

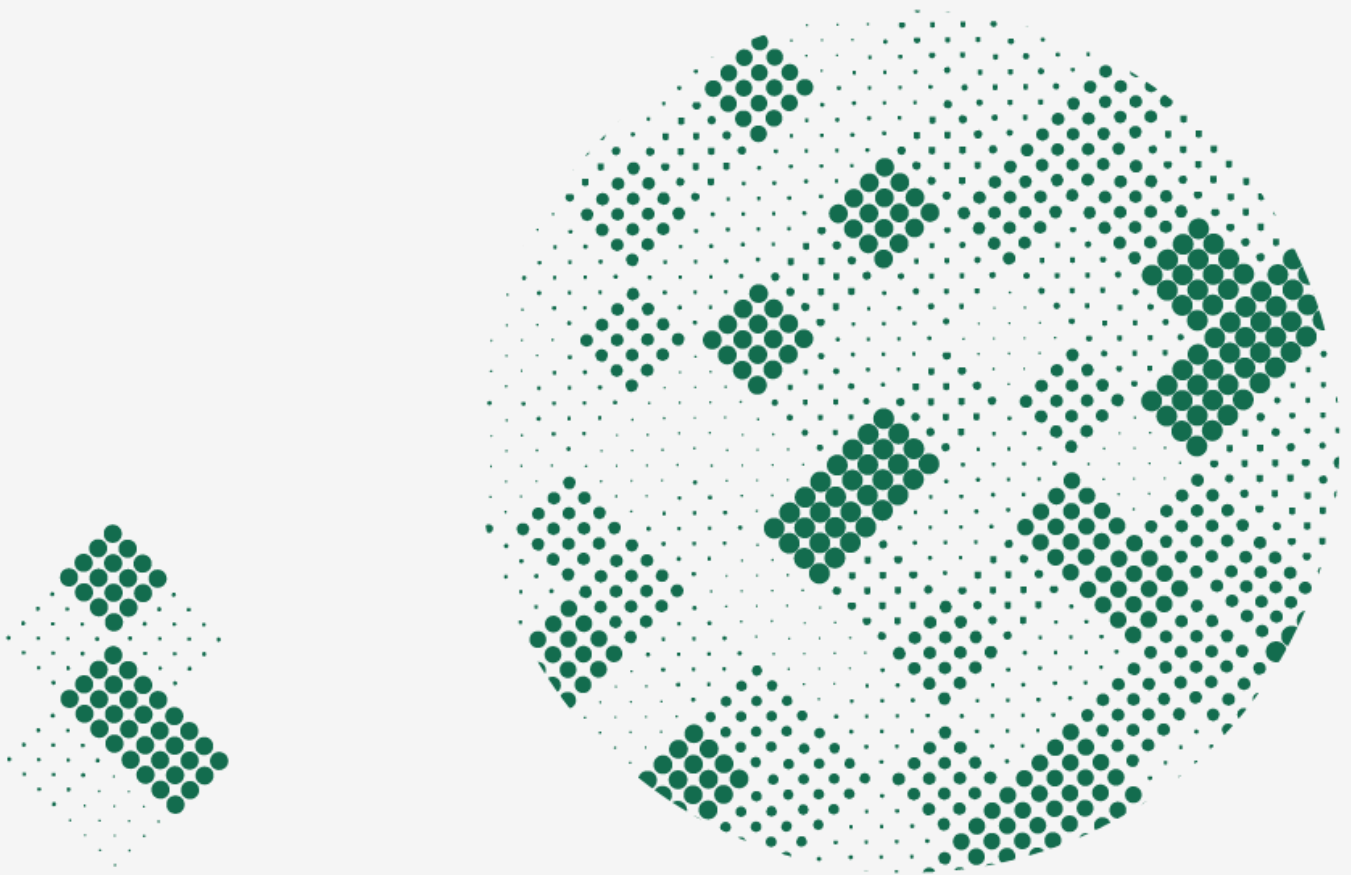


RESPONSIBLE  
RESEARCH AND  
INNOVATION IN  
TERRITORIES

## D2.4

### **Synthesis report on individual partner internal review reports**

(including the partners' individual RRI reports)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439

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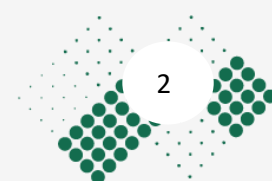
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## Deliverable 2.4

### Title: Synthesis report on individual partner internal review reports

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## RRI-LEADERS Partners

NO	PARTNER'S NAME IN ENGLISH	PARTNER'S NAME IN NATIONAL LANGUAGE	PARTNER'S SHORT NAME
P1	APPLIED RESEARCH AND COMMUNICATIONS FUND	ФОНДАЦИЯ „ПРИЛОЖНИ ИЗСЛЕДВАНИЯ И КОМУНИКАЦИИ“ (FONDATSIA PRILOZHNI IZSLEDVANIA I KOMUNIKACII)	ARC FUND
P2	UNIVERSITY OF WESTERN MACEDONIA	PANEPISTIMIO DYTIKIS MAKEDONIAS	UoWM
P3	THE DANISH BOARD OF TECHNOLOGY FOUNDATION	FONDEN TEKNOLOGIRADET	DBT
P4	THE CATALAN FOUNDATION FOR RESEARCH AND INNOVATION	FUNDACIO CATALANA PER A LA RECERCA I LA INNOVACIO	FCRI
P5	ZURICH UNIVERSITY OF APPLIED SCIENCES	ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN	ZHAW
P6	REGIONAL ASSOCIATION OF LOCAL GOVERNMENT OF WESTERN MACEDONIA	PERIFEREIAKI ENOSI DIMON DYTIKIS MAKEDONIAS	LGA-WM
P7	SOFIA DEVELOPMENT ASSOCIATION	АСОЦИАЦИЯ ЗА РАЗВИТИЕ НА СОФИЯ (ASSOTSIATSIA ZA RAZVITIE NA SOFIA)	SDA
P8	MUNICIPALITY OF THALWIL	GEMEINDE THALWIL	THA
P9	ECONOMIC DEVELOPMENT AGENCY OF SABADELL CITY COUNCIL	PROMOCIO ECONOMICA DE SABADELL	PES SL



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## List of acronyms / abbreviations used in this document

AACSB – Association to Advance Collegiate Schools of Business

AAQ – Swiss Agency for Accreditation and Quality Assurance

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

ARC Fund – Applied Research and Communications Fund

CAPCIT – Consell Assessor del Parlament sobre Ciència i Tecnologia (Catalan Parliamentary Advisory Council on Science and Technology)

CAS – Certificate of Advanced Studies

CERTH – Centre for Research and Technology Hellas

DBT – Danish Board of Technology

DPP – Data Protection Policy

EC – European Commission

EEN – Enterprise Europe Network

ETHZ – Eidgenössische Technische Hochschule Zürich (Zurich Polytechnik University)

EU – European Union

FCRI – Fundació Catalana per a la Recerca i la Innovació (Catalan Foundation for Research and Innovation)

FHR – Fachhochschulrat (University of Applied Sciences Council)

FSO – Federal Statistical Office

GDPR – General Data Protection Regulation

GRD – Green Rural Deal

HED – Higher Educational Development

HEPC – Higher Education Promotion and Coordination Act

IBS – Innovation and Business Support Programme.

ICT – Internet Communication Technology

IFRS – International Financial Reporting Standards

IPA – Individual Performance Agreement

IPR – Intellectual Property Rights

ISCN – International Sustainable Campus Network

JTP – Just Transition Plan

KIC – Knowledge and Innovation Community

KPIs – Key Performance Indicators

LGA-WM – Local Government Association of Western Macedonia

LGBTQ – Lesbian, Gay, Bisexual, Transgender, Queer

LSFM – School of Life Sciences & Facility Management

MAS – Master of Advanced Studies



OER – Open Educational Resources

OGD – Open Government Data

R&D – Research and Development

R&D&I – Research, Development and Innovation

R&I – Research and INNOVATION

RPO – Research Performing organisation

RRI - Responsible Research and Innovation

SAAS – Swiss Academies of Arts and Sciences

SDA – Sofia Development Association

SDGs – Sustainable Development Goals

SHF – School of Health Professions

SIC – Safer Internet Centre Programme

SMC – Sofia Municipal Council

SML – School of Management and Law

SNSF – Swiss National Science Foundation

STEAM – Science, Technology, Engineering, the Arts, and Mathematics

STEM – Science, Technology, Engineering, and Mathematics

STIPP – Science, Technology and Innovation Policy Programme

THA – Thalwil Municipal Administration

UAS – University of Applied Sciences

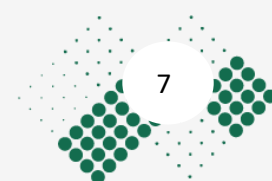
UNESCO – United Nations Educational, Scientific, and Cultural Organisation

UN PRME – United Nations Principles for Responsible Management Education

UoWM - University of Western Macedonia

ZFH – Zürcher Fachhochschule (Zurich University of Applied Sciences & Arts)

ZHAW – Zürcher Hochschule für Angewandte Wissenschaften (Zurich University of Applied Sciences)



## About the project

The project “Leveraging Leadership for Responsible Research and Innovation in Territories” (RRI-LEADERS) explores the relevance of responsible research and innovation (RRI) to territorial governance in four European territories, representing different cultural and socio-economic backgrounds, different scope of territorial oversight, different institutional and decision-making infrastructures, and different R&I landscapes.

The objectives of RRI-LEADERS are:

- to facilitate the adoption of RRI principles within territorial governance;
- to promote innovative, inclusive and responsive multi-actor approach to the development of policies on issues related to science and innovation; and
- to provide an evolutionary perspective on the future of RRI in territorial policy and governance.

The central goal of RRI-LEADERS is to elaborate future-oriented strategy and action plans, or territorial outlooks, for the future potential of RRI as a guiding framework in territorial R&I governance. Outlooks will be developed through a multi-stage co-creation process, which will mobilise quadruple-helix stakeholders, i.e. academia, policymakers, industry and civil society, from the participating territories.

RRI-LEADERS involves four territories: Sofia (Bulgaria), Thalwil (Switzerland), Western Macedonia (Greece) and Sabadell (Spain), representing a diverse range of opportunities and implications for responsible research and innovation (RRI), which will enable to carry out a thorough assessment of the RRI relevance to territorial governance. The accumulated knowledge will be used to chart a detailed outlook for the future potential of RRI as a guiding framework in territorial governance of R&I and will aim to provide an evolutionary perspective on RRI for the Horizon Europe programme.

The project adopts the dominant understanding of RRI, as defined by von Schomberg: “A transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products.”<sup>1</sup> It diverges only slightly from this definition in that it does not promote the separation of innovators from the rest of the societal actors, and instead seeks to include societal actors as co-creators in the innovation processes, and enable leadership in the development of policies with a future outlook. In doing so, RRI-LEADERS interpretation of RRI draws on the extension of the RRI framework proposed by Stilgoe, Owen and Macnaghten, who emphasise the prospective notion of responsibility by introducing four dimensions of RRI – *anticipation, inclusiveness, reflexivity and responsiveness*, largely known as the AIRR dimensions.<sup>2</sup>

RRI-LEADERS attempts to leverage leadership through three complementary tiers of planned intervention around RRI. The three tiers of leadership intervention are interlinked into an operational progression, whereby each tier supports and enables the others as the project progresses:

1. Leveraging leadership in understanding of RRI proliferation and opportunities in the four territories.
2. Leveraging leadership in examining RRI construct relevance to territorial applications and its transformative potential.
3. Leveraging leadership in the reaffirming of the RRI concept with a view of providing tighter integration of territorial aspects into a renewed RRI construct.

<sup>1</sup> von Schomberg, R. (2011). “Prospects for technology assessment in a framework of responsible research and innovation”. In: Dusseldorp, M., Beecroft, R. (Eds.), *Technikfolgen Abschätzen Lehren: Bildungspotenziale Transdisziplinärer*. Vs Verlag, Methoden, Wiesbaden.

<sup>2</sup> Stilgoe, J.; Owen, R. & Macnaghten, Ph. (2013). “Developing a framework for responsible innovation”. In *Research Policy*, vol.42(9), pp.1568-1580.





## Executive Summary

This deliverable is a synthesis report presenting the main findings from the individual RRI audits in the organisations participating in the RRI-LEADERS project. Each member of the RRI-LEADERS consortium performed an internal RRI review of its organisation with the aim to identify areas for improvement of the organisational policies and practices through integrating the RRI keys and AIRR dimensions into them. The overall methodology of the internal RRI reviews included:

- review of internal organisational documents;
- interviews with 8-10 key members of staff;
- one focus-group to explore issues not sufficiently addressed during the interviews.

One of the main objectives of the RRI-LEADERS project is to promote and mainstream the RRI-AIRR approach as a framework that not only fosters the design of inclusive and sustainable research and innovation, but has the potential to enhance a wide variety of policy goals, implementation routines, and leadership frameworks on the territorial level. The RRI-LEADERS consortium frames its understanding of the RRI-AIRR approach as a combination of the five so-called RRI keys (Ethics, Gender Equality & Diversity, Open Access, Public Engagement, and Science Education), and on four RRI process dimensions, called also AIRR dimensions (Anticipation, Inclusiveness, Reflexivity and Responsiveness).

While the central goal of the project is to promote a shared and future-oriented vision for RRI-AIRR as a territorial leadership framework, and to obtain its endorsement by the respective level of territorial authorities, the project does not diminish the importance of the framework for different organisations participating in the research and innovation ecosystem. Such organisations are namely the main target audience of this report. By reading the nine individual RRI audit reports of organisations participating in the project, similar organisations that are considering implementing policies or practices related to RRI might find inspiration on how to proceed with this valuable and rewarding endeavour. The actions described and analysed in the reports may also prove helpful to sustain the already existing good practices and initiatives to advance RRI in organisations.

The consortium members represent a diverse group of organisations. Five are methodological partners: Applied Research and Communications Fund (ARC Fund), the Danish Board of Technology Foundation (DBT) and the Catalan Foundation for Research and Innovation (FCRI) are private non-profit institutes, and University of Western Macedonia (UoWM) and the Zurich University of Applied Sciences (ZHAW) are higher education institutions. Four organisations are territorial partners – they include the Regional Association of Local Government of Western Macedonia (LGA-WM; legal institution representing the 13 municipalities of the region), Sofia Development Association (SDA; non-governmental research and policy organisation supporting the Sofia municipality), the Municipality of Thalwil (THA; local government authority) and the Economic Development Agency of Sabadell City Council (PES SL; municipal agency with a legal form of Limited Company).

The nine RRI-LEADERS project partners reviewed a total of 59 institutional documents in order to understand how the RRI keys and AIRR dimensions are currently embedded in their organisations. Internal documents in which the RRI-AIRR approach is explicitly included as a comprehensive framework are rare, however, the review revealed that all organisations are largely abiding by its principles and values. Specific RRI keys, such as ethics, gender equality, public engagement and open access, are included in many of the documents, while the AIRR dimensions are most often present indirectly, stemming from the interpretation of various objectives, activities or policies of the organisations.

Overall, it is hard to assess which are the most prominent keys as some of them are more important for certain organisations than for other, depending on their scope of activity. Public engagement is vital for ARC Fund,



DBT and SDA, but it is not that essential for THA and PES SL. Gender equality is recognised as important by all RRI-LEADERS partners and as such has been included in their policies, while ethics and open access are more relevant for research institutes and higher education institutions. Science education is best embedded in the two universities (ZHAW, UoWM), whereas it is not as relevant for the other project partners. Still, each of the examined organisations recognises the relevance of the RRI framework and especially the keys that are applicable to its activities.

The AIRR dimensions are harder to comprehend and identify in the documents in comparison to the RRI keys. Although they are rarely mentioned directly, they are reflected in the documents and different practices of each organisation. For example, reflexivity is of crucial importance for the two higher education institutions as it allows them to maintain high educational standards. In other organisations, reflexivity is associated with monitoring of progress against the stated objectives, different forms of evaluation and self-reflection, and annual reporting on the activities. Inclusiveness is recognised as a very important dimension by all audited organisations, especially in the form of involving stakeholders and the general public in co-design/co-creation of solutions that address relevant societal challenges. Anticipation is least practiced by the territorial partners, which tend to be more often reactive rather than proactive. At research-conducting organisations, anticipation is mostly linked to project development and implementation (assessment of potential project-related risks and impacts) and its application is still limited on organisational level. Although responsiveness is mentioned in some organisational documents, in general more efforts would be needed to embed it into the organisational culture of all RRI-LEADERS partners.

A total of 76 members of staff at junior/middle/senior expert and managerial positions at the RRI-LEADERS project partners were interviewed to examine their understanding about the RRI-AIRR framework and how they apply it in their work. The interviewees were selected based on their expertise, experience or knowledge of the RRI-AIRR approach.

The majority of the interviewees were familiar with the RRI keys, but the AIRR dimensions were known to only few of them. European Commission funded projects seem to be the main driver for the popularisation of the RRI framework, and many of the interviewees said that participation in European projects has led to the introduction of the RRI keys in their organisation. According to the interviewees, the main purpose of RRI is to align scientific and technological developments with the aspirations, values and needs of the society, while AIRR is seen more as a process for conducting research and innovation in a responsible way.

Most of the participants in the interviews said that they consider the majority of the RRI keys/AIRR dimensions as part of their responsibilities at work. Although most of the keys and dimensions are de facto applied in the organisations, interviewees said that institutional strategies incorporating the overall RRI-AIRR approach are still missing. Such strategies or other relevant documents would be essential for further uptake of the approach in the organisations.

Public engagement is essential in order to arrive at feasible and actionable output when developing or revising policies in the field of research and innovation, as it helps to understand the viewpoints of different societal groups, including non-experts. Ethics is of paramount importance for research organisations and higher education institutions, as it strengthens the public trust in science. Although gender equality and diversity were recognised as very important by all interviewees, at the same time they are not seen as an area where improvements are needed, and the current state of affairs was evaluated as adequate. All project partners follow the policy of providing open access to their publications and other outputs. Some are also taking effort to provide open access to research data, but for most organisations, this is still in the inception phase. Not surprisingly, the science education key is essential to the two universities ZHAW and UoWM, but is less relevant for the rest of the project partners.



Regarding the AIRR dimensions, responsiveness is perceived as a responsibility to act upon feedback and input and most interviewees consider it to be a crucial part of their work. Anticipation is connected to risk management and to considerations concerning the organisational development. Some interviewees noted that despite being essential, anticipation is often implemented informally. Inclusiveness is seen as closely related to public engagement, but can be applied on different levels – from the micro (responsibility to engage staff members in the organisational development) to the macro level (a balanced and diverse participation of the quadruple helix stakeholders in the entire research and innovation cycle). Reflexivity is most often associated to different forms of reviews, (self)analyses and evaluations, and annual reporting on activities and achievements.

A total of 64 members of staff, holding various (junior/middle/senior) expert and managerial positions at the project partners' organisations, participated in the focus groups, organised by each RRI-LEADERS partner. Like the interviewees, focus group participants were again selected due to their knowledge, interest or relevance for the RRI-AIRR approach as a whole, or its elements.

Only half of these 64 participants were familiar with the RRI-AIRR framework prior to the focus group. The framework was the least known among the focus group participants in both Swiss organisations, while at the other end were the three smallest consortium members (ARC Fund, SDA and DBT) where majority of participants were aware of the RRI-AIRR framework. However, the discussions revealed that in all organisations, a large majority even of those participants that were not aware of the concept, have been applying the principles in their work and said that they were relevant on the organisational level.

The focus group confirmed the previous findings, namely that the RRI keys were more recognisable and frequently used than the AIRR dimensions. Public engagement and ethics were again assessed as the most important keys. Gender equality was evaluated as very relevant by participants, some of whom noted that although gender balance policies were in place in their organisations, more needed to be done to implement them effectively. Open access was assessed as most relevant for research performing organisations, due to the requirements of funding bodies such as the European Commission which demand open access to research data and publications. With the exception of two universities, science education is considered the least important RRI key among the RRI-LEADERS project partners.

Participants in all focus groups considered all AIRR dimensions to be very important, as the entire AIRR framework is needed to develop inclusive forward-looking policies and programmes. The AIRR dimensions were furthermore perceived as relevant for sectoral policies in any field, and as an important instrument in the field of governance.

Some common drivers for the application of the RRI-AIRR framework in the RRI-LEADERS partners' organisations include the requirements of the funding authorities during project implementation, the national legislation and the innate drivers such as personal morality and views. The lack of formal embeddedness of the keys/dimensions in internal documents, lack of concrete steps towards their integration in the activities of the respective organisation, organisational inertia, and the lack of competences, time, financial and human resources are the most common barriers that were mentioned by participants.

Focus group participants suggested that the RRI-AIRR framework can be efficiently integrated in the organisations only if it is tailored to the specific needs and activities of each organisation. If this was not the case, there is a risk of embedding it only formally on paper and not using it in practice in their work. Establishment of units or other bodies that would be responsible for the RRI-AIRR uptake and development was also identified as a necessary step, for example an RRI office or board. Another suggestion was adoption of a formal document based on the RRI-AIRR framework.



## Introduction

One of the main objectives of the RRI-LEADERS project is to promote and mainstream the RRI-AIRR approach as a framework with the potential to enhance a wide variety of policy goals, implementation routines, and leadership structures on the territorial level. While the central goal of the project is to promote a shared and future-oriented vision for RRI-AIRR as a territorial leadership framework, the project does not diminish the importance of the RRI-AIRR approach for different organisations participating in the research and innovation ecosystem.

This deliverable is a synthesis report presenting the main findings from the individual RRI audit reports, written by RRI-LEADERS partners and based on an extensive review of embeddedness of RRI-AIRR approach in their organisations. By reading the summarised findings and the individual RRI audit reports of organisations participating in the project, similar organisations that are considering implementing policies or practices related to RRI might find inspiration and guidance on how to proceed with this valuable and rewarding endeavour. The actions described and analysed in the reports may also prove helpful to sustain the already existing good practices and initiatives to advance RRI in organisations.

The consortium members represent a diverse group of organisations. Five of them are methodological partners: Applied Research and Communications Fund (ARC Fund), the Danish Board of Technology Foundation (DBT) and the Catalan Foundation for Research and Innovation (FCRI) are private non-profit institutes, and University of Western Macedonia (UoWM) and the Zurich University of Applied Sciences (ZHAW) are higher education institutions. Four organisations are territorial partners – they include the Regional Association of Local Government of Western Macedonia (LGA-WM; legal institution representing the 12 municipalities of the region), Sofia Development Association (SDA; non-governmental research and policy organisation supporting the Sofia municipality), the Municipality of Thalwil (THA; local government authority) and the Economic Development Agency of Sabadell City Council (PES SL; municipal agency with a legal form of Limited Company). Each member of the RRI-LEADERS consortium performed an internal RRI review of its organisation with the aim to identify areas for improvement of the organisational policies and practices through integrating the RRI keys and AIRR dimensions into them. The overall methodology of the internal RRI reviews included:

- review of internal organisational documents;
- interviews with 8-10 key members of staff;
- one focus-group to explore issues not sufficiently addressed during the interviews.

Each partner produced an organisational RRI audit report, which includes a brief presentation of the organisation, a review of the relevant internal organisational documents, summary of the interviews with the staff members regarding the framing of the RRI-AIRR approach in the organisation, summary of the focus group about the embeddedness of the RRI-AIRR approach in the organisation, and recommendations for targeted measures for further uptake of the RRI-AIRR approach in the overall organisational development. These reports are included as annexes at the end of the deliverable.

The deliverable begins with a chapter presenting the methodology for the RRI audits in the organisations participating in the RRI-LEADERS project. This is followed by a synthesis of the internal RRI reviews (documentary review, interviews, focus groups). The main part of the deliverable is completed by a chapter presenting the main conclusions from the RRI audits and proposing some targeted measures for integrating RRI-AIRR in the partners' organisations.



The deliverable has nine annexes – internal RRI review reports of all participating organisations: ARC Fund, UoWM, DBT, FCRI, ZHAW, LGA-WM, SDA, THA and PES SL. The content structure of the internal RRI review reports is as follows:

1. Introduction with a concise and informative presentation of the organisation.
2. Review of the relevant internal organisational documents.
3. Summary of the interviews (overview of respondents; framing of the RRI-AIRR approach in the organisation; RRI keys and AIRR dimensions in the organisation; suggestions for further integration of RRI-AIRR approach).
4. Summary of the focus group (overview of participants; relevance of the RRI-AIRR approach in the organisation; embeddedness of the RRI-AIRR approach in the organisation; recommendations to improve the existing practices).
5. Conclusion (a concise summary of the main findings from the document review, interviews and focus group).

## Methodology

The main objectives of RRI audits in organisations participating in the RRI-LEADERS project were to:

- Identify and describe the current state-of-play regarding the embeddedness of the RRI-AIRR approach in the organisations.
- Identify and describe the existing resources of the organisations related with the RRI-AIRR approach and/or the individual RRI keys and AIRR dimensions (documents, policies, and human, material, technological or other resources).
- Identify areas and set the goals for improving the policies and practices of the organisations by integrating into them the RRI keys and AIRR dimensions.

The RRI audit of partner organisations encompassed three main activities:

- detailed examination of the relevant internal organisational documents (a decision was made not to analyse more than 10 documents per organisation);
- interviews with 8-10 key members of staff (at least two interviews on each of the following three levels: senior managers; middle-level managers/researchers/lecturers/experts; junior level);
- one focus-group to explore issues not sufficiently addressed during the interviews, and clarify the divergent opinions regarding the potential role of RRI-AIRR in the overall institutional/organisational development.

The RRI audits focused on:

- Departments, units, commissions or committees related to different aspects of RRI-AIRR, such as research ethics boards, organisational units for strategic development, teams experienced in public and stakeholder engagement, gender equality units of officers, and similar.
- Internal documents such as statutes, codes of ethics, codes of conduct, mission statements, action plans, data management plans, gender equality plans, annual reports, policies, strategies and other documents that concern RRI keys and AIRR dimensions.
- Practices concerning different aspects of RRI-AIRR, for instance regular annual meetings, internal and external reviews, trainings, and others.



- Staff with experience and/or expertise in the different RRI key areas (ethics, gender equality, public engagement, science education, open access) and AIRR dimensions (anticipation, inclusiveness, reflexivity, responsiveness).

Findings from the three research activities (document review, interviews, focus group) are presented in reports produced by each project partner and included as annexes to this deliverable.

Timeline of the internal RRI audits:

- Methodology for the internal RRI reviews of partners was finalised in December 2021, after being discussed and approved by the project partners. The methodology included the template for the review of internal organisational documents, and the interview and focus group questionnaire.
- Detailed examination and analysis of the relevant internal organisational documents took place in January and February 2022.
- Interviews with key members of staff were conducted in February and March 2022.
- Focus groups were organised in March and April 2022.
- The concept note for D2.4 with contents and structure for individual chapters was finalised in March 2022.
- Reports summarising the findings from internal RRI reviews of partners were written and submitted to ARC Fund (partner responsible for the D2.4) in April and May 2022.

### Review of the relevant internal organisational documents:

The document review was based on the Qualitative Content analysis. The presentation of the results starts with a brief summary of each document, including the year of publication and main purpose. It continues with a table presenting the place of RRI-AIRR approach in the document. For each of the RRI keys and AIRR dimensions, as well as for the framework as a whole, a simple “yes” and “no” answers are provided to the following questions:

- Is it a key focus of the document?
- Is it mentioned?
- Is it identified as a goal or value?
- Are any good practices identified?
- Can it be included in the document, if it is not there?

The table is followed by a short but detailed explanation of the most relevant and interesting points of the document.

### Interviews with staff members:

The aim of the interviews was to highlight the relevant areas where further actions are needed to embed RRI-AIRR approach into organisational policy and practice. The method used was semi-structured in-depth interviews. The interviewers followed a questionnaire guide, but had the freedom to change the order of the questions or the way they were formed. They were encouraged to adapt the questionnaire guide to the situation in their organisations and the profiles of the respondents, and when relevant, to modify the questions – especially in the case of the subsequent interviews in order to incorporate interesting information emerging from the previous respondents. The interviews were held in the local language.





The interviewees were asked to consider the notion of responsibility in science and innovation in the organisation; evaluate and describe initiatives, practices or processes related to the current organisational RRI-AIRR status; describe the drivers, barriers and good practices related to implementing RRI keys and AIRR dimensions in the organisation; highlight the key events that changed the discourse on RRI-AIRR, and recommend ways to strength the organisation's work on different aspects on responsibility.

Each partner interviewed 8-10 key members of staff, including at least two interviewees from each of the following three levels: senior managers; middle-level managers/researchers/lecturers/experts; junior level. When appropriate, partners also interviewed 1-2 relevant external stakeholders with very good knowledge about the work of the organisation.

The interviews started with a brief presentation about the project and the goal of the interview. Before proceeding with the questions, interviewers obtained informed consent from the respondents. The task leader ARC Fund developed an interview guide, but the interviewers had the freedom to adapt the questions to the situation in their organisation and to the profile of the respondents. When relevant, the information obtained from the document analysis was also considered. The interviews lasted between 60 and 90 minutes.

### Focus groups:

The aim of the focus groups was to explore issues not sufficiently addressed during the interviews, and clarify the divergent opinions regarding the potential role of RRI-AIRR in the overall institutional/organisational development. The partners tried to include in the focus group different participants from those involved in the interviews. However, this very much depended on the size of the organisation and the number of relevant people. In case of smaller organisations, inclusion of several interview participants in the focus group was unavoidable.

The focus group guide included a list of guiding questions for the discussion, but the focus group moderators were not obliged to strictly follow the order of the questions or the way they were formed. Each moderator therefore adapted the questionnaire to the situation in their organisation and the profile of the respondents, considering also the information obtained from the document analysis and from the interviews. Similarly to the interviews, the discussion started with a brief presentation about the project and the goal of the focus group, followed by obtaining informed consent from the participants. Before proceeding with the discussion based on the guiding questions, the participants filled in a hard-copy table in which they ranked the importance/relevance of the RRI keys and AIRR dimensions for their own work and for their organisation.

The focus groups lasted between 2.5 and 3.5 hours.

### The RRI audit reports

The main findings from the documentary analysis, interviews and focus groups were summarised and presented in nine organisational RRI audit reports, which are included as annexes to this document. The template and structure of the reports were developed by task leader ARC Fund. The other partners commented and proposed changes to the draft template.

Recommended structure for the internal RRI review reports of partners:

1. Introduction:
  - Type of organisation and legal form
  - Organisational structure (text or diagram)



- Brief presentation
  - Mission or main purpose of the organisation
  - Place/importance of the organisation in the territorial innovation eco-system (Organisational networks)
2. Review of the relevant internal organisational documents:
    - Brief summary of the document
    - Place of RRI-AIRR approach in the document
    - A concise review of the most relevant and interesting points of the document
  3. Summary of the interviews:
    - Brief overview of respondents
    - Framing of the RRI-AIRR approach in the organisation
    - RRI keys and AIRR dimensions in the organisation
    - Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in organisation
  4. Summary of the focus group:
    - Brief overview of participants
    - Relevance of the RRI-AIRR approach in the organisation
    - Embeddedness of the RRI-AIRR approach in the organisation (drivers, barriers, good practices, monitoring and evaluation)
    - Recommendations
  5. Conclusion:
    - To what extent is RRI-AIRR approach (in its entirety) a relevant issue in the organisation?
    - Which RRI keys and AIRR dimensions are integrated in the organisational documents and policies, and which are most prominently featured in its practices? How?
    - Who is responsible for the governance, management, implementation, monitoring and evaluation of policies and practices pertaining to different RRI keys and AIRR dimensions?
    - What is still missing? How could the integration and implementation of RRI-AIRR approach or individual RRI keys and AIRR dimensions in the organisation be further improved?



# Synthesis of the internal RRI reviews

## Summary of document reviews

### General overview of audited documents

A total of 59 institutional documents at the nine RRI-LEADERS project partners from Bulgaria, Greece, Spain, Denmark and Switzerland have been reviewed in order to understand the current state of embeddedness of the RRI keys and AIRR dimensions in these organisations. The objective of this task was to identify areas for improvement of their internal policies and practices by integrating the RRI-AIRR framework into them. The potential role of RRI-AIRR in the overall institutional development has been investigated. Although the type of the audited organisations differs, ranging from research and innovation policy institutes through agencies and associations, supporting public authorities, to universities and a municipality, some commonalities regarding the awareness and the application of the RRI-AIRR approach have been identified.

The largest number of documents that were considered relevant to RRI-AIRR have been reviewed in the biggest organisations, namely the two universities (ZHAW with 10 documents and UoWM with 9) and the Municipality of Thalwil (8 documents). The number of reviewed documents in other organisations is as follows: ARC Fund (8), DBT (7), LGA-WM (6), FCRI (5), PES SL (4) and SDA (4). All organisations have some kind of a document, regulating the internal rules of operation, such as a code of conduct or an employee handbook as well as a gender equality plan/strategy and an ethics code. Most partners also either have a concrete policy, addressing data management and the requirements of the GDPR (UoWM, ARC Fund, DBT and SDA) or have such provisions in some of the other institutional policies (LGA-WM, THA, ZHAW, PES SL, FCRI). All except LGA-WM and UoWM develop annual reports on their activities. The two universities (UoWM and ZHAW) also have policies that safeguard the quality of the education, offered by the respective higher institution.

Regarding RRI-AIRR, the first important conclusion that can be drawn across all organisations is the fact that the RRI keys have been considered easier to comprehend, identify and explore in comparison to the AIRR dimensions. Furthermore, in most cases there was a lack of explicit inclusion of the specific keys and dimensions, but yet they were presented indirectly in the reviewed documents. For example, the terms gender equality and ethics are included in all six documents of LGA-WM, while responsiveness and reflexivity are implicitly present as they are stemming from the interpretation of the organisation's objectives and the responsibilities of the staff.

In other cases, the lack of the specific RRI-AIRR terms in the examined documents made it difficult to assess whether the principles are present or not (e.g. PES SL). However, the review at SDA, for instance, revealed that the organisation has been abiding by principles and values, which are similar to the RRI-AIRR approach, although it has not been formally institutionalised in the relevant documents. The cases of ARC Fund, FCRI and DBT are similar to the one of SDA, because all RRI keys and AIRR dimensions are mentioned either explicitly or implicitly and are implemented in accordance with the mission and the specific activities, carried out by these organisations, despite the fact that no targeted RRI strategy exists in either of them. This is also applicable to THA, where the AIRR dimensions are not mentioned as such, but can be found in the form of good practices. At ZHAW, even though the RRI terminology is missing, a policy for each of the RRI keys is available, while the AIRR dimensions can be found in the university's strategies. Similar to ZHAW, UoWM has an institutional policy that touches more or less upon all of the RRI-AIRR principles.



## RRI keys overview

When it comes to specific RRI keys, their relevance depends largely upon the activities that are in the focus of the respective organisation. For instance, the public engagement key is included either explicitly or implicitly in the policies of all RRI-LEADERS partners. ARC Fund is the pioneer of public engagement activities in Bulgaria since 2009 and up to date it is a central principle in the activities of the policy institute. Similarly, since DBT is a foundation that supports deliberative democracy, societal engagement is part of its mission and a core methodological principle. Public engagement is important also for THA regarding social welfare, counselling services for the elderly, families and young people, information events and more. Furthermore, it is included as a goal in the *Articles of Association* of SDA, in SDA's internal rules and regulations as well as in the annual reports. The key is also in the focus of the policies of ZHAW and UoWM and is recognised as important by LGA-WM, FCRI and PES SL.

Gender equality is a key that is included in the policies of all partnering organisations. Some of them have targeted gender equality plans or strategies in place (ZHAW, DBT (draft), PES SL, ARC Fund (draft), FCRI), while the rest have included these provisions in documents like staff regulations, internal rules, codes of conduct, etc. In recent years, some organisations such as ZHAW have expanded the scope from gender equality into gender equality and diversity, which is a more encompassing notion, including a broader set of social and demographic aspects such as age, culture, sexual orientation, race and nationality.

The ethics key is strictly regulated in the two higher education institutions, namely ZHAW and UoWM. At ZHAW, the University's *Research Integrity Policy* provides the general ethical guidelines that have to be followed when conducting research. Also, some schools have developed their own departmental *Codes of Ethics* and have established Ethics Committees to observe the adherence to these codes. At UoWM, there is a *Code of Ethics and Good Practices* and a policy that regulates the principles and functioning of the Committee on Research Ethics of UoWM. In THA, the state legislative framework safeguards ethics and higher-level bodies regulate its enforcement. At PES SL, the embeddedness of ethics was triggered by the regional law on transparency, access to public information and good government, however, as it is not a research performing body, ethics is perceived as a value rather than a goal. At ARC Fund ethics is embedded through several of the institutional documents, including *Code of Conduct*, *Code of Ethics*, *Rules and Order for Performing Publicly Beneficial Activities*, *Child Protection Policy*, and *Rules for the Processing and Protection of Personal Data*. SDA follows relevant ethical stipulations available in the *Gender Equality Plan*, *Internal Rules and Regulations* and the *Child Protection Policies*. At DBT, this key is embedded both in the organisational practices by the *Employee Handbook* and in project activities. Since LGA-WM is a local government association, it promotes ethics principles in research and innovation by implementing concrete research activities, following ethical and research integrity regulations.

Five of the reviewed documents at ARC Fund mention open access and the general provisions in them postulate that open access to project/research results has to be followed by all project staff members, while open access to research data has to be further developed at organisational level. At DBT, publications are made accessible free of charge after a certain period of time, but this is not the case with the strategic organisational documents that are accessible only to the staff. At FCRI open access is mentioned in the *Strategic Plan*, which defines the lines of action, values and priorities of the organisation for a particular time period. PES SL implements open access via publishing monthly economic data in the *Local Economy Observatory of Sabadell* and the *Open Data Service of Sabadell City Council*. At SDA, open access is included in the *Internal Rules and Regulations* as well as in the annual reports of activity, but no targeted policy for open access is currently available.



Furthermore, ZHAW goes beyond open access into open science, which is quite well embedded at the university through the many initiatives, executed by the Strategic Affairs Office for R&D for Open Research Data Management and the University Library in the fields of open access to research publications, open educational resources (OER) and citizenship access. At UoWM, open access is included in all relevant institutional documents and all relevant decisions and actions are made available to the general public. Furthermore, research publications also follow open access requirements. At LGA-WM, research outputs from projects are made available online on the organisation's website. Also, there is a plan to create a user-friendly digital platform that will include all the scientific findings from the projects that have been implemented in the past. THA is not conducting any research, however open access is not considered any less relevant than in the other RRI-LEADERS partnering organisations. On the contrary, it is seen as essential for transparency and communication with the citizens, and especially important in the context of digitalisation (e.g. automated procurement).

Not surprisingly, science education is the most well embedded RRI key at both universities, namely ZHAW and UoWM. The execution of research, based on the principles of excellence/good research practices is a core value, included in all relevant documents which regulate the activities of these higher education institutions. At ARC Fund, DBT, SDA, LGA-WM, PES SL and FCRI, science education is mentioned in some organisational documents, but seems to be the least practiced key. It becomes more relevant when understood as science communication, i.e. reaching a broader audience when communicating and disseminating project findings. Since THA is an administrative body, the promotion of science or scientific education is hardly recognised as an objective. Rather, science education is relevant when it comes to raising the technical competences of employees as well as increasing their understanding of the societal effects of their work.

Overall, it is hard to assess which are the most prominent keys as some of them are more important for certain organisations than for other, depending on the scope of activity of the respective body. For example, public engagement is vital for ARC Fund, DBT and SDA, but it is not that essential for the territorial partners. Furthermore, gender equality is recognised as important by all RRI-LEADERS partners and as such has been included in their policies, while ethics and open access are more relevant for research institutes and higher education institutions as they are the bodies, engaged in research activities. To this end, science education is best embedded in the two universities and it is not as relevant for the other project partners. Still, each of the examined organisations recognises the relevance of the RRI framework and especially the keys that are applicable to its activities.

### Overview of AIRR dimensions

As mentioned above, the AIRR dimensions anticipation, inclusiveness, reflexivity and responsiveness have been considered more abstract and therefore harder to comprehend, identify and explore in comparison to the RRI keys. Regarding anticipation, it is mentioned in the majority of the reviewed documents at ARC Fund, but it is mostly linked to project development and implementation, and its application is still limited on organisational level. At DBT, anticipation is the focus of two documents, namely the *Data Management Plan*, which defines the in-house data management, related to project work and administrative procedures, and the *Business Plan*, aiming to foresee the course of the organisation in a 2-4 years' time horizon. At SDA, not only anticipation, but none of the other three AIRR dimensions is referred to in any of the internal documents. In spite of this fact, anticipation is actually practiced by assessing potential project-related risks as well as effects of policies and by foreseeing appropriate corrective measures. At FCRI, anticipation is included in the *Social Report* (presenting the actions carried out during the previous year and their societal impact), and is implemented in practice by the elaboration of the *Strategic Plan*. At LGA-WM, anticipation is included in the *Rules of Procedure of the Board of Directors of the LGA-WM*, which sets the framework for taking operational



and strategic decisions. Since PES SL is a municipal agency, it tends to solve existing problems rather than anticipate them. Still, anticipation has been identified as a goal/value by three internal documents, including *How Quality is Worked at PES SL*, the *Internal Plan of Gender Equality* and the *Annual Report 2020*. In THA, anticipation is mentioned in three of the examined documents, but it is especially important and regularly applied in the strategic and planning departments. At UoWM, although anticipation is in the focus of seven of the reviewed documents, it is still not well embedded because of lack of shared pathways between academia and other stakeholders such as policymakers and business representatives as well as lack of prioritisation of regional needs and demands for the energy transition. At ZHAW, anticipation is in the focus of seven of the reviewed documents. It is not only included in them, but has been successfully institutionalised by the establishment of a ZHAW Sustainable Strategic Programme R&D Strategic Office and a Higher Educational Development Unit.

Inclusiveness is mentioned in half of the reviewed documents at ARC Fund and it is very well embedded in all projects, implemented with the support of EU funding. Inclusiveness is also at the core of all projects, implemented by DBT, but on the organisational level the systematic engagement of employees in decision-making could be further enhanced. Although not being included explicitly in the reviewed documents, inclusiveness at SDA is de facto practiced by involving stakeholders and the general public in co-design/co-creation of solutions to urban challenges. In contrast to the other project partners, inclusiveness is neither included, nor implemented by FCRI. Since LGA-WM is a coordinating body for 13 municipalities in the region of Western Macedonia, inclusiveness is a core principle in its work. Furthermore, it tries to also include representatives of civil society, academia and businesses in deliberations that address relevant societal challenges. At PES SL, inclusiveness is the focus of the *Internal Plan of Gender Equality* and has been identified as a goal by other reviewed documents, namely *Local Action Plan*, *How Quality is Worked at PES SL* and the *Annual Report 2020*. Several of the documents examined at THA identify inclusiveness as a goal, which includes maintaining contacts with the business community, strengthening public relations and ensuring social balance. On the institutional level, there is an effort to ensure a climate of mutual trust and dialog across all hierarchical levels. At UoWM, inclusiveness is enforced by law, since the university is a public body. Moreover, its purpose is to support the advancement of society, which requires the involvement of all relevant stakeholders, including citizens. Surprisingly, inclusiveness is not as well integrated at ZHAW as expected and is rarely mentioned in the reviewed documents.

Reflexivity is the main objective of the annual reports of ARC Fund that are published on the organisational website in the first quarter of each year in order to present an overview of the activities and achievements of the previous calendar year. Reflexivity is mentioned in the *Data Management Plan*, the *Employee Handbook*, the *Gender Equality Plan* (draft) and the *Annual report* of DBT. The *Business Plan* of DBT and the DBT Academy (knowledge sharing initiative in the organisation) are also perceived as examples of reflexivity on the organisational level. Reflexivity at SDA is associated with monitoring of the activities of the organisation against its objectives. At FCRI, reflexivity is practiced by the annual elaboration of the *Social Report*, which includes the actions carried out during the previous year and presents their impact on society. This dimension is included in the majority of the documents, reviewed at LGA-WM. At PES SL, the *Annual Report* serves as a tool for reflexivity as it collects, presents and evaluates the activities, carried out by the organisation each year. Reflexivity at THA is practiced by the constant revision of the municipal code and the annual employee performance reviews. Furthermore, it is enhanced by the ability to self-reflect, which is embedded in Swiss culture. At UoWM, reflexivity is a key focus of five of the examined documents. These documents include evaluation procedures, aiming to identify problems and provide solutions in order to improve the overall functioning of the institution. Reflexivity has always been a priority at ZHAW, since making frequent self-evaluations is a prerequisite for increasing the quality of the provided education.



Responsiveness at ARC Fund is mentioned in the *Statute* and the *Child Protection Policy*, and in practice is applied at the level of project implementation and is related to project risk management. At DBT responsiveness is included in the *Five Principles on Citizen Engagement*, which is a guide on the organisation of citizen engagement activities. Also, this dimension is part of the vision and mission of DBT to address and find solutions to societal needs. Responsiveness at SDA is mostly associated with making modifications to the policy and political agenda in times of crisis or when a socially desired result needs to be achieved (e.g. devising a programme for provision of grants to local civil society organisations in order to help them adapt to a digital working environment after the burst of the Covid-19 pandemic). As the *Strategic Plan* at FCRI has evolved over the years in order to adapt to organisational and territorial needs, it is an example of an activity that addresses both the anticipation and the responsiveness dimension. Responsiveness at LGA-WM is mainly associated with initiating activities that address the priority issues of the region such as the current energy transition. Since PES SL is a municipal body, responsiveness (adaptation) is not well embedded at the organisation, because it is mostly reactive rather than proactive. Still, responsiveness is in the focus of two of the reviewed documents, namely the *Internal Plan of Gender Equality* and the *Annual Report 2020*, which shows that this dimension has been recognised as important by the management of PES SL and more efforts in this direction will be invested. Responsiveness is not addressed in any of the documents, examined at THA, and being a municipal body, similarly to PES SL, THA is mostly reactive than proactive. Although the COVID-19 pandemic has created some opportunities for faster adaptation, the organisation of THA remains rigid. In contrast, UoWM has always been responsive to societal needs and the COVID-19 pandemic has shown that it is also very adaptable on the organisational level. At ZHAW, a gap has been identified between anticipation and responsiveness – although a lot of efforts have been invested in developing strategies and planning for the future, more could be done in order to effectively implement these strategies.

To sum up, although the AIRR dimensions are rarely directly mentioned in the documents examined by the RRI-LEADERS partners, after a thorough in-house analysis it can be concluded that they are practiced to a certain degree by all organisations, depending on the specific activities that are in the focus of each of them. For example, reflexivity is of crucial importance for the two higher education institutions as it allows them to maintain high educational standards. Not surprisingly, anticipation is least practiced at the municipal bodies, which tend to be rather reactive than proactive. Inclusiveness seems to be recognised as a very important dimension by all audited organisations. Although responsiveness is considered essential as well, more efforts have to be invested in order to embed it into the organisational culture of all RRI-LEADERS partners.

Furthermore, despite the various differences among the examined organisations (type/scope of activity, number of employees, institutional culture, country of origin, etc.), the RRI audit of their internal documents made the representatives of these entities aware of the importance and the potential that the RRI-AIRR framework has in increasing the institutional capacity and supporting the overall development of the respective organisation.

## Summary of interviews

A total of 76 members of staff at junior/middle/senior expert and managerial positions at the RRI-LEADERS project partners have been interviewed in February and March 2022 in order to share what their understanding about the RRI-AIRR framework was and if/how they have been applying its principles in their work. There was a good balance between the number of men and women, involved in this task. The majority of the interviewees were familiar with the RRI concept, while the AIRR dimensions were unknown to most of them. Public engagement, ethics, gender equality and open access seem to be the most relevant keys





according to the majority of the interviewees. Science education is important to FCRI and the two universities ZHAW and UoWM, but is not that relevant to the rest of the project partners as they are not engaged in scientific activities. Regarding AIRR, once the dimensions had been presented and explained, the majority of interviewees acknowledged their importance.

Overall, the purpose of RRI according to the interviewees is to link technological innovation and society by aligning technological developments with the aspirations, values and needs of people, thus perceiving it as a toolbox and/or a policy agenda, while AIRR is seen more as a process, a way to conduct research and innovation responsibly. In most cases the meaning and significance of the RRI-AIRR elements were implicitly known since they have been applied in practice, however, interviewees confirmed that these principles were not framed in the same terminology, nor have they been consolidated into official organisational documents. Most of the participants in the interviews said that they consider the majority of the RRI keys/AIRR dimensions as part of their responsibilities at work.

The importance of public engagement in implementation of projects, funded by the European Commission, has been constantly rising in the last decade, because public involvement is essential in order to arrive at feasible and actionable output when developing/revising policies in the field of research and innovation. Engagement of all societal actors into policymaking is a central objective of DBT, LGA-WM, SDA and ARC Fund, and is important according to some interviewees from FCRI, PES SL, UoWM, ZHAW and THA. Public engagement allows non-experts to express their opinion on a certain topic and is crucial for understanding the viewpoints of different societal groups. This RRI key also fills-in the gap between science and society by making lay people part of the R&I process. As an interviewee at ARC Fund said: *“Without the participation of citizens, science cannot, in practice, fulfil its mission to meet societal needs.”*

Ethics is of paramount importance for research organisations and higher education institutions and if not observed, this could be detrimental as it leads to loss of trust in science. Hence, this key has been pointed out as very important by interviewees from all project partners. In their opinion, ethics covers a wide variety of issues, including: proper referencing of data and information; respect to authorship rights and IPR; adhering to ethical standards during the elaboration and the implementation of research projects; respect for colleagues and participants in research; responsibility regarding the application of research results.

Provisions regulating gender equality and diversity exist in all partnering organisations. Although this key is perceived as very important by all interviewees, it is not viewed as an area where additional efforts need to be focused. The reason given in most cases is that the rules are already in place and all that is needed is to respect them. At LGA-WM, PES SL, UoWM, ZHAW and THA this key is manifested through the commitment of these organisations to ensure equal opportunities to both genders. Gender equality has taken a central place in all FCRI projects, activities and events. For example, there is a requirement for equal number of men and women, participating in activities, organised by the organisation. As the interviewees pointed out, this has occurred naturally, not by external or top-down obligation. At DBT, a responsibility to ensure a balance of men and women in project activities is only one of the many ways to interpret and practice gender equality. At ARC Fund, the key is perceived as a non-issue by all interviewees. Given the project-based nature of the work, the selection procedures for hiring new employees are based on excellence and relevant experience, irrespective of gender.

Open access to publications is a policy, followed by all project partners, because publications, elaborated within EU funded projects shall be of open access nature as per the requirements of the European Commission. At LGA-WM, open access is fostered by allowing the general public to access information and data about research projects as well as the regular activities of the organisation. At ARC Fund, access to publications is



ensured, but access to research data is still in its inception phase and more work in this regard has to be done. At DBT, open access is seen as a responsibility to promote dissemination of results in order to avoid outcomes being cut off from the outside world. At PES SL some employees mentioned the relevance of the open data RRI key when they manage large amounts of public data. Open access is an important element for establishing public trust both at UoWM and THA and is very important for ZHAW as well. In fact, ZHAW is the only University in Switzerland and among the few in Europe that has established an Open Educational Resources policy. According to the interviewees, open access is the least relevant key at FCRI.

Not surprisingly, the science education key is essential to the two universities ZHAW and UoWM. Being a University of Applied Sciences, interviewees at ZHAW in particular underlined their mission of serving as a bridge that connects students both with science and the practice (business and industry). Interviewees at ARC Fund, SDA, DBT, FCRI, PES SL, LGA-WM and THA support the view that this is the least relevant key to the activities of their organisations and as such it is not practiced.

In relation to anticipation, ARC Fund's staff members pointed out that it has two aspects – the first one is related to project activities and the other concerns long-term organisational development. In the context of project development, anticipation is connected to risk management – the better the proposed risk management strategy during the stage of project design, the easier it is to anticipate and manage changes during project implementation. On the level of projects, at DBT this dimension is also related to responding to risks during the execution of project activities. On an organisational level, it is perceived as considerations, concerning the business and organisational development of DBT. Anticipation is well embedded in the work of ZHAW's R&D Strategic Office and the Higher Educational Development Unit, which develops strategies that look ahead at the next 5 years. Interviewees at FCRI said that anticipation is implemented informally, but it is a crucial part of their work activities. At LGA-WM this dimension is practiced by designing research projects in accordance with local policy goals such as energy transition, regional innovation systems, digital transformation, people with disabilities, etc. At PES SL, staff members, who are involved in project management, recognise anticipation as a valuable AIRR dimension, because it is a key attribute in project planning. A mixed picture regarding anticipation was revealed at THA. Some interviewees described the municipal administration as very forward-looking, while others saw it as slow and reactive.

Inclusiveness is understood in several organisations (DBT, LGA-WM, ARC Fund, SDA) as a concept that is linked to public engagement, but is much broader. Its objective is to ensure a balanced and diverse participation of all relevant stakeholders in different events and activities in order to achieve results, based on the accumulated knowledge and experience of the actors involved. On an organisational level, it is a responsibility to engage staff members in the organisational development, as well as providing opportunities for interaction and cooperation of the staff with external stakeholders. At FCRI inclusiveness is not implemented because of cultural reasons, logistical difficulties (e.g. lack of time and human resources) and because it increases project management complexity. At PES SL interviewees who are directly involved in offering services to people consider this AIRR dimension as part of their responsibilities. At ZHAW inclusiveness was an unfamiliar term, understood mainly by the experts in diversity/gender equality. For THA, on the other hand, inclusiveness is closely linked to the Swiss tradition of direct democracy, making it essential to engage in a dialogue with the citizens and to work benevolently for common interests.

Reflexivity is largely associated with regular monitoring and reporting of activities, against the set KPIs and objectives (SDA, DBT, LGA-WM, ARC Fund, UoWM). The evaluations can be conducted both by internal organisational resources or by external independent experts, and their results can be reported in different forms and formats (mid-term and final technical reviews in case of projects, annual reports in case of overall organisational performance). Reflexivity does not mean simply to reflect on the achievements (and failures) of



the past period, but is also needed for drawing lessons for the future. Reflexivity as well indicates the organisational openness to discuss working conditions and/or existing internal policies and procedures with the relevant societal actors. At FCRI reflexivity is practiced through the preparation of annual quantitative and qualitative data analyses, including statistical data and satisfaction surveys. Similarly, at ZHAW, evaluations and surveys are regularly used as a guarantee for the higher quality of services provided. The accreditations system of ZHAW as a whole, and its Schools in particular, also requires continuous self-evaluations, as well as evaluations from third parties.

Regarding the AIRR dimension responsiveness, at ARC Fund it is perceived as flexibility to react promptly to changing situations during implementation of projects and as such it is strongly represented in the work of the organisation. At DBT, it is viewed as the aim of the organisation to influence actions in the context of project implementation, and as a responsibility to act upon feedback and input. Interviewees at FCRI said that responsiveness is a crucial part of their work. Responsiveness at UoWM is seen as part of the responsibilities of staff members to identify the emerging needs at university or regional level and act in order to address them. An example is the Holistic Care structure, which has been created recently in order to respond to the problem of alienation among students and between students and the local community. Thus, UoWM responded in a timely manner to personal and psychological needs of students and society that emerged prior to and after the burst of the COVID-19 pandemic. At ZHAW, mixed views were reported. Some respondents mentioned the slow pace at which the strategies and policies are being implemented, while others praised the responsiveness of the university to the challenges of our times, for example the COVID pandemic.

Furthermore, interviewees at SDA, THA and ZHAW shared their reflections on the overall AIRR framework and did not go into details about specific dimensions. According to the opinion of interviewees at SDA, the AIRR elements are implicitly known and are applied at the organisation, although they are not part of the organisational discourse, encompassing programme priorities and activities. However, respondents perceive RRI-AIRR as an add-on, rather than as a focus of SDA's work.

Since THA is a municipality, the AIRR dimensions are regarded as particularly relevant by interviewees, because the framework is in line with the growing awareness for good governance. One interviewee from THA even stated that the AIRR dimensions have the potential to become a modern framework for governance.

Similar to interviewees at SDA and THA, most respondents at ZHAW focused on the framework as a whole and said that the concept has already been reflected in the strategic documents of the university although the terms used therein are different. Moreover, RRI-AIRR aspects are part of the foundation principles of ZHAW, therefore, these could be found in the actions and commitments of ZHAW.

To sum up, overall, the RRI keys turned out to be easier to be understood, because they are more familiar to the participants, while the AIRR dimensions seem to be more abstract and a bit harder to understand. Therefore, it is not a surprise that most of the participating organisations do not have institutional strategies, addressing RRI-AIRR although practice has shown that most of the keys and dimensions are de facto being applied. About half of the 76 interviewees have been acquainted with RRI-AIRR prior to their participation in the interviews and they have also admitted that the main driver for the inclusion of RRI in projects is the European Commission. Some even said that participation in European projects has led to the introduction of the RRI keys in their organisation. Since the majority of the people who have been interviewed in all partnering organisations understand that the RRI-AIRR framework is useful and applying it brings a lot of benefits, some of the project partners have already begun the process of institutionalising the keys/dimensions, while others are beginning to contemplate how to do it exactly so that these principles do not just stay on paper, but rather be applied effectively.





## Summary of focus groups

A total of 64 members of staff, holding various (junior/middle/senior) expert and managerial positions at the project partners' organisations, participated in the focus groups, organised by each RRI-LEADERS partner in the period March – June 2022. Analysis of the discussions shows that only half of these 64 participants were familiar with the RRI-AIRR framework. There were substantial differences between organisations. RRI-AIRR was the least known among the focus group participants in both Swiss organisations – none of the group members at ZHAW were aware of the framework, and only two (out of five) participants at THA were familiar with it prior to the event. In three organisations, about one half of the focus group participants were familiar with the framework: three out of six at PES SL, four out of nine at LGA-WM, and five out of eight at FCRI. Seven out of nine at ARC Fund and all participants in the focus groups at SDA (eight people) and DBT (five) were aware of the RRI-AIRR framework. However, even the participants that were not aware of the concept and the related terminology have been applying the principles in their work and said that the keys and dimensions were relevant on the organisational level.

In the beginning of the events, participants were asked to rate the relevance of the RRI-AIRR approach to their own work as well as its relevance on an organisational level by applying a scale 1 to 5, where 1 means most relevant and 5 is least relevant. This evaluation confirmed the findings from the documentary review, namely that the RRI keys were more recognisable and popular than the AIRR dimensions. Another major observation is the fact that there were very slight differences in the scores of the keys/dimensions regarding the relevance to personal work and the relevance to the organisation. In most cases this difference is about 0.5 points. There is only one case, related to the public engagement key at the UoWM, which was rated as almost irrelevant to own work (rated with 4) and highly relevant to the organisation (rated with 1).

Overall, public engagement was assessed as the most important key both in relation to personal work and in connection to the activities on the organisational level at DBT, SDA, ARC Fund, PES SL and FCRI. Since this key is essential when developing policies of public interest, it is an important tool in the activities of municipal bodies such as PES SL and non-governmental organisations, supporting deliberative democratic processes and sustainable development (DBT, ARC Fund, SDA, FCRI). Ethics received a very high score in the focus groups of DBT, ARC Fund, SDA, THA, UoWM, FCRI, ZHAW, as adhering to ethical standards when conducting research is crucial in order to produce results based on universal research integrity principles.

Gender equality was evaluated as very relevant by participants in the focus groups of PES SL, THA, ZHAW, LGA-WM, ARC Fund, SDA and had a score around 3 at UoWM, FCRI and DBT. Some participants expressed the opinion that while gender balance policies were in place, more action should be taken in order to implement them effectively. Furthermore, it was pointed out that gender equality goes beyond the ratio of men versus women and aims at providing equal start and opportunity for all, with a focus on knowledge and skills instead of gender. This RRI key also includes taking account of gender issues when conducting research.

Open access received the highest score at UoWM, followed by ARC Fund, ZHAW, LGA-WM, SDA, while at FCRI and DBT it was evaluated as moderately relevant (score around 3). Not surprisingly, open access is most relevant for research performing organisations, due to the requirements of funding bodies such as the European Commission which demand open access to research data and publications.

Except for the UoWM and ZHAW, where it was rated as very relevant, science education received scores between 2.5 to 3.5 at THA, SDA, DBT, ARC Fund, FCRI, PES SL, and LGA-WM, which makes it the least important RRI key among the RRI-LEADERS project partners. However, this is not surprising given the fact that with the exception of the two universities, project partners do not usually engage in educational activities.



All of the AIRR dimensions are considered very important by UoWM, THA, ARC Fund, PES SL, SDA, DBT, LGA-WM and ZHAW, while FCRI participants have rated them with 3. Since all dimensions received high scores, it is not possible to conclude that one is more relevant than other. Most participants shared the view that the application of the AIRR framework is needed in order to develop inclusive forward-looking policies and programmes. Also, it is an important instrument in the field of governance, which makes it essential for the work of THA (the municipal authorities), SDA (municipal foundation, supporting the sustainable development of the Bulgarian capital Sofia), PES SL (municipal agency for economic development) and LGA-WM (local government association, implementing policies and practices on behalf of 13 municipalities in the region of WM). Furthermore, the AIRR dimensions are perceived relevant for sectoral policies in any field.

Some common drivers for the application of the RRI-AIRR framework in the RRI-LEADERS partners include the requirements of the funding authorities during project implementation. In some cases national legislation imposes obligations, especially for the higher education institutions, to adhere to some of the principles such as ethics, gender equality and open access (UoWM, ZHAW). In universities and other research performing institutes, there is also the necessity to have clear rules on how to conduct research properly. Moreover, there are innate drivers, stemming from personal morality and views regarding the code of conduct, which has to be followed at the workplace – this aspect is mainly related to the ethics and gender equality keys.

The lack of formal embeddedness of the keys/dimensions in internal documents, lack of concrete steps towards their integration in the activities of the respective organisation, organisational inertia, lack of competences, time, financial and human resources are the most common barriers that were mentioned by participants. Furthermore, some participants said that not all keys/dimensions are relevant to the activities of the organisation that employs them, which is considered another barrier for their integration.

Some common good practices include the involvement of citizens and stakeholders in policy-making; promotion of scientific knowledge by involving citizens in public engagement activities; providing a platform for collaboration among the quadruple helix stakeholders; and providing access to data and publications free of charge.

There are other interesting practices, implemented by several partners, which are worth sharing. One such example is the platform for anonymous complaints, related to ethical matters in research or mobbing issues among students, set up by UoWM. Another one is the collaboration of ZHAW with the city of Winterthur, aiming to turn it into a smart city. The Strategic Observatory initiative by ZHAW was also mentioned as an effective instrument for strengthening anticipation by providing an opportunity to identify strategic future topics in society and environment. A survey about a construction project, which was carried out by THA in a parking lot with the help of a QR code, was given as an example of a good practice for inclusiveness. SofiaLab, an urban living lab, run by SDA, with the objective to use citizen-centred approaches to ensure the transition to smart living and sustainable development, is another interesting good practice.

Currently, there are no specific criteria for monitoring and evaluation of the performance of the partnering organisations in relation to RRI-AIRR, which is a result of the lack of formal documents, addressing the framework. In cases when such monitoring and evaluation is performed, it is usually a result of project implementation requirements and includes some of the RRI keys and AIRR dimensions or is stemming from internal organisational practices for self-reflection.

To sum up, the analysis of the results shows that only half of the 64 participants have heard about the framework prior to their participation in the focus group although they had been applying some of its principles in their own work. Yet, familiarity with RRI was a bit higher than awareness about AIRR. After getting acquainted with the framework, most participants rated the keys and dimensions as very relevant both to their



personal work as well as for the activities on an organisational level. However, they also discussed the necessity to tailor the RRI-AIRR framework to the specific needs and activities of each organisation in order to integrate it effectively and avoid embedding it formally on paper and not using it in practice in their work. An example for the recognition of the relevance of the framework is the proposal for establishment of an RRI office at UoWM, which is waiting for the approval of the University's senate. Furthermore, ARC Fund is currently developing a Code of Ethics and Good Research practices, which will include chapters about four of the RRI keys, leaving out only science education, which is out of the scope of the activities of the Fund. The rest of the RRI-LEADERS partners have also begun contemplating strategies for embedding the framework into their organisations.

## Recommendations for targeted measures for integrating RRI-AIRR in the policies of the partners' organisations

Based on the analysis of interviews and focus group discussions, the following recommendations for the further uptake and more effective integration of RRI-AIRR approach into the audited organisations can be made:

- Internal procedures with specific steps to be followed and concrete aims to be achieved need to be developed. The document should include specifications about the rules and responsibilities that apply to individual employees, units, and the organisation as a whole. Such internal guidelines would complement organisational policies and help make RRI-AIRR keys and dimensions actionable for all employees. A section of the document, or a separate document, could also present experiences and good practices of other organisations as inspiration for their application in partner organisations.
- Organisations should proactively seek cooperation and networking with stakeholders adhering to RRI, by including them in pilot programmes, events, and projects.
- The RRI-AIRR framework can be efficiently promoted through RRI-related projects implemented in organisations.
- Annual informal meetings of entire personnel can be organised in the end of each year in order to discuss the accomplishments of the organisation and potential strategies for increasing the work effectiveness. Meetings of the staff responsible for organisational planning and evaluation could take place even more frequently in order to monitor changes and progress.
- Opportunities for internal mutual learning need to be created. Making information and learning resources available will enable RRI-AIRR diffusion and adoption by the staff members; designing feedback mechanisms with KPIs about difficulties/success in the implementation of the respective RRI keys is also recommended.
- A common understanding of what is ethical and what is not should be achieved at the level of the entire organisation. This can be done by offering more training programmes to the personnel. Furthermore, a more systematic culture for educating employees in practices and policies of the organisation is recommended.
- More time needs to be devoted to properly exploit the experience and knowledge accumulated at the organisational level, so that they can benefit everyone and facilitate the work in the organisation.



- The RRI-AIRR approach can be further integrated through better coordination of policies and practices in the organisations. This can be achieved by strengthening the culture of coordination and constructive dialogue.
- Existing documents such as Code of Ethics and Code of Conduct can be updated taking into consideration the RRI-AIRR approach. In organisations, where no such documents exist, they should be produced in such a way that would enhance the integration of RRI-AIRR into the existing processes within the organisations. This includes also specific documents regulating issues such as gender equality, diversity, public engagement and open access.
- While open access should be promoted and encouraged, issues of data protection and data accessibility must also be thoroughly considered.
- Organisations should not be focused only on gender equality, but need to encourage diversity in all its different dimensions (cultures, age groups, origin, etc.). More effort should be made to demonstrate the benefits which diversity brings to the organisations and how it can become a competitive advantage.
- If needed, additional in-depth analysis of organisational processes and resources can be conducted to decide which new organisational elements and practices may be introduced so that RRI-AIRR are streamlined into all organisational processes and become routine.
- A more systematic inclusion of employees in the development of new policies is suggested. The AIRR principles are particularly well-suited to guide the process of developing new policies.
- Better communication of RRI-AIRR values to external stakeholders and partner networks would promote the wider uptake of the RRI-AIRR keys and dimensions. Organisations should optimise and upgrade their communication channels and make the outputs of their work more accessible to a wider audience.

# Annexes

## Internal RRI review of ARC Fund

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### List of acronyms / abbreviations used in this document

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

ARC Fund – Applied Research and Communications Fund

EC – European Commission

EEN – Enterprise Europe Network

EU – European Union

IBS – Innovation and Business Support Programme.

IFRS – International Financial Reporting Standards

KPIs – Key Performance Indicators

R&D – Research and Development

R&I – Research and Innovation

RRI - Responsible Research and Innovation

SIC – Safer Internet Centre Programme

STEAM – Science, Technology, Engineering, the Arts, and Mathematics

STEM – Science, Technology, Engineering, and Mathematics

STIPP – Science, Technology and Innovation Policy Programme

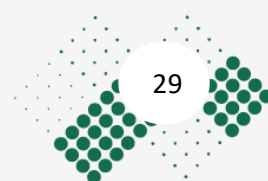
## Executive Summary

The audit report of the Applied Research and Communications Fund (ARC Fund) is based on the review of eight internal organisational documents, eight interviews with staff members at different positions within the organisation, and a focus group with nine participants. The report begins with a brief presentation of ARC Fund, which is a research and innovation policy institute, working towards the creation of a favourable environment for the development of the research and innovation system, and stimulating the free exchange of ideas, information, scientific knowledge and RTD results.

The reviewed documents include ARC Fund's Statute, Code of Conduct, Code of Ethics, Rules and Order for Performing Publicly Beneficial Activities, Child Protection Policy, and Rules for the processing and protection of personal data, as well as a selection of Audited Annual Financial Statements and Annual Reports. The aim of the documentary analysis was to establish which RRI keys (public engagement, ethics, open access, gender



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equality and science education) and AIRR dimensions (anticipation, inclusiveness, reflexivity, responsiveness) are directly mentioned in the documents, which are identified as a goal or value, and which represent the main focus of the document. The review also aimed to identify potential good RRI-AIRR related practices in the documents. When none of RRI keys and AIRR dimensions could be linked to a certain document, evaluation was made about the prospects to integrate them into the respective document as well as the potential benefit from doing so.

The term Responsible Research and Innovation, or RRI, has been mentioned only in ARC Fund's Annual Reports, where it has been appearing regularly since 2015, mostly in reference to the organisation's activities and achievements as part of different Horizon 2020 funded projects. The Reports also aim to promote the RRI framework in the Bulgarian research and innovation area. On the other hand, a more general notion of responsibility is prominently featured in almost all examined documents, covering different aspects of socially responsible behaviour, including transparency and accountability to societal actors and stakeholders, research integrity, data protection, and responsible and prudent management.

Research ethics or research integrity is the key focus, or is directly mentioned, in six out of the eight reviewed documents, while public engagement, open access and gender equality are featured in five documents. Clearly having a more marginal role compared to other RRI keys, activities related to science education are mentioned in three of the documents.

Anticipation and reflexivity are mostly contained in the organisation's mechanisms for the internal and external evaluation of its activities, responsible and adequate planning of the work, and various ways for reassessment of the previous work and adjustment of the current and future performance.

Research ethics, gender equality and diversity, open access, and inclusiveness can be clearly identified as leading values of ARC Fund according to its Code of Conduct, Code of Ethics and Child Protection Policy. Rules and Order for Performing Publicly Beneficial Activities also identify these keys and dimensions as a value, along with public engagement and science education.

The overall conclusion from the documentary review is that the idea and principles of the RRI-AIRR approach are well represented in the organisational documents of ARC Fund, however there is still significant room for improvement. To this end, in early 2022 the organisation began to develop a comprehensive Code of Ethics and Good Research Practices, which covers four of the RRI keys that are most important for ARC Fund: ethics, gender equality and diversity, public engagement and open access. AIRR dimensions are indirectly included and manifested through monitoring and evaluation of progress on the implementation of the Action Plans for each key, and planning of further necessary measures. The Code is to be formally endorsed in the second half of 2022 as an internal document all ARC Fund's personnel must comply with.

In order to obtain additional information about the knowledge and application of the RRI-AIRR approach in the organisation and to highlight the relevant areas where further actions are needed to embed it into the organisational policy and practice, eight ARC Fund's employees were interviewed: three representatives of the senior management, three representatives of the middle-level management and two from the project management level.

All interviewees are at least to a certain extent familiar with the overall RRI concept, which is not surprising as ARC Fund has worked on several RRI-focused EU funded projects in recent years. All interviewees except one confirmed their general awareness of the individual RRI keys as well, but this was not the case with the AIRR dimensions – while some interviewees have good knowledge, others are moderately aware of only some of the dimensions.





The interviewees defined the overall notion of responsibility in science and innovation in the following way:

- Understanding the needs of society and being closely linked with it;
- Addressing pressing societal challenges and conducting scientific research for the benefits of society;
- Adhering to rigorous ethical principles in research activities;
- Consulting scientific research with representatives of broader public groups and stakeholders, and presenting the research results in a way that is understandable by the society at large;
- Creating conditions for attracting and engaging young people in science, generating new knowledge and communicating it through open-access/open-science good practices, and following rigorous scientific ethics in general (open access/open science, gender balance and diversity, inclusiveness, research ethics).
- Science going beyond the boundaries of the scientific community and being more open to society, building bridges and finding common grounds for joint actions of the scientific community and society;
- Non-discrimination in scientific research.

Research ethics and public engagement are the most easily recognisable RRI keys in the organisation, as the former is an indispensable part of project management and the latter is an integral part of research methodologies of numerous implemented projects. Open access is a policy followed by the organisation since its establishment. Gender equality is seen as a non-issue by the interviewees, because the gender balance has been achieved in ARC Fund long ago, and the issue is also covered by some of the implemented research projects. Science education is the least relevant for the organisation RRI key.

Anticipation is considered essential for planning the long-term development of ARC Fund, but also for successful project implementation. Inclusiveness is considered to be much broader than public engagement and aims at a diverse yet balanced participation of all relevant stakeholders in the processes taking place in the organisation. Reflexivity is practiced through different forms of monitoring and evaluation, which usually occur during midterm and final reviews of different projects, or at the end of each calendar year, when ARC Fund's Annual Reports are being prepared. Responsiveness is considered one of the strongest traits of the organisation – small but highly skilled and experienced research teams are able to quickly react and adapt to changing situations during project implementation, or other unexpected changes in the external environment.

In general, most interviewees consider the RRI-AIRR approach to be very important for ARC Fund and its current and future work, but also express some concerns that integration of the approach into the organisational policy and practice will be a long process and that it might represent an additional burden to the personnel, especially to the ones that are not fully familiar with it or are not yet convinced about its potential benefits.

In order to explore issues not sufficiently addressed during the interviews, and clarify the divergent opinions regarding the potential role of RRI-AIRR in the overall institutional/organisational development, a focus group was organised. Nine persons participated in the discussion – seven of them said that they were aware of the RRI-AIRR framework and two learned about it during previous activities within the current project. One of the participants noted that ARC Fund has been working with the RRI concept for years and has been promoting it in the higher education and research systems of Bulgaria, confirming its sustainable performance as a pioneer in the introduction of such types of policies at national level.

Participants prioritised the RRI keys and AIRR dimensions, evaluating them in terms of the relevance to their own work, as well as the applicability at the level of the organisation. The evaluation and the subsequent discussion confirmed the conclusions from the interviews: public engagement and research ethics are the most relevant and recognisable among the RRI keys, followed by open access. Gender equality and science

education are less relevant, but for different reasons – the former is rather neglected and seen through a simplified lens of gender parity, while the latter is only peripheral to the organisation’s goals and activities.

Participants agreed that the main barrier slowing down the process of the RRI-AIRR integration is the lack of tangible blueprint for such a process. What is needed is a concrete and actionable internal document, actively promoted by the management and presented/explained to all employees. The Code of Ethics and Good Research Practices, an organisational document that is currently being developed, covers four of the five RRI keys, and will make ARC Fund the first organisation in Bulgaria with such a wide-ranging organisational document, based on the RRI-AIRR approach.

Major recommendations from the focus group:

- Promote the RRI-AIRR framework through ARC Fund’s projects.
- Develop a practical guide where experience and good practices are shared with other organisations.
- Develop an internal procedure with specific steps to be followed and concrete aims to be achieved.
- Organise annual informal meetings in the end of each year in order to discuss the accomplishments of each team/programme and potential strategies for increasing the work effectiveness.
- Create opportunities for internal mutual learning.

## Introduction

### Type of organisation and legal form

Established in 1991, the Applied Research and Communications Fund (ARC Fund) is a research and innovation policy institute. It is committed to maintaining an independent and non-partisan position while developing knowledge in support of policy, industry and society.

ARC Fund is a not-for-profit organisation acting for the public benefit. Up to 2017, it was registered at the Sofia City Court and the Central Register of Not-for-Profit Legal Entities at the Bulgarian Ministry of Justice. In 2018, following amendments to the national legislation, ARC Fund was re-registered in the public Commercial Register and Register of Not-for-Profit Legal Entities at the Registry Agency under the Minister of Justice.

In line with its status as a public-benefit organisation, ARC Fund follows strict legal provisions, which stipulate full transparency and accountability of its activities, and subject it to a number of financial and activity reporting rules.

### Number of employees

Board of Trustees: 4 persons (all male)

Senior Management: 5 persons (2 female, 3 male)

Innovation and Business Support programme: 5 persons (4 female, 1 male)

Science, Technology and Innovation Policy programme: 4 persons (3 female, 1 male)

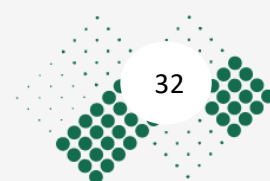
Safer Internet Centre programme: 3 persons (1 female, 2 male)

Finance and Administration: 6 persons (4 female, 2 male)

Total: 27 persons (14 female, 13 male)

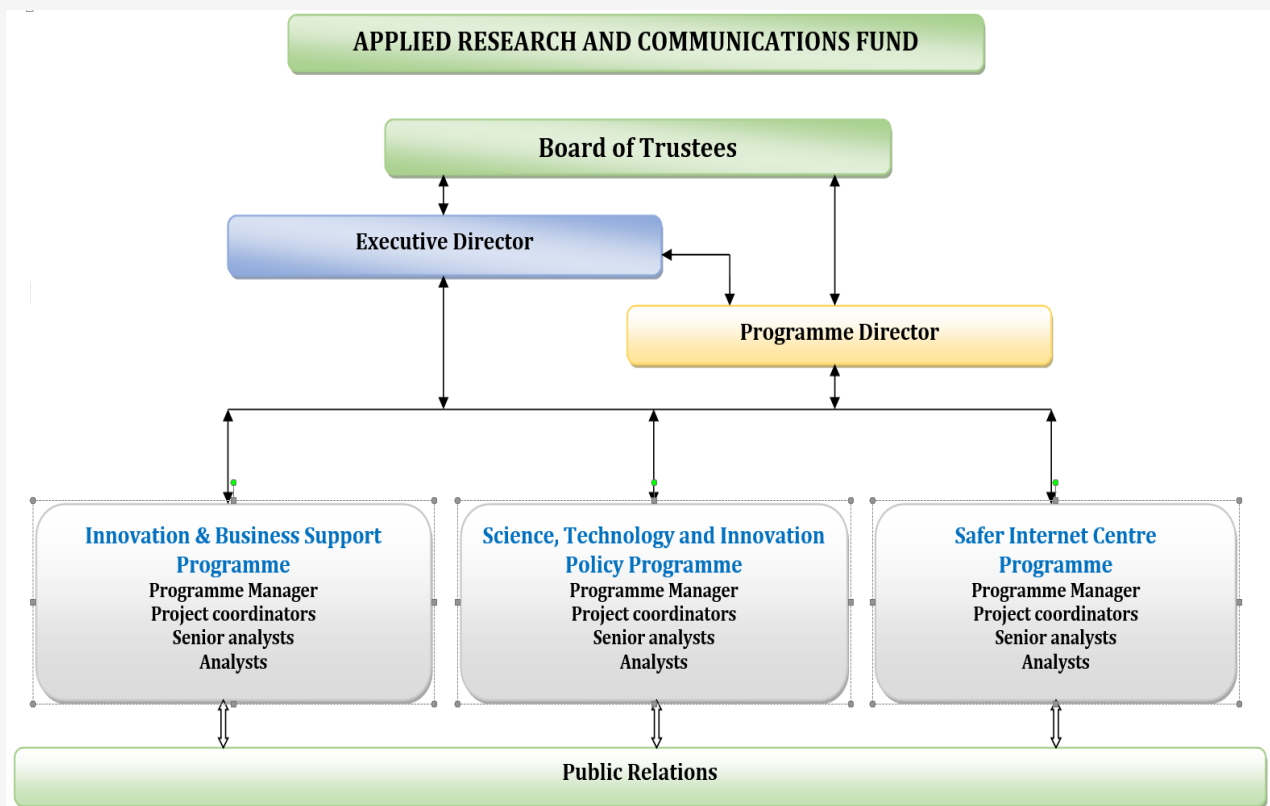


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## Organisational structure (organigramme)



## Mission or main purpose of the organisation

The mission of ARC Fund is to drive the development of a knowledge-based economy and society through targeted promotion of innovation, knowledge transfer, cross-border networking and capacity-building. In pursuit of this mission, ARC Fund aims (1) to create a favourable environment for the development of the research and innovation system, and (2) to contribute to and stimulate the free exchange of ideas, information, scientific knowledge and RTD results.

The means ARC Fund employs to realise its strategic goals include applied policy research and analysis, design of innovative solutions to development problems, elaboration of new policy concepts and innovative policy-making tools, education and training, and various forms of liaison with governmental and non-governmental agencies.

## A brief presentation

ARC Fund has three thematic programmes: (i) Science, Technology and Innovation Policy Programme (STIPP), (ii) Safer Internet Centre (SIC) Programme, and (iii) Innovation and Business Support (IBS) Programme.

The Science, Technology and Innovation Policy Programme (STIPP) is the programme most committed to the principles of RRI. All strategic activities of STIPP are undertaken in support of strengthening the link between

research, society, and policy, and aim at mobilising different actors and societal stakeholders in the exchange of knowledge, experience and ideas so as to derive sustainable solutions to societal challenges. The programme is a pioneer in the use of technology foresight and technology assessment in the development of public policies in Bulgaria and across the region. Citizen or public engagement has been at the heart of STIPP's work for over a decade.

The Bulgarian Safer Internet Centre aims to enhance the digital literacy of children and adults through various training, engagement and other initiatives. It maintains an online hotline for reporting illegal and harmful content on the web, develops and disseminates materials on the issue of the protection of minors online, and conducts trainings for teachers and children in the field of safe Internet use. Safer Internet Centre cooperates closely with the Ministry of the Interior and the Ministry of Education and Science, and numerous IT companies and NGOs.

The Innovation and Business Support Programme promotes innovation and entrepreneurship culture in Bulgaria and helps Bulgarian SMEs to establish themselves on the global market. It has been acting as the national coordinator of Enterprise Europe Network (EEN) node in Bulgaria<sup>3</sup> since 2008. The programme also advises businesses, research and industry organisations on how to prepare applications for Horizon 2020 and Horizon Europe calls focusing on the SME Instrument.

ARC Fund has also a commercial subsidiary – ARC Consulting, established in 2006. It helps ARC Fund to better achieve its mission, mainly in the domain of innovation, ICT, and business support, by delivering high-quality consulting services to its partners and customers. ARC Fund and ARC Consulting together make up the ARC Fund Group.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

As a value-based research and innovation policy institute, ARC Fund's core activities are focused on the development of a knowledge-based economy and society in national, regional, European and global contexts, and the targeted promotion of innovation, knowledge transfer, cross-border networking and capacity-building. In pursuit of these objectives, ARC Fund plays a pivotal role in the development and promotion of the Bulgarian innovation system. The most important aspects of this role are *Innovation.bg* report, the *National Innovation Forum*, and the *Innovative Enterprise of the Year* contest.

The *Innovation.bg* report has been published annually since 2004. It assesses the Bulgarian economy's innovation performance, reviews the current status and development prospects of Bulgarian innovation system, and analyses the policy of the Bulgarian government for supporting competitive businesses.

The National Innovation Forum showcases the performance of top Bulgarian innovative companies. The Forum brings together each year hundreds of representatives of the policy, research and business communities to share views on Bulgaria's innovation performance and potential.

The Innovative Enterprise of the Year contest acknowledges innovative enterprises, which have developed new or have significantly improved their existing products, services or processes over the last three years. All finalists of the contest receive ARC Fund's Excellence in Innovation label.

<sup>3</sup> <http://www.een.bg/bg/>



# Review of the internal organisational documents

List of reviewed documents and the date of publication:

- Statute (2007)
- Code of Conduct (2008)
- Code of Ethics (2008)
- Rules and Order for Performing Publicly Beneficial Activities (2008)
- Child Protection Policy (2016)
- Rules for the processing and protection of personal data (2018)
- Audited Annual Financial Statements
- Annual Report

## 1. Statute of Applied Research and Communications Fund

### Brief summary of the document:

Year of publication: 2007

Target audience: Internal document

Main purpose: Statute is one of ARC Fund's principal founding documents, and it spells out its objectives, activities, management and administration procedures, funding rules, and conditions for potential termination.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Societal engagement or public engagement	No	Yes	No	No	N/A
Open access and open science	No	Yes	No	No	N/A
Science education	No	Yes	No	No	N/A
Anticipation, foresight, vision, planning	No	Yes	No	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A
Responsiveness and adaptation	No	Yes	No	No	N/A

### A concise review of the most relevant and interesting points of the document:

Art. 2 lists objectives and activities of ARC Fund. Most of these objectives are quite directly related to several RRI keys (public engagement, open access and science education) and AIRR dimensions (anticipation, reflexivity, responsiveness). For example, organisation's aim to contribute to and stimulate the free exchange of ideas, information, scientific knowledge, RTD results and intellectual property rights is based on the idea of

providing open access to knowledge generated not only through ARC Fund's own research activities, but advocates open and unrestricted exchange of knowledge in general.

ARC Fund's activities such as trainings and other educational initiatives focused on research, information, technology and innovation are very close to the definition of science education. The objective to "*promote the development of cultural, scientific and educational links between Bulgaria and other countries*" can be linked with the science education, which can also be said for the objective "*to contribute to creative, intellectual and professional realisation of young and talented Bulgarians*".

Public engagement, which has been in the focus of ARC Fund for many years, is manifested in activities such as seminars, meetings, round tables, competitions, training courses, workshops and exhibitions organised both inside and outside Bulgaria. This is additionally underlined by the objective to assist the participation and initiatives of Bulgarian citizens in international organisations in the field of innovations and information society.

Activities related to development of recommendations to the competent government authorities concerning the improvement of existing legislation and standards in the areas of research and innovation have a notable anticipatory character, but they are also responsive inasmuch the intention of these recommendations is to bring the Bulgarian legislation in line with the international standards.

Statute is one of the fundamental organisational documents. While it can be updated should the circumstances require such an act, it is not feasible to recommend additional inclusion of RRI-AIRR aspects in the document.

## 2. Code of Conduct

### Brief summary of the document:

Year of publication: 2008

Target audience: Internal document

Main purpose: The document spells out the standards of conduct and other obligations ARC Fund's employees need to observe when attending their professional responsibilities.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	No	No	Yes
Responsible research and innovation (RRI) ( <i>the English language term</i> )	No	No	No	No	Yes
Responsible research and innovation ( <i>the translated equivalent</i> )	No	No	No	No	Yes
Research ethics or research integrity	Yes	Yes	Yes	No	N/A
Societal engagement or public engagement	No	Yes	No	No	N/A
Gender and diversity	Yes	Yes	Yes	No	N/A
Open access and open science	No	Yes	No	No	N/A
Science education	No	No	No	No	Yes



Anticipation, foresight, vision, planning	No	Yes	No	No	N/A
Inclusiveness	Yes	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A

### A concise review of the most relevant and interesting points of the document:

While the Code of Conduct is a very short document (3 pages), most of the RRI keys and AIRR dimensions are very explicitly covered. There are specific sections dedicated to Fairness and Equity (ethics and inclusiveness), Moral and Ethical Integrity (ethics), Good Governance (anticipation and reflexivity), Communication and Collaboration (open access and public engagement), Gender Equity (gender equality), Environmental Consciousness (responsibility and ethics), and Sustainability (responsibility).

The document starts by presenting the mission and objectives of ARC Fund. One of the objectives that is quite close to the notion of public engagement is the promotion of *“public-private partnerships bringing together key actors in government, industry, academia and civil society to provide solutions through technology transfer and increasing business competitiveness.”* The commitment to public engagement is confirmed also through the pledge that all ARC Fund’s projects will be *“planned, designed, implemented, monitored and evaluated with the participation of the relevant stakeholders and other people concerned.”*

The goal of involving *“all men, women, and young people to the greatest possible extent in the conception, implementation and evaluation”* of ARC Fund’s activities and projects is an undeniable manifestation of organisation’s implementation of the AIRR dimension of inclusiveness. Respect for the principle of inclusiveness is further asserted by the statement that *“the Fund shall respect the dignity and identity of individuals and their culture, faith and values”*.

Organisation’s dedication to the principles of ethics and integrity is attested by the inclusion in the Code of the following provisions:

- *“Art. 2. The Fund shall exercise and promote fairness, impartiality and equity in all of its activities and in its dealings with interested parties, partners and the general public.”*
- *“Art. 3. The Fund shall be truthful in all its activities and refrain from practices that undermine its moral and ethical integrity.”*
- *“Art. 4. The Fund shall be transparent and accountable in its dealings with the Government and partners, the public, donors and other interested parties.”*
- *“Art. 5. (2) All of the organisational transactions of The Fund shall be free of conflicts of personal and professional interest.”*
- *“Art. 9. The Fund shall exercise a responsible and responsive approach to the care of the environment and to the proper management of the eco-system in all its activities.”*

Art. 8 of the Code addresses ARC Fund’s commitment to *“advance gender balance and equity”* and *“ensure the equal participation of women in all its activities.”* Furthermore, the Code obliges the organisation to *“fully integrate gender sensitisation into its human resource development and promote non-discriminatory working practices and relationships.”* The policies and procedures, in which gender equity is promoted, include recruitment, hiring, training, professional development and advancement.

ARC Fund fully upholds the principle of open access, as clearly stated in the Code of Conduct, Art. 7 (3): *“The Fund shall share and exchange information, experiences and resources pertinent to its mission with the view to promoting, learning and common understanding within and outside the areas of its activities.”*



AIRR dimensions of anticipation and reflexivity are contained in organisation's mechanisms for the internal and external evaluations of its activities, which are based on unified standards and performance indicators. ARC Fund applies different *"monitoring and evaluation tools to gauge its performance in relation to its objectives and the short and long term goals of its activities."*

### 3. Code of Ethics

#### Brief summary of the document:

Year of publication: 2008

Target audience: Internal document

Main purpose: The document defines the ethical standard and values that ARC Fund is committed to.

#### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	No	N/A
Research ethics or research integrity	Yes	Yes	Yes	Yes	N/A
Societal engagement or public engagement	No	Yes	No	No	N/A
Gender and diversity	No	Yes	Yes	No	N/A
Open access and open science	No	Yes	Yes	No	N/A
Anticipation, foresight, vision, planning	No	Yes	No	No	N/A
Inclusiveness	No	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	N/A

#### A concise review of the most relevant and interesting points of the document:

ARC Fund's Code of Ethics is a short, but concise document, spelling out the ethical principles and defining the values organisation adheres to. The document starts with a Statement of Values, which lists the values that inform and guide all ARC Fund's policies, practices and actions:

- Commitment to the public good;
- Accountability to the public;
- Respect for the worth and dignity of individuals;
- Inclusiveness and social justice;
- Respect for pluralism and diversity;
- Transparency, integrity and honesty;
- Commitment to excellence and to maintaining the public trust.

The RRI-AIRR aspects such as ethics, integrity, diversity and inclusiveness are clearly identified as values, while public engagement, open access and reflexivity are implicitly included.

The spirit of RRI-AIRR is present in the Art. 2 of the Code, which deals with the governance of the organisation. ARC Fund has a Board of Trustees, which manages its finances, operations, and policies, and as such is

responsible for ethical issues (prevention of the conflict of interest; ensuring that all transactions and dealings of ARC Fund are conducted with integrity and honesty; responsible and prudent management of resources), policies and practices of non-discrimination and inclusiveness (ensuring that working relationships within the organisation and with its beneficiaries are based on mutual respect, fairness and openness; fair and inclusive hiring and promotion policies and practices for all staff positions), and anticipatory and reflexive governance (guaranteeing that ARC Fund has the capacity to carry out its programmes effectively).

The Code further stipulates that ARC Fund will provide comprehensive and timely information about its activities and funding to the public, the media, and other stakeholders. Organisation's financial and activity reports are published annually and are available on the Fund's website – a practice reflecting the open access principle.

Art. 5 (Inclusiveness and Diversity) testifies about organisation's commitment to promote inclusiveness in its hiring, retention, promotion, board recruitment and constituencies served.

Part II of the Code sets out the ethical standards in the staff conduct in relation to their professional responsibilities. The Board of Trustees and staff members may not participate in or be associated with dishonesty, fraud, deception, or actual, potential, or perceived conflicts of interest.

A good practice that can be identified in the Code is the role of the Board of Trustees. The Board is the body that staff members can consult with whenever they believe they might be in a possible conflict of interest, or are in doubt regarding any other issue pertaining to the ethical conduct of research. The Board of Trustees reviews such cases and advises the staff members on the appropriate course of action.

## 4. Rules and Order for Performing Publicly Beneficial Activities

### Brief summary of the document:

Year of publication: 2008

Target audience: Internal document

Main purpose: The document regulates the mechanisms and ways in which the public benefit activities of ARC Fund are carried out.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	No	N/A
Research ethics or research integrity	No	Yes	Yes	No	N/A
Societal engagement or public engagement	No	Yes	Yes	No	N/A
Gender and diversity	No	Yes	Yes	Yes	N/A
Open access and open science	No	Yes	Yes	No	N/A
Science education	No	No	Yes	No	N/A
Anticipation, foresight, vision, planning	No	Yes	No	Yes	N/A
Inclusiveness	No	Yes	Yes	Yes	N/A



### A concise review of the most relevant and interesting points of the document:

The document lists the main guiding principles ARC Fund must follow while carrying out its public benefit activities. They include:

1. Non-discriminatory treatment (equal participation of all men, women and young people in the development, implementation and evaluation of all ARC Fund's activities and projects, and respect of the dignity, culture, religion and values of each individual).
2. Partnership and collaboration.
3. Targeted and effective allocation of financial resources.
4. Fair, impartial, transparent, accountable and equitable relations with public authorities, partners, the public, donors and other stakeholders.
5. Openness and publicity.
6. Autonomy.

The first principle clearly corresponds with the RRI key gender equality and diversity, and the AIRR dimension of inclusiveness. The second principle is loosely related to the RRI key public engagement, as its main focus is on cooperation with the organised and institutional actors, and less so with the society/public, which is mainly seen as beneficiary of ARC Fund's activities. The third principle concerns responsibility in general, but also relates to the dimension of anticipation. The fourth principles again demonstrates organisation's commitment to responsible conduct, especially in its relations with other stakeholders. The fifth principle can be associated with the open access, while the sixth one has no direct linkages with the RRI-AIRR approach.

The document further lists the objectives and goals of ARC Fund. Among these, disseminating and stimulating the free exchange of ideas and information, scientific knowledge, intellectual achievements and intellectual property rights clearly corresponds with the idea of open access.

The activities performed by the organisation are also listed in the document:

1. Educational, training, cultural, research, information and technical programmes and initiatives in the field of innovation and communication technologies;
2. Symposia, seminars, meetings, round tables, competitions, courses, exhibitions and other socially accepted forms of communication and networking;
3. Support for the participation and initiatives of Bulgarian citizens in the field of innovation and the information society;
4. Elaboration of proposals to the competent state institutions for the improvement of the relevant normative acts and state standards in the areas covered by the objectives of the ARC Fund;
5. Publication and distribution of scientific and popular scientific literature, periodicals and papers.

Most of these activities are in the scope of public engagement, but are as well close to the AIRR dimension of inclusiveness, as they support the involvement and participation of all citizens in innovation and research activities. While not mentioned directly as a goal or activity, science education is supported through generation and distribution of scientific publications.

As substantial part of the document deals with the goals of the organisation, clearly defining the means and order for achieving them, it can be concluded that the *Rules and Order for Performing Publicly Beneficial Activities* is a good example of an anticipatory document, necessary for responsible and adequate planning of the work in a research-performing organisation.



## 5. Child Protection Policy

### Brief summary of the document:

Year of publication: 2016

Target audience: Mixed purpose (instructions for the internal staff and the external stakeholders-partners)

Main purpose: ARC Fund's Child Protection Policy delineates the organisation's commitment to high professional integrity, openness and transparency in decision-making processes and activities. The document addresses issues of child safety, wellbeing, and empowerment as essential elements of responsible and ethical design and implementation of all projects and programmes, which directly or indirectly focus on children.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	Yes	N/A
Research ethics or research integrity	Yes	Yes	Yes	Yes	N/A
Gender and diversity	No	Yes	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	Yes	Yes	Yes	N/A
Inclusiveness	No	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	N/A
Responsiveness and adaptation	No	Yes	No	Yes	N/A

### A concise review of the most relevant and interesting points of the document:

ARC Fund's Child Protection Policy was developed first for the needs of the 'Safer Internet Centre' Programme and then endorsed by the organisation's Board of Trustees. The document lists the ethical values and principles the employees must uphold in and outside the office, and describes in detail all procedures and obligations that need to be met when working with children and minors. The Policy is binding not only for organisation's staff, but also for partners in concerned projects. The document is an excellent example of a formal document outlining the ethical requirements for the work implemented in and by the organisation.

Responsibility is very much in the focus of the document, which underlines ARC Fund's commitment to contribute to building a society where children not only have nominal rights, but can in fact feel and be safe, and have the capacity and opportunity to fully enjoy their rights. The well-being of children is defined in the document as the core value of the organisation, which places their interests above those of individual adults or other stakeholders. All staff members are obliged to ensure that their actions do not cause any harm to the children and that in all their activities they are guided by respect for children's rights. Employees of ARC Fund are further obliged to *"treat seriously, professionally and responsibly any complaint received about a child at risk or suspected of being at risk."*

Gender equality and diversity aspect is addressed by two of the core principles: *"Children should be treated with respect regardless of their gender, ethnicity, language, religion, beliefs, abilities, limitations, sexual orientation or social status"* and *"every child has strengths and potential for development."*

In addition to following its own Code of Ethics, Child Protection Policy stipulates that when dealing with children and minors, ARC Fund will also respect the Code of Ethics of the State Agency for Child Protection.



Anticipation and planning have an important role in the document. One of the core principles is minimisation and prevention of all possible risks that may arise when working with children. All staff members are obliged to plan and organise their work and the workplace in such a way as to minimise potential risks. The risk assessments are obligatory for all operations, programmes, projects and activities of the organisation.

Reflexivity and self-evaluation: Executive Director of ARC Fund informs the Board of Trustees every six months about how the Child Protection Policy is applied in the organisation's operational activities. The information includes identified challenges and barriers, observations and results of policy implementation. The Executive Director is further required to immediately inform the Board of Trustees when a policy violation has been identified. Based on this notification, the Board decides on the appropriate course of action. How the Policy is applied is regularly presented in the Annual Report on the activities of ARC Fund.

The Child Protection Policy is updated, adapted and expanded every three years, and more frequently if necessary. This is done in order to respond and adapt to the changing contexts and circumstances, and/or if additional stakeholder needs have been identified.

Public engagement is not directly mentioned or identified in the document, but one of the requirements for the organisation's personnel does mention participation and engagement of children and young people, who should be encouraged to form and share their views on issues that affect them. Likewise, open access is only noted in relations to the policy itself: *"Child Protection Policy should always be accessible to all stakeholders in paper and online formats."*

## 6. Rules for the processing and protection of personal data

### Brief summary of the document:

Year of publication: 2018

Target audience: Internal document

Main purpose: The rules govern the mechanisms for processing and protection of personal data for employees, partners, trainees, job applicants, and participants in events and activities organised by ARC Fund; obligations of data processors and their liability in the event of failure to comply with these obligations; data subjects' rights; and the necessary technical and organisational measures to protect the personal data of data subjects.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	No	No	No	N/A
Research ethics or research integrity	Yes	No	No	No	N/A

### A concise review of the most relevant and interesting points of the document:

The processing of personal data at ARC Fund is carried out in compliance with the following principles:

- lawfulness;
- fairness and transparency;
- relevance of the processing to the purposes;
- accuracy and timeliness;



- data minimisation;
- storage limitation;
- accountability, integrity and confidentiality;
- user consent to data processing.

The data subjects have the right to access their personal data by submitting a written request to the data processor, including electronically, either in person or through an authorised person. They also have the right to object to the processing of their personal data, where there is a lawful basis for doing so; the right to rectification or completion of inaccurate or incomplete personal data; the right to restrict the processing of personal data in certain cases; and the right to be “forgotten,” i.e. to request that personal data be erased.

The data controller is obliged to provide data subjects with summary of the collected and processed personal data; to provide concise and intelligible information on what categories of personal data are collected and for what purposes they are processed; information about the rights of data subjects; and the contact details of the person responsible for handling of personal data at the ARC Fund. The data controller is also obliged to implement strict security procedures for the storage and disclosure of personal data and to protect it from accidental loss, destruction or damage.

While responsibility and ethics are not explicitly mentioned in the document, the above provisions demonstrate the importance of these two principles in the ARC Fund’s approach to processing and protection of personal data.

Responsibility and ethics are of exceptional importance regarding the work of the Safer Internet Centre programme, and maintaining internal databases of reports obtained through hotline for reporting illegal and harmful content on the web. This data cannot be disclosed to third parties under any circumstances except for the purpose of investigative and procedural actions, which is done with the consent of the sender. The consent of the sender is not required when there is a reasonable suspicion that a risk to the life, health or welfare of a child exists, whereas the information is provided to the competent child protection authority in accordance with the legal obligations.

ARC Fund does not carry out a Personal Data Protection Impact Assessment due to the nature of the data processed and the number of data subjects, which does not give grounds to assume that the processing operations of the controller and the processor are likely to pose a high risk to the rights and freedoms of natural persons. An impact and risk assessment are carried out only in the event of an emergency, which may result in a risk of a breach of the confidentiality, integrity or availability of personal data. In such a case, the Bulgarian Commission for the Protection of Personal Data shall be notified within 72 hours of the occurrence of the situation.

## 7. Annual Financial Statements

### **Brief summary of the document:**

Year of publication: Annual

Target audience: Intended for external audience

Main purpose: Annual Consolidated Financial Statements are prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU). They comprise the financial statements of the ARC Fund and its consulting arm (ARC Consulting) as of 31 December each year.



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101006439

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Anticipation, foresight, planning	No	Yes	No	No	No
Reflexivity, self-evaluation	No	Yes	No	No	No

### A concise review of the most relevant and interesting points of the document:

Annual Financial Statements of ARC Fund are above all an example and good practice of reflexivity and evaluation, but they are also essential for timely and accurate anticipation and planning. They comprise the consolidated statement of the financial performance of the organisation, including its income, changes in equity and cash flows, and a summary of significant accounting policies and other explanatory notes. The Statements are audited by an independent external auditor in accordance with the International Standards on Auditing, the Code of Ethics for Professional Accountants of the International Ethics Standards Board for Accountants (the IESBA Code), and the ethical requirements of the Law on the Independent Financial Audit (LIFA).

The management of ARC Fund is responsible for the accurate preparation and fair presentation of Annual Financial Statements, which are free from mistakes and inaccuracies. The consolidated Financial Statements are indispensable for the management to evaluate the current financial standing of the organisation, and plan its operation and development in the coming period.

## 8. Annual Report

### Brief summary of the document:

Year of publication: Annual

Target audience: Intended for external audience

Main purpose: Annual Reports of ARC Fund present organisation's track record in performing high-quality applied research as well as its main achievements, providing support for the development and implementation of innovation policies, and establishing productive partnerships with policy institutions and science centres in Bulgaria and across Europe. Reports are published each March and provide a concise overview of activities and achievements of the previous calendar year. As a not-for-profit legal entity acting for the public benefit, ARC Fund is obliged by the Bulgarian law to submit annually an activity report and financial statements for entry in the public Commercial Register and Register of Not-for-Profit Legal Entities.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	No	No	N/A
Responsible research and innovation (RRI) ( <i>the English language term</i> )	Yes	Yes	No	Yes	N/A
Responsible research and innovation ( <i>the translated equivalent</i> )	Yes	Yes	No	No	N/A



Research ethics or research integrity	No	Yes	No	No	Yes
Societal engagement or public engagement	No	Yes	No	No	Yes
Gender and diversity	No	Yes	No	No	Yes
Open access and open science	No	Yes	No	No	Yes
Science education	No	Yes	No	No	Yes
Reflexivity, evaluation, self-evaluation	Yes	No	Yes	No	N/A

### A concise review of the most relevant and interesting points of the document:

Responsibility in terms of a broader socially responsible behaviour, transparency and accountability to societal actors and stakeholders is the underpinning philosophy driving ARC Fund's organisational strategy, and the Annual Reports are an explicit manifestation of this policy. Reports are a testimony to organisation's stern commitment to the values such as accountability to the public, transparency, integrity, honesty and maintenance of the public trust.

Since 2015, when it was included for the first time, Responsible Research and Innovation, or RRI, (both the English language term in the English version of the report, and its translation *Отговорните наука и иновации* in the Bulgarian version), has been featured in all Annual Reports. Describing ARC Fund's activities and achievements in this field, mostly in the frame of the Horizon 2020 funded projects, the Reports also strive to popularise the term in the Bulgarian research and innovation area. ARC Fund has been working actively to promote and integrate Responsible Research and Innovation and establish it as a guiding principle of Bulgarian R&I performing and funding organisations.

Each report has highlighted a certain RRI-related good practice, usually undertaken as part of the projects such as RRI-Practice (Responsible Research and Innovation in Practice), TeRRitoria (Territorial Responsible Research and Innovation Through the involvement of local R&I Actors), ETHNA System (Ethics Governance System for RRI in Higher Education, Funding and Research Centres), CASI (Public Participation in Developing a Common Framework for Assessment and Management of Sustainable Innovation), CIMULACT (Citizen and Multi-Actor Consultation on Horizon 2020), and others.

RRI keys (ethics, public engagement, gender equality and diversity, open access and science education) are regularly mentioned in the reports, but as part of the presentation of activities and achievements within the aforementioned RRI-related projects. They are not identified as a goal or value in itself, and not given specific attention. This could change in the future, and the current RRI Audit Report will recommend the inclusion of the reporting on ARC Fund's research ethics performance, public engagement activities, gender equality and diversity activities, science education activities and on open access in the organisation's Annual Reports (in English and in Bulgarian).

Regarding the AIRR dimensions, Annual Reports are a clear example of a good practice in reflexivity and self-evaluation, as they provide the management and staff of ARC Fund an excellent opportunity to reassess their previous work and adjust, when needed, their current and future performance.



# Summary of the interviews

## Brief overview of respondents

Eight interviews were conducted in the second half of March and the first week of April 2022. Three men and five women participated in the interviews. Of the interviewees three were representatives of the senior management, three were representatives of the middle-level management and two were from the project management level. Senior management representatives have diverse responsibilities which vary from the development of organisational policies on research activities, to the development of new research methodologies and delivering methodological support to the programme teams, to the development of new project proposals, and as well to inter-programme coordination. Responsibilities of middle-level management are mainly focused on managing a portfolio of research projects and projects supporting research and innovation policy implementation, as well as on coordinating the implementation of research projects with EU or national funding in which the organisation is the lead partner. Senior and middle-level management are responsible as well for the strategic development of the organisation in terms of expanding the organisational network of partners, identification of development opportunities and proposal development. Project managers are responsible for the timely implementation of ARC Fund's tasks in concrete projects in which the organisation is a partner.

## Framing of the RRI-AIRR approach in ARC Fund

The opinions of the interviewees on the responsibility in science and innovation are diverse, yet complementary, reflecting the thematic focus of their work and drawing a detailed picture of the perceptions of RRI within the organisation. As per the interviewees, the overall responsibility in science and innovation is about:

- Understanding the needs of society: R&D is and should be closely linked with society; In order to address societal challenges, scientists must be pro-active in understanding societal needs so as to make new discoveries and offer new ways of problem-solving to society (anticipation).
- Addressing pressing societal challenges and conducting scientific research for the benefits of society, as well as for improving working and living conditions of people (responsiveness).
- Adhering to rigorous ethical principles in everyday research activities: Strictly respecting IPR and copyrights, incl. properly referencing the research work of others; Striving for impartiality and maximum objectivity in research, which encompass as well a thorough checking of information and data sources, as well as objective, unbiased interpretation of data, all of which call for taking into account different views when interpreting data (research ethics and integrity).
- Using research methods which comply with rigorous ethical norms and moral imperatives: Do-no-harm principle should be respected; Researchers are responsible for the outcomes of research, i.e. responsibility for the impacts on the health of people and environment, which directly links responsibility in scientific research to sustainable development (research ethics and integrity, anticipation).
- Avoiding misuse of research results (research ethics and anticipation).
- Responsibility of researchers to other participants involved in research, i.e. fellow researchers, stakeholders, representatives of target societal groups which are in the research focus: This requires the provision of timely and objective information to those who participate in research (research ethics).





- Consulting scientific research with representatives of broader public groups and stakeholders, and as well presenting the research results in a way that is understandable by the society at large, i.e. non-experts (public engagement and inclusiveness, gender balance and diversity).
- Creating conditions for attracting and engaging young people in science, generating new knowledge and communicating it through open-access/open-science good practices, and following rigorous scientific ethics in general (open access/open science, gender balance and diversity, inclusiveness, research ethics).
- Science going beyond the boundaries of the scientific community and being more open to society, building bridges and finding common grounds for joint actions of the scientific community and society: Sometimes scientists' self-understanding of science differs from that of society (public engagement and inclusiveness, gender balance and diversity).
- Non-discrimination in scientific research based on gender, ethnical origin or religion (gender balance and diversity).
- Communicating research results to society at large and disseminating research results to relevant audiences as wider as possible (science communication, public engagement, open access).

All interviewees are familiar to a certain extent with the overall RRI concept, which is deemed natural as most projects implemented by ARC Fund are funded under EU programmes, i.e. Interreg Danube, Interreg Europe, Horizon 2020, etc. All interviewees except one confirmed their general awareness of the individual RRI keys as well, but the level of their awareness of AIRR dimensions varies from good knowledge of AIRR dimensions to being just aware of some of the dimensions. Five out of eight interviewees have sound knowledge of RRI-AIRR, and practice the RRI keys and AIRR dimensions in their project-related work.

### RRI Keys

*Research ethics/integrity* and *public engagement* are the two most practiced RRI keys in the everyday work of ARC Fund, as they are either integrated in the research methodologies of some projects under implementation, or in the project management activities.

*Research ethics/integrity* is perceived as the most important RRI key by the interviewees. It is a fundamental responsibility in project implementation, this is why high standards of research ethics are applied during the whole process of project management, from proposal development to project implementation, and to exploitation of research outputs. Research ethics is mandatory for ARC Fund's staff, but also is a requirement placed to colleagues of partnering organisations in projects coordinated by ARC Fund. Interviewees were unanimous in their opinions that ethics is of utmost importance for every research organisation and university, and if not observed, it is detrimental to science itself, leading to loss of trust in science. As per the interviewees, research ethics includes (list not exhaustive): proper referencing of information, research data and literature; respect to authorship and IPR, no plagiarism; respect of ethical standards in research during the preparation and the implementation of research projects. Ethics as well includes respect for colleagues and participants in research, non-discrimination, and social responsibility about the use of research results. One of the interviewees recommended to abide by the European Code of Conduct for Research Integrity as a guiding document in the work of the organisation.

*Public engagement* is about bringing together citizens (non-experts) to deliberate on matters of science and technology. There is a growing role of public engagement in project implementation, as public engagement is deemed important in understanding the thinking of different societal groups on the one hand, and on the other hand is an instrument used by researchers to help target groups better understand scientific topics under scrutiny. Since 2018, public engagement is being increasingly embedded in project methodologies and there is more deliberation about its benefits for the organisation. In almost all projects funded by Horizon 2020, in



which ARC Fund is a partner, there is a focus on public engagement, ranging from consultations with citizens, to citizen science, to co-creation and co-production activities in living labs. Co-creation has been widely used to directly engage the societal groups concerned with a certain topic/issue.

*"The Bulgarian society is "hungry" for public engagement, more, representatives of science and policymakers have a lot to learn from society. Without the participation of citizens, science cannot, in practice, fulfil its mission to meet societal needs."*

*Opinion of an interviewee*

Public engagement is instrumental for elaborating proposals for R&I policies or for policy changes so as to make these policies actionable, i.e. being realistic and implementable. ARC Fund has profound experience with various formats of public engagement, which is one of the best developed in-house activities. Further, engagement of citizens in ARC Fund's projects is perceived as a trademark of the organisation. For more than a decade already, all organisational experiences confirm that this is an extremely important key for achieving a strong societal impact of conducted research.

*Science education* is considered by some interviewees as somewhat interlinked with public engagement. From the perspective of ARC Fund's projects, it is perceived as informal science education and is focused mainly on delivering information to participants in public engagement activities to help them form their own opinion on the topics to be discussed. Six interviewees were of the opinion that when working with citizens (non-experts on the topic under discussion) it is of utmost importance to build trust between participants and researchers to achieve an open dialogue and free sharing of information and tacit knowledge. There is diversity in the approaches used for collecting, digesting and delivering information to citizens prior public engagement events. One of the approaches is to prepare a comprehensive information material (a booklet) in national language, written in a layman language. Another approach is to aim at providing impartial information from different sources (popular science articles or articles from newspapers) on the topic to be discussed. A third approach is first to conduct a quick survey to capture the needs of those who will participate in an engagement event, and only then to deliver to them targeted information on the topic. When it comes to the understanding of science education as STEM or STEAM, all interviewees were of the opinion that if this is the case, then it is the least relevant key to ARC Fund's activities and de facto is not practiced. Further activities perceived as relevant to science education are attracting interns, working on Erasmus+ projects, providing support to doctoral students.

*Open access* to publications is a policy followed by ARC Fund since its establishment, and is well practiced in the organisation. All publications stemming from project implementation are of open-access nature and available on the website of ARC Fund, as well as on the projects' websites. Further, in the work with the national public institutions ARC Fund's teams encourage them to respect open access when drafting documents (strategies, programmes, action plans) during the stage of policy design. When commenting on the open access to research data, as per the interviewees, this is still in an inception phase and there is yet a lot of work to be done in this regard. ARC Fund should also aim at open access to research data, as data quickly becomes obsolete and does not bring any competitive advantage to the organisation. One of the recommendations was to aim at expanding open access to research data through various repositories, like ZENODO ( <https://zenodo.org/> ).

*Gender equality and diversity* key is perceived as a non-issue within ARC Fund by all interviewees. There is gender balance at the level of the higher managerial positions (programme managers), as well as at the level of project managers. All teams aim at achieving gender balance and diversity of participants in all events which



are organised during project implementation. Currently, the number of female workers is higher than the number of male workers at the organisation. One of the interviewees commented that given the project-based nature of our work, when hiring new members of staff the most important criteria are excellence and relevant experience, and gender balance comes next. Further, gender equality and diversity is a theme in some of the research projects in which ARC Fund is a partner. An interesting topic in this regard is the one of women's entrepreneurship which is highly relevant to the Innovation and Business Support Programme.

### AIRR Dimensions

During the interviews it became apparent that *Anticipation* has two aspects: the *first* aspect is closely related to ARC Fund's project activities, for instance the work on the national Innovation Strategy for Smart Specialisation or projects focused on specific technology areas (foresight studies on energy and environment and technology assessment studies on healthy ageing and sustainable development); the *second* aspect is related to the long-term development of ARC Fund itself. Currently, interviewees clearly link anticipation to project implementation, which is expressed in detailed planning in terms of specific tasks or a complete work package, detailing task/work package methodologies, responsibilities of partners, time-frame, as well as early identification of potential risks. Anticipation is also important during the stage of developing project proposals and is closely linked with risk management, and the better the proposed risk management approach is at the stage of proposal design, the easier is to anticipate and manage change during the project implementation. Anticipation related to the overall long-term development of ARC Fund is still limited, which is partially due to the project-based work of the organisation. But at the same time anticipation at the level of the organisation is deemed extremely important for the overall strategic development and positioning of ARC Fund in the European Research Area.

*Inclusiveness* is understood as closely linked to public engagement, but is considered to be much broader than public engagement. The aim here is to achieve a diverse, yet balanced, participation of all relevant stakeholders in a study, consultation on a certain topic, or event. Inclusiveness is considered an integral part of all projects with EU funding, and social media are an important instrument for reaching out to all relevant stakeholders. The high importance of digital technologies, for instance online surveys, online consultations and online events (i.e. focus groups), was underlined, especially taking into account the last two years, which were marked by the COVID-19 pandemic. Most interviewees were of the opinion that there is accumulated knowledge and experience in including all relevant stakeholder groups in project activities within the organisations.

An interesting 'working' definition was suggested by one of the interviewees:

*"Inclusion is the combination of public engagement, gender equality and the broader concept of diversity."*

*Opinion of an interviewee*

*Reflexivity* has two dimensions according to the interviewees: at the level of the organisation and at the level of the projects in implementation phase. At the level of the *organisation*, this is the elaboration of ARC Fund's annual report (at the end of each calendar year), which is mandatory by virtue of law and has been published since the establishment of the organisation, as well as the drafting of the annual plan of activities (for the current year), for the purpose of which we have to look back and evaluate the successes and failures from the previous years, and draw lessons for the future. At the level of *projects*, reflexivity is expressed in the mid-term and final technical reviews by an independent, external to the consortium, experts. Some interviewees suggested that we develop an in-house approach for self-reflection and self-assessment upon completion of



each project, to openly discuss what worked well and what did not, and identify good or bad practices to be considered in project implementation in the future. This is deemed important as a self-learning practice, as lessons learnt from completed project are very useful during the design and implementation of new projects. Further, it was recommended to develop (i) in-house standardised criteria for assessing the efficiency and effectiveness of project management, as well as (ii) criteria to assess the collaboration within the consortium, the robustness of the research methodologies, the achieved results, the legacy of the project and its impact.

*Responsiveness* is believed to be strongly represented in the work of the organisation, and is perceived as flexibility to react quickly to changing situations during project implementation rather than linking it to the outcomes of reflexive activities at the level of the organisation. The small size of the organisation in regard to responsiveness is considered an advantage as the teams can quickly adapt to changes. The mutual trust among the staff members is also considered advantageous for the ability of the organisation to respond quickly and adequately to changes in the external environment.

### **The role of RRI-AIRR in the organisation – main concerns, practices, messages and actors**

The team of the *Science, Technology and Innovation Policy Programme* is the initiator of integrating the RRI-AIRR framework in the overall organisational policy of ARC Fund thanks to the work on responsible research and innovation since 2014. The aim is not to replace existing in-house policies, but to complement and expand them to better respond to new requirements to research and innovation related projects, and the growing demand for accountability and social responsibility of science and innovation. Although the initiative is bottom-up, the importance of RRI-AIRR for the organisational development is recognised by the higher management as well, which is expressed in the support to updating and further developing the organisational policy on open access and research ethics, as well as developing an in-house policy on gender equality and diversity and public engagement.

Overall, most interviewees consider the RRI framework important for ARC Fund and its current and future work. Most interviewees were of the opinion that RRI will become more and more important for those research teams who are well aware of the framework as a whole and apply some or all keys and dimensions in their work. Still, some interviewees consider the integration of the RRI framework in the existing working practices of the organisation as a time-consuming requirement, which is not part of the everyday activities, and are of the opinion that the potential benefits of such integration are not fully clear. This is an indication that although the majority of interviewees are positive about the usefulness and benefits of the RRI-AIRR framework for ARC Fund, still there is no uniform understanding of RRI as being part of the very nature of the working processes within the organisation.

ARC Fund is currently developing its Code of Ethics and Good Research Practices. This will be the first official document of the organisation to formally define and adopt the RRI framework. The Code builds upon the concepts and principles of ethical and socially responsible conduct of research, already practiced by the organisation and embedded in its founding documents such as Statute and the Rules and Order for Performing Publicly Beneficial Activities. Furthermore, the Code will provide specific information and serve as a reference point for research and management staff in relation to their obligations and responsibilities when it comes to the conduct, management and oversight of research activities.

The Code will include four main chapters: Research Integrity Policy; Gender Equality and Diversity Policy; Public Engagement Policy; and Open Access Policy. To ensure that the Code will adequately address the needs, challenges and expectations, interviews with the relevant staff members were conducted that when completed, the first draft of the Code will be discussed at the workshop with the personnel. Based on their



suggestions and recommendation, the Code will be finalised and then endorsed by the senior management of ARC Fund.

A formal document such as Code of Ethics and Good Research Practices will further strengthen ARC Fund's reputation and enhance its visibility and attractiveness as a partner in future (research) projects, and therefore increase the opportunities for research collaboration provided by the EU framework programmes on research. It will solidify the shared perception of ethics as a pillar of research excellence and research quality among management and research staff of the organisation, and internalise the moral and professional responsibilities toward conducting research.

After the finalisation of the Code of Ethics and Good Practices, the Research Ethics Board will be formed, consisting of two members of ARC Fund's staff and at least one external stakeholder. All staff members will participate in a series of trainings (research ethics; public engagement methods; gender equality and diversity issues in research; and training on open access).

ARC Fund has established the position of the RRI Officer, who acts as the main champion of RRI-AIRR approach within the organisation, but also in its relations with partner organisations.

### **Evolution and development of RRI-AIRR integration at ARC Fund**

The role and contribution of FP7 and H2020 has to be acknowledged, as these two EU funding programmes were instrumental for understanding RRI and for building in-house capacity and knowledge on the importance of RRI. Below is a short description of the evolution of integrating RRI-AIRR approach within ARC Fund's work.

#### *Conference in Rome, 2014*

It all started with the participation of staff members of ARC Fund in the international conference "SIS-RRI: Science, Innovation and Society: Responsible Research and Innovation" held on 19-21 Nov 2014 in Rome. The main goal of this high-level event was to deliberate on the concept of RRI. The Rome Declaration on Responsible Research and Innovation in Europe was signed by the conference participants on the last day of the event. The declaration called on all relevant stakeholders to jointly work for developing sustainable solutions to societal challenges in an inclusive way.

#### *CIMULACT, 2015-2018*

CIMULACT (Citizen and Multi-actor Consultation on Horizon 2020), a Horizon 2020 project in which ARC Fund was a partner, was the next step in this process. CIMULACT demonstrated the value of public engagement in R&I policy design, namely that research and policy recommendations based on citizens' visions are innovative, while at the same time they remain closely linked to societal needs and concerns. It further demonstrated that citizens can deliver very concrete inputs to the European research and innovation policy agenda, and that engaging citizens during the design of research and innovation policy enhances responsibility in research and innovation.

#### *RRI-Practice, 2016-2019*

RRI-Practice, another Horizon 2020 project in which ARC Fund participated, explored barriers and drivers to the successful implementation of RRI in research performing and research funding organisations in European and global contexts, promoting reflection on organisational structures and cultures, and identifying and supporting best practices to facilitate the uptake of RRI. ARC Fund was one of the 22 research conducting and research funding organisations, in which RRI audits were conducted, leading to the development of RRI Outlooks with concrete objectives, action plans, targets and indicators for RRI uptake.





### *TeRRItoria, 2019-2022*

TeRRItoria (Territorial Responsible Research and Innovation Through the involvement of local R&I Actors) was a Horizon 2020 project of experimental nature, aiming to adopt RRI in the R&I systems of five European territories. TeRRItoria aimed at developing the concept of “Territorial RRI” through a transformative journey for each of the five territories. TeRRItoria delivered a comprehensive set of policy recommendations, grouped as follows: recommendations for integrating RRI principles into the design stage of regional innovation policies and smart specialisation strategies; recommendations for integrating RRI principles and dimensions into the implementation stage of regional innovation policies and smart specialisation strategies; overall suggestions for RRI integration into regional innovation policies and S3; suggestions for enhancing the sustainability of RRI-driven regional policies and their results. TeRRItoria was inspirational for ARC Fund’s team to conceptualise and submit the RRI-LEADERS proposal focused on integrating RRI in territories, with a focus on selected policy areas by each territory.

### *ETHNA System, 2020-2023*

The next Horizon 2020 project focused on RRI in which ARC Fund has been involved is ETHNA System (Ethics Governance System for RRI in Higher Education, Funding and Research Centres). It implemented and validated an ethics governance system called ETHNA office – an ethical research and innovation governance structure – into the management of six organisations from Spain, Norway, Estonia, Bulgaria, Austria and Portugal. ARC Fund was one of the six organisations where ETHNA office has been implemented and tested. The process included writing of the necessary organisational documents (such as the Code of Ethics and Gender Equality Plan), training and engagement of personnel, and setting up of relevant positions and/or bodies, such as the RRI Officer and Ethics Board.

RRI-AIRR complements and enriches the existing policy of ARC Fund. Because of ARC Fund’s participation in a number of successful projects under Horizon 2020, focused on the overall RRI-AIRR framework, first, the RRI-AIRR became well known within the organisation; second, an in-depth review related to RRI-AIRR was performed, and concrete measures for its integration in the overall organisational policy were suggested building on the outcomes of two projects – the ETHNA System and RRI-LEADERS. The most important measures include the writing of the Code of Ethics and Good Research Practices, establishment of positions of RRI Officer and Ethics Board, Action Plans for implementation of RRI keys (without science education) and annual monitoring and reporting on the progress.

## RRI keys and AIRR dimensions in ARC Fund

### Ethics

**Embeddedness.** Relevant organisational documents: Code of Conduct, Code of Ethics, Rules and Order for Performing Publicly Beneficial Activities, Child Protection Policy, and Rules for the Processing and Protection of Personal Data

**Main barriers:** No barriers have been identified.

**Main drivers** (legal, cultural, structural and/or political). Legal requirement to submit annual report on the activities of the organisation to the public Commercial Register and Register of Not-for-Profit Legal Entities at the Registry Agency under the Minister of Justice of Bulgaria; research ethics is mandatory for ARC Fund’s staff and is perceived as the most important RRI key by the interviewees.





**Good practices:** An organisational Code of Ethics and Good Research Practices has been finalised in June 2022. The document covers four RRI keys, including research ethics and integrity policy. As per the Code, ARC Fund establishes a position of RRI Officer and the Research Ethics Board.

**Monitoring and evaluation mechanisms and practices:** The Code of Ethics and Good Research Practices includes KPIs and activities for in-house capacity building for each of the four keys. As of 2023, the Annual Report of ARC Fund will include a dedicated sub-section under Part III Institutional development, addressing all four RRI keys.

## Public engagement

**Embeddedness.** Relevant organisational documents: Statute of ARC Fund, Code of Conduct, Code of Ethics, Rules and Order for Performing Publicly Beneficial Activities, Annual Report; public engagement is an integral part of methodologies of projects in the implementation stage; in-depth experience in public engagement.

**Main barriers:** No barriers have been identified.

**Main drivers** (legal, cultural, structural and/or political): requirements of the EU-funded programmes in which ARC Fund participates, more than 10 years of experience and sound knowledge of staff how to engage with citizens and civil society organisations.

**Good practices:** An organisational Code of Ethics and Good Research Practices, developed in 2022, includes a public engagement policy and plan. Prior experience with development of methodologies for public engagement, which have been successfully applied by ARC Fund's staff in Bulgaria: **citizen panels** (brings together 20-25 citizens to elaborate long-term visions on a certain topic/issue of high societal relevance and the role of science and innovation for resolving this issue; **World-wide views** (brings together citizens from several countries – ideally 100 citizens per country, who work in sub-groups, and deliberate on the same day on issues related to science and technologies; such as biodiversity, sustainable development, energy transition), and **focus groups** (8-12 participants who openly discuss on 4-5 questions and the discussion is facilitated by a moderator).

**Monitoring and evaluation mechanisms and practices:** As public engagement activities are always organised as part of project implementation, the monitoring and evaluation mechanisms and related KPIs are part of the corresponding project methodologies.

## Gender equality

**Embeddedness.** Relevant organisational documents: Code of Conduct, Code of Ethics, Rules and Order for Performing Publicly Beneficial Activities, Child Protection Policy, Annual Report

**Main barriers.** Gender equality is perceived as a non-issue for the organisation because the current number of female workers is slightly higher than the number of male workers, however this predominant view neglects a variety of less visible gender disbalances and biases.

**Main drivers** (legal, cultural, structural and/or political). National anti-discrimination legislation, organisational documents and overall organisational policy promoting equality and prohibiting discrimination.

**Good practices.** Included in the organisational Code of Ethics and Good Research Practices. Gender balance is an objective for all activities/events organised during project implementation. In some research projects gender equality is included as a research topic.



**Monitoring and evaluation mechanisms and practices.** As gender equality and diversity activities are always organised as part of projects implementation, the monitoring and evaluation mechanisms are part of the corresponding project methodologies.

### Open access

**Embeddedness.** Organisational documents which mention open access: Statute of ARC Fund, Code of Conduct, Code of Ethics, Rules and Order for Performing Publicly Beneficial Activities, Annual Reports of ARC Fund. Open access to project/research results is a practice followed by all project staff members, while open access to research data is yet to be fully developed at the level of the organisation.

**Main barriers.** No barriers have been identified.

**Main drivers** (legal, cultural, structural and/or political). Organisational documents, where open access to project/research results is defined as mandatory for all project staff, and is as well the working culture of the organisation. EU-supported programmes are also a strong driver as open access to project/research results is a contractual obligation.

**Good practices.** All publications are freely accessible on the organisational website and the websites of the individual projects. For some publications EU repositories (under Horizon 2020) are also used. For some projects of the Safer Internet Programme there is as well open access to research data from nation-wide representative surveys.

**Monitoring and evaluation mechanisms and practices.** As all publications and research data are resulting from projects, the monitoring and evaluation mechanisms are part of the corresponding project methodologies.

### Science education

**Embeddedness.** Science education as STEM / STEAM is not a core activity of the organisation and is the least practiced.

**Main barriers.** n/a.

**Main drivers** (legal, cultural, structural and/or political). Informal science education is mostly related to the public engagement activities in the projects implemented by ARC Fund.

**Good practices.** Elaboration of information materials for participants in public engagement events, in national language, prior the events.

**Monitoring and evaluation mechanisms and practices.** These are part of the project methodologies which have co-creation activities with citizens (non-experts).

### Anticipation

**Embeddedness.** Anticipation is mostly linked to project development and project implementation, but at the level of the organisation it is still limited.

**Main barriers.** Project-based work at the organisation.

**Main drivers.** In-house knowledge and experience in developing long-term strategies using foresight tools. Anticipation is recognised to be of high importance for the long-term strategic development of ARC Fund.

**Good practices.** At the level of project implementation – detailed planning of project activities and tasks, role of partners and distribution of responsibilities.

**Monitoring and evaluation mechanisms and practices.** Part of the project methodologies.



## Inclusiveness

**Embeddedness.** Inclusiveness is well embedded in all projects with EU funding.

**Main barriers.** No barriers have been identified.

**Main drivers.** In-house knowledge and experience in working with stakeholders from the Quadruple Helix, as well as citizens (non-experts).

**Good practices.** Methodologies for co-creation through including all relevant stakeholders are an integral part of the projects.

**Monitoring and evaluation mechanisms and practices.** Part of the project methodologies.

## Reflexivity

**Embeddedness.** Reflexivity is embedded/practiced at two levels – at the level of the projects and at the level of ARC Fund.

**Main barriers.** No barriers have been identified.

**Main drivers.** EU-supported projects and changes in the external environment which require continuous monitoring and reflection so as to quickly adapt to new circumstances and requirements.

**Good practices.** ARC Fund's annual report on activities, annual financial audit and audit report, project mid-term and final evaluation meetings and follow-up activities.

**Monitoring and evaluation mechanisms and practices.** Part of the project methodologies.

## Responsiveness

**Embeddedness.** De facto practiced only at the level of project implementation and perceived as closely linked to project risk management.

**Main barriers.** No uniform understanding of responsiveness within the organisation.

**Main drivers.** EU-supported projects and changes in the external environment which require continuous monitoring and reflection so as to quickly adapt to new or emerging circumstances of the external environment and/or new requirements stemming from the project implementation, i.e. a critical milestone which may necessitate a change in the project methodology.

**Good practices.** Not identified.

**Monitoring and evaluation mechanisms and practices.** Non-existent.

## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in organisation

1. Among the main barriers for further integration of RRI-AIRR approach are the workload and the time constraints related to the project-based work, which is bounded by strict deadlines. Therefore, ARC Fund's researchers are seldom able to further exploit the results of the project work beyond the projects' needs and requirements, and the large quantities of interesting data are not further analysed and used for publications and other types of dissemination. Project data and outputs are also rarely utilised to draw conclusions and make recommendations regarding the future work of the organisation. Time constraints



also mean that the opportunities for self-study and self-evaluation of performance are rare. More time needs to be devoted to systematic research processes, because at the organisational level considerable experience and knowledge have been accumulated, and they must be properly exploited to benefit everyone and facilitate the work of the particular team or of the entire organisation.

2. Another obstacle is the fact that the three thematic programmes of ARC Fund have very different foci, they work with different stakeholder groups and have different goals. Therefore, they do not share and follow the same KPIs. The only quantitative indicator is the number of projects implemented during the year, which is insufficient. There are no quality indicators. RRI-AIRR approach could provide a common frame for the three programmes, as most keys and dimensions are already implicitly and sometimes explicitly embedded into practices of the three programmes.
3. RRI-AIRR can be further integrated through better coordination of policies and practices in the organisation. For this to happen, culture of coordination and constructive dialogue needs to be strengthened. In the past, organisation used to organise annual meetings of the entire personnel – this was very beneficial for internal communication, team-building and definition of common organisational goals. Such meetings need to again become regular annual events. Better coordination and cooperation would also include sharing of resources across the programmes, and would result in efficient synergy between the programmes, which would benefit the organisation.
4. Most of the interviewees welcomed the development of the Code of Ethics and Good Practices and recommended the Code to include as well a detailed description of the internal organisational procedures. The Code is expected to contribute significantly to the more efficient integration of RRI-AIRR into the existing processes within the organisations. However, the interviewees also noted that such organisational innovations are a slow process, and the drafting of the Code can only represent the first step. The full integration of RRI-AIRR approach into the overall organisational policy and practice might take several years. It is very important to reach a good understanding among the staff members and obtain their support, so that they are also active in these processes of integrating the RRI keys and the AIRR dimensions. To this end, more internal meetings of the staff will be needed, during which the issues related to the integration of RRI and AIRR should be discussed, as well as foreseen problems and possible solutions.

## Summary of the focus group

### Brief overview of participants

Nine staff members of ARC Fund participated in the focus group, conducted on 17 June 2022. They hold various expert and managerial positions. The duties of the analysts include executing operational activities, developing and implementing projects. Project managers are involved in both operational project activities and overall project management, while senior managers carry out administrative, managerial and financial management activities on the level of the organisation.

### Relevance of the RRI-AIRR approach in ARC Fund

During the discussion about the awareness regarding the RRI-AIRR framework, seven participants shared that they were aware of the framework and two have become familiar with it during previous activities within the



current project. All participants agreed that if people are not specifically engaged with the framework, they are very often unaware of its existence, even though they apply its principles in their work.

One of the participants made a comparison between the activities at ARC Fund and the situation in the higher education system of Bulgaria, where the level of awareness about RRI is low. This confirms again ARC Fund's sustainable performance as an innovator/pioneer in such types of policies at national level.

Participants prioritised the RRI keys and AIRR dimensions in terms of the applicability of the framework to their own work, as well as the applicability at the level of the organisation.

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	1	1.11
Ethics	1.11	1.11
Gender equality	2.22	2.11
Open access	1.44	1.33
Science education	3.00	2.78
Anticipation	2.00	1.78
Inclusiveness	1.22	1.33
Reflexivity	1.89	1.89
Responsiveness	1.33	1.33

(1 – being most relevant; 5 – being least relevant; average score from evaluation of participants)

Another important conclusion was that overall the framework is applicable to ARC Fund's activities, despite that not all keys/dimensions are applicable to all projects. It was stated that the Science, Technology and Innovation Policy Programme (STIPP) team is a pioneer in public engagement activities in Bulgaria, dating back to 2009, when the first events of this type were organised in Sofia. Participants also agreed that the framework, especially the public engagement key, should be applied in policy-making – specifically when developing policies that are of high societal relevance. Also, AIRR dimensions are perceived as relevant for policies in any field, not only for the innovation policy.

Science education at ARC Fund is most often understood and practiced as provision of informal education to citizens prior to public engagement activities. However, there are two additional examples of activities related to science education. IBS programme support the innovation ecosystem in Bulgaria as organiser of the annual *Innovative Enterprise of the Year* contest. Some of the participants in the contest are start-ups, which either directly provide or popularise science education. The Safer Internet programme develops educational programmes for digital and media literacy as well as cyber security and works with teachers and young students (up to 18 years of age), which can also be considered a form of science education.

The gender balance key is not considered an issue in Bulgarian science as there are more women scientists than men, but this is rather a result of the low salaries in the field, not targeted policies. Usually, gender balance is understood as ratio of men versus women, however, this RRI key is much broader and includes taking account of gender issues when conducting research. Some focus group participants underlined that gender balance should not be an end in itself, and that it is more important to provide equal start and opportunity for all, irrespective of gender, and focus on competences, knowledge and skills. On the other hand, others noted that the existing gender stereotypes and biases represent a genuine problem. More needs to be done in the organisation to overcome it and provide flexibility and opportunity for women to fully participate in the work process, because their responsibilities are different than those of men.

Open access on organisational level could be enhanced as the access to paid repositories is currently rather limited. Promotion of outputs can be also ameliorated since reports are currently uploaded only on ARC Fund's website.

## Embeddedness of the RRI-AIRR approach in ARC Fund

### Drivers

Some RRI keys are included in ARC Fund's documents, which regulate the work at the organisation (Statute, the Code of Conduct and the Code of Ethics), but these are not well known among staff members. Therefore, the participants in the focus group concluded that the concrete projects and requirements of the funding programmes are most often the main drivers for changes such as the development of a comprehensive organisational policy on RRI-AIRR.

### Barriers

The main barrier slowing down the process of the RRI-AIRR framework embeddedness is the lack of concrete blueprint for its integration in the activities of ARC Fund. Staff members apply the principles because of the requirements of the European Commission, however the internal organisational regulation is absent. What is needed is not to produce yet another internal document most employees will not be aware of, but to put what has been written down into practice and integrate it into the everyday practice of the organisation. ARC Fund's management should be more active in promoting these documents.

### Good practices

Several good practices can be highlighted:

1. Open access – all publications are distributed free of charge. Furthermore, a platform *Innovation.BG* is under development. When completed, it will provide access to all data, used to prepare the annual *Innovation.bg* reports. This would be a good open science practice in the context of lack of any data on national level, especially in relation to patent activity.
2. Another good practice is related to the general concept of responsibility in research, as ARC Fund works on projects that address societal challenges and propose solutions to them.
3. Organisation often serves as a platform for discussion and exchange of information between stakeholders and public institutions – a good practice that can be associated with inclusiveness. In addition, all relevant stakeholders are invited to participate in workshops organised by ARC Fund on various topics.
4. There is absolute transparency regarding project implementation.
5. On organisational level, there is continuity and consistency in engagement with RRI. There is hardly any other organisation in Bulgaria that works with RRI so consistently in order to promote the concept in the country. In RRI-LEADERS the aim is to experiment with the application of the framework in other areas of policies on territorial level.
6. The Code of Ethics and Good Research Practices, an organisational document that is currently being developed, covers four of the five RRI keys. ARC Fund will be the first organisation in Bulgaria with such a wide-ranging organisational code. Two information days will be organised (one in July and another one in September 2022) in order to present the document to ARC Fund's staff members.



## Monitoring and evaluation

Current indicators assess only whether the keys/dimensions are either available or lacking. When specific assessment criteria for any key are missing, experts follow project indicators. The Code of Ethics and Good Research Practices that ARC Fund is currently developing will include indicators for monitoring the implementation of proposed measures. The evaluation will be based on the annual self-reflection survey of what has been achieved.

## Recommendations

- Map issues that are controversial for society, including not only scientific topics, but ones that need a wider discussion and application of RRI keys in order to be overcome.
- Promote the RRI-AIRR framework through ARC Fund's projects.
- Develop a practical guide where experience and good practices are shared in order for other organisations to be inspired and to apply them.
- Develop an internal procedure with specific steps to be followed and concrete aims to be achieved – could be in the form of a check list, used to monitor whether the keys/dimensions are applied at ARC Fund.
- Organise annual informal meetings in the end of each year in order to discuss the accomplishments of each team/programme and potential strategies for increasing the work effectiveness, thus enhancing the bottom-up approach and create opportunities for internal mutual learning.

## Conclusions

The findings from the documentary analysis, interviews and focus group show that the RRI-AIRR approach has a firmly established position at ARC Fund, being one of the main focus areas the organisation is working on. Since 2015, the organisation has participated in several EC funded projects, focused on RRI (RRI-Practice, TeRRItoria, ETHNA System, SuperMoRRI) and on RRI related themes (CASI, CIMULACT, ISEED), and is a coordinator of one such project (RRI-LEADERS). Through these projects, ARC Fund has accumulated considerable experience and knowledge on RRI and has been working actively to promote it among the policymakers, researchers, scientists, businesses and NGOs active in the higher education and research systems of Bulgaria. The organisation's work in connection to the RRI-AIRR approach has been regularly reported and presented to the broader audience via ARC Fund's Annual Reports, which are published in the beginning of each year and are openly accessible on the organisation's website.

Although the term Responsible Research and Innovation, or RRI, has been mentioned only in the Annual Reports, a more general notion of responsibility appears in almost all studied organisational documents. Responsibility in the documents applies to transparency and accountability to societal actors and stakeholders, different aspects of socially responsible behaviour, research integrity, data protection, and responsible and prudent management.

Most of the RRI keys (research ethics, public engagement, open access and gender equality) are directly mentioned, or referred to as a goal or value, in most of the reviewed documents. The only exception is science education, which is rarely in the focus of ARC Fund's activities. Concerning the AIRR dimensions, inclusiveness can be clearly identified as a leading value in several of the fundamental documents, while anticipation and



reflexivity are mostly incorporated in texts spelling out different internal and external evaluation procedures as well as planning of current and future work.

Interviewees and focus group participants agreed that research ethics and public engagement were the most important and most often practiced RRI keys in the organisation. ARC Fund has always been deeply committed to maintaining the highest ethical standards during the entire process of project implementation. Public engagement has been an important element of ARC Fund's work for over a decade, but since 2018 the organisation has strived to include it in different forms (citizens consultations, citizen science, living labs, panels, survey) into the methodologies of most projects it is involved in.

Nevertheless, there is still room for improvement. In early 2022, the organisation began to develop a comprehensive Code of Ethics and Good Research Practices, which covers four of the RRI keys that are most important for the organisation: ethics, gender equality and diversity, public engagement and open access. ARC Fund will be the first organisation in Bulgaria with such a wide-ranging organisational document based on the RRI-AIRR approach. While not being covered directly, AIRR dimensions such as anticipation, responsiveness and reflexivity will be manifested in the Code through monitoring and evaluation of progress on the implementation of the Action Plans for each key, and planning of further necessary measures. The Code is expected to be formally endorsed in the second half of 2022, after which it will become compulsory for all current and potential future employees. All ARC Fund's personnel will undergo a training in order to become acquainted with the Code. In addition to having an influence over the internal processes in the organisation (increasing credibility of research work, aligning the policies and practices of ARC Fund with EC guidelines and requirements; promoting a culture that fosters responsibility, cooperation and excellence), the Code is also expected to strengthen the visibility and attractiveness of ARC Fund as a partner in future projects and collaborations.

Currently, ARC Fund has no departments or bodies that are responsible for the governance, management, and evaluation of policies and practices, pertaining to different RRI keys and AIRR dimensions. In the near future, this will be changed with the establishment of the Research Ethics Board and the position of RRI Officer. The Research Ethics Board will ensure the compliance of ARC Fund's employees with the Code of Ethics and Good Research Practices, will monitor and evaluate the application of the Code by ARC Fund's staff, and will contribute to maintaining the high standards of ARC Fund's research work through review, comments and suggestions. The RRI Officer will be responsible for supporting the culture of research integrity at ARC Fund, will ensure communication and cooperation with the Research Ethics Board, will participate in planning and implementation of training and communication activities regarding the RRI-AIRR approach, and will receive and review anonymous signals and complaints, related to ethical, gender or diversity issues, submitted by the members of staff.



# Internal RRI review of UoWM

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## List of acronyms / abbreviations used in this document

RRI - Responsible Research and Innovation

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

R&I – Research and innovation

UoWM - University of Western Macedonia

## Executive Summary

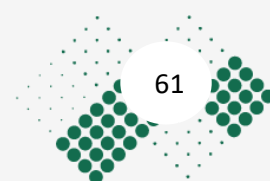
This document represents a **synthesis report of the internal RRI review of the University of Western Macedonia**. The report reflects on the processes and findings of the internal RRI review in the organisation, aiming at identifying areas for improvement in the organisation's policies and practices through integrating the RRI keys into them. Based on this work, the current report outlines the areas for targeted measures towards integrating the RRI-AIRR approach in the internal policies and practices at the UoWM. It contains a review of the internal organisational documents which identify the institutional policies and practices that are relevant to the RRI-AIRR dimensions. It also presents a summary of the interviews with the organisation's employees at various hierarchy levels as well as the analysis of the focus group regarding the RRI practices, made among the staff of the University.

This report outlines the areas for targeted measures towards integrating the RRI-AIRR approach into the University's internal policies and practices. The report contains:

- (i) review and synthesis of 9 internal organisational documents from UoWM;
- (ii) analysis of interviews with a total of 11 key members of staff (at the levels of senior managers, middle-level managers/experts and junior level), and one focus-group with the participation of 9 people, which aimed to explore issues not sufficiently addressed during the interviews and/or divergent opinions in regard to the potential role of RRI-AIRR in the overall institutional/organisational development;
- (iii) recommendations and conclusions regarding the integration of the RRI-AIRR approach in the University of Western Macedonia.



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# Introduction

## Type of organisation and legal form

The University of Western Macedonia (UoWM) is a fully self-governing legal entity of public law. UoWM aims at catering for outstanding higher education and training with emphasis on sciences. All University activities contribute in full respect to the citizens' constitutional rights and to the human rights, established by international organisations, attending to invariably promoting democratic institutions and practices required for science advancement and social recognition. The University also functions as a powerful link between the Greek society and the broader international, European and South-East European environment by fostering collaboration - within the relevant statutory framework and principles - with other legal entities and persons. UoWM is focused on creative and effective academic-community collaboration, as prescribed in the respective legislation, internal regulations and UoWM's statutory principles. In addition, beyond written regulations, the academic community fosters a set of timeless values and principles, which endorse free scientific thinking.

## Organisational structure

At present, UoWM runs 22 undergraduate and 27 postgraduate programmes. Table 1 below demonstrates the full profile of the University of Western Macedonia (programmes, facilities, students, graduates, researchers, staff).

Table 1: UoWM profile.

UoWM PROFILE	
Undergraduate Courses	22
Postgraduate Courses	27
University Cities - Department Locations	5
University Facilities	17
Undergraduate enrolled students	9.134
Current students	8.661
Graduates	5.422
Enrolled Postgraduate Students	2.097
Postgraduate Degree Holders	2.288
Current PhD Candidates	369
PhD Degrees	180
Current Post Doctoral Candidates	27
Academic Staff	193
Special Teaching staff/Special Laboratory Teaching staff/ Special Laboratory Technical staff /Other Staff	73
Administration Staff	131

Source: UoWM, August 2021



## Number of employees

The total number of UoWM academic staff is 193, including the Special Teaching staff (EDIP in Greek), Special Laboratory Teaching staff (EEP), and Special Laboratory Technical staff (ETEP) members. Data is from the first half of 2020.

## Mission of the organisation

UoWM's mission is to promote and consolidate knowledge and progress through its dynamic, reliable and modern functions, both for the benefit of the academic community and for society.

In particular, UoWM's mission involves the following three thematic axes:

### (1) Education – Research – Culture

- development and implementation of curricula in disciplines that engage in sustainability in Western Macedonia, Greece, and the wider area of the South-East Europe and Europe as a whole. In particular, curricula focus on fostering knowledge, critical thinking and ethics, which aim at students' personal development, successful professional career and social status;
- support and enhancement of scientific research and innovation with a view to increasing UoWM's international prestige;
- promotion of academic and scientific culture as well as scientific independence and ethics.

### (2) Economy – Development

- significant contribution to solving local and national development problems and assisting with regional development planning;
- development of business culture, ideas, and organisations in order to achieve positive results in employment and income, and offer new opportunities in research and the economy;
- lifelong education and training, emphasising the importance of human resources as a key component in production;
- exploitation of UoWM's assets and its intellectual, intangible and innovative research outcomes.

### (3) Just, responsible and open society

- shaping modern citizens via promoting knowledge, participation and cooperation with an aim to foster a responsible scientific outlook to contemporary problems and avoid discrimination and social exclusion;
- promotion of scientific thinking, free dialogue and exchange of ideas for the benefit of democratic values, tolerance and societal progress;
- support and promotion of cultural work, creative thinking and environmental awareness.

## Brief presentation of the organisation

The University of Western Macedonia, prominent for its long academic history and high status in the local community and among international affiliates, has undertaken a key role in implementing the new development model for the region. Within this framework, it will undertake flagship Master Plan actions for the period 2020-2025, for clean energy and retraining of human resources. Originally, UoWM has provided courses in 2 cities, Kozani and Florina, within 3 schools, namely Education, Engineering and Fine Arts, and 6 Departments. Abiding by Law 4610/2019 (Government Gazette 70 / A / 07.05.2019), the Technological Education Institute of Western Macedonia was merged with the University of Western Macedonia, and, as a result, significant structural changes took place in the new institution. The new University of Western Macedonia runs 7 Schools and 22 Departments in 5 cities of the Region of Western Macedonia.



## Place of the organisation in the territorial innovation eco-system (Organisational networks)

The strategic planning of the region of Western Macedonia in the post-lignite era focuses on UoWM's substantial contribution to restructuring the regional production base and creating new activities/jobs in order to strengthen the local and national economies. The contribution of the University of Western Macedonia in the territorial innovation eco-system is the promotion of entrepreneurship innovation at a local level with an emphasis on human resources as well as social and cultural development. UoWM will engage in retraining and re-skilling actions for the workforce, affected by the transition to the post-lignite era to enable them to remain active and efficient in the labour market. UoWM recognises its social role to cater for course curricula and functions to the benefit of society and citizens and seeks to encourage collaboration with both national and local authorities. It endorses ongoing communication and collaboration with local and regional authorities, with a view to promoting social and economic development on a regional and local scale. In the context of its social mission, UoWM aspires to further enhance collaboration by engaging in support actions with the national and local authorities to enable addressing potential problems and contribute to development initiatives through relevant research and know-how transfer. A major University objective is delivering state-of-the-art education in the present and producing time-value work for the future.

## Review of the relevant internal organisational documents

### 1. Data Protection Policy of the University of Western Macedonia

#### Brief summary of the document:

Year of publication: 2021

Target audience: (Mixed purpose – Instructions for collection, processing and storage of data for university purposes or external users as well as definition and protection of the user's data).

Main purpose: The implementation of the General Data Protection Regulation (GDPR) is a priority for UoWM. Personal data includes any information related to an identified or identifiable natural person. For example, such information includes name, home address, ID number, Internet Protocol (IP) code, information about a person's health and insurance capacity, employment status and more. Special categories of data, such as data, related to health, racial or ethnic origin, trade union activity, etc. receive special protection. The rules apply when collecting, using and storing personal data, which is done digitally or in hard copy through a structured filling system. This policy is in line with the EU General Data Protection Regulation (GDPR), and opinions/decisions issued by the Hellenic Data Protection Authority.

#### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	N	N	It is included
Responsible research and innovation (RRI) ( <i>the English language term</i> )	N	N	N	N	N





Responsible research and innovation ( <i>the translated equivalent</i> )	yes	yes	N	N	yes
Research ethics or research integrity	yes	yes	N	N	It is included
Societal engagement or public engagement	N	N	N	N	N
Gender and diversity	N	yes	N	N	N
Open access and open science	N	yes	N	N	N
Science education	N	N	N	N	N
Anticipation, foresight, vision, planning	yes	yes	N	N	It is included
Inclusiveness	yes	yes	N	N	N
Reflexivity, evaluation, self-evaluation	yes	yes	N	N	It is included
Responsiveness and adaptation	yes	yes	N	N	N

### A concise review of the most relevant and interesting points of the document:

In order to guarantee the protection of personal data, UoWM is taking into account the nature, the scope, the context and the purposes of data processing as well as the risks of a potential data breach with potential effects on the rights and freedoms of natural persons. UoWM staff members apply appropriate technical and organisational measures to ensure and to be able to prove that data processing is carried out under the GDPR and strives to anticipate the various security issues that could occur.

During the assessment of the appropriate security level by UoWM, account is taken regarding the risks, arising from the processing, particularly from an accidental or unlawful destruction, loss, alteration, unauthorised disclosure, or access to personal data transmitted, stored, or otherwise processed. Concerning the categories of personal data, collected in the context of the above activities and the regular operation in the public interest, the UoWM may collect personal data of citizens, associates, employees, students and other persons with whom it deals within the framework of his responsibilities. For this reason, strict ethical guidelines, which are imposed not only from national, but also EU level through the GDPR, are followed. Depending on the form and purpose of processing per service, UoWM may collect and process personal data and the inclusiveness dimension is embedded in the sense that every stakeholder is always informed about the data processes, their rights and updates.

## 2. Strategic and Operational Plan (2020-2025)

### Brief summary of the document:

Year of publication: 2021

Target audience: (Mixed purpose – Strategic planning of the University, focusing on the next 5 years).

Main purpose: The vision in the UoWM strategic planning is to corroborate the major scientific and cultural role of the University among other Greek and European academic institutions. Based on excellence, fully featured academic profile and generated range of knowledge, UoWM aspires to be ranked among the top world universities in order to make a considerable contribution to the economic, social and cultural development, both on a local and national scale.



### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	yes	yes	It is included
Responsible research and innovation (RRI) ( <i>the English language term</i> )	N	N	N	N	yes
Responsible research and innovation ( <i>the translated equivalent</i> )	yes	yes	yes	yes	It is included
Research ethics or research integrity	yes	yes	yes	yes	It is included
Societal engagement or public engagement	yes	yes	yes	yes	It is included
Gender and diversity	yes	yes	yes	yes	It is included
Open access and open science	yes	yes	yes	yes	It is included
Science education	yes	yes	yes	yes	It is included
Anticipation, foresight, vision, planning	yes	yes	yes	yes	It is included
Inclusiveness	yes	yes	yes	yes	It is included
Reflexivity, evaluation, self-evaluation	yes	yes	yes	yes	It is included
Responsiveness and adaptation	yes	yes	yes	N	It is included

### A concise review of the most relevant and interesting points of the document:

The moral, social, cultural, and scientific values, fostered by UoWM, are basic prerequisites and essential conventions of principles and ethics to meet its mission and vision requirements. These values should be cherished by the entire UoWM academic community. UoWM's vision is to become an educational and social cluster, and contribute to addressing social, cultural and developmental problems, committing to the principles of scientific ethics, sustainability, sustainable development, social cohesion and accountability, always placing emphasis on students.

Non-discrimination policies preventing individuals' exclusion from access to knowledge due to different economic and social status or origin (gender, religion, disability etc.), are among the indisputable and enduring University values. Some worth mentioning good practices in this respect include UoWM's Research Centre (URC), called "TEMENOS", which was established in Kozani under Law 4610/2019. "TEMENOS" aims at delivering and promoting science, research, innovation, excellence and culture for social and economic development and progress.

The role of the University is to engage and provide social and research work for the development of the society. RRI and AIRR dimensions are practically all embedded in the University's actions and values. Ethical principles are followed by law and a committee was established to promote gender equality. Open access is a major part of the institution, which publishes its research, thus making it available to stakeholders. Inclusiveness is also a core value, implemented by forming partnerships with various stakeholders in the business sector, civil society, other academic institutes and by collaborating with policy-makers. Open events, information campaigns and events, which include citizens, are also organised.



### 3. Anti-Corruption Management System Manual

#### Brief summary of the document:

Year of publication: Renewed edition 2021

Target audience: (Mixed purpose – Instructions for anti-Corruption management).

Main purpose: The purpose of the Anti-Corruption Management System is to define the requirements and provide guidance for the establishment, implementation, maintenance, review and improvement of such an anti-corruption system in accordance to the international practices, especially those of the International Standard ISO 37001: 2016.

Its scope includes:

- Operation of administrative services, financial services and senate.
- Development of technical documents, supervision and receipt of projects.

#### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	yes	N	It is included
Responsible research and innovation (RRI) ( <i>the English language term</i> )	N	N	N	N	yes
Responsible research and innovation ( <i>the translated equivalent</i> )	N	yes	yes	N	yes
Research ethics or research integrity	yes	yes	N	N	N
Societal engagement or public engagement	N	yes	yes	yes	It is included
Gender and diversity	N	N	N	N	N
Open access and open science	N	yes	N	N	N
Science education	N	N	N	N	N
Anticipation, foresight, vision, planning	yes	yes	yes	yes	It is included
Inclusiveness	N	yes	yes	yes	It is included
Reflexivity, evaluation, self-evaluation	yes	yes	yes	yes	It is included
Responsiveness and adaptation	yes	yes	yes	yes	It is included

#### A concise review of the most relevant and interesting points of the document:

The University of Western Macedonia is committed to the creation, implementation, maintenance and continuous improvement of the anti-bribery management system that is applied in accordance with the international standard ISO 37001: 2016. Regarding the ethics parameter the anti-corruption management system highlights standards of ethical conduct and requires all employees, business associates and other stakeholders with whom it works to comply with this policy without exception. All employees, including the management, have been trained in this policy. The organisation has no tolerance regarding corruption,



facilitation payments or any other illegal acts and follows the procedures, provided by law, when such cases occur.

A Bribery Compliance and Investigation Committee promotes the resolution of any issues, related to this topic. The inclusiveness dimension is practiced by ensuring that associates, stakeholders and employees are informed about the University's commitment to fighting corruption. Protecting the integrity of offers and other price-sensitive information by restricting access to suitable individuals is essential.

The anticipation and reflexivity dimensions are practiced through the so called Improvement Cycle Methodology approach, which gives the ability to:

- understand and consistently meet the requirements;
- consider processes in terms of added value;
- achieve effective process performance; and
- improve the efficiency of processes, based on data evaluation and information.

## 4. Social Responsibility System Manual

### Brief summary of the document:

Year of publication: 2020

Target audience: (Mixed purpose – Guidelines for social responsibility).

Main purpose: The purpose of the Social Responsibility System is to contribute to the sustainable development of UoWM, through the achievement of high-quality social responsibility, resulting from its operation, in accordance with international practices, especially those of the International Standard ISO 26000: 2010.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	yes	yes	It is included
Responsible research and innovation (RRI) ( <i>the English language term</i> )	N	N	N	N	N
Responsible research and innovation ( <i>the translated equivalent</i> )	yes	yes	yes	yes	It is included
Research ethics or research integrity	yes	yes	yes	N	It is included
Societal engagement or public engagement	yes	yes	yes	yes	It is included
Gender and diversity	N	yes	yes	N	It is included
Open access and open science	N	yes	yes	yes	It is included
Science education	N	yes	yes	N	It is included
Anticipation, foresight, vision, planning	N	yes	N	N	yes
Inclusiveness	yes	yes	yes	N	It is included
Reflexivity, evaluation, self-evaluation	N	yes	N	yes	It is included
Responsiveness and adaptation	yes	yes	yes	yes	It is included



**A concise review of the most relevant and interesting points of the document:**

In the field of social responsibility, good operational practices concern the way in which the UoWM cooperates with other Organisations to promote positive results. Positive results can be achieved by providing leadership and promoting the adoption of social responsibility more widely throughout the organisation's sphere of influence.

The UoWM recognises the importance of the following seven principles of social responsibility:

1. Accountability;
2. Transparency;
3. Ethics;
4. Respect for the interests of stakeholders;
5. Respect for the laws;
6. Respect for international rules of conduct;
7. Respect for human rights.

The above principles are integrated into UoWM's governance structures and are monitored through established committees.

The University has methods to review and improve actions and practices that can ameliorate its reflexivity on emerging issues which need re-evaluation. The University has identified performance indicators and monitoring methods. Monitoring is continuous, while the annual analysis and evaluation of the indicators takes place during the *Management Review Meeting*, which can be considered a good practice.

Ethical behaviour is fundamental to the creation and maintenance of legal and productive relations at the UoWM. Therefore, adhering to, promoting and encouraging standards of ethical behaviour are the basis of all good operating practices. Preventing corruption and engaging in responsible conduct of research and internal processes depend on the respect for the rule of law, ethics, accountability and transparency. Fair competition and respect for property rights cannot be achieved if organisations do not treat each other with honesty, fairness and integrity. UoWM, through its social responsibility system, recognises and takes due account of the rights of members of the University community to make decisions in relation to its development. It also recognises and takes due account of their characteristics such as culture, religion, traditions and community history while interacting within the community. All these aspects encompass the values of inclusiveness. Public engagement is practiced while cooperating, supporting the exchange of experiences, resources and efforts between UoWM and the relevant stakeholders in the region along with the public input.

Based on the strategic planning of UoWM, it becomes clear that participation of the University in community development is not just a statement, but it is applied in practice. Various performance indicators demonstrate the participation of the University in the economic development of the society at local and national level. Furthermore, UoWM aims to enhance the cultural activity in the region and tries to examine the way in which it promotes cultural development either by its own actions or by the participation of its staff and students in actions of the local community.

Through its social responsibility system the University responds to the development needs of the region by promoting the dissemination of knowledge and the development of arts, the utilisation of research results and innovations, adhering to the principles of scientific ethics, sustainable development and social cohesion, as well as by contributing to the national plan for the productive reconstruction of the country in terms of sustainability.



## 2.5 Environmental Management System Manual

### Brief summary of the document:

Year of publication: 2020-2021

Target audience: (internal document / intended for external audience / mixed purpose – e.g., instructions for the staff on how to collaborate with external stakeholders). The competent body for the administration and management of the organisation's manual is the Quality Assurance Unit (MODIP).

Main purpose: The purpose of the Environmental Management System is to define the requirements and provide guidance for the establishment, implementation, maintenance, review and improvement of such a system in accordance with international practices, in particular those of the International Standard ISO 14001: 2015.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	goal		
Societal engagement or public engagement	yes	yes	goal		
Open access and open science	yes	yes	value		
Anticipation, foresight, vision, planning	yes	yes	goal		
Inclusiveness	yes	yes	goal		
Reflexivity, evaluation, self-evaluation	yes	yes	goal		
Responsiveness and adaptation	yes	yes	goal		

### A concise review of the most relevant and interesting points of the document:

The manual has been created in the framework of the principles, directions and instructions of the International Standard ISO 14001: 2015. The environmental impact of the University is evaluated by the head of the Quality Assurance Unit, following specific criteria. The University shall determine the compliance obligations, applicable to the environmental aspects and the manner in which they are to be implemented. The organisation measures and monitors environmental indicators and has identified potential accidents, which, in case they occur, can cause significant impact on the environment. The actions that have to be implemented in such cases are described as well.

**Open access and open science:** All interested parties (students, staff, suppliers, partners, etc.) are informed about the importance of effective environmental management and the need to ensure the compliance with the requirements of the Environmental Management. Also, there is an obligation for the publication of the environmental impact of the operation of the University of Western Macedonia, as well as the measures taken to reduce these impacts according to the Environmental Management System Manual.

**Societal engagement or public engagement:** The organisation's management motivates, guides and supports staff and stakeholders to contribute to the efficiency of the environmental management system. In the context of the application of the environmental management policy, the University implements





environmental awareness programmes and communicates appropriately documented information of the environmental management system to all parties involved.

**Responsiveness and adaptation:** It is ensured that the environmental management policy and the environmental objectives that are established are compatible with the operating framework and strategic planning of the organisation. The achievement of the objectives is done by applying methods of control, monitoring and measurement of all processes that fall under the functions of the University as well as by defining specific measurable management objectives.

The head of the environmental management system is authorised to develop, improve, document and monitor the manual as well as to bring into force the necessary changes. The rest of the employees are responsible for controlling the activities of their departments and ensuring their compliance with the requirements of the environmental management system in their area of responsibility.

**Anticipation, foresight, vision, planning:** There is a continuous training and education of university staff in matters of environmental awareness. Also, a constant effort to reduce the potential impact on the environment through the improvement of UoWM's educational functions and services exists.

## 2.6 Regulation of principles and functioning of the Committee on Research Ethics of the University of Western Macedonia

### Brief summary of the document:

Year of publication: 2018

Target audience: (internal document / intended for external audience / mixed purpose – e.g. instructions for the internal staff on how to collaborate with the external stakeholders). This Regulation contains rules of ethics that must be applied to all research activities, carried out under the responsibility or with the participation of the scientific staff of the Institute, with or without funding.

Main purpose: The purpose of this Committee is to provide a guarantee of the credibility of the research projects, carried out at the University by following the Regulation, which contains the respective rules of conduct. The Committee checks whether a research project is conducted with respect to the value of human beings, the autonomy of the persons involved, their private life and personal data, as well as the natural and cultural environment. It also monitors compliance with generally accepted principles of research integrity and the criteria of good scientific practice.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	goal		
Research ethics or research integrity	yes	yes	goal		
Societal engagement or public engagement	yes	yes	value		
Gender and diversity	yes	yes	goal		
Open access and open science	yes	yes	goal		
Science education	yes	yes			

Anticipation, foresight, vision, planning	yes	yes	value		
Inclusiveness	yes	yes			
Reflexivity, evaluation, self-evaluation	yes	yes			
Responsiveness and adaptation	yes	yes	goal		

#### **A concise review of the most relevant and interesting points of the document:**

The purpose of the document for the regulation of principles and functioning of the Committee on Research Ethics is to provide the guidance and rules that determine whether a specific research project to be conducted at the University of Western Macedonia adheres to current legislation and whether it complies with generally accepted rules of research ethics. The evaluation criteria lead to the approval of the research proposal or provide the guidelines for recommendations and suggestions for its revision, if moral and ethical obstacles arise.

**Responsibility:** According to the document, the rules of ethics for research are applied to all research activities, carried out under the responsibility or with the participation of the scientific staff of the University. The compliance with the ethical standards is monitored by the ethics committee.

**Research ethics or research integrity:** The document analyses the independence of research as a public good. The fundamental ethical principles and rules are set in the framework of the Ethics Code of this Committee. Research initiatives and ethics are governed by internal rules and guidelines as well as by national regulation. The ethical regulations and the functioning of the Committee on Research Ethics provide researchers with the guideline to ensure the protection of personal data of participants in the respective study and ensure that the selection of the participants in the study is based on equality, impartiality and in accordance with the principles of scientific ethics.

**Societal engagement or public engagement:** The results of the research must be available to the participants in a format that is understandable.

**Gender and diversity:** Some of the basic principles that arise from the document of this Committee are that researchers must be committed to complying with the general principles, related to the protection of human rights, equality, the protection of public health, the protection of children and other socially vulnerable groups.

It is determined by the Committee regulation that during studies that are involving people from sensitive groups, all necessary measures shall be taken to ensure the rights of these people.

**Open access and open science:** Regarding open access, the document delineates the necessity to keep a complete record of the progress and results of a research project in order to be able to control, in any case, the intellectual property rights.

It is recommended to disseminate the findings of the research through reputable scientific publications or actions. The promotion of research programmes must be done with a purpose and in a way that serves the scientific community and the wider public.

**Science education:** The document also identifies other categories of university staff, besides faculty members, that may be eligible to take part in research, in particular staff, seconded to the University as well as external collaborators.

**Anticipation, foresight, vision, planning:** The aim of the regulation of principles and functioning of the Committee on Research Ethics of the University of Western Macedonia is to determine whether a specific



research project, carried out at UoWM, adheres to current legislation and whether it complies with generally accepted rules of research ethics and how they are enforced.

**Reflexivity, evaluation, self-evaluation:** The regulation of principles on Research Ethics of University of Western Macedonia does have self-evaluation and evaluation processes on an annual basis in order to revise any problematic issues arising, making the processes more inclusive and effective. This reinforces the reflexivity aspect and provides a critical view on re-approaching the issues, related to abiding with the legislation and complying with generally accepted rules of research ethics and how they are enforced.

## 2.7 Code of Ethics and Good practice of University of Western Macedonia

### Brief summary of the document:

Year of publication: 2018

Target audience: (internal document / intended for external audience / mixed purpose – e.g., instructions for the internal staff on how to collaborate with the external stakeholders). This Code was drafted based on the decision 3822 / 21-1-2018 for the establishment of an Ethics Committee, ensuring the observance and implementation of ethics rules by all members of the University.

Main purpose: The Ethics Committee: a) ensures the observance and application of the rules of ethics by all members of the University and identifies violations of these rules; b) prepares a general annual report on the observance and implementation or the need to revise the rules of ethics and examines any complaint.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	value		
Research ethics or research integrity	yes	yes	goal		
Societal engagement or public engagement	yes	yes			
Gender and diversity	yes	yes	goal		
Open access and open science	yes	yes	goal		
Science education	yes	yes	goal		
Anticipation, foresight, vision, planning	yes	yes	value		
Inclusiveness	yes	yes	value		
Reflexivity, evaluation, self-evaluation					
Responsiveness and adaptation	yes	yes	value		

### A concise review of the most relevant and interesting points of the document:

The Code of Ethics and Good Practice of the University of Western Macedonia is a document, developed by the University in order to provide an agreed framework and set of values for professional practice. It offers a frame of reference where ethical and safe practices are developed. The Code of Ethics and Good Practice is a guide of principles, designed to help the University's personnel and academic staff to conduct research honestly and with integrity. The document outlines the mission and values of the University, how academics are supposed to approach problems, the ethical principles, based on the organisation's core values and the



standards that shall be followed. The document encompasses research ethics, a code of professional practice and an employee code of conduct. Key issues, tackled in the document, are the University's ethical guidelines and best practices for honesty, integrity and professionalism that shall be followed by the staff. Violations of the Code of Ethics by members of the University can result in sanctions, including termination. The document includes a compliance-based code of ethics, a value-based code of ethics, and a code of ethics among academics and research conduct.

**Responsibility:** The basic principles of the Code of Ethics and good practise concerns the responsibility for the integrity, transparency, accountability, efficiency and accountability in the use of public resources and protection of the assets of the University.

**Societal engagement or public engagement:** Another principle of the Code is the ensuring the freedom in scientific research that includes the freedom of scientific opinion and the avoidance of any obstacles to its expression or dissemination. Science and art, research and teaching are free and any infringements should be reported immediately to the Ethics Committee for further investigation. Public engagement relates to the code of ethics indirectly since scientific research, involving the general public, must adhere to the principles within the code of ethics and good practice.

**Gender and diversity:** The principle of meritocracy and equal opportunities, based on the Code, means that the administration, but also the academic and administrative staff will not treat someone more or less favourably, because of their position at the University, their gender, their origin, their religious beliefs or for any other reason and will not engage in any actions that imply such practices.

**Research ethics or research integrity:** In order to ensure the quality of the research work and dissemination of scientific knowledge the rules of scientific ethics based on the Code of Ethics and Good Practices must be followed by all scientific, technical and administrative staff of the University. The teaching and research staff of the University must contribute in every possible way to the growth and dissemination of the research work and shall promote the work of the University in a way that will be clear, understandable, complete and accurate.

**Open access and open science:** Signs, announcements, leaflets and general means of promoting the programmes are designed and used in a way that serves the scientific community or the citizens and not the professional promotion of the research in an unfair way.

Researchers should be aware of and publicise the sources of funding, provided to them in order to conduct their research. The appropriation of results obtained from the research effort by other researchers is controlled and punished in accordance with the principles of copyright protection.

**Science education:** According to the code of ethics and good practice there is a commitment to the quality of the educational work. The teaching staff must make every effort for the continuous improvement of the teaching in order to provide a high-level work, based on the latest developments in science. Teaching staff are encouraged to participate in conferences, workshops and any other activity that promotes the work of the University.

The research activity should be carried out with absolute respect for the bioethical, physical and physiological condition of people as well as respect for the environment. Researchers are committed to the following generally recognised principles: the value of human beings and the protection of human rights, freedom and equality, the protection of public health, the protection of children and vulnerable groups, the protection of personal data, and biodiversity protection.

**Anticipation, foresight, vision, planning:** The Code of Ethics and Good practice of University Code has been drafted by the Ethics Committee, which is responsible for ensuring the compliance on research ethics and implementation by all members of the University.



## 2.8 Certification Guide

### Brief summary of the document:

Year of publication: 2017

Target audience: (internal document / intended for external audience / mixed purpose – e.g., instructions for the internal staff on how to collaborate with the external stakeholders). This Certification Guide ensures that the academic curriculum, offered by the Universities meets all the standard requirements, set out in the Quality Standard, but also, that the performance and skills of graduates of the specific course (learning outcomes) correspond to the expected professional qualifications, required by society and the labour market. The quality standards are set by the certification process which is a quality assurance process based on specific, predetermined, internationally accepted and ex ante published quantitative and qualitative criteria and indicators, harmonised with the Principles and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015). This policy is developed for and focused on the fields of activity of the University and should be made public and implemented by all respective stakeholders (teachers, students, administration and leadership).

Main purpose: The purpose of the Certification Guide is to ensure the quality of higher education as well as to enhance the efficiency and transparency of the overall operation of the University. In particular, the Certification guarantees the quality of the study programmes and the awarded degrees, as well as the implementation of a strategy of continuous improvement of the quality of the services.

### Place of RRI-AIRR approach in the document – a table:

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	goal		
Responsible research and innovation (RRI) ( <i>the English language term</i> )					
Responsible research and innovation ( <i>the translated equivalent</i> )					
Research ethics or research integrity					
Societal engagement or public engagement	yes	yes	both		
Gender and diversity					
Open access and open science	yes	yes	value		
Science education					
Anticipation, foresight, vision, planning	yes	yes	value		
Inclusiveness	yes	yes	value		
Reflexivity, evaluation, self-evaluation	yes	yes	goal		
Responsiveness and adaptation	yes	yes	goal		
Other related words (please make separate rows for each term that is identified as important)					



### **A concise review of the most relevant and interesting points of the document:**

The certification guide of the University of Western Macedonia is an external evaluation process, based on specific, predetermined, internationally accepted and ex ante published quantitative and qualitative criteria and indicators, harmonised with the Principles and Guidelines for Quality Assurance in the European Higher Education Area. The purpose of the certification is to ensure quality in higher education and to enhance the efficiency and transparency of the overall operation of the University. In particular, the certification guarantees the quality of the study programmes and the awarded degrees as well as the implementation of a strategy of continuous improvement of the quality of the services, provided by the institution. The certification guide ensures that the academic curriculum, offered by the University meets all the standard requirements, set out in the Quality Standards, but also that the performance and skills of graduates of the specific course (learning outcomes) correspond to the expected professional qualifications required by society and the labour market.

**Responsibility:** The guide describes in detail the certification process, with the aim of providing the University with the correct information, needed in order to proceed with the certification of the internal quality assurance system and its curricula. The purpose of the certification is to ensure quality, as well as to enhance the efficiency and transparency of the overall operation of the University.

**Open access and open science:** The certification process is transparent and the results are published so as to be accessible to everyone interested in the certification processes.

**Inclusiveness:** The certification process covers all quality assurance activities whether they are mandatory or optional.

**Reflexivity, evaluation, self-evaluation:** The Certification Guide includes the internal evaluation by the institution, through the Quality Assurance Unit and the external evaluation by a committee of independent experts in order to self-evaluate the certification processes and re-adapt or make reforms on any emerging issue.

**Responsiveness and adaptation:** Through the Certification Guide the University should be able to demonstrate how it will achieve the results, provided in the Certification Proposal, until the next scheduled certification. Clear evidence of the achievement of the objectives in all its areas of operation will be required and the progress made should be noted, compared to the previous certification.

## 2.9 Intellectual Property Rights Management Guide

### **Brief summary of the document:**

Year of publication: 2019

Target audience: (internal document / intended for external audience / mixed purpose – e.g. instructions for the internal staff on how to collaborate with the external stakeholders). The purpose of concluding technology transfer contracts is the establishment of a mechanism that will encourage the practical application of the research results of the Special Account for Research Funds - University of Western Macedonia for the benefit of academia and society.

Main purpose: With this Guide, the University of Western Macedonia formulates a clear framework for technology transfer policy, in full harmonisation with applicable legal provisions. The Guide clarifies the way and the procedure regarding the utilisation of the research results, the securing of the new knowledge





through the registration of patents, the granting of licenses for the purpose of their commercial exploitation and, finally, the utilisation of the revenues.

**Place of RRI-AIRR approach in the document – a table:**

	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	yes	yes	value		
Responsible research and innovation (RRI) ( <i>the English language term</i> )					
Responsible research and innovation ( <i>the translated equivalent</i> )					
Research ethics or research integrity	yes	yes	both		
Societal engagement or public engagement	yes	yes	goal		
Gender and diversity					
Open access and open science	yes	yes	goal	Yes (spin offs)	
Science education	yes	yes	value	Yes (spin offs)	
Anticipation, foresight, vision, planning	yes	yes	value		
Inclusiveness					
Reflexivity, evaluation, self-evaluation					
Responsiveness and adaptation	yes	yes	value		
Other related words (please make separate rows for each term that is identified as important)					

**A concise review of the most relevant and interesting points of the document:**

The Intellectual Property Rights Management Guide provides a framework to manage intangible creations of the human intellect and encompasses copyrights, patents and trademarks. The guide also includes other types of rights, including publicity rights and rights against unfair competition. With this guide, the University of Western Macedonia formulates a clear framework for technology transfer policy in full harmonisation with applicable legal provisions. The guide clarifies the way and the procedure regarding the utilisation of the research results, the securing of the new knowledge with the issuance of patents, the granting of licenses for the purpose of their exploitation and, finally, the utilisation of the revenues.

**Research ethics or research integrity:** The Intellectual Property Rights Management Guide provides the regulatory framework to secure that all technology transfer processes are implemented with professionalism, based on international practices in transparent conditions. Safety barriers are also applied in order to reduce the risk margins and optimise the desired result, always protecting the researcher / inventor and the institution by ensuring distinct roles for researchers and evaluators, and ensuring that conflicts of interest of all stakeholders are avoided. The guide delineates that the work created during the research effort of the members of the University of Western Macedonia are original intellectual creations of speech, art or science and as such need protection.



**Societal engagement or public engagement:** Based on this Guide, the framework ensures the rightful utilisation of the intellectual rights and the promotion of research results to the wider society through various mechanisms of technology transfer.

**Open access and open science:** The guide also links the intellectual property assets with the University's technology transfer mechanisms, which include the application of ideas, production methodologies, the use of know-how, the licensing of patents and the conclusion of technology transfer agreements with existing companies or new creations such as spin off.

**Anticipation, foresight, vision, planning:** The vision deriving from the implementation of the intellectual guide and its framework is the creativity and innovation that is stimulated by intellectual property, because intellectual property promotes advancement in science and technology, arts and culture and knowledge transfer of scientific innovations. With the help of such regulatory frameworks of intellectual property, the University enhances the entrepreneurial ecosystem in the region.

## Summary of the interviews

### Brief overview of respondents

In total 11 interviews were conducted from a wide range of staff members at various positions. Five interviewees were at senior level positions, three at middle-level management and three at junior level.

### Framing of the RRI-AIRR approach in the University of Western Macedonia

Most of the interviewees were familiar the concept of Responsible Research and Innovation. Even if they did not know precisely about the RRI concept it was clear that they act upon the dimensions of RRI-AIRR because these are dimensions and keys that exist in the processes of the organisation. Regarding inclusiveness there is a legislative obligation to act through inclusive processes. The University being a public body regulated also by national law must encompass a lot of other stakeholders and engage with the public in order to disseminate knowledge and work with stakeholders together to advance the development of the Region. There is also a gender equality committee which has set various guidelines on gender equality issues. There is also an ethics committee which monitors the implementation of the internal regulation on ethics. The RRI concept per se is not practiced in its totality, but the interviewees have a concrete understanding for the RRI keys which, even without having an official RRI framework in place, are implemented at the university (ethics, public engagement, gender equality science education, open access). A few RRI keys and AIRR dimensions have gained recognition in the last few years as a guiding principle and policy concept, primarily open access as an important element for establishing public trust. Even though the interviewees were not familiar with anticipation and reflexivity within the AIRR context, they explained that they always take into consideration the potential impacts of research as well as society's needs. They are also taking into account the new insights, which corresponds to the responsiveness dimension.

Ethics is a responsibility of all the interviewees. Ethics is an everyday responsibility from the most mundane administrative task to the proper conduct of research in the university. It applies to all levels and positions whether it is guidelines for ethical research conduct, or ethics in administrative or management issues. Transparency and open access is a dimension that staff members see as part of their responsibilities. However, the institution poses limitations to them on how much to intervene to a greater extent, because they must also comply with the national legislation. The University has its own governing rules about ethics



and the interviewees consider it their responsibility to provide as much open access as possible in accordance with the rules regarding the institutions ethics.

Responsiveness is seen as part of their responsibilities in the sense that they have to identify the needs that emerge at a university level or regional level and act, based on their positions, to meet these emerging needs. For example, a structure called Holistic Care has been created recently and it has been set up because there is a problem of alienation between students and between students and the local community. There was a great response to personal and psychological issues and needs of society and students that were emerging prior to and after the start of the pandemic. The holistic care structure, which has been created to respond to some crucial emerging needs, operates with sensitivity and seriousness. To adequately respond to such needs, collaborations have also been made with sports bodies in the region in order to make the quality of life of students better.

Science education is the core role that the University plays for the development of the region. Open access and ethics are all practiced and governed by law and internal guidelines in the University. The main RRI-AIRR actors are the very same research staff with their production of new knowledge and dissemination, the various committees for ethics and gender equality that promote inclusiveness and transparency as well as the various research laboratories that promote science education and anticipate and respond to the emerging needs of the region for various societal and technological issues.

Some main concerns are that there has to be a system, related to society. There must be a think tank outside from academia that will encompass various regional stakeholders, policy-makers and citizens so that the university will feed from it and understand the societal issues better. Another important thing is that the information that is disseminated through the organisation needs to be more transparent and faster. There are many parallel systems and mechanisms at the University that make decisions difficult as many procedures and bureaucracy that do not allow information to be disseminated in a timely manner exist.

RRI keys play an important role for the University since they also promote the University's values, but further practices on the RRI-AIRR concept need to be implemented on an institutional level in order to foster Responsible Research and Innovation for the wider society. Key messages are that with the RRI concept the university can explore the benefits of RRI for a wide range of stakeholders from those closest to research and innovation to those regulating or being affected by its implications.

The merging of the Technological Institute with the University helped to obtain the positive elements and dimensions of the already practiced RRI keys and AIRR dimensions and gave the chance to improve them. The merger changed the course of the organisation. Numerically, currently there are 22 departments in seven schools, which was inconceivable 15 years ago. Procedures have been reviewed and improved. Responsiveness and reflexivity have been improved, because the merging gave the opportunity for the re-evaluation of processes and methods at the Institute and it helped pave the way to more transparent and effective actions with much more concrete research developments.

After the merger the university has become more open to society. The pandemic has shown that the University is able to respond quickly to the various issues that have arisen and to adapt to the new reality in order to meet all the new operational and implementation requirements of all the procedures, related to RRI. The RRI-AIRR approach obtained its current position at the University the last few years when academics had the chance to get involved or get an idea from other collaborating projects about the concepts of RRI-AIRR and their potential applications.

## RRI keys and AIRR dimensions in the University of Western Macedonia

### Ethics

**Embeddedness:** Ethics is applied by law and internal guidelines to every research, organisational or management or monitoring action.

**Main barriers:** There are no barriers concerning the ethics dimension in the University.

**Main drivers:** Legal drivers from national legislative level and EU level.

**Good practices:** Handbook on mobbing regarding moral harassment. Availability of a platform that receives and processes complaints from students. UoWM has an ISO 26000 for social responsibility and anti-corruption mechanisms and these contribute to the proper functioning of ethics.

**Monitoring and evaluation mechanisms and practices:** Ethics committees and quality assurance committees are all providing their own monitoring and evaluation mechanisms for the related issues that each committee is responsible for.

### Public engagement

**Embeddedness:** It is embedded to a large extent, but not to the degree that is needed. The strategic plan of the University for the next 5 years has taken into account the engagement actions to be done in order to address the public engagement key.

**Main barriers:** Lack of interconnectivity between research institutions and laboratories with the wider public in a direct manner. Networking between public and academia is not fully activated and properly conducted.

**Main drivers:** Mainly bureaucratic issues that halt the smooth process for timely engagement between academia and the public.

**Good practices:** Several public consultations are implemented through the University. The University's decisions and actions are publicly posted so that everyone is able to access them.

**Monitoring and evaluation mechanisms and practices:** The University's committees have developed processes to incorporate the university's public outreach and incorporate the public views and opinions for various issues turning them into actions. Public consultations, forums and surveys are conducted as mechanisms to monitor public engagement and direct actions towards better public outreach and engagement.

### Gender equality

**Embeddedness:** Gender equality is fully applied and embedded at the University through the gender equality committee.

**Main barriers:** Lack of flexible work practices (this has changed due to the covid-19 challenges). Affordability and accessibility of childcare.

**Main drivers:** Political drivers to reach the embeddedness of the EU expectations on gender equality issues.

**Good practices:** The University has its internal Gender Equality Plan.

**Monitoring and evaluation mechanisms and practices:** Gender Equality Committee, which has its own monitoring and evaluation procedures regarding the gender equality applications at the university level.



## Open access

**Embeddedness:** Open access is applied. All decisions and actions are posted for everyone to access them. Research publications also frequently follow open access requirements.

**Main barriers:** Law requires that institutional decisions be publicly available. Open access scientific publications can be limited due to lack of budgeting to cover publication fees.

**Main drivers:** Accessibility of content to readers, open exchange of knowledge and results to different stakeholders. Promotion of the scientific work of the University.

**Good practices:** University portals to access journal publications are also available for open access.

**Monitoring and evaluation mechanisms and practices:** Monitoring indicators for publications. National portal for monitoring all the decisions taken from public bodies, including universities.

## Science education

**Embeddedness:** It is the core principle of the institution. The University has to face the challenge of the post-coal era, therefore science education will be a central pillar to tackle the respective challenges.

**Main barriers:** Lack of resources, monetary, human and funding resources for further enhancement of the science education pillar.

**Main drivers:** Structural changes in the development of the region and the post-coal transition.

**Good practices:** Synergies and collaborations between the quadruple helix actors (academia, policy-makers, business, civil society) of the region.

**Monitoring and evaluation mechanisms and practices:** Monitoring indicators for synergies and educational milestones and achievements.

## Anticipation

**Embeddedness:** It is not embedded to a high degree.

**Main barriers:** Construction of shared pathways between academia and other stakeholders such as businesses or policy-makers. Lack of clear prioritisation of the regional needs and demands for the transition.

**Main drivers:** Political transparency problems.

**Good practices:** Partnerships with other institutions and businesses for the purposes of innovation.

**Monitoring and evaluation mechanisms and practices:** Innovation incubators in the region with the participation of the University. UoWM has also submitted a funding proposal for various projects, such as a specialised Innovation Zone in Western Macedonia, start-ups, research in hydrogen technologies and renewable energy sources and smart grids, using storage technologies, which will be financed by public and private entities.

## Inclusiveness

**Embeddedness:** Inclusiveness is enforced by law, because the University is a public body.

**Main barriers:** Bureaucratic procedures for timely processes. Trade-off between transparency and inclusivity; therefore 'closed' spaces for interaction and safe discussion arenas might be necessary to achieve more transparency and inclusiveness of all relevant actors.



**Main drivers:** Cultural drivers. The purpose of the University is to help the advancement of society and assist in solving societal issues. For this reason, inclusiveness of all actors and citizens is a major principle for the University.

**Good practices:** Public consultations through the University. Establishment of Holistic Care to alleviate the problem of alienation of students and address emerging psychological issues. The University has established QR codes in the campus restaurants for evaluation of the food quality and processes.

**Monitoring and evaluation mechanisms and practices:**

The ethics and equality committees are involved in the process of complaints by the students because, depending on their nature, the committees are involved in their resolution. The Quality Assurance Unit is also planning to create a handbook on mobbing regarding moral harassment in collaboration with the psychology department and that requires the application of inclusive mechanisms.

### Reflexivity

**Embeddedness:** The University has evaluation procedures to identify problems and reform its approaches towards the improvement of the institution as a whole (management, organisation, research).

**Main barriers:** Bureaucratic issues.

**Main drivers:** Due to the huge challenge of the region to make a transition to cleaner energy, the University redefines its role through reflexive approaches to re-evaluate the issues at hand.

**Good practices:** Quality assurance committee and establishment of the University's strategic plan.

**Monitoring and evaluation mechanisms and practices:** Each institution is responsible for ensuring and continuously improving the quality of its educational and research work, as well as for the effective operation and performance of its services in accordance with international practices, in particular those of the European Higher Education Area, and the principles and guidelines of the National Higher Education Authority.

### Responsiveness

**Embeddedness:** The University was always responsive to the research needs and technological advancements over the years to meet the societal requirements for development. In addition, the pandemic has shown that the University is able to respond quickly to the various issues that arise in order to meet all the new operational and implementation requirements of all the procedures related to RRI.

**Main barriers:** The University is a public body that must follow legal and national rules about its ways of management, action elaboration, ethics, organisational decisions, public issues etc. Its responsiveness mechanisms must be in line with public and national guidelines.

**Main drivers:** The biggest challenge of the Region is to achieve a just post-coal transition era. The university is aiming to help towards the achievement of the Just Transition by planning and redefining its actions, research and approaches to help the area grow and develop into new innovative paths.

**Good practices:** Creation of new curricula, courses on graduate and postgraduate level to encompass the new needs of the region during the transition. Energy-related master courses. The University of Western Macedonia also aims at full digitisation, which will transform it into an e-campus. In this framework, digital infrastructure, such as e-documents and standardised facilities and infrastructure, will be endorsed to enable all users (teaching staff, students and administrative staff) to have full access to all e-services, delivered by the University.

**Monitoring and evaluation mechanisms and practices:** Evaluation and monitoring mechanisms of the University's committees trying to adhere with the vision of the strategic plan of the University.





## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in the University of Western Macedonia

The University has to face the challenge of the post-coal period in the area and all the interviewees have stressed that science education will be a central pillar to third parties, businesses, society and policy-makers for the further development of the region. The RRI-AIRR approach should be integrated through training seminars and educational events in the context of the transition from one productive model to new productive models. The University will have a very active role in science education and it has planned strategic partnerships with other organisation, which will help the efforts of integrating the RRI-AIRR on institutional level. At the same time the University should plan to have better dissemination, create new programmes and promote them in an efficient manner. The integration of RRI-AIRR approach into the policies and practices of the University will help the creation of targeted actions encompassing various RRI dimensions towards the processes of Just Transition and societal development.

## Summary of the focus group

### Brief overview of participants

In total 9 people participated in the focus group discussion and their positions include senior level (4), three from middle-level management (3) and two from junior level (2).

### Relevance of the RRI-AIRR approach in the University of Western Macedonia

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	4	1
Ethics	1	1
Gender equality	3	2
Open access	1	1
Science education	1	1
Anticipation	2	2
Inclusiveness	2	1
Reflexivity	2	2
Responsiveness	1	1

(1 – being most relevant; 5 – being least relevant; average score from evaluation of participants)



## Embeddedness of the RRI-AIRR approach in the University of Western Macedonia

### Drivers

Legislation guidelines for most of the RRI keys especially for Ethics, Gender Equality and Open Access are in place and the University must adhere to them. There are formal systems in place such as committees for ethics, quality assurance, anti-corruption, data protection, whose work is related to implementing the RRI keys and AIRR dimensions in the organisation.

### Barriers

Main barriers that exist are the bureaucratic processes that are not under the control of the University since it is a national entity and a lot of its processes must go through various legislative routes. In addition, there is no connection between research institutions, laboratories and stakeholders of the quadruple helix and therefore, there is lack of an informed and collaborative environment to tackle the emerging regional issues in a timely manner. Networking between public and academia is not fully activated and properly conducted and the aspect of public engagement in the context of the University needs further strengthening and strategic actions.

### Good practices

The University strives to achieve open access for most of its research results, it provides a portal for accessing published research and hosts annual conferences to disseminate information about issues, related to the needs of the region. The ethics committee is active on various aspects of the University processes, it also hosts information days and has established platforms in order to monitor and include the various ethical or mobbing issues that could arise on a research level or on a student level (e.g. platform for anonymous complaints and emotional mobbing). Reflexivity and anticipation is practiced through its strategic plans in a long-term and short-term basis incorporating emerging issues and reforming them to accommodate new needs (e.g. establishment of Holistic Care to alleviate the problem of alienation of students).

### Monitoring and evaluation

There is a proposal for the establishment of an RRI office and appointment of an RRI officer, made by the vice rector of the UoWM, which is waiting for the approval of the University's senate. This UoWM RRI unit will be part of the quality assurance department and will establish the criteria and indicators for monitoring and evaluating the organisation's performance, related to the RRI keys and AIRR dimensions. In general, a lot of the criteria and indicators (e.g., number of open access journals per department, or percentage of gender distribution among various positions) are practiced, but they are not clearly indicated and measured as a separate RRI key or AIRR dimension. For example, ethics requirements are monitored every time prior to the initiation of research and the ethics committee conducts annual evaluation reports and audits for the various university processes.

## Recommendations

As a public entity the University's role outside of academia is the advancement of society, thus, anticipation and science education must be further strengthened with a better networking between academia and the quadruple helix in order to have a foundation to anticipate the future challenges of the region in an inclusive



manner. Over the years, the University has always been responsive to the regional needs and technological advancements have been used to meet the societal requirements for development, but there is a connection gap between the actors of the quadruple helix and that poses problems in the actual fruition of the University's work and its contribution on a regional level. The new needs that have arisen due to the energy transition are a major issue. The dimensions of science education and inclusiveness could help create the ground for innovations and stakeholder networks to achieve a Just Transition. Open access could also be revised in terms of providing funding opportunities to all researchers to openly publish their research work in order to make research results accessible by everyone.

## Conclusions

The RRI-AIRR approach is a very relevant issue in the University since all of the keys and dimensions are practiced to various degrees. Ethics is followed de facto from the organisation since it must abide to research rules of conduct and ethics. Open access is practiced to a large degree and the University tries to strengthen this key by various actions, related to publication support. Public engagement is embedded to a large extent, but not to the degree that is needed. The strategic plan of the University for the next 5 years has taken into account the engagement actions that need to be implemented in order to claim that the public engagement key is applied. Finally, science education is the core principle of the institution. The University has to face the challenges of the post-coal era and science education will be a central pillar to tackle these challenges and promote innovations through synergies, which will strengthen the inclusiveness dimension.

The most prominent RRI keys and AIRR dimensions, which are integrated in the organisational documents and policies are ethics, open access, science education and inclusiveness. Ethics is applied by law and internal guidelines to every research, organisational, management or monitoring action. There is also the newly established Handbook on mobbing regarding moral harassment. A platform, established to receive and process complaints from students exists. UoWM has introduced the ISO26000 for social responsibility and anti-corruption mechanisms and these contribute to the proper functioning of ethics. Gender equality committee, ethics committees and quality assurance committees are all providing their own monitoring and evaluation mechanisms for the related issues that each committee is responsible for. Open access to publications (articles, books, etc.) and open access to research data is applied. All decisions and actions are posted so that everyone is able to access them. Research publications frequently follow open access requirements. University portals to access journal publications are also available through open access. Inclusiveness is enforced by law since the University is a public body. Public consultations are conducted through the University. Holistic Care was established to alleviate the problem of alienation of students and address any emerging psychological issues. The University has also established QR codes in the campus restaurants for evaluation of the food quality and processes. Open access could be also revised in terms of providing funding to all researchers so that they could publish their research work in order to make research results accessible to everyone.

There is a discussion to appoint an RRI officer for the governance, management, implementation, monitoring and evaluation of policies and practices, pertaining to different RRI keys and AIRR dimensions. Currently, different departments and teams have the responsibility to monitor these policies and practices, namely the ethics committee, the anti-corruption committee, the data protection officer, the quality assurance committee and each of them engages with specific actions and governance processes, related to RRI-AIRR.



# Internal RRI review of DBT

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Contributor: Julia Miljevic Jakobsen

## List of acronyms / abbreviations used in this document

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

DBT – Danish Board of Technology

GDPR – General Data Protection Regulation

R&I – Research and innovation

RRI – Responsible Research and Innovation

## Executive Summary

This report reviews the integration of the RRI-AIRR framework into the policies and practices of the Danish Board of Technology (DBT). Seven organisational documents have been analysed, eight individual interviews have been conducted, and one focus group with five participants has also been held.

The documents reviewed are the Data Management Plan, the Articles of Association, the Employee Handbook, the Five principles on Citizen Engagement, the Gender Equality Plan, the Annual Report 2020, and the Business Plan. In the analysis of the documents, the prevalence of the RRI-AIRR framework was examined, including the specific keys and dimensions, and possibilities for further integration of the RRI-AIRR framework was considered. Based on this analysis, the most interesting points were addressed and accounted for.

Representatives from the management, senior project managers, and project managers participated in both the individual interviews and in the focus group interview. All respondents contribute to the project activities of the organisation, including projects under the EU Horizon 2020 programme and projects with Danish regions and municipalities. Throughout the individual interviews and focus group discussions, the embeddedness of the RRI-AIRR framework was considered along with potential barriers, drivers, good practices, as well as monitoring and evaluation mechanisms and practices. Based on these findings and considerations, suggestions were made for further integration of the RRI-AIRR framework into the policies and practices of the organisation.

Overall, RRI is seen as integrated in the very core and purpose of DBT. This is reflected in the project activities undertaken throughout the years and in the strategic goals of the organisation. The main RRI actors of DBT are employees with an expertise on the subject, including the management. Through these actors, the awareness of RRI is promoted internally and gradually, the principles are expected to be passed on to new employees.

Suggestions to further integrate the RRI-AIRR framework into the policies and practices of DBT include development of guidelines on good practices and further integration of procedures for monitoring and evaluation, both in relation to different RRI keys and AIRR dimensions. Preceding the integration of guidelines, evaluation procedures and monitoring mechanisms, DBT first needs to discuss to which extent the organisation wishes to formalise different procedures of the organisation.



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# Introduction

## Type of organisation and legal form

The Danish Board of Technology (DBT) is an independent foundation committed to deliberative democracy in the form of participatory technology assessment and foresight, knowledge-based public decision-making, parliamentary dialogues on science, technology and innovation, and collaborative governance. DBT works with a local, regional, national, and international perspective. The core expertise of DBT is in interactive methodologies, stakeholder and citizen participation, political deliberation and policy recommendations, and public communication.

## Organisational structure (text or organigramme)

DBT consists of a secretariat with 39 employees, including a management with a director and a deputy director. DBT has a board of directors with eight members and a board of representatives with 29 members.

## Number of employees

DBT currently (May 2022) employs 39 people.

## Mission or main purpose of the organisation

The mission of the organisation is to work for a development of society, shaped in informed and forward-looking cooperation with citizens, experts, stakeholders, and decision-makers.

According to the Articles of Association, which is the founding document for DBT, the purpose of the foundation is to carry out research, analysis, assessments, dialogue, and dissemination as well as advice within social issues, including the use of knowledge and technology, in Denmark as well as internationally.

The inclusive form of work is a trademark of the foundation and is reflected in the slogan "Creating society together". This is done by setting up processes that break down barriers between groups and silos in society and get them together to develop understanding and workable solutions.

## Brief presentation

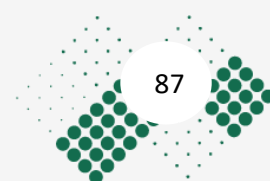
DBT has historically emphasised the importance of citizen participation and co-creation in technological development, administrative planning, and political decision-making. In its 30-year history, the organisation has built a world-class skillset for the facilitation of trans-disciplinary dialogue and solution-oriented research. In recent years, DBT has contributed extensively to the development of the concept and practice of Responsible Research and Innovation (RRI). DBT has especially sought to ensure that the mainstreaming of public engagement, which the RRI approach involves, starts from and improves upon the state-of-the-art. Along with international partners, DBT has developed toolboxes and training programmes for public engagement and multi-stakeholder dialogue in relation to Horizon 2020 projects and other platforms for science with and for society. DBT works actively to develop methodologies for engagement of citizens and stakeholders and shape engagement practice in European research and innovation.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

DBT has for the past decade worked with R&I projects, and specifically with the RRI framework in numerous projects under Horizon 2020. For many years DBT has been part of the Research and Democracy (R&D



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



network). Here, DBT exchanges knowledge and experiences within the R&I and RRI framework as well as in the national context, since DBT regularly serves the Danish Parliament with a newsletter, encompassing research and knowledge within the national and international R&I field. As such, DBT plays an active role as part of civil society in promoting and working with deliberation and participation.

## Review of the relevant internal organisational documents

### 1. Data Management Plan

#### Brief summary of the document:

Year of publication: 2020.

Target audience: Internal document.

Main purpose: To define the policy on in-house data management regarding project work and administrative procedures.

#### Place of RRI-AIRR approach in the document

Data Management Plan	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	Yes	No
Research ethics or research integrity	Yes	Yes	Yes	Yes	Yes
Anticipation, foresight, vision, planning	Yes	Yes	Yes	Yes	No
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	Yes

#### A concise review of the most relevant and interesting points of the document:

Overall, this document does not directly mention RRI or related terms, but does reflect some keys and dimensions. The policies on how to manage personal data refer to storing, safety and mitigation, procedures for deletion, and documentation, as well as the purpose of collecting data. The procedures are described separately for different groups, including data, related to citizens, stakeholders, partners, employees, clients, and board members. Furthermore, risk assessments are a standard procedure if sensitive data is collected, which is only allowed with a permission from a data protection officer. This way, the document systematically addresses possible implications of data related processes, reflecting the dimension of anticipation.

Responsibility is the one term that does appear a few times when the role of the project manager in data management procedures is described. Even though responsibility is only mentioned a couple of times, it is a clear purpose of the document to describe the responsibility of the project manager, responsible for the collection of data.





The document is revised on a yearly basis and an Annual Report on the management of personal data is produced. This recurring examination reflects reflexivity in the data management procedures. To include reflexivity further, continuous assessments could be added to the Annual Report on whether the integration of GDPR into the organisation is working as planned or if any changes ought to be made.

Although research ethics is not mentioned explicitly, the Data Management Plan includes several ethical considerations. Some examples are anonymisation and minimisation of data, informed consent, deletion procedures, and obligations of data protection officers. To embed ethics further, the notion of ethics could be used throughout the document to increase the awareness of ethical aspects in GDPR among employees.

Several good practices are identified throughout the document. Among these are a practical guide on how to comply with the data policy along with a step-by-step guide on how to collect and process data in connection with events and interviews run by the organisation. Furthermore, the different procedures, described in the document, all include good practices on how to comply with each specific procedure.

## 2. Articles of Association

### Brief summary of the document:

Year of publication: 2013.

Target audience: External document.

Main purpose: A founding document for the Danish Board of Technology. Includes articles such as the purpose of the organisation, use of profit, the board of directors, and the managing director.

### Place of RRI-AIRR approach in the document

Articles of Association	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Public engagement	Yes	Yes	Yes	No	No
Gender and diversity	No	Yes	Yes	No	No
Open access and open science	Yes	Yes	Yes	No	No
Inclusiveness	Yes	Yes	Yes	No	No

### A concise review of the most relevant and interesting points of the document:

The objective of the organisation is to carry out research, analysis, assessments, dialogue, and dissemination. In addition, the purpose is to advice within social issues, including the use of knowledge and technology, in Denmark as well as internationally. This way, open access is reflected in the purpose of the organisation, as dissemination of social issues on technology is declared. Also, dialogue is a key focus of the organisation. This is further elaborated when the document defines possible tasks and methods, undertaken by the organisation. As part of the possible tasks and methods, it is described how the methods can build on a broad societal dialogue and include experts, stakeholders, politicians, and individual representatives of the population directly in the work, reflecting societal engagement and inclusiveness.

Gender is mentioned briefly in the Articles of Association as a declaration to represent both genders in the board of directors. It does not, however, mention an equal representation.



### 3. Employee Handbook

#### Brief summary of the document:

Year of publication: 2021.

Target audience: Internal document.

Main purpose: To communicate information and to certify agreements with importance to the daily work of the employees.

#### Place of RRI-AIRR approach in the document

Employee Handbook	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	Yes
Research ethics or research integrity	No	Yes	Yes	No	No
Societal engagement or public engagement	No	Yes	Yes	No	No
Gender and diversity	No	Yes	Yes	No	No
Open access and open science	No	Yes	Yes	Yes	No
Science education	No	Yes	Yes	No	Yes
Anticipation, foresight, vision, planning	No	Yes	Yes	No	No
Inclusiveness	No	Yes	Yes	No	Yes
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	Yes
Responsiveness and adaptation	No	No	No	No	Yes

#### A concise review of the most relevant and interesting points of the document:

In one way or another, this document covers a lot of the keys and dimensions within the RRI-AIRR framework. None of them is central in the document, but they are mentioned in general terms. In some cases, other documents with relevance to the RRI-AIRR framework are introduced briefly, in other cases the manual communicates different RRI-AIRR-related goals of the organisation.

RRI is not specifically mentioned as a term, but the RRI notion is present throughout the document in the form of the different keys and dimensions. Responsibility is mentioned once and is tied to the RRI aspect of diversity. Under the headline *Social chapter*, there is a declaration about the social responsibility of the organisation to employ people with reduced ability to work, integration problems, and lack of work experience. Procedures in case of sexual harassment are addressed, including a continuous focus on sexual harassment in the recurring workplace assessments. To further embed the RRI-AIRR framework into the Employee Handbook, guidelines on good practices for responsible project management could be included.

Research ethics is present mainly as a reference to the organisational document of General Data Protection Regulation (GDPR) with a passage on employee confidentiality obligations.



The mission of the organisation is described in the Employee Handbook, referring to the keys and dimensions of public engagement, anticipation, science education, and inclusiveness. The mission states that the organisation works for a development of society, shaped in informed and forward-looking cooperation with citizens, experts, stakeholders, and decision-makers. To integrate inclusiveness further into the document, guidelines on good practices in organisational procedures could be added. Also, integrating how science education could be strengthened through upskilling and knowledge sharing procedures could embed the key further into the document.

Open access is mentioned as a declaration to make all publications of the organisation accessible on its webpage. Furthermore, a newsletter, addressed to politicians and decision-makers and sent to the press, communicates results and recommendations from the work of the organisation.

Reflexivity appears as the intention to evaluate all major events, projects, and methods. Furthermore, knowledge sharing is mentioned in the document as an area for additional initiative. To embed reflexivity further into the document, the processes of evaluation could be elaborated.

Finally, responsiveness could be added to the document by including good practices and guidelines on how to respond to complex situations as a project manager.

## 4. Five Principles on Citizen Engagement

### Brief summary of the document:

Year of publication: 2020.

Target audience: External document.

Main purpose: To describe the five methodological principles, guiding the organisation on citizen engagement activities.

### Place of RRI-AIRR approach in the document

Five Principles on Citizen Engagement	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	No	No	No	Yes
Research ethics or research integrity	No	No	No	No	Yes
Societal engagement or public engagement	Yes	Yes	Yes	Yes	No
Gender and diversity	No	Yes	Yes	No	No
Open access and open science	No	No	No	No	Yes
Science education	No	Yes	Yes	Yes	No
Anticipation, foresight, vision, planning	No	Yes	Yes	Yes	No
Inclusiveness	Yes	Yes	Yes	Yes	No
Reflexivity, evaluation, self-evaluation	No	No	No	No	Yes



Responsiveness and adaptation	No	Yes	Yes	Yes	No
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#### A concise review of the most relevant and interesting points of the document:

As the title of the document suggests, public engagement and inclusiveness are the key foci of the document when it comes to the RRI-AIRR framework. The five principles on citizen engagement, described in the document, illustrate five good practices on public engagement and inclusiveness. The principles are: 1) Rooting, 2) Situational, 3) Diversity, 4) Informed, and 5) Structure.

The first principle Rooting aims to define the purpose and use of the engagement process, and preferably to make agreements on rooting with responsible politicians. This should ensure a clear mandate for the citizens involved.

The second principle to make each engagement process situational is about carefully selecting and adapting appropriate methods for a given project in close dialogue with the beneficiaries. This way, the AIRR dimension on responsiveness is embedded in the process, as the organisation of the engagement process adapts to the needs and expectations of stakeholders.

The third principle on diversity aims at a representative selection of participants, including gender, education, and age. In this way, the RRI key on gender is reflected in the methodological principles.

The fourth principle aims to organise each engagement process in a way to ensure that all participants are informed about the subject in question, promoting a fair and equal chance of being consulted and actively involved in the development of society. This way, inclusiveness is addressed in the methodological principles, integrating perspectives from a wide range of societal actors. Also, the RRI key on science education is reflected as the citizens are informed about scientific knowledge throughout the engagement process.

The fifth principle on structure aims at a structured and well-planned dialogue, including a clear connection between purpose, subject, and process. There is no clear link to the RRI-AIRR framework for this principle.

A way to add responsibility to the document could be by describing how the purpose of the principles is to conduct responsible engagement processes. Also, reflexivity could be added by describing practices of evaluation, and open access could be further integrated by including procedures of communicating the results to a wider audience.

## 5. Gender Equality Plan (Draft)

#### Brief summary of the document:

Year of publication: 2022

Target audience: External document.

Main purpose: To ensure gender equality within the organisation.

#### Place of RRI-AIRR approach in the document

Gender Equality Plan	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	No	No	Yes
Gender and diversity	Yes	Yes	Yes	Yes	Yes
Inclusiveness	No	No	No	No	Yes



Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	No
Responsiveness and adaptation	No	No	No	No	Yes

#### A concise review of the most relevant and interesting points of the document:

The identified goal of the Gender Equality Plan is to ensure a gender balance in the organisation and equal rights for all genders, including, but not limited to, equal pay between employees with different genders within similar job categories. This goal will be monitored through the following parameters: Numerical representation of genders in the organisation, gender-disaggregated wage statistics, gender-based violence, and work-life balance. The parameters will be reported in the Annual Report, beginning in 2022. Further initiatives include flexible working hours as well as an opportunity to part-time work and working from home in connection with parental leave, if one so chooses. Furthermore, it is stated that gender equality and diversity are seen as a methodological principle and are considered a core principle in the work of the organisation. To further embed gender and diversity into the document, good practices and examples could be included.

Besides the RRI key on gender equality, the AIRR dimension on reflexivity appears in the document. Based on the Annual Reports, discussions can be initiated between employees and the board of directors on desired improvements. Furthermore, the recurring workplace assessment can identify potential challenges and if necessary, the Working Environment Organisation can initiate activities such as seminars to strengthen the implementation of the Gender Equality Plan. As the Annual Reports are external documents, the monitoring of gender equality can be accessed by the public, reflecting the RRI key on open access.

The term responsibility is mentioned a few times throughout the document, assigning the responsibilities of monitoring procedures to different parts of the organisation, including the Deputy Director, Financial Director, and the Work Environment Organisation.

Finally, good practices of inclusiveness and responsiveness could be added to the document, including the recruitment process and bias training.

## 6. Annual Report 2020

#### Brief summary of the document:

Year of publication: 2021.

Target audience: External document.

Main purpose: A report on the management's review and annual account. This includes the purpose and focus of the organisation, and project activities.

#### Place of RRI-AIRR approach in the document

Annual Report 2020	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	No	Yes
Responsible research and innovation (RRI)	No	Yes	No	No	No



Responsible research and innovation (the translated equivalent)	No	Yes	No	No	No
Research ethics or research integrity	No	Yes	No	No	No
Societal engagement or public engagement	No	Yes	Yes	No	No
Gender and diversity	No	Yes	No	No	No
Open access and open science	No	Yes	No	No	No
Science education	No	Yes	Yes	No	No
Anticipation, foresight, planning	No	Yes	Yes	No	No
Inclusiveness	No	Yes	Yes	No	No
Reflexivity, self-evaluation	No	Yes	No	No	No

#### A concise review of the most relevant and interesting points of the document:

A description of the areas of work central to the organisation is recounted in the Annual Report. The four areas are: 1) Research, 2) Democracy and Public Engagement, 3) Technology assessment, and 4) International activities. In this way, the RRI key of public engagement appears as a central focus of the organisation. Also, anticipation appears in the shape of technology assessment and foresight regarding challenges of society, organisations, and companies. Internationally, public engagement is also a strategic principle. The area of research aims to accomplish practice-oriented research within fields such as technology assessments, foresight, public and stakeholder engagement, and RRI. Besides the Business Plan, this is the only time RRI is mentioned as a strategic goal in the organisational documents reviewed. It is, however, reflected in the project activities, undertaken by the organisation throughout the year. RRI has appeared for the first time in the Annual Report in 2013 and has been an area of work ever since with only a minor moderation to the description of the area in 2018.

As the Annual Report accounts for the purpose and focus of the organisation, some of the RRI keys and AIRR dimensions, reflected in this document, are mentioned elsewhere. The mission of the organisation, to work for a development of society, shaped in informed and forward-looking cooperation with citizens, experts, stakeholders, and decision-makers, also occurs in the Employee Handbook. The mission reflects the keys and dimensions of public engagement, anticipation, science education, and inclusiveness, which is further elaborated above in the section of the Employee Handbook. The project activities, listed in the Annual Report, clearly reflect that these four keys and dimensions are central to the work, undertaken by the organisation. In addition to the keys and dimensions already mentioned, ethics and diversity make up some of the subjects that preoccupy the organisation. As also mentioned in the Employee Handbook, publications of the projects are accessible on the webpage of the organisation, reflecting open access.

In one of the sections of the document, *Statement of good foundation governance*, it is noted that the organisation meets the recommendation to consider diversity in the nomination of board members, including age, gender, and occupational experience. From 2022, the Annual Report will account for the progression of the Gender Equality Plan. Furthermore, reflexivity is represented in the governance of the organisation as the organisation meets the recommendation to evaluate the work, executed by the board of directors.





As part of the management's review, anticipation is reflected in the account of the future of the organisation. These considerations include economical and project-related activities. One of the strategic priorities of the organisation is to increase activities in Denmark while keeping the level of international research activities.

Responsibility is a key focus of the document, as the purpose of the Annual Report is to review and account for activities throughout the year. The term responsibility occurs throughout the document, but mostly in connection with the independent auditor's report, including responsibilities of the management and those charged with governance for the financial statements. No new or specific good practices are identified, but the organisation follows the recommendations on good foundation governance. To further embed responsibility into the document, including good practices in line with sustainability, the sustainable development goals could be added, for example.

## 7. Business Plan (Draft)

### Brief summary of the document:

Year of publication: Forthcoming.

Target audience: Internal document.

Main purpose: An outline of the overall purpose of the organisation and a plan for the organisational development over the coming 2-4 years.

### Place of RRI-AIRR approach in the document

Business Plan	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	Yes	No	No	No
Societal engagement or public engagement	No	Yes	Yes	No	No
Open access and open science	No	Yes	Yes	No	No
Science education	No	Yes	Yes	No	No
Anticipation, foresight, vision, planning	Yes	Yes	Yes	Yes	No
Inclusiveness	No	Yes	Yes	No	No
Reflexivity, evaluation, self-evaluation	No	No	No	No	Yes
Responsiveness and adaptation	No	No	No	No	Yes

### A concise review of the most relevant and interesting points of the document:

The Business Plan begins by unfolding the concept of the organisation, including the purpose and mission, which reflects public engagement, anticipation, science education, inclusiveness, and open access. The purpose and mission are written in the Articles of Association and Employee Handbook respectively, and an elaboration of the keys and dimensions can be found in the analysis of the two documents above.

Anticipation is the key focus of the document. The strategic priorities in the coming 2-4 years regarding the market, sales promotion, the organisation, and economic development are outlined within it. This includes assessments of current opportunities in the market and level of activity in the future.

Furthermore, the document unfolds the overall objective of the organisation. This being to contribute to resolve societal challenges and change societal practises and institutions in accordance with the purpose of the organisation. Public engagement is mentioned as a key focus of the organisation. Also, RRI is mentioned as a strategic priority.

Some other suggestions to further embed RRI-AIRR into the Business Plan include the following: further describing how responsibility is embedded into the organisations business development activities; embedding reflexivity by continuously engaging with external partners; embedding responsiveness by formulating how often the Business Plan should be revised in order to respond to an agile market; or embedding ethical reflections on overall business development plan and activities.

## Summary of the interviews

### Brief overview of respondents

Eight interviews have been conducted with people from the organisation, including representatives from the management, senior project managers, and project managers. There was an even distribution of gender between participants. All respondents contribute to the project activities of the organisation. These activities include projects under the Horizon 2020 programme of the European Union and projects with Danish regions and municipalities. Besides project work, project managers are organised in different business development teams that work to increase sales in the Danish market, including a group, focusing on public engagement and a group, focusing on RRI.

### Framing of the RRI-AIRR approach in The Danish Board of Technology

All respondents have experience in working with RRI in projects and are familiar with the concept, either through this work or from research activities. Whereas the respondents are all aware of the RRI keys, the AIRR dimensions are unknown to some of them.

Overall, RRI is perceived as a meaningful, but difficult concept to grasp. Since it bridges technological innovation and society, the purpose of RRI is to align technological developments with the needs, values, and expectations of society. To do so, an important aspect is to involve societal actors in the process of technology development.

The RRI keys are perceived either as policy agendas or as a toolbox to realise and monitor the bridging of the technological and the social world. The AIRR dimensions are perceived as a process, i.e. a way to conduct responsible research and innovation.



Generally, the respondents perceive the AIRR dimensions as an integral part of conducting project work, and therefore consider all dimensions as part of their responsibilities. For some, the AIRR dimensions are reflected in the outcome of an engagement process. For instance, methods focusing on participatory planning are mentioned as an example. For others, the AIRR dimensions are present in the methodological reflections concerning the process of conducting project work. In this perspective, inclusiveness is reflected in the considerations on how to engage a wide range of societal actors. Reflexivity is related to considerations on bringing societal actors together to gain multiple perspectives on a given subject. Responsiveness is seen as the purpose of the organisation to influence actions. Anticipation is thought as a way to map risks and how to respond to them in project activities. Especially in research projects, AIRR dimensions are considered an integral part of the process. Therefore, participation in research projects is seen as promoting the work with the AIRR dimensions.

Finally, some respondents reflect on the AIRR dimensions from an internal organisational perspective. From this perspective, inclusiveness can be seen as a responsibility to engage employees in the organisational development. Reflexivity can be seen as an internal openness to discuss working conditions or organisational policies and procedures. Responsiveness is perceived as a responsibility to act upon feedback and input from the organisation, and anticipation can be seen as considerations, concerning business and organisational development.

Public engagement, gender equality, ethics, and open access are the main RRI keys considered as part of the responsibilities of project managers. In particular, the role of public engagement is stressed, as engagement activities are central to the work of the organisation. This includes engagement of industry, government, academia, and civil society. Gender equality is seen as a responsibility to secure an equal representation of men and women in project activities. This is especially important in projects under Horizon 2020 and Horizon Europe, as it is a legal requirement. Ethics is integrated in the methodical reflections of the organisation, including considerations on which knowledge is produced and by whom. In recent years, data management is also becoming an integrated part of the ethical procedures, related to project activities. Finally, open access is considered a responsibility to promote dissemination of results to avoid outcomes being cut off from the outside world and to make organisational processes transparent. Science education is generally not considered as part of the responsibilities of the respondents, but could be seen as a responsibility to organise internal knowledge sharing.

Concerning the role of RRI in the organisation, RRI is integrated in the very core and purpose of DBT. At the same time, RRI is an agenda, opening a major source of revenue in correspondence with the organisational values. Some of the agendas with a long tradition in the organisation are ethical considerations, public engagement, and gender equality understood as representativity in project activities.

Many of the respondents point to a few colleagues as main RRI-AIRR actors, and some include the management in this observation. The RRI business development team, promoting sales in the Danish market, is also considered a main actor.

The embeddedness of RRI is promoted by the organisations' main RRI actors, who help support the awareness of RRI internally. Over time, the principles of RRI (and public engagement in particular) are to be passed on to new employees by engaging in the activities and projects of the organisation.

The European Union is considered a main driver behind the prevalence of RRI in projects. Originally, the Danish Board of Technology was founded with a purpose to conduct technology assessments. When RRI was introduced, the principles of technology assessments were perceived as corresponding to the principles of RRI, making an easy transition to the new concept. This correspondence between technology assessments and RRI is the reason RRI is considered as integrated in the very core and purpose of the organisation.



Implementation of GDPR standards is another event changing the discourse on responsibility in the organisation. Furthermore, the requirement about having a gender equality plan, included in the Horizon Europe funding programme of the European Union, is promoting an internal debate on gender equality. Lastly, a change in legal status from a public to a private organisation is perceived as somewhat impeding the position to influence the research agenda towards RRI due to lack of a public grant.

## RRI keys and AIRR dimensions in The Danish Board of Technology

### Ethics

**Embeddedness:** Ethics is embedded both in the organisational practices and in project activities. GDPR is an example of an organisational practice considering ethical aspects. Also, the practice of freely accessible and well-documented methods is thought to be a high ethical standard. As part of the activities, conducted by the organisation, ethics is embedded in the methodical thinking of engagement activities.

**Main barriers:** Resources are a central barrier, as funding modalities do not necessarily consider the extra costs of implementing ethical practices into research and project activities.

**Main drivers (legal, cultural, structural and/or political):** A number of Data Protection Officers are appointed to oversee the compliance with GDPR, making sure ethical standards are met in relation to data protection.

**Good practices:** Open access to methods and work conducted by the organisation is considered a good ethical practice.

**Monitoring and evaluation mechanisms and practices:** No monitoring and evaluation mechanisms and practices are mentioned.

### Public engagement

**Embeddedness:** Public engagement is a part of the history, identity, and self-perception of the organisation. Public engagement procedures are inculcated by the management and embedded through project activities, as engagement is a part of most projects undertaken by the organisation.

**Main barriers:** Time constraints is the main barrier to systematically evaluating and sharing knowledge about engagement activities.

**Main drivers (legal, cultural, structural and/or political):** The organisation was founded as a reaction to the technological development in the 1980's. In the beginning, the organisation was occupied with technology assessments, dealing with reactions to issues such as pollution, new clear energy, gene technology, and concerns about unemployment as a result of the technological development. To respond to a technological scepticism in society, public engagement was included in the legal foundation of the organisation when the organisation was founded in 1985.

Cultural drivers are also considered as central to the embeddedness of public engagement. This is the case, since public engagement is a part of the history, identity, and self-perception of the organisation. An example of a cultural driver is the practice of introducing new employees to the historical roots of the organisation.

Furthermore, a growing demand on engagement activities in Denmark and internationally is seen as a driver.

**Good practices:** When it comes to concrete methods on public engagement, the organisation has many good practices. This includes the Consensus Conference in which a panel of citizens are assembled to deliberate and reach consensus on a given issue. Another example is the Citizen Jury in which a group of citizens deliberate on a given issue and vote on a number of options. These methods are all well described and guidelines on how to conduct the engagement activities exist.



**Monitoring and evaluation mechanisms and practices:** Evaluation practices exist in different varieties and are tailored to fit the specific engagement activities. However, a strengthening of monitoring and evaluation mechanisms and practices are mentioned.

### Gender equality

**Embeddedness:** Gender equality is mostly seen as embedded in the recruitment practices of the organisation when it comes to equal representativity of men and women in engagement activities. Furthermore, gender equality is at the moment a topic of discussion in the organisation, as a new Gender Equality Plan is being developed.

**Main barriers:** The organisation needs to discuss the issue of representativity as to whether an equal representation should be a goal, and which other aspects are important when speaking of gender equality.

**Main drivers (legal, cultural, structural and/or political):** The new rules to receive funding under Horizon Europe is considered a main driver behind gender equality in the organisation. Also, the European Union is seen as promoting an equal representation of men and women when requesting this in ongoing project activities under the Horizon Europe. When conducting project activities in a Danish context, equal representation it is typically not a formal requirement, but is strived for in all project related activities.

**Good practices:** Guidelines on good practices on gender equality could be developed to introduce a shared practice in the organisation. This would include considerations on which measures should be taken to promote gender equality (and diversity) within the organisation. Examples could be good practices on recruitment and work-life balance.

**Monitoring and evaluation mechanisms and practices:** As part of the Gender Equality Plan, representation of men and women as well as potential pay gap between genders will be monitored in the future.

### Open access

**Embeddedness:** All publications, produced by the organisation are made accessible free of charge after a certain period. Publications are published on the organisational webpage and on project websites and platforms, which is a thoroughly embedded practice in the organisation for all projects and project activities.

Open access is also practiced and valued internally in the organisation. This includes open access to all information, related to the organisation, including strategic documents.

**Main barriers:** Insufficient time can be a considerable barrier to really understand what RRI and open access entails, especially for the rather large number of junior colleagues in the organisation who may not yet have a deeper understanding of what these principles mean to their work.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** The practice of making organisational information accessible to employees is considered a good practice. However, most respondents find it difficult to mention good practices or calls for guidelines on good practices.

**Monitoring and evaluation mechanisms and practices:** There are no monitoring and evaluation mechanisms and practices, related to internal or external open access procedures.

### Science education

**Embeddedness:** Generally, science education is not believed to be embedded in the organisation and for some, this key does not make much sense in an organisational context. However, understood as science



communication, there is a clear wish and efforts towards reaching a broader audience when communicating project findings to the public.

**Main barriers:** A barrier to embed science communication into projects might be the personal interest and communication skill of projects managers, managing a given project.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** No good practices were mentioned.

**Monitoring and evaluation mechanisms and practices:** No monitoring and evaluation mechanisms and practices are mentioned.

## Anticipation

**Embeddedness:** Anticipation is considered a central capacity when it comes to the methodical approaches of the organisation.

On an organisational level, the draft of a new Business Plan is an attempt to anticipate the course of the organisation in 2-4 years' time. Also, the business development teams, introduced in the beginning of the chapter, is an attempt to practice anticipation in relation to the Danish market.

**Main barriers:** No particular barriers are discussed.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** Some of the methods used by the organisation are mentioned as examples of good practices on how to work with anticipation in projects. One method is the Scenario Workshop, which aims to assess solutions to specific problems, using scenarios as visions and inspiration during the workshop.

**Monitoring and evaluation mechanisms and practices:** Generally, there are no monitoring and evaluation mechanism and practices regarding the AIRR dimensions.

## Inclusiveness

**Embeddedness:** On an organisational level, inclusiveness can be seen as an expectation to be engaged in some of the decision-making processes of the organisation. Here, a more bottom-up decision-making process is called for by some of the respondents, for example through a more systematic engagement of employees in these processes.

**Main barriers:** As new employees are continuously joining the organisation, some of the respondents expressed a need to further support the engagement of employees in the organisational practices.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** The different roles of the employees in project work are described, including an evaluation procedure. This serves as a good practice, as it clarifies how project managers can contribute to and are included in project activities. Also, some employees mention that they feel included in decision-making regarding the organisational development and have an experience of being invited to make contributions to new organisational policies.

**Monitoring and evaluation mechanisms and practices:** Generally, there are no monitoring and evaluation mechanism and practices regarding the AIRR dimensions.



## Reflexivity

**Embeddedness:** A central practice of the organisation is to include a lot of different perspectives from stakeholders and citizens when working on a specific task. Another reflexive practice is the DBT Academy, which is a recurring knowledge sharing initiative in the organisation. One of the initiatives under DBT Academy is a lunch break activity where project managers are encouraged to share their knowledge on different subjects over lunch. Open discussions on working conditions and the Business Plan are perceived as examples of reflexivity in the organisation as well.

**Main barriers:** Time constraints are mentioned as a central barrier.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** The knowledge sharing activities and organisational reflections mentioned above are examples of good practices in the organisation. A yearly staff seminar, internal meetings, and workshops are also mentioned as practices that create a space to foster reflection.

**Monitoring and evaluation mechanisms and practices:** Generally, there are no monitoring and evaluation mechanism and practices, regarding the AIRR dimensions.

## Responsiveness

**Embeddedness:** As per the respondents, responsiveness is embedded in the very core of the organisation. Responsiveness is considered as the main purpose of the organisation; it is part of the organisational vision and mission to put societal needs first and to find common solutions. Responsiveness is further embedded in the methodical reflections in project activities, for instance, by mapping risks and finding ways to respond to them.

**Main barriers:** Further clarity on responsiveness is suggested, for example on how the organisation can work with responsiveness in the external communication of purpose, projects, and activities.

**Main drivers (legal, cultural, structural and/or political):** No main drivers are mentioned.

**Good practices:** The team coordinators are an example of responsiveness, as their role is to support project management by coordinating projects across the organisation.

**Monitoring and evaluation mechanisms and practices:** Generally, there are no monitoring and evaluation mechanism and practices, regarding the AIRR dimensions. To implement evaluation mechanisms, a discussion needs to take place within the organisation to decide whether responsiveness should be part of the branding strategy of the organisation.

## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in The Danish Board of Technology

A further integration of the AIRR-dimensions into practices of the organisation is suggested by several respondents. For reflexivity and responsiveness, additional knowledge (and culture) sharing activities and evaluation procedures after project completion is needed. This could enhance the organisational learning and improve the organisational capability to respond to internal and external developments. Furthermore, a more systematic culture for educating employees in practices and policies of the organisation is mentioned, including general codes of conduct, methods used, and GDPR.



The enhanced practice of reflexivity could help promote best practices on inclusiveness, fostering discussions on what kind of engagement is important in different projects and why. On an organisational level, a more systematic inclusion of employees in the development of new policies is suggested. For instance, the AIRR-principles could be used to guide the process of developing new policies.

Some issues of further integrating AIRR dimensions into the organisation are also mentioned. On the one hand, reflexive practices are beneficial to the organisation and can be improved by engaging employees in developing organisational policies. On the other hand, it could be difficult to dedicate time to contribute to these policies, in parallel with project activities.

Elaborating existing guidelines on good practices is another initiative mentioned several times by the respondents, which includes guidelines on ethics, public engagement, gender equality, and open access. Besides helping to further integrate the mentioned RRI keys in the organisational practices, the guidelines would help introduce a shared practice regarding the keys in the organisation and speed up the integration of new employees.

One of the main RRI keys of the organisation is public engagement. Some of the suggestions to include the key further into organisational practices include ensuring easier access to the engagement methods used by the organisation and systematic communication of experiences, related to working with these methods, including procedures and references to specific methods.

Upgrading the external communication of the organisation is another theme discussed by the respondents. It is suggested that open access could be improved by upgrading communication channels and making the outputs more accessible to a wider audience. Also, some suggestions are made to improve science education, including a need to define target groups to better communicate scientific information to the public.

In the rest of this section, input from the respondents on how to further integrate RRI-AIRR into the policies, analysed in the previous chapter, is summarised.

**Five Principles on Citizen Engagement:** There is some debate as to whether the RRI-AIRR principles should be further integrated into the five principles. On the one hand, it is suggested that open access could be integrated in the sense of communicating the process and the results to a wider audience. An example is the Climate Assemblies which could open up further to citizens in the relevant municipalities who are not participating in the assemblies. The opening up of the Climate Assemblies should not only be a technical access, but an improved effort to communicate how to follow the process. Climate Assemblies is a method where a group of citizens is brought together to deliberate on climate issues(s) of local or national importance, aiming to develop recommendations to inform policy-making. On the other hand, a lot of the RRI-AIRR principles can be seen as already integrated in the Five Principles of Citizen Engagement, though not with the exact wording. This includes inclusiveness, public engagement, ethics, open access, science education, and gender equality. Reflexivity is integrated in the method, but a more systematic procedure on how to collect feedback from the citizens and integrate it in future engagement activities could be implemented.

**Employee Handbook:** It is suggested that some phrases on why and how public engagement activities are conducted could be further integrated into the handbook. This could help establish some good practices and constitute a point of reference to which engagement activities of the organisation are conducted. Ethical guidelines on the type of projects to be undertaken by the organisation could also be added to the handbook.

**Business Plan (Draft):** Several respondents believe that a further integration of reflexivity into the practices around the business plan is feasible and might increase reflection on business development activities. Responsiveness could be integrated further by formulating how often the Business Plan should be revised to be able to respond to an agile market.



**Data Management Plan:** Continuous reflections on the integration of GDPR into the organisation could be integrated into the policy and enhance the practice of reflexivity. This could include reflections on how to make data management easier to understand and implement in daily work practices. This way, reflexivity also touches upon inclusiveness and how to further engage employees in the GDPR practices of the organisation. Also, ethics is currently not mentioned explicitly in the Data Management Plan. However, it might contribute to engage employees further in data management practices to frame it as an ethical consideration.

**Gender Equality Plan:** Obviously, the key of gender is in the centre of this policy. It is suggested that diversity should be added here and that diversity should be further integrated into the policy and practices of the organisation. Both when representing the organisation and when assembling teams. Other initiatives to improve diversity could be to establish an internal practice of speaking English or establish a Human Resource department to handle hiring procedures.

Responsiveness is another dimension which could be integrated further into the Gender Equality Plan. Currently, statistics of earnings are being made. In the future, statistics on gender in relation to job categories will be included, and possibly statistics on gender in relation to the management and the board of directors will be included, too. Furthermore, it is suggested to monitor (conscious and unconscious) biases within the organisation.

## Summary of the focus group

### Brief overview of participants

Five respondents participated in the focus group, including representatives from the management, senior project managers, and project managers. There was an even distribution of gender between participants. Two of the participants also participated in the interviews, conducted prior to the focus group. As for the interviews, all respondents contribute to the projects, undertaken by the organisation. Likewise, most respondents are organised in the business development teams of the organisation, working to increase sales in the Danish market.

All the respondents have experience working with RRI in projects and are familiar with the concept. All the respondents know about the RRI keys, whereas the AIRR dimensions are unknown to some. Some respondents mention that they are more familiar with a similar framework AREA (Anticipate, Reflect, Engage, and Act).

### Relevance of the RRI-AIRR approach in The Danish Board of Technology

Below is the average score of the answers to the relevance of the RRI-AIRR approach, provided by the respondents, 1 being most relevant and 5 being least relevant. All five participants of the focus group provided an answer.

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	1,6	1,0
Ethics	1,4	1,4
Gender equality	2,2	1,8
Open access	2,8	2,8
Science education	2,5*	3,0*



Anticipation	1,0*	1,3*
Inclusiveness	1,2	1,2
Reflexivity	1,4	1,6
Responsiveness	1,4	1,6
Total average	1,7	1,7

\* One respondent has not provided a valid answer. Therefore, the average is based on four observations.

As it can be seen in the table, the four AIRR dimensions are of high relevance to the work of the respondents. Anticipation scores highest, followed by inclusiveness, reflexivity, and responsiveness. Ethics is the RRI key with the highest score, followed by public engagement. Science education is considered to be the least relevant to the work of the respondents, followed by open access and gender equality.

When looking at the relevance of the RRI-AIRR approach to the organisation, the answers are slightly different. Here, public engagement is considered the most relevant, followed by anticipation, inclusiveness, and ethics. Reflexivity and responsiveness are considered slightly less relevant to the organisation, compared to the respondents' own work. Again, science education is considered the least relevant, followed by open access and gender equality. Gender equality is considered more relevant to the organisation as a whole, compared with the respondents' own work, whereas science education is considered even less relevant.

The total score of the relevance of the RRI-AIRR approach to the work of the respondents and to the organisation is close to 1, indicating a rather high relevance of the framework. This is reflected in the summary of the focus group below, where much of the discussion centred around opinions to further improve the RRI-AIRR framework into the policies and practices of the organisation.

## Embeddedness of the RRI-AIRR approach in The Danish Board of Technology

### Drivers

Generally, there are no reward systems or benefits supporting the RRI keys and AIRR dimensions. Rather, the drivers are manifested in the cultural practices of the organisation.

**Public engagement** is the first RRI key, identified by the respondents as embedded in the organisation. Engagement methods are considered an expertise of the organisation. The fact that engagement methods are considered central and important among project managers also serve as an innate driver. Furthermore, the public engagement business development can be seen as promoting the work with public engagement. For instance, the team has developed the Five Principles on Citizen Engagement to be used in engagement activities.

Furthermore, project managers experience a growing awareness externally, from municipalities to political decisions in the European Union, of the need to engage citizens and stakeholders in developing society, expanding the opportunities of the DBT. Furthermore, the European Union is seen as a driver for recruiting marginalised groups for deliberative processes, since projects under Horizon 2020 focus specifically on engaging these groups.

**Ethics** is less embedded in the organisation, compared to public engagement. Nonetheless, ethics is believed to be an important aspect in all projects. Most project managers have an academic background, some with a PhD degree, which increases the familiarity of working with ethical aspects. Furthermore, the literature and methods on public engagement are considered a driver of ethics.



**Reflexivity** is believed to be a point of development. However, a few drivers are mentioned by the respondents. The business development teams can be seen as a driver, promoting discussions and reflections among employees about the relevance of the work done by the organisation to society. Also, the board of directors serves as a driver for reflecting on the strategy of the organisation and relevance to society. Likewise, the board of representatives is used to discuss different topics. Furthermore, when representing the organisation in outgoing activities, project managers need to reflect upon the projects conducted, including the relevance of the work, the recipients, and methods used. The team coordinator role, supporting project management by coordinating projects across the organisation, could also be seen as a driver to further coordination of knowledge sharing and evaluation between projects in the future.

**Gender equality** has not been a focus of the organisation in the past, but the new requirement under Horizon Europe for a gender equality plan is mentioned as a driver.

## Barriers

**Inclusiveness** was discussed in the sense of how to methodically recruit and include marginalised groups, as this is a demanding task. As recruitment processes are already expensive for the beneficiaries, the added costs of expanding these processes are considered a barrier. Also, time can be a barrier, as it is considered easier to recruit people based on gender and age.

**Gender equality** has previously been experienced as an area where there has been some reluctance to consider the challenges connected to gender equality, both within the organisation and in Denmark in general. Besides gender equality, diversity is an aspect discussed by the respondents and they believe that it is not yet sufficiently addressed.

**Reflexivity** is considered to be an organisational challenge, concerning both evaluation practices and continuous knowledge sharing within the organisation. One barrier has been the Covid-19 pandemic and a rapid growth of organisational staff, limiting the time and space for reflexivity. Also, some of the reflective practices are driven by project managers and are therefore dependent on sufficient time besides main tasks. Some challenges to further establishing an evaluation culture were also discussed. In fact, templates for evaluation practice already exist and there is a general interest from respondents to promote both evaluation practices and knowledge sharing internally. Insufficient time is mentioned as one of the main obstacles.

## Good practices

Some of the good practices existing in the organisation are not yet formalised. One exception being public engagement, where the methods used by the organisation and the Five Principles on Citizen Engagement are mentioned by the respondents as examples of good practices.

One formalised good practice is also mentioned for science education, namely a project manager training programme. Besides that, the discussion is centred around good practices as the outcome of the work done by the organisation. For instance, when engaging stakeholders and citizens, and when advising decision-makers, scientific knowledge is communicated. This way, scientific literacy is improved, which is considered a good practice.

Ethics is another RRI key, discussed by the respondents. Overall, it is difficult for the respondents to give concrete examples of good practices. Only one formalised practice is mentioned - a code of conduct in relation to beneficiaries and collaborators, which can be considered a good ethical practice.

In relation to open access, different informal practices are mentioned as examples of good practices, including methodical lectures at universities, an online catalogue of methods used by the organisation, contributions to public debates, and sharing the outcome of the projects undertaken by the organisation.



## Monitoring and evaluation

Generally, there are no formalised criteria or indicators for monitoring and evaluating the organisation's performance, related to the RRI keys and AIRR dimensions.

It is agreed that practices of the organisation largely exist as an informal organisational culture. Therefore, an internal discussion on the need to formalise these practices must precede the implementation of monitoring and evaluation mechanisms.

A few dilemmas on formalising organisational culture are addressed. On the one hand, getting to know an organisation takes time and is not necessarily obtained through formalised introductions. Rather, organisational practices are learned from working on projects. On the other hand, formalising practices of the organisation might help new employees understand the practices faster. At the moment, mentoring schemes and introductory courses do exist, but are still in the process to become more formalised, as they are currently informal talks with the management and employees. A more formalised introduction to the organisation could include a curriculum of theoretical texts and introductions to specific methods, prominent projects, and working procedures. Also, formalising practices might lead to the realisation of a need for improvement in certain areas.

## Recommendations

A further integration of anticipation and responsiveness is discussed by the respondents. Some ideas include using the outcome of different engagement activities to frame what the organisation should work with in the future. Also, at the yearly staff seminar, the whole organisation could brainstorm on visions for future areas of interest, citizens could be engaged in a similar brainstorming, or the organisation could systematically take into consideration what the public has said in other projects. It is suggested that the goal in such processes should be to place societal needs in the centre.

Reflexivity is another AIRR dimension that could be further developed. Evaluation forms are one of the approaches being discussed. It is suggested that instead of evaluation forms, evaluations could take the form of town hall meetings where participants take turns sharing their perspective on a topic of concern, or a presentation for the whole organisation could be made to create a space for general reflection. Another thing discussed in relation to reflexivity is the process of organisational development. It is suggested that the RRI keys and AIRR dimensions could be used to create a process of organisational development.

In line with the further integration of reflexivity, it is suggested that the public engagement key could be further improved by inviting external resources to participate in a debate about citizen engagement and methods, including citizens and stakeholders.

The gender equality key is currently being developed, receiving great support from the respondents. It is suggested that expertise from outside the organisation is used to get input for the process. Also, diversity is suggested as a better expression compared to gender equality exclusively.

To further improve science education within the organisation, earmarking time for knowledge sharing and upskilling is suggested. This would also create a measurable indicator to monitor. Another way to improve science education would be to formalise upskilling and knowledge sharing in job positions to centralise the work.

Finally, open access could be improved by formalising practices of internal knowledge sharing, making it easier to disseminate results to the public.





# Conclusions

RRI is seen as integrated in the very core and in the purpose of DBT. Originally, DBT was founded with a purpose to conduct technology assessments. When RRI was introduced, the principles of technology assessments were perceived as corresponding to the principles of RRI, making an easy transition to the new concept when introduced by the European Union under Horizon 2020. At the same time, RRI is an agenda, opening a major source of project opportunities in correspondence with the organisational values. This is reflected in the project activities undertaken throughout the year and in the strategic goals of the organisation.

All the participants in the interviews and in the focus group have experience working with RRI in various projects and are familiar with the concept, either through Horizon 2020 or from research activities. In particular, public engagement is considered as central to the work of the organisation and as part of the project responsibilities of the respondents. The AIRR dimensions are unknown to some of the participants. However, when introduced to the concept, most respondents consider the AIRR dimensions as an integrated part of conducting project work and therefore believes all the dimensions to be part of their responsibilities.

The mapping of internal documents revealed seven documents, addressing aspects of the RRI-AIRR framework. A few policies focus specifically on an RRI key or an AIRR dimension. However, most documents do not address the notion of RRI or the different keys and dimensions directly. Nonetheless, all the keys and dimensions are reflected in one way or another, including in the mission and purpose of the organisation.

The keys and dimensions reflected in the mission and purpose of the organisation are the ones most prominently featured in the policies and practices. The mission of the organisation is to work for a development of society, shaped in informed and forward-looking cooperation with citizens, experts, stakeholders, and decision-makers, reflecting the keys and dimensions of public engagement, anticipation, science education, and inclusiveness. The purpose of the organisation is to carry out research, analysis, assessments, dialogue, and dissemination, reflecting open access, societal engagement, and inclusiveness.

Besides being reflected in both the mission and purpose of the organisation, societal engagement and inclusiveness are some of the RRI-AIRR principles integrated in several policies, including the Articles of Associations, the Employee Handbook, the Annual Report, and the Business Plan. In these documents, societal engagement and inclusiveness are presented as part of the mission of the organisation and as core methodological principles. Moreover, the policy on Five Principles on Citizen Engagement specifically addresses public engagement and inclusiveness. Concerning the practice of the organisation, most of the respondents consider public engagement as embedded in the history, identity, and self-perception. Engagement methods are considered an expertise of the organisation and are embedded through project activities. When asked to rate the relevance of the RRI-AIRR principles to the work of the organisation, the respondents rate public engagement as the most relevant, followed by inclusiveness.

Anticipation is mentioned in the mission of the organisation and it is embedded in some of the organisational policies. Most prominently, anticipation is the key focus of the Business Plan, outlining a plan for the organisational development. Another example of anticipation is in the Annual Report, accounting for the areas of work central to the organisation. Here, anticipation is integrated in the technology assessments and foresight activities, conducted by DBT. Some of the respondents consider anticipation to be a central expertise when it comes to the methodical approaches of the organisation. Moreover, anticipation is the RRI-AIRR principle rated as most relevant to the respondents' own work.



Science education is another RRI-AIRR principle mentioned in the mission of the organisation. This key is reflected in the Five Principles on Citizen Engagement as a way of informing citizens about scientific knowledge through engagement activities. However, science education is rated as one of the least relevant RRI-AIRR principles to the respondents' own work and to the work of the organisation.

Open access is stated in the purpose of the organisation. There are several examples of open access described in the policies, including the Employee Handbook and the Annual Report. One example is the practice of having open access to all publications made by the organisation. The practices described in the policies were confirmed by the respondents to be a central practice of the organisation, applied to both internal and external documents.

Gender is not mentioned in the purpose and mission of the organisation, but is specifically addressed in the Gender Equality Plan. The policy is still being developed, but currently the goal is to ensure a gender balance within the organisation and equal rights for all genders. Furthermore, the Gender Equality Plan states that gender equality and diversity are seen as methodological principles, which is also reflected in the Five Principles on Citizen Engagement. Pertaining to the organisational practices, gender equality is mostly seen as embedded in the recruitment practices of the organisation. As the Gender Equality Plan is still a new initiative of the organisation, a new practice has still to be developed.

The main RRI actors of the organisation are the employees with an expertise on the subject, including the management. These actors help promote the awareness of RRI internally and gradually, the principles are expected to be passed on to new employees by engaging in the activities and projects of the organisation.

Two business development teams support the organisational awareness of public engagement and RRI respectively. For instance, the Five Principles on Citizen Engagement have been developed by the business development team on public engagement. Furthermore, a number of Data Protection Officers oversee the compliance with GDPR, embedding ethical standards into the organisation. And finally, the board of directors and the board of representatives are seen as drivers of organisational reflexivity.

There are no reward systems or benefits supporting the implementation of the RRI keys and AIRR dimensions. Rather, the practices of the organisation largely exist as an informal organisational culture. The same applies to monitoring and evaluating mechanisms, exceptions being the Gender Equality Plan and the Data Management Plan where monitoring mechanisms do exist and are reported annually.

To further embed the RRI-AIRR framework into the policies and practices of the organisation, different suggestions have been made. Overall, guidelines on good practices is one of the areas in which the organisation could work to further embed RRI-AIRR, introducing a shared practice within the organisation and helping new employees understand internal practices faster. Integrating procedures for monitoring and evaluation further is another aspect which could embed the RRI-AIRR practices into the organisation. Preceding the integration of guidelines, evaluation procedures, and monitoring mechanisms, DBT needs to discuss to which extend the organisation wishes to formalise different procedures.

Suggestions to further integrate the RRI-AIRR framework include both the RRI keys and AIRR dimensions. Reflexivity is one of the dimensions which has been a recurring theme in the analysis and is closely related to the discussion on formalisation of monitoring and evaluation mechanisms. At the moment, reflexivity is considered to be an organisational challenge. This concerns both evaluation practices and continuous knowledge sharing within the organisation. One of the suggestions to further embed evaluation practices include the promotion of internal discussions, focusing on evaluations, with the aim to increase the organisational spaces for reflection. A more systematic approach to knowledge sharing could promote the embeddedness of other keys and dimensions. For instance, a systematic communication of experiences



working with engagement methods could embed public engagement further into the organisation. Formalising knowledge sharing and upskilling in job positions could also improve science education internally.

Elaborating guidelines on good practices were discussed for several of the RRI keys and AIRR dimensions, including responsiveness, inclusiveness, ethics, gender equality (and diversity), public engagement, and open access. One example is responsiveness, where good practices could help project managers respond to complex situations and clarify how the organisation can work with responsiveness in the external communication. In relation to inclusiveness, a more systematic inclusion of employees in the development of new policies of the organisation was discussed. For instance, guidelines on good practices in organisational procedures could be developed and based on the AIRR principles. Moreover, guidelines on good practices in recruitment processes and training on conscious/unconscious bias could help to further embed inclusiveness into the organisation.

Finally, gender equality was a recurring theme of the analysis, as it is currently a focus of the organisation. DBT needs to discuss the issue of representativity as to whether an equal representation should be a goal for the organisation itself and which other aspects are important when speaking of gender equality. Several respondents mentioned that diversity should be added to the Gender Equality Plan. Other initiatives to improve diversity could be to establish an internal practice of speaking English or establish a Human Resource department to handle hiring procedures.



# Internal RRI review of FCRI

Lead authors: Belén López, Marc Portella, Miguel Ángel Guadalupe

## List of acronyms/abbreviations used in this document

RRI: responsible research and innovation

AIRR: anticipation, inclusiveness, reflexivity, responsiveness

R&I: research and innovation

R&D&I: research, development and innovation

FCRI: Fundació Catalana per a la Recerca i la Innovació (Catalan Foundation for Research and Innovation)

STEAM: science, technology, engineering, arts and maths

STEM: science, technology, engineering and maths

CAPCIT: Consell Assessor del Parlament sobre Ciència i Tecnologia (Catalan Parliamentary Advisory Council on Science and Technology)

## Executive Summary

The RRI-LEADERS project ([www.rri-leaders.eu](http://www.rri-leaders.eu)), funded by the European Commission, explores the application and sustainability of the RRI paradigm within territorial research and innovation systems. It is conceived as a multi-stage co-creation process, whose ambition is to leverage leadership capacities and territorial actors in the elaboration of future-oriented, sustainable, and RRI-embedding policy action plans in the form of transformative outlooks.

The project includes a series of work packages, and the final task of work package 2 ('RRI audits in the involved territories and partners'), is to conduct internal RRI reviews in the consortium organisations. The present document contains the results of the review conducted in the Catalan Foundation for Research and Innovation (Fundació Catalana per a la Recerca i la Innovació; FCRI). An internal review aims to identify and analyse the presence and implementation of the RRI keys (ethics, gender equality, science education, public engagement, open access) and AIRR dimensions (anticipation, inclusiveness, reflexivity, responsiveness) in the organisation's policies and activities.

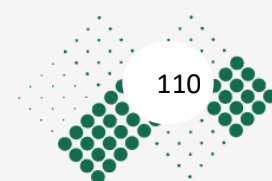
The review process involved the following subtasks, undertaken between January 2022 and March 2022 and listed here in chronological order: (i) review and synthesis of internal organisational documents; (ii) interviews with eight key members of staff; (iii) focus group with a different eight members of staff.

The FCRI – a small, private, non-profit foundation dedicated to disseminating research and innovation results to wider society – has no specific RRI institutional strategy in place. Nonetheless, the analysis of the internal documentation and the feedback from the interviews and focus group indicate that all the RRI keys are mentioned, explicitly or implicitly, and are implemented to different degrees in accordance with the organisation's typology and mission. The most implemented RRI keys are science education, gender equality and ethics, whereas the least implemented key is open access, as the FCRI is not a research organisation.

The AIRR dimensions are not explicitly mentioned in any document, but are de facto implemented. Anticipation is the most present dimension, while inclusiveness is absent for cultural reasons (scarce tradition of participatory processes) and lack of resources.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



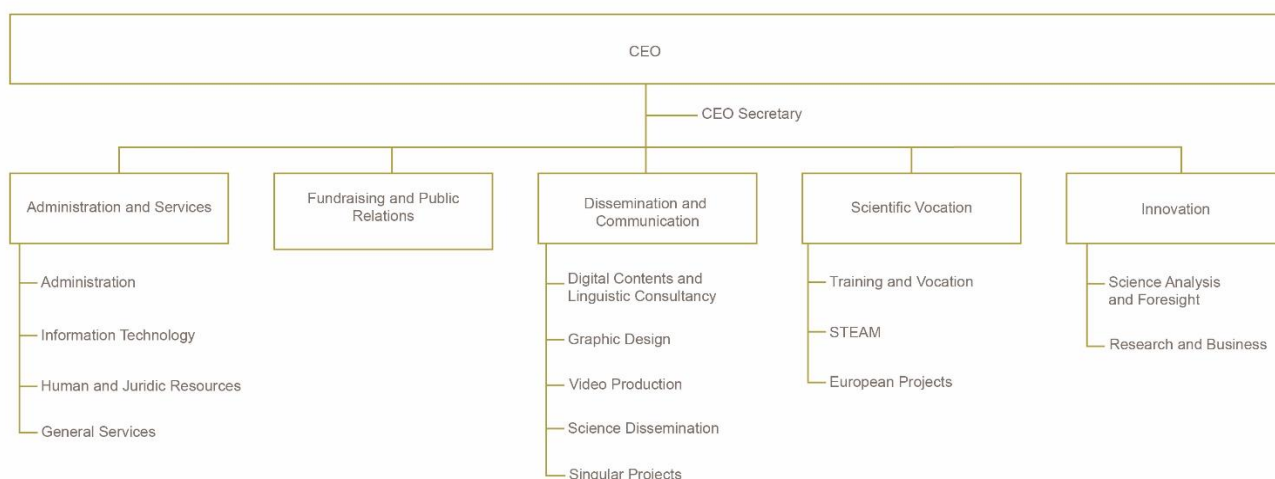
In conclusion, as the RRI keys and AIRR dimensions are de facto implemented and even perceived as necessary and useful by the staff, the organisation should formalise these aspects by establishing clear guidelines and objectives, training staff, evaluating the results, and assigning the necessary economic resources.

## Introduction

### Type of organisation and legal form

The Catalan Foundation for Research and Innovation (Fundació Catalana per a la Recerca i la Innovació; FCRI) is a private non-profit foundation that was created in 1986 in the city of Barcelona (Spain).

### Organisational structure



### Number of employees

The organisation has 26 members of staff, of whom 14 are women and 12 are men.

### Mission or main purpose of the organisation

To become a valuable and leading agent in knowledge and strengthening of R&D&I structures in Catalonia, by:

- developing versatile and concise wide-ranging proposals, especially in scientific communication and dissemination;
- creating scientific vocation and STEM training; and
- promoting knowledge transfer between the public and private scientific and business spheres.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439

## Brief presentation

FCRI is a private organisation, founded in 1986, that disseminates research and innovation results to wider society with the aim of promoting scientific culture, scientific and technical vocations, public-private relations, and entrepreneurship.

The FCRI does not carry out research, but facilitates communication between society, the Catalan research and innovation system, and the productive sector, with the aim of increasing public interest in science and technology. In this way, it helps to bridge the communication gap between knowledge-generating agents and the public.

The FCRI is structured in 3 strategic axes:

- Scientific Dissemination and Communication axis: dedicated to popularising the latest science by disseminating internally and externally generated content. It aims to promote science as a social reference and to explain how knowledge translates into socioeconomic advances.
- Science and Scientific Vocation axis: dedicated to promoting scientific vocation through different programmes, projects and actions that, following the most advanced pedagogical techniques, help to awaken and consolidate this vocation at the different educational stages.
- Innovation, Analysis and Foresight axis: dedicated to promoting the knowledge society and entrepreneurship by connecting public and private agents that are interested in the latest developments in science, research, innovation, and knowledge transfer; and by monitoring, creating and disseminating relevant information for the R&D&I system.

The Board of Trustees, comprising both public and private employers, is the governing and administrative body of the FCRI. It represents and manages the organisation, assuming all the operations and functions necessary for achieving its goals. The trustees serve on the board voluntarily, and all represent prestigious organisations in the territory, with the exception of one member who acts in a personal capacity as a renowned professional. The fact that the Board of Trustees includes representatives of the public administration (Generalitat de Catalunya) as well as private companies (Fundació “la Caixa”, Esteve, IberCaja, Telefónica I+D, BBVA, Endesa and Naturgy) demonstrates the FCRI’s commitment to public engagement.

## Position of the organisation in the territorial innovation eco-system (organisational networks)

The FCRI has a close relationship with the Generalitat de Catalunya (regional government of Catalonia); in fact, the current president of the Board of Trustees is the regional Minister of Research and Universities. To fulfil its mission and carry out its various projects, the FCRI has established formal agreements with the regional Ministry of Education; and collaborations with regional universities, the Research Centres of Catalonia (CERCA<sup>4</sup>), the regional parliament, regional media outlets (La Vanguardia newspaper and the Catalan Audiovisual Media Corporation), and prestigious regional and international private entities such as LaCaixa Foundation and BBVA (both members of the Board of Trustees), the Amgen Foundation<sup>5</sup>, Hewlett-Packard<sup>6</sup>, Boehringer Ingelheim<sup>7</sup> and Braun<sup>8</sup>.

<sup>4</sup> <https://cerca.cat/en/>

<sup>5</sup> <https://www.amgen.com/responsibility/amgen-foundation>

<sup>6</sup> <https://www.hpe.com/us/en/home.html>

<sup>7</sup> <https://www.boehringer-ingelheim.com/>

<sup>8</sup> <https://www.bbraun.com/en.html>





## Review of the relevant internal organisational documents

Because the FCRI is not a research organisation, it has no RRI institutional strategy as such. Nonetheless, the analysis of the internal documentation shows that all the RRI keys are mentioned – explicitly or implicitly – and implemented to different degrees in accordance with the organisation’s typology and mission.

Similarly, the AIRR dimensions are implicitly mentioned in some internal documents, and are de facto implemented. For example, the Strategic Plan of the organisation covers the dimension of anticipation. The only exception is the dimension of inclusiveness, which is neither mentioned nor implemented.

Of all existing internal documents of the FCRI, only three address one or more RRI keys or AIRR dimensions. These documents are (1) the Code of Ethics, (2) the Social Report (which includes all content of the Activity Report, as well as other useful information), and (3) the Strategic Plan. The FCRI is not obliged by law to have a data management plan or a gender equality plan, so these documents do not exist.

### 1. Code of Ethics

#### Brief summary of the document

Year of publication: 2016

Target audience: internal, published on the corporate website

Purpose: guidelines on ethics and transparency, establishing a series of general principles to guarantee the ethical and responsible behaviour of all staff during their professional activity.

#### Presence of RRI-AIRR approach in the document

Code of Ethics	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Could it be included in the document, if not already included?
Responsibility	Yes	Yes	Yes	No	N/A
Gender and diversity	No	Yes	Yes	No	N/A
Sustainability	No	Yes	Yes	No	N/A

#### Concise review of the most relevant and interesting points of the document

The Code of Ethics is a declaration of basic values and criteria that reflects the organisation's commitment to ethics and transparency in its areas of action. It follows national and international recommendations for good governance in non-profit organisations and for social responsibility. The CEO of the organisation is responsible for ensuring the implementation and fulfilment of this ethical code, and all members of staff must be acquainted with it. Each year a compliance report is published on the website.

The only RRI keys mentioned in this document are (1) ethics, in sections regarding fulfilment of legal requirements, respect for human and labour rights, professional integrity, and environmental protection; and (2) gender, according to principles of non-discrimination and equality of opportunities, which are required by law.

The document also includes the following relevant aspects.

- Respect for the right to data privacy and confidentiality:  
*The Foundation is committed to not disclosing personal data [...] (page 6)*
- Occupational health and safety:



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101006439

*The Foundation will promote an occupational health and safety programme and will adopt the preventive measures established according to law [...] (page 7)*

■ Conflicts of interest:

*Professional decisions will be based on the interests of the Foundation and will not be influenced by personal interests or family relationships [...] (page 9)*

■ Confidential and classified information:

*Private information belonging to the Foundation will be [...] considered confidential and classified information, and will be subject to professional secrecy [...] (page 11)*

*It is the responsibility of the Foundation and all the professionals it employs [...] to protect confidential and classified information recorded in physical or electronic format [...] (page 11)*

■ Sustainability:

*The Foundation carries out its activity respecting the environment, undertaking to [...] minimise waste and pollution, conserve natural resources and promote energy saving.*

## 2. Social Report

### Brief summary of the document

Year of publication: 2020

Target audience: external document, published on the corporate website

Main purpose: since 2018, all foundations and associations declared of public interest in Catalonia are obliged to present a social report as a measure of transparency (Order JUS / 152/2018). This report functions as an instrument of communication with the government and the public, presenting a summary or full account of the actions carried out in the previous year and their impact on society.

### Presence of RRI-AIRR approach in the document

Social Report	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Could it be included in the document, if not already included?
Responsibility	No	Yes	Yes	No	N/A
Research ethics or research integrity	No	Yes	No	Yes	N/A
Societal engagement or public engagement	No	Yes	Yes	Yes	N/A
Gender and diversity	No	Yes	Yes	Yes	N/A
Open access and open science	No	No	No	Yes	N/A
Science education	Yes	Yes	Yes	Yes	N/A
Anticipation, foresight, vision, planning	No	Yes	No	Yes	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	No	Yes	N/A
Responsiveness and adaptation	No	No	No	No	N/A



## Concise review of the most relevant and interesting points of the document

This exhaustive 81-page document is divided into seven sections, related to (1) the mission and activities of the FCRI; (2) staff aspects; (3) good governance; (4) networks, community and citizen relationships; (5) environmental issues; (6) supplier management; and (7) other aspects.

The RRI keys are presented in section 1.

- Science education, which constitutes the mission of the FCRI, is a key focus of the document and is identified as a goal in section 1. For instance, on page 7:

*[...] the FCRI is committed to [developing] original communication formats, for its own use and for the use of third parties, and to disseminating knowledge, either face-to-face or online, in order to extend scientific culture to the public and create spaces for communication between scientists and wider society.*

- Public engagement and gender equality are implicitly identified as goals in section 1. For instance, on page 7:

*[...] the goal of the FCRI's Science Innovation axis is to raise awareness among industrial stakeholders of public-private cooperation, through projects aimed at updating and transferring knowledge from researchers to companies, [...] while encouraging R&D-based entrepreneurship.*

and

*[...] the FCRI promotes the strategic role of women in the research and innovation system [...]*

- Research ethics or research integrity are not identified as goals, but are explicitly mentioned in two cases: (1) an activity called "Youth, science and ethics", which is an annual meeting between pupils and scientists for discussing scientific ethical matters; and (2) the EU Horizon 2020 project Path2Integrity<sup>9</sup>, in which the FCRI is involved, and which aims to promote research integrity among researchers of all levels, from school pupils to senior scientists.
- Though not specifically mentioned, the spirit of open access is present in the initiative 'Compàs', an online platform that creates, identifies, gathers, and disseminates relevant information and trends in public and private research in Catalonia.

Examples of good practices of all the RRI keys in the FCRI's programmes and/or activities are detailed in section 1 and are classified in the table below:

RRI Key	Good practices	Description
Science education	<ul style="list-style-type: none"> <li>• Science week</li> <li>• Research awards</li> <li>• Science fair</li> <li>• Thesis in 4 minutes</li> <li>• Go out for research in Catalonia</li> </ul>	Activities aimed at popularising the latest science and promoting science as a social reference.
	<ul style="list-style-type: none"> <li>• Research in action</li> <li>• Open STEAM workshops</li> <li>• Summer courses for teachers</li> <li>• Amgen TransferCiencia</li> <li>• Youth, science and ethics</li> <li>• Small scientific talents</li> <li>• STEMarium</li> </ul>	Activities aimed at promoting scientific vocations at the different educational stages.

<sup>9</sup> <https://www.path2integrity.eu>

Public engagement	<ul style="list-style-type: none"> <li>• Coffees with research</li> <li>• CAPCIT</li> </ul>	Activities aimed at bringing together researchers, policy makers and industry to discuss various matters of science and technology.
Gender equality	<ul style="list-style-type: none"> <li>• 100 women in science</li> </ul>	Activity aimed at providing information on leading female role models in science and engineering, and promoting good practices that lead to gender equality in the sector.
Ethics	<ul style="list-style-type: none"> <li>• Youth, science and ethics</li> <li>• Path2Integrity EU project</li> </ul>	Activities for discussing controversial scientific matters and for promoting research integrity from school level to senior research level.
Open access	<ul style="list-style-type: none"> <li>• Compàs</li> </ul>	Platform for monitoring and providing information for research professionals and companies, to facilitate decision-making.

Regarding the AIRR dimensions, the practice of reflexivity is mentioned on page 52:

*In order to evaluate the effectiveness of its activities and projects, the FCRI has [...] its own system of indicators for systematically measuring the achievement of the objectives of each action [...]*

Likewise, anticipation and responsiveness are implicitly mentioned on page 55:

*The FCRI has its own information system that allows it to perform context analysis on a continual basis (territorial R&I monitoring system) and on an ad hoc basis (analysis and foresight, benchmarking) [...] to quickly identify potential opportunities and threats and react quickly to take appropriate action.*

The Strategic Plan is prepared and implemented on the basis of the anticipation and reflexivity exercises mentioned above.

As expected, inclusiveness is neither mentioned nor implemented. This AIRR dimension is often absent in Catalan organisations, probably due to unfamiliarity with the concept or lack of tradition.

### 3. Strategic Plan

#### Brief summary of the document

Year of publication: 2021

Target audience: internal document, not published

Main purpose: the Strategic Plan defines the lines of action, values, and priorities of the FCRI for an established period, usually four years. Regularly developed from prospective and normative scenarios, it defines the organisation's contextual framework and strategic lines of action, and establishes its priority fields of application and the organisational structure needed to carry them out. The result is a document that presents a shared vision of the future of the FCRI.



### Presence of RRI-AIRR approach in the document

Strategic Plan	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Could it be included in the document, if not already included?
Responsible research and innovation (RRI; concept in English)	No	Yes	Yes	No	N/A
Responsible research and innovation (translated equivalent)	No	Yes	Yes	No	N/A
Research ethics or research integrity	No	Yes	Yes	No	N/A
Public engagement	No	Yes	Yes	Yes	N/A
Gender and diversity	No	Yes	Yes	Yes	N/A
Open access and open science	No	Yes	Yes	Yes	N/A
Science education	Yes	Yes	Yes	Yes	N/A
Anticipation, foresight, vision, planning	No	Yes	Yes	Yes	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A
Responsiveness and adaptation	No	Yes	No	No	N/A

### Concise review of the most relevant and interesting points of the document

The 62-page Strategic Plan 2021-2025 explains the FCRI's vision, mission, and values. It also includes strategic objectives and annexes with historical information about the organisation's activities and their link to the Catalan society and R&I system. For instance, on page 20:

*To prioritise [...] innovation and transfer [...], it is necessary to create a true entrepreneurial ecosystem while increasing the support for scientific and technological entrepreneurship as a driving force and strengthening the elements that allow the transfer between knowledge and the productive framework.*

*The FCRI must continue to collaborate and contribute, as it does today, to the improvement of the R&D&I system through its position as a connector of sectors, facilitating the dissemination of knowledge and innovation that arises from scientists to companies [...]*

All RRI keys are present in the same way as in the social report. Owing to the mission of the FCRI, the most frequently mentioned key is science education, followed by public engagement. In this sense, no significant variations have been identified with respect to the last two Strategic Plans<sup>10</sup> (2010-2013 and 2017-2020), where science education was the primary focus of the organisation, followed by public engagement. These

<sup>10</sup> For the period 2014-2016 no Strategic Plan was approved.



priorities are in line with the European Commission's recommendations, which are gradually being implemented in Catalan public organisations.

Gender equality was briefly mentioned in the former Strategic Plan and is clearly stressed on pages 18 and 21 of the current version:

*Promote and integrate the gender perspective in all projects and actions of Scientific Vocation [axis] and  
Promote participation and co-creation in gender equality and improvement of the R&D&I system.*

The current Strategic plan is the first to mention ethics explicitly (page 19), in the context of RRI, as the FCRI is participating in the EU Horizon2020 project Path2Integrity, which aims to promote research integrity:

*To advance in the incorporation of the concepts of responsible research and innovation  
Today's great social challenges need to be addressed through ethical, acceptable, socially desirable, and sustainable research and innovation, acting at the level of schools (teachers and professors) to reinforce their knowledge and debate, as well as at the level of research staff, to promote scientific integrity and thus prevent bad practices.*

However, aside from mentioning that the FCRI intends to *Promote and reinforce specific RRI-themed programmes and, especially ethics*, the document fails to outline any concrete measures or activities.

The Strategic Plan is itself an example of anticipation, as it is based on an analysis of previous results plus a prospective analysis of the Catalan Research and Innovation system, which takes into account the Catalan Government's *National Agreement for the Knowledge Society*<sup>11</sup>. Therefore, the Strategic Plans have evolved to better adapt to organisational and territorial needs. Modifications have been made to strengthen the activities that possess a greater potential for growth, and to readjust or end the activities with less favourable results, according to the internal indicators analysis. Again, as in the social report, inclusiveness is not mentioned.

## 4. Gender equality plan

In Spain, gender equality plans are compulsory by law in organisations with more than 50 workers<sup>12</sup>. As the FCRI has only 26 members of staff, no such document exists.

The FCRI is committed to gender equality: women currently make up 53% of the workforce, and the proportion of women in managerial roles has increased over the years to 33%. In addition, the Code of Ethics mentions:

*In particular, the Foundation will promote equality in treatment between men and women regarding occupation, training, professional promotion, and work condition, rejecting [...] any sexual, psychologic, moral or other kinds of abuse [...]*

Nonetheless, there is room for improvement in the following aspects:

- Composition of the board of trustees, predominantly male (12 men versus 2 women)
- There has never been a female CEO
- Only 33% of managerial positions are held by women

<sup>11</sup> <http://empresa.gencat.cat/ca/intern/pnsc>

<sup>12</sup> Real Decreto-ley 6/2019, de 1 de marzo  
[https://ajuntament.barcelona.cat/tempsicures/sites/default/files/boe\\_7\\_de\\_marc\\_de\\_2019\\_0.pdf](https://ajuntament.barcelona.cat/tempsicures/sites/default/files/boe_7_de_marc_de_2019_0.pdf)





## 5. Data management plan

Again, by law the FCRI is not obliged to have a data management plan, so such a document does not exist. However, the FCRI complies with the provisions of the European Union General Data Protection Regulation (GDPR<sup>13</sup>) and the Spanish Organic Law on Protection of Personal Data and Guarantee of Digital Rights (LOGPD<sup>14</sup>), and has appointed members of staff to deal with concrete data-related issues such as responsibility, security, and management.

## Summary of the interviews

### Brief overview of respondents

Eight people were interviewed – five men and three women – representing both upper and lower hierarchical positions (4 + 4) and all four units of the organisation.

### Framing of the RRI-AIRR approach in the FCRI

All the interviewees were familiar with the concept of RRI, though to different degrees according to the unit they work for: those who run the FCRI projects described in section 2 (pages 11 and 12) had the greatest understanding of RRI. These interviewees mentioned nearly all the keys, though none of the AIRR dimensions. For instance:

*[RRI...] is a comprehensive approach to research and innovation, taking into account the implications and impact they have on society and the environment. Key issues are, for example, gender equality, participation, governance, ethics, and so on.*

Only one person alluded to a few AIRR dimensions when saying:

*A vision of research and innovation aimed at a commitment to making them transparent, reflexive, inclusive, and responsive.*

While two people declared that neither RRI keys nor AIRR dimensions were part of their direct responsibilities, the remaining six confirmed that they were. The keys most relevant to their duties were, in order of importance, ethics, gender equality, and science education. Ethics is understood as a basic and universal value in any workplace, in accordance with the spirit of the Code of Ethics, which highlights the importance of respecting all members of staff, data protection, confidentiality, and the law. Gender equality occupies an increasingly predominant place in all FCRI projects, and is always taken into account in the implementation of new activities and events. This has occurred naturally, not by any external or downstream obligation. Examples are the minimum requirement of equal presence of women and men in the FCRI's activities (speakers, lecturers, students). Science education has always been a core element in the FCRI: six of the eight interviewees work in this area while the other two do not deal with it directly.

Six interviewees said they had implemented anticipation and responsiveness in an informal way, as these aspects form a crucial part of their current and new projects and activities. In addition, reflexivity practices are in place, in the form of annual quantitative and qualitative data analyses (with statistical data and satisfaction surveys). The two interviewees who said they had not implemented any AIRR dimensions

<sup>13</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2016.119.01.0001.01.ENG&toc=OJ:L:2016:119:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.119.01.0001.01.ENG&toc=OJ:L:2016:119:TOC)

<sup>14</sup> <https://www.boe.es/eli/es/lo/2018/12/05/3/con>



explained that these aspects are not part of their duties, but rather are the responsibility of their bosses. Inclusiveness is not implemented for cultural reasons and logistical difficulties (i.e. lack of time and human resources), and because it creates more work and increases project management complexity.

When asked about the role of RRI in the organisation, the interviewees said that science education, gender equality, public engagement and ethics were the most implemented keys in the FCRI, in that order, owing to the mission of the organisation. One of the interviewees even made the following statement:

*In fact, all these keys are fulfilled but in an irregular and partial manner. Ethics issues are addressed in a specific programme but not in all FCRI programmes. Public engagement is partially addressed in some innovation programmes involving scientists and entrepreneurs, but generally, the public is not consulted.*

In this regard, all the interviewees said that ethics is a fundamental part of their job, but only one FCRI project, “Youth, science and ethics” addresses this key specifically.

With regard to gender equality, one interviewee mentioned that, since 2018, the Young Talent category in the Catalan National Research Awards has applied an age limit of 40 years to male but not female candidates, because motherhood can interrupt women’s scientific careers. Accordingly, the age limit for women is one year higher for every child they have. This adjustment was proposed by the staff themselves based on the comments of female researchers in several consultations.

Open access is the least implemented key because:

*We are not an institution that carries out research, so we can only disseminate the results of research done by other entities, as we do, for example, through the COMPÀS portal.*

This portal, along with the corporate website and Research in Action website, includes and has links to the documents produced as part of the last European projects the organisation was involved in: Path2Integrity, CheckorCheat, and sySTEAM. Some documents have even been translated or adapted to Catalan to reach a wider audience.

One person mentioned that *There is no general culture of open access, although our structure has demonstrable levels of external transparency*, referring to the publication of the FCRI’s Activity Report, Social Report, Code of Ethics, and the organigram on the corporate website.

According to the interviewees, the most implemented AIRR dimensions in the organisation are anticipation, responsiveness and reflexivity, as mentioned above. Inclusiveness is not implemented due to:

*Excessive workload because of [the FCRI’s] involvement in too many projects without considering the real capabilities of the human team.*

*[...] these types of methodologies involve more workload and are less agile.*

*The inherent mechanics and inertia of the business culture [in our country].*

However, one interviewee mentioned that

*Projects are enriched by the participation and perspectives of multiple actors, although this approach can also make projects more difficult to manage and hinder their development.*

As mentioned in section 2, page 10, no specific institutional RRI strategy is in place in the FCRI. The RRI keys and AIRR dimensions, except inclusiveness, are de facto implemented and have not been imposed by the management.

	Implementation	Main barriers	Main drivers	Good practices <sup>15</sup>	Monitoring and evaluation mechanisms
<b>Ethics</b>	High	None	<ul style="list-style-type: none"> <li>• Legal regulations</li> <li>• Good level of self-responsibility and awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Youth, science and ethics</li> <li>• Path2Integrity EU project</li> </ul>	None
<b>Public engagement</b>	Moderate	Lack of culture	<ul style="list-style-type: none"> <li>• FCRI managers and staff are very open to it</li> <li>• Encouragement from European Commission and regional government</li> </ul>	<ul style="list-style-type: none"> <li>• Coffees with research</li> <li>• CAPCIT</li> </ul>	Internal statistics
<b>Gender equality</b>	High	None	<ul style="list-style-type: none"> <li>• Legal regulations</li> <li>• Good level of self-responsibility and awareness</li> </ul>	<ul style="list-style-type: none"> <li>• 100 Scientific women</li> </ul>	Internal statistics
<b>Open access</b>	Low	FCRI does not have its own publications except for compilation of information, reports from projects it participates in, occasional reports about research in Catalonia.	<ul style="list-style-type: none"> <li>• Good level of awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Compàs</li> </ul>	None

<sup>15</sup> See page11 for a brief explanation.





<b>Science education</b>	High	None	Core mission of the FCRI	<ul style="list-style-type: none"> <li>• Science week</li> <li>• Research awards</li> <li>• Science fair</li> <li>• Thesis in 4 minutes</li> <li>• Go out for research in Catalonia</li> <li>• Research in action</li> <li>• Open STEAM workshops</li> <li>• Summer courses for teachers</li> <li>• Amgen TransferCiencia</li> <li>• Youth, science and ethics</li> <li>• Small scientific talents</li> <li>• STEMarium</li> </ul>	Internal statistics
<b>Anticipation</b>	Moderate	<ul style="list-style-type: none"> <li>• Lack of formal methodology</li> </ul>	Encouragement and support from the FCRI management	Strategic plans	Internal statistics
<b>Inclusiveness</b>	None	<ul style="list-style-type: none"> <li>• Lack of time</li> <li>• Lack of culture</li> <li>• Lack of formal methodology</li> </ul>	Certain degree of awareness in the FCRI management	None	None
<b>Reflexivity</b>	Moderate	<ul style="list-style-type: none"> <li>• Lack of time</li> <li>• Inertia</li> <li>• Lack of formal methodology</li> </ul>	<ul style="list-style-type: none"> <li>• Good level of self-responsibility and awareness</li> <li>• Encouragement and support from the FCRI management</li> <li>• Accountability to the firms that fund several projects</li> </ul>	None	None
<b>Responsiveness</b>	Moderate	None	<ul style="list-style-type: none"> <li>• Good level of self-responsibility</li> <li>• Encouragement and support from the FCRI management</li> </ul>	None	None



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



## Suggestions for further integration of the RRI-AIRR approach, or individual keys and dimensions, into policies and practices in the FCRI.

All the interviewees agreed that as far as the RRI keys and AIRR dimensions are concerned, the FCRI is following the right path, especially in gender equality and science education and training:

*I think that the mere fact of developing RRI-related projects is in itself a positive value. The Foundation has been a pioneer in many areas of inclusion [...] focusing, for instance, on promoting women (#100tífics); improving the training of groups that work directly with children and young people, such as primary, secondary and high school teachers; or actions to promote high social impact (SW) [Science Week][...]*

However, all agree that there is room for improvement, notably in the AIRR dimensions of inclusiveness and reflexivity, and in the need to formalise and systematise RRI implementation:

*Due to the current role of the entity, work should continue on public engagement with the entities that carry out R&D in the [Catalan] system and all AIRR dimensions should be implemented [in the FCRI].*

*[...] out-of-institution consultations could be promoted to ask about priorities and thus promote reflexivity, inclusion and responsiveness.*

After these interviews for the RRI-LEADERS' project, the FCRI staff said they had become more aware of the RRI keys and AIRR dimensions and that they would try to improve the implementation of these aspects in a more formal and methodical way, as this could help to improve the projects' results and the organisation's recognition and acceptance within Catalan society.

## Summary of the focus group

### Brief overview of participants

Eight people attended the focus group – three men and five women – representing both hierarchical positions (one director + seven others) and all four units of the organisation. None of them had participated in the interviews. Five of the attendees were familiar with RRI and three were not.

### Relevance of the RRI-AIRR approach in the FCRI

RRI key/AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	4	4
Ethics	4	4
Gender equality	3	3
Open access	3	3
Science education	3	3
Anticipation	3	3
Inclusiveness	3	3
Reflexivity	3	3
Responsiveness	3	3

1: least relevant; 5: most relevant; average score from evaluation of participants

The average perceived relevance of the RRI keys to the organisation and to each participants' work was the same. Public engagement and ethics were considered the most relevant keys. Interestingly, these findings



do not coincide exactly with those of the interviews, where science education, ethics and gender equality were considered the most relevant RRI keys.

The same occurred with the AIRR dimensions: whereas the interviewees clearly identified inclusiveness and reflexivity as the least implemented dimensions in their work as well as in the organisation, the focus group attendees regarded all dimensions as equal and with a moderate (3 out of 5) relevance to both their work and the organisation. It may be that not everybody understood these concepts fully, despite the introduction to the RRI-AIRR approach and subsequent debate.

## Implementation of the RRI-AIRR approach in the FCRI

### Drivers

The main drivers identified were encouragement from managers, legal regulations (as in the case of ethics and gender equality), and openness of workers towards new practices that could help to improve work processes, project management and results:

*[...] any practice that can contribute positively to our work or our projects is always welcome as long as it does not consume too much time or too many economic resources, which are usually scarce.*

### Barriers

The main barriers identified were work inertia and lack of economic resources and time:

*Lack of collaborative and transverse participation to generate initiatives and mature ideas inside the FCRI [...]*

*Low budget for activities. We carry out large projects with scarce resources. Allocating more money to ongoing projects that are working well [...] could help to improve them further, above all through the inclusion of [...] more RRI aspects or the improvement of those already implemented.*

*The FCRI is an entity that applies most RRI or AIRR keys in several projects. A small increase in the financial allocation for each project could improve and increase dimensions such as anticipation, inclusiveness and responsiveness. With an economic increase for specific projects, we could allocate specific resources for monitoring RRI keys, develop tools, and allocate staff for the assessment of public engagement, the implementation of gender equality [...]*

### Good practices

The good practices identified were the same as those mentioned by the interviewees and by the authors of this report. This is logical for such a small organisation, where the different departments interact closely and everybody knows about the projects of the organisation, which have been mentioned several times in this report.

### Monitoring and evaluation

There are no established criteria or indicators for monitoring and evaluating the organisation's performance in relation to RRI keys and AIRR dimensions, as they are not formally implemented. However, quantitative and qualitative data from all the projects implemented in the FCRI are gathered in excel files and analysed, forming the basis of reflexivity and responsiveness exercises.





## Recommendations

All the attendees believed that all RRI keys are de facto implemented, and that the low degree of implementation in some cases (e.g. open access) is due to the organisation's nature and mission. The same is true of the AIRR dimensions, which are implemented to a greater or lesser extent according to each person's position in the organisation. This aspect came up in interviews and in the focus group.

The proposed recommendations are (1) increase economic resources and (2) formalise the RRI-AIRR approach to establish a common ground for everybody with equal rules and clear procedures.

Formalisation would mean developing a guide with clear objectives and specifications about rules and responsibilities that apply to individual employees, units, and the organisation as a whole. In all the official annual reports or in future strategic plans, the RRI keys and AIRR dimensions should have a specific chapter. To do this, the FCRI would have to implement a system of continuous monitoring of all activities and projects, and the results could be used to design corrective measures.

## Conclusion

The RRI-AIRR approach is relevant in the FCRI despite not being formalised. All the RRI keys are mentioned explicitly (ethics, gender equality, science education) or implicitly (public engagement, open access), in the analysed organisational documents, and are de facto implemented to different degrees according to the organisation's main mission (science dissemination) and nature (non-research organisation). The most and least implemented keys are science education and open access, respectively.

Likewise, the AIRR dimensions are implicitly present in the organisational documents and de facto implemented, except for inclusiveness, which for cultural reasons and lack of resources is missing from all the documents, and is not implemented in any project, with the exception of the EU-funded RRI-LEADERS.

In practice, all staff members are responsible for implementing the RRI keys and AIRR dimensions, according to their specific duties and their position in the FCRI. Furthermore, staff members in higher positions prepare internal statistics on the projects and activities they are responsible for, to analyse their current situation (reflexivity) and thus make the necessary improvements and/or propose new initiatives (responsiveness). However, aside from some monitoring of gender equality, science education and public engagement, no other RRI aspects or indicators are examined.

FCRI managers and workers alike are interested in the RRI-AIRR approach and are open to taking the first steps towards its formalisation; the benefits are perceived as positive and well aligned with the regional government's 2020 [National Agreement for the Knowledge Society](#)<sup>16</sup>, which specifically mentions how RRI can help to "Increase the value of scientific culture as an essential tool to form a responsible and critical society and strengthen ad hoc training in this respect."

<sup>16</sup> [Pacte Nacional per a la Societat del Coneixement – PN@SC. Departament d'Empresa i Coneixement \(gencat.cat\)](#)



# Internal RRI review of ZHAW

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## List of acronyms / abbreviations used in this document

AACSB- Association to Advance Collegiate Schools of Business  
AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness  
AAQ- Swiss Agency for Accreditation and Quality Assurance  
CAS- Certificate of Advanced Studies  
ETHZ- Eidgenössische Technische Hochschule Zürich (Zurich Polytechnic University)  
ICT- Internet Communication Technology  
IPA- Individual Performance Agreement  
ISCN- International Sustainable Campus Network  
FHR- Fachhochschulrat (University of Applied Sciences Council)  
HED- Higher Educational Development  
HEPC- Higher Education Promotion and Coordination Act  
KIC- Knowledge and Innovation Community  
KPIs- Key Performance Indicators  
LGBTQ- Lesbian, Gay, Bisexual, Transgender, Queer  
LSFM- School of Life Sciences & Facility Management  
MAS- Master of Advanced Studies  
OER- Open Educational Resources  
R&D- Research and Development  
RRI - Responsible Research and Innovation  
R&I – Research and Innovation  
SAAS- Swiss Academies of Arts and Sciences  
SDGs- Sustainable Development Goals  
SHF- School of Health Professions  
SML- School of Management and Law  
SNSF- Swiss National Science Foundation  
UAS- University of Applied Sciences  
UNESCO- United Nations Educational, Scientific, and Cultural Organisation  
UN PRME- United Nations Principles for Responsible Management Education  
ZFH- Zürcher Fachhochschule (Zurich University of Applied Sciences & Arts)  
ZHAW- Zürcher Hochschule für Angewandte Wissenschaften (Zurich University of Applied Sciences)



## Executive Summary

Responsible Research and Innovation (RRI) is a new approach very significant at organisational level. Therefore, this report seeks to set light on the embeddedness of the RRI approach, namely the RRI keys and AIRR dimensions in the Zurich University of Applied Sciences (ZHAW). ZHAW with around 14,000 students, 3,000 employees and 8 Schools is among the leading higher education institutions in the canton of Zurich as well as in Switzerland, strongly anchored in the territorial innovation eco-system. At the initial stage, a variety of documents linked to the University's strategies, policies and regulations were carefully selected and studied with regards to the RRI approach. In total, 10 documents were analysed, offering a deep understanding on the important position of RRI and its key actors in the organisation. At the second stage, semi-structured in-depth interviews were carried out with 8 academics, each one an expert in one of the RRI keys or AIRR dimensions based on information found in the documents. The interviews were used as a great incentive for the respondents to get more familiar with the RRI-AIRR concept, as for most of them it was still a rather new approach. The responses gave very useful insights on the evolution of the approach in the organisation, the main drivers and barriers, examples from the practice, as well as recommendations for improvement. At the third stage, a focus group was organised with 8 different experts to gain more inputs, compare their perceptions to the ones from the interviews, but also foster a dialogue for further implementation of the RRI-AIRR approach. Finally, the report concludes with a general overview of the most important findings and an interpretation for their significance for the organisation.

## Introduction

### Type of organisation and legal form

The Zurich University of Applied Sciences (ZHAW) is a legally independent public law academic institution and part of the four University entities that belong to the Zurich University of Applied Sciences and Arts (ZFH). The main focus is on teaching, research, continuous education and other services both practice-oriented and science-based. ZHAW is governed by the Zurich Cantonal Legislation on Universities of Applied Sciences of April 2, 2007.

### Organisational structure

The Council of the Zurich University of Applied Sciences and Arts (FHR), as the highest body of ZFH is exclusively responsible for the strategic management of ZHAW, while the Executive Board, consisting of the President, the Managing Director and the Deans of the eight Schools, is responsible for its operational management. The Deans are also responsible for the Strategic Affairs Offices, with the aim to encourage cooperation and to ensure that uniform principles are applied across the University. The President's Office is divided into the following subsections: Corporate Communications, General Secretary, Higher Educational Development, and Legal Services. The Finance and Services department is divided into the sections of Finance/ Services Administration and Service Management, as well as the following subsections: Finance and Controlling, Human Resources, Facility Management, ICT and the University Library.



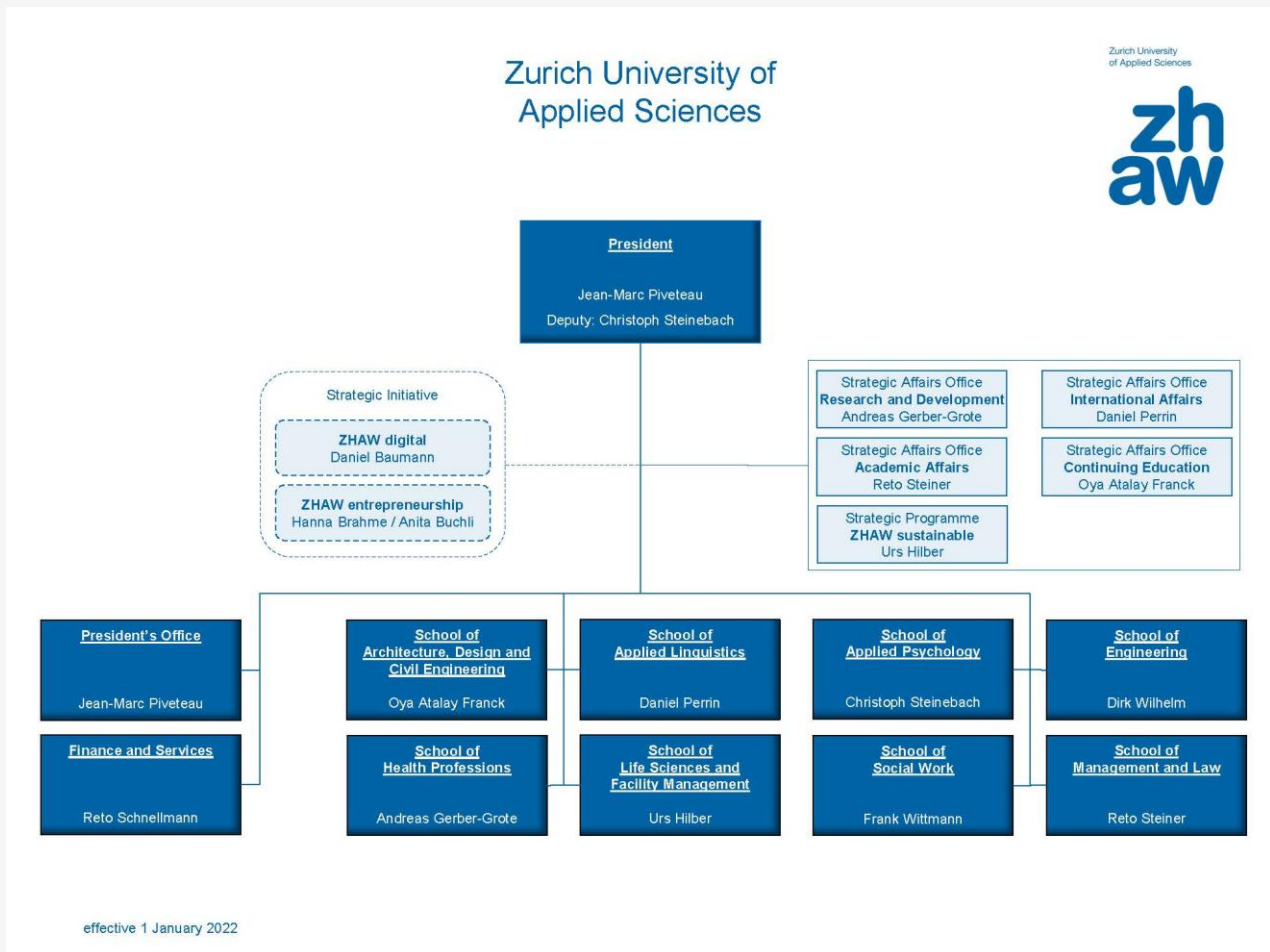


Figure 1: Organisation chart ZHAW (Source: ZHAW Intranet, 2022)

## Number of employees

As seen in the annual report of 2020, 3,413 people were employed in ZHAW in 2019. Among them were 1,259 assistants and research associates, 955 administrative and technical personnel, 930 lecturers and 269 professors. The percentage of women was reported at 50%.

## Mission or main purpose of the organisation

ZHAW's main goal as stated in the mission statement is to prepare graduates for the *knowledge-based society* by providing them with competences of reflection, professionalism, as well as research and practice-based skills. A combination of reflective scientific education and high research and development quality are the core elements in helping the graduates in this process. Sustainability is the second key objective focusing particularly on the support of *transformative* science towards societal challenges and the multidimensional understanding of innovation. Thirdly, international cooperation and partnerships are of high importance and there is a particular concentration in Europe. By offering an attractive working environment with principles of diversity and equal opportunity prevailing among others, ZHAW seeks to acquire qualified and service-oriented employees that will allow the implementation of the University's mission.



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## A brief presentation

ZHAW with around 14,000 students (ZHAW Annual Report, 2020) is after ETHZ and the University of Zurich the third largest academic institution in the canton of Zurich and one of the leading universities in Switzerland. It was founded in 2007 and the headquarters are located in the city of Winterthur with campuses found also in Zurich City and in Wädenswil. The University consists of 8 Schools: The School of Management and Law (SML), being the biggest of them with around 5,000 students, the School of Engineering, the School of Health Professions (SHP), the School of Life Sciences and Facility Management (LSFM), the School of Applied Linguistics, the School of Social Work, the School of Applied Psychology, and the School of Architecture, Design and Civil Engineering. Currently, 29 Bachelor's and 18 Master's degree programmes are offered. The percentage of female students is at 50.3%. The University also offers a large variety of continuous learning programmes (CAS and MAS) targeted to practitioners that attract around 10,000 participants per year. R&D projects account for 30% of the activity, while services to businesses cover 4%. Although very well anchored in its region, ZHAW has also established strong long-term partnerships with universities in Europe and around the globe. The funds are mainly coming from the Swiss Federation and the Canton of Zurich. In 2019 ZHAW had an annual revenue of approximately 506 million Swiss Francs.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

It is of strategic importance for ZHAW to play a pivotal role in the territorial innovation eco-system not only at Swiss level, but also at European level and therefore ZHAW strives to be part of multiple networks to achieve such a position. Regarding the European Networks, the University is since 2017 member of the European University Association (EUA), which offers its members the opportunity to shape higher education policy in Europe and exchange with key decision makers. Another important network is since 2018 the Climate-KIC in the field of climate. The Swiss State Secretariat for Education, Research and Innovation has mandated ZHAW as lead coordinator for South Asia and Iran from 2021-2024 to support cooperation between Swiss researchers and public institutions in these regions. The University Library is a member of the Open Access Network following the Green and Golden Roads. When looking separately at each of the departments there are many more networks that are linked to innovation like SML's membership to the prestigious AACSB network or the UN PRME Champions, partnerships with other Swiss Universities and Universities of Applied Sciences, public institutions at federal, cantonal and municipal level, memberships in associations like the öbu-Association for Sustainability Management and engagement with multiple private companies due to collaboration with the Swiss Innovation Agency (Innosuisse).



## Review of internal organisational documents

### 1. ZHAW Mission Statement and University Strategy 2015-2025

#### Brief summary of the document:

Year of publication: 2015, revised in 2020

Target audience: An internal document serving as compass for the staff of ZHAW, but also for its external stakeholders.

Main purpose: A guidance tool for ZHAW's staff to stay in tune with the future challenges the institution must face without losing its orientation. It allows ZHAW to be ready to actively contribute and address the multiple changes the society is currently undergoing. The ultimate goal is to create dialogue and offer a roadmap for the next 10 years of actions.

Table 1: RRI-AIRR approach in the Mission Statement & University Strategy 2015-2025

Mission Statement and University Strategy 2015-2025	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	N/A
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Societal or public engagement	Yes	No	Yes	No	N/A
Gender and diversity	No	Yes	No	No	N/A
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	No	No	No	No	Yes
Inclusiveness	No	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	Yes	Yes	N/A
Responsiveness and adaptation	No	No	No	No	Yes
Innovation, Research & Innovation	Yes	Yes	Yes	No	N/A
Transformation	Yes	Yes	Yes	No	N/A
Sustainability, sustainable development	No	Yes	Yes	No	N/A

#### A concise review of the most relevant and interesting points of the document:

Although the main focus of the document is on the three strategic goals of ZHAW being “knowledge- based and competence- oriented”, “transformative” and “European”, the revision of 2020 added three new major points: “lifelong learning”, “digital transformation” and “sustainable development”. The term “transformative” is precisely explained as ZHAW's joint responsibility for societal sustainability, seeing itself “a catalyst for innovation”. The word “transformative” is also linked to science education, since in some chapters the term is described as producing knowledge through research and embedding it in education. RRI is not mentioned, but there is focus on a comprehensive understanding of innovation through emphasis on new methods like inter- and transdisciplinary approaches, inter-university cooperation and ongoing dialogue





with external partners and the community that will allow researchers to address key societal challenges by applying innovative solutions in areas like energy, climate and health. ZHAW is “in tune with the society”. All through the document, societal engagement is one of the main drivers of the strategy targeting to produce transformative knowledge through more involvement of societal partners in the research process, in the co-design and co-production and thus making this knowledge more useful at societal, political and economic level. Fostering the right environment to attract and keep qualified employees is crucial, therefore special emphasis is given on cultivating a working culture of individual responsibility, creativity, where the principles of diversity and equal opportunity prevail. It is underlined that research should be conducted in networks both inter- and transdisciplinary, with the inclusion of the users of the knowledge in the research projects. Taking into account the diverse perspectives of the society is a major challenge to achieve the needed inclusion. The evaluation of all degree and continuous education programmes is referred as fundamental practice for systemic reflection that will lead to higher levels of competence. Anticipation could be added as important aspect since the whole document is described as a compass for future planning. The link between science education and social engagement dominates the 10- year strategy, while promoting a dialogue between society, politics, business and academia.

## 2. Diversity Policy

### Brief summary of the document:

Year of publication: 2012

Target audience: Students, lecturers, employees in teaching and research, as well as employees in administration and continuing education and services.

Main purpose: The Diversity Policy serves to establish guidelines alongside the University, in all the departments and core areas, for the recognition, development and use of different potentials and competencies of the University employees, by preventing them from discrimination and stigmatisation, improving as well as ensuring equal opportunities and promoting equality. It guarantees the students and their families the conditions they need in order to succeed in their studies and careers.

Table 2: RRI-AIRR approach in the Diversity Policy

Diversity Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	No	No	No	Yes
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Gender equality and diversity	Yes	Yes	Yes	No	N/A
Public engagement	Yes	No	Yes	No	N/A
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	Yes	No	No	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	Yes	No	N/A
Inclusiveness	No	No	No	No	Yes



Responsiveness and adaptation	Yes	Yes	Yes	No	N/A
Integration	Yes	Yes	Yes	No	N/A

### **A concise review of the most relevant and interesting points of the document:**

This document sets the main principles for diversity management in ZHAW. Diversity for all University parties is addressed based on their origin, race, age, gender, language, religion, political beliefs, social status and health condition. In order to offer equal opportunities and develop the potential of students and employees, ZHAW takes appropriate measures to compensate for any disadvantages and inequalities. Regarding protection against discrimination, it provides consulting and other anticipative measures to make everyone aware of the essence of discrimination in order to prevent it from happening, but also sets action plans for effective reaction. Diversity and gender are an important qualification factor at the recruiting process and for the promotion of staff's personal development, whereas special treatment is planned for those having special needs. At the education and teaching level special measures are taken to protect and promote those students who are underrepresented due to gender, have a disability, are immigrants, or are coming from a difficult socio-economic background.

Equality between men and women is a key focus and core value of the organisation, while the application of measures to achieve it is of crucial importance and influences all University aspects. It is integrated in education, research, and work and life balance of both employees and students. The same applies for people with disabilities, where ZHAW makes sure to provide all the necessary conditions for their full unproblematic participation to work and study. Special attention is given to the fact that equal opportunities and diversity are promoted and applied in all hierarchy levels and by all departments, University wide.

Even though RRI as an overall concept is not explicitly mentioned in the document, it is still of great relevance as gender equality/diversity is one of the RRI keys. The public engagement of the University is mentioned indirectly through the presentation of the organisation's culture and its commitment to communicate diversity in the outside world. The term integration is used more than inclusiveness, although the latter could certainly be added in the text since all the measures mentioned have, as ultimate goal, the inclusion of less advantaged groups. The creation of the Diversity Unit of ZHAW promises the uncomplicated application of the measures decided by the dean's office, while an evaluation process is designed to control their effectiveness and help improve the quality. There is a supplementary document that is called "Explanations to the Diversity Policy", which is focused on more detail in the adaptation of the current policy, the preparation of action plans and the evaluation of the measures taken.

## **3. Gender Policy**

### **Brief summary of the document:**

Year of publication: 2012

Target audience: Students, lecturers, employees in teaching and research, as well as employees in administration and continuing education and services.

Main purpose: The ZHAW Gender Policy forms the basis for the realisation of gender equality between women and men at the ZHAW. It provides the framework for the measures that promote gender-specific equal opportunities for students and all other members of the ZHAW in all areas and at all levels.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439

Table 3: RRI-AIRR approach in the Gender Policy

Gender Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	No	No	No	Yes
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Gender research	Yes	Yes	Yes	No	N/A
Gender Equality	Yes	Yes	Yes	No	N/A
Ethics	No	No	Yes	No	Yes
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	No	No	N/A
Inclusiveness	No	No	No	No	Yes
Responsiveness and adaptation	Yes	Yes	No	No	N/A
Integration	No	Yes	No	No	N/A

#### A concise review of the most relevant and interesting points of the document:

Gender equality, meaning equal opportunities for men and women, is a key focus of this document and has a significant value for ZHAW as an organisation. Both for the staff as well as for the students, ZHAW promotes equality in teaching, research and development, services, in human resource policies, and in the context of the administration, at all levels and in all areas. Therefore, in the strategical and operational planning, all the needed measures are applied to efficiently achieve this goal. A detailed action plan is displayed to raise awareness and empower students and staff about gender equality issues, while it serves as an example of how ZHAW anticipates and responds. The concept of study life balance and work life balance according to childcare obligations is especially promoted. Applied research on gender equality subjects is very well supported testifying that the RRI-AIRR concept could very well be suited in this context. Unethical behaviour such as gender mobbing, sexual harassment or sexist manners or anything else that can be perceived as discrimination due to gender is strictly not tolerated. The principle of “equal salary for equal work” is of particular importance. Anticipation is also evident from the fact that cooperation and exchange on gender equality issues is supported between other universities as well as institutions at cantonal, national and international level. The evaluation and controlling of equality levels is crucial to guarantee quality development in the University and a sign of how equality is reflected. Inclusiveness is not particularly mentioned, but the whole document is based on including and better integrating genders both as students as well as employees in the whole organisation.



## 4. Regulations on the Protection against Discrimination, Sexual Harassment and Bullying

### Brief summary of the document:

Year of publication: 2009, revised in 2019

Target audience: Internal document directed to ZHAW's staff, students and course auditors, as well as participants in continuing education courses in connection with all their University-related activities.

Main purpose: The purpose of the regulations is to protect members of the ZHAW community against discrimination of any kind, sexual harassment, bullying, and thus safeguard their personal rights, dignity, and integrity. They are grounded in the principle that members of the ZHAW community should not be hindered in achieving genuine equality at the workplace or in their studies nor should they be adversely affected in their professional or academic careers.

Table 4: RRI-AIRR approach in the Regulations on the Protection against Discrimination, Sexual Harassment and Bullying

Regulations on the Protection against Discrimination, Sexual Harassment and Bullying	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	No	No	N/A
Integrity	No	Yes	No	No	N/A
Gender Equality & Diversity	Yes	Yes	Yes	No	N/A
Science education	No	No	No	No	Yes
Anticipation, foresight, vision, planning	Yes	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	No	No	No	No	Yes
Inclusiveness	Yes	No	No	No	Yes
Responsiveness and adaptation	Yes	Yes	Yes	Yes	N/A

### A concise review of the most relevant and interesting points of the document:

The key focus of the document is the protection against discrimination, meaning any statement or action that puts a person in a disadvantaged or unequal position due to their gender, ethnicity, age, religion or belief, physical or mental characteristics or sexual orientation. This policy serves as a preventive and therefore anticipatory measure against inappropriate and unethical behaviours against a person's integrity, while at the same time it promotes diversity. Sexual harassment behaviours are defined, and the meaning of bullying is explained. Detailed guidelines for the University community members and the senior line managers on how to deal with discriminatory situations at the workplace are given, as a sign of good anticipation. A good practice example of responsiveness in case of discrimination is the presentation of a list of contacts to report incidents. Among those listed the most important is the Diversity Unit. In addition to that, all measures that are undertaken to stop the discrimination such as the step-by-step investigation proceedings are a proof of the well-designed responsiveness of the organisation in that matter. The matter of discrimination could very well be connected to the science education and paragraphs could be added to the regulation that particularly explain how awareness against discrimination could be raised among the students through research projects. The ultimate goal of the document is to achieve more inclusiveness in the workplace and therefore this term could also be part of the text, where the purpose of the policy is explicitly stated.



## 5. Open Access Policy

### Brief summary of the document:

Year of publication: 2016, revised in 2017

Target audience: An internal document for the research associates and employees of ZHAW.

Main purpose: The purpose is for ZHAW to implement the Open Access Position of the SNSF, as well as that of the European Programme Horizon 2020 by supporting the demands of the Berlin Declaration. Therefore, ZHAW commits to publishing all its research results in accordance with the principles of open access, provided that there are no legal restrictions.

Table 5: RRI-AIRR approach in the Open Access Policy

Open Access Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	No	No	No	Yes
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Open access and Open Science	Yes	Yes	Yes	Yes	N/A
Societal or Public engagement	Yes	No	Yes	No	N/A
Science education	Yes	Yes	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	No	Yes	Yes	N/A
Responsiveness and adaptation	Yes	No	Yes	Yes	N/A

### A concise review of the most relevant and interesting points of the document:

At the very beginning of the document, open access is set as an important value and prerequisite for ZHAW to provide science-based education and applied research. By providing publications with the principles of open access, the general public is allowed to get access into scientific results, while dissemination with various stakeholders is promoted. An anticipatory plan follows with the most important guidelines to support the University's researchers in the process of publishing their work in an open access mode. The University Library is nominated as the main body responsible to execute this task. When not covered by research projects' own budget, the University Library is committed to take over the costs for the open publications. In terms of adaptation, ZHAW supports the Green and Golden Open Access Roads. Furthermore, the creation and further expansion of the "ZHAW Digital Collection", the University's institutional repository for open access publications, is explicitly mentioned as best practice in the implementation of the Green Road.

## 6. Open Educational Resources (OER) Policy

### Brief summary of the document:

Year of publication: 2020

Target audience: An internal document for ZHAW staff

Main purpose: This policy provides guidelines for the use of open educational resources during the initial phase of implementing this initiative. The iterative introduction to OER consists of the following, allowing third parties to gain knowledge with the active use of OER, to maintain OER and to support teaching staff in implementing OER.

Table 6: RRI-AIRR approach in the Open Educational Resources Policy

Open Educational Resources Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Open access and open science	Yes	Yes	Yes	No	N/A
Societal or public engagement	Yes	No	Yes	No	N/A
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	Yes	No	No	N/A
Inclusiveness	No	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	N/A
Responsiveness and adaptation	Yes	Yes	No	No	N/A
Quality Education	Yes	Yes	Yes	No	N/A

### A concise review of the most relevant and interesting points of the document:

This policy document was created as means to adapt to ZHAW's strategy on education and digital transformation for the years 2018 to 2029, as well as to support the fourth SDG on ensuring inclusive and equitable education and promotion of lifelong learning opportunities. It is also used to give precise definitions of OER and what they include. The use of OER as an Open Science initiative is considered very beneficial, as it is expected to have a positive impact on educational participation and the permeability of the education system, which will become more inclusive. ZHAW encourages the production of OER material for an active participation in the shared culture. The advantages of the production are enlisted in detail and include among others, the evaluation and therefore quality control of educational resources by peer review and community feedback. It is evident that this policy aims at public engagement of ZHAW, although it is not explicitly mentioned.

## 7. Research and Development Policy

### Brief summary of the document:

Year of publication: 2012 revised in 2019

Target audience: An internal document directed to all departments, research associates, lecturers and professors in ZHAW.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



Main purpose: This document sets a roadmap with the most important principles for the research process which serves the society and the practice, while it ensures the quality and validity of the University's education. It follows a highly ethical orientation adapting the guidelines of Scientific Integrity Regulation according to the SAAS, as well as the HEPC Act, the Cantonal Law for Universities of Applied Sciences and the Personnel Regulation of the Canton Zurich.

Table 7: RRI-AIRR approach in Research and Development Policy

Research & Development Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	N/A
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Ethics/ Research Integrity	Yes	Yes	Yes	No	N/A
Public engagement	No	Yes	Yes	No	N/A
Diversity	No	Yes	Yes	No	N/A
Open Science, Open Innovation	Yes	Yes	Yes	No	N/A
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	No	Yes	No	N/A
Reflexivity, Evaluation, Self-evaluation	Yes	Yes	Yes	No	N/A
Responsiveness, implementation	Yes	Yes	Yes	No	N/A

#### A concise review of the most relevant and interesting points of the document:

With this policy, ZHAW commits to the global movement of open science/ open innovation and promotes the responsible awareness of its researchers. However, during the whole R&D process the principles of ethics and scientific integrity especially with regards to the benefits of data publication should be strictly applied. In the case of the use of sensitive data for example, certain conditions need to be considered for their protection. Cooperation with multiple stakeholders like the general public and the participation to national and international networks is set as an important goal to support the adaptation of the current policy. According to the strategic plan mentioned, it is anticipated that the departments will have to define the specific research focuses based on future needs of the market and take advantage of their diversity to establish collaborations. The connection between R&D and education and how research results should flow into teaching is a precisely valued matter and used to show the importance of science education. The results need to be further disseminated following the guidelines of the open access policy. The continuous reflexivity and evaluation of the quality of the research should be encouraged by the project leaders, who will be reviewed for their performance by the representatives of their departments. For the implementation of the policy, it is considered crucial that all researchers (lecturers and associates) take into account ethical, legal and environmental relevant outcomes during the project management process.



## 8. ZHAW Sustainability Strategy

### Brief summary of the document:

Year of publication: 2019

Target audience: An internal document targeting internal and external stakeholders of ZHAW.

Main purpose: With this document, ZHAW aspires to increase its appeal to responsible students, teachers, researchers, and partners, while contributing to the sustainable development of the society, the environment and the economy. The strategy was designed with the aim to be long-term and participatory.

Table 8: RRI-AIRR approach in ZHAW's Sustainability Strategy

ZHAW Sustainability Strategy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	Yes	Yes	Yes	No	N/A
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	Yes	No	Yes	Yes	N/A
Research & Innovation	Yes	Yes	Yes	Yes	N/A
Research ethics or research integrity	No	Yes	Yes	No	N/A
Societal engagement or public engagement	Yes	No	Yes	No	N/A
Gender and diversity	No	Yes	Yes	No	N/A
Science education	Yes	No	Yes	Yes	N/A
Anticipation, foresight, vision, planning	Yes	Yes	Yes	Yes	N/A
Inclusiveness	No	Yes	Yes	No	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	Yes	No	N/A
Responsiveness and adaptation	Yes	Yes	Yes	Yes	N/A
Transformative	No	Yes	Yes	No	N/A
Sustainability, sustainable development	Yes	Yes	Yes	Yes	N/A
Social challenges	No	Yes	No	No	N/A

### A concise review of the most relevant and interesting points of the document:

The Sustainability Strategy starts by defining the vision of ZHAW, which is concentrated on promoting educational programmes as well as research in sustainable development. By setting sustainable goals and becoming part of international networks like UN PRME and ISCN, ZHAW aspires to be a real-world laboratory for sustainable development. The exact meaning of sustainable development for ZHAW and the linkage to the SDGs is explained in detail at the end of the document accompanied by a competence profile set by UNESCO regarding competences for institutionalised education in that field. Furthermore, the intended effects of the strategy and the expected outcomes in the areas of governance, education, research and innovation and University operations are described.



It is obvious from the above that the RRI approach is apparent and is identified as an important value. However, the term mostly used in the document is “research and innovation”, while the term “responsible” is given through the term “social responsibility”, which is perceived as a tool to achieve innovation. In addition to this, other good practices are planned, such as the foundation of the “Competence Centre for Applied Sustainability” that will facilitate the transfer of practice-oriented knowledge, research, and technology. Moreover, the “ZHAW Market Place for Applied Sustainability” will become a platform to provide sustainable development expertise to the professional world. The commitment to the future of society is also a key focus as ZHAW sees itself playing a crucial role for educating the students about important sustainability issues, while it seeks for its expertise to have an external impact on administrative, political, commercial and public organisations. The creation of an annual sustainability report and a sustainable communication concept are directed towards further public engagement but are also a way to reflect and evaluate the University’s performance. In addition to that, a “Sustainability Cockpit” is developed to help ZHAW review, discuss, and improve the achievement of its SDGs. Gender equality and diversity are only briefly mentioned as part of the SDGs and the same is true for inclusiveness. Science education receives major attention and is supported by the foundation of the “Sustainable School ZHAW”, where students are encouraged to use science to shape a sustainable future through interdisciplinary elective modules. The launch of the “ZHAW Sustainable Impact Program” aims at supporting excellent initiatives on innovative projects from students and researchers of ZHAW, which seek to have an impact on ZHAW itself or in the region. Finally, the “ZHAW Green Impact Book” is a great example on how the University created guidelines to adapt the current strategy and achieve its goals.

## 9. ZHAW Quality Strategy 2015-2025

### Brief summary of the document:

Year of publication: 2016 revised in 2018

Target audience: A document for ZHAW’s stakeholders namely its sponsors, students, the public and its partners, but also a guidance for its research associates.

Main purpose: The quality assurance and development strategy of ZHAW should help to ensure that: 1. ZHAW will maintain and expand its excellent position as a broad-based teaching and research University, 2. a University-wide culture of quality in the sense of a learning organisation will be established, 3. the legal mandate for quality assurance and development, as well as the implementation of ZHAW’s strategic goals will be fulfilled, 4. the quality requirements will regularly be reviewed to determine whether they have been met and whether the instruments together with the financial/ structural framework conditions are appropriate.

Table 9: RRI-AIRR approach in ZHAW Quality Strategy 2015-2025

ZHAW Quality Strategy 2015-2025	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	N/A
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes



Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Research ethics or research integrity	Yes	Yes	Yes	No	N/A
Open Access & Open Science	No	Yes	No	No	N/A
Societal engagement or public engagement	Yes	No	Yes	Yes	N/A
Gender and diversity	Yes	Yes	Yes	Yes	N/A
Science education	Yes	No	Yes	No	N/A
Anticipation, foresight, vision, planning	Yes	Yes	Yes	Yes	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	Yes	Yes	N/A
Inclusiveness	No	No	Yes	No	Yes
Responsiveness and adaptation (measures, processes, instruments)	Yes	Yes	Yes	Yes	N/A
Sustainability, social sustainability	Yes	Yes	Yes	No	N/A
Societal challenges	No	Yes	No	No	N/A

#### A concise review of the most relevant and interesting points of the document:

A thorough analysis of the document has shown that the RRI concept is not mentioned in the text, neither in German nor in English, although almost all RRI keys and AIRR dimensions are mentioned. Based on this finding, the RRI concept could be included as such in case of a possible future revision.

One of the main goals to achieve quality in ZHAW is to guarantee freedom of research and scientific integrity, therefore researchers in all departments should adhere to the ethical and epistemological basic rules of good scientific practice. Students are also expected to follow the ethical policies with regards to their scientific assignments. Gender equality is hardly mentioned, however diversity and dialogue have a central role in the entire strategy, as means to create a fair University culture. Particularly, ZHAW's diversity policy is considered a good practice that guarantees social sustainability. A precise example is given on how the diversity policy facilitates the recruiting process by applying the principles of equal opportunity. The same policy takes all preventive measures to ensure protection against discrimination for all members of staff, as well as creating an appropriate framework for equal, fair and barrier-free access to study. Furthermore, considerable attention is given to education and educational programmes which are developed according to scientific findings and the requirements of professional practice. The main goal is to offer courses that are competence-oriented, transformative and compatible with the European Higher Education Area. It is highlighted that the learning process should systematically be reflected and evaluated by students, lecturers, and external experts from science, practice, and the society. Societal engagement is not mentioned but it is one of the main purposes for the creation of the strategy. All documents related to the Mission, University, and Quality Strategies are developed together with external stakeholders, while they are published in open access mode. A precise procedure through the creation of a report with all relevant to quality development activities ensures that transparent communication with external stakeholders will be achieved.

ZHAW's quality strategy is based on three main domains, namely governance, performance, and resources. To achieve the desired quality in all three, the following 4 -step model is applied: 1. Define and plan, 2. Design and implement, 3. Reflect and evaluate and 4. Adapt and secure. The AIRR dimensions are very much reflected in this model. Starting with anticipation, the President's Office, Finance and Services Office, as well



as the departments are obliged to establish long-term multiannual plans with all the quality criteria and demands relevant for each of the above domains. As part of the implementation process, these plans must consider the internal and external stakeholders of ZHAW, which is a step towards more inclusiveness. Reflexivity is a significant core topic in the whole document and the different evaluation instruments to ensure quality in each of the above domains are explained in detail with many examples of good practices such as research evaluations through peer review publications to measure impact, satisfaction surveys for students, regular employee discussions with appropriate feedback, and internal reviews of ZHAW through employee surveys. Other external instruments are also mentioned such as institutionalised evaluation through Informed Peer-Review Process, as well as programme and institutional accreditations, e.g. AACSB for SML or AAQ. In terms of responsiveness, it is highlighted how the University adapts its strategy based on the evaluation results in order to meet the expected quality standards, e.g. by organising quartal meetings with the heads of departments.

## 10. ZHAW Annual Report 2020

### Brief summary of the document:

Year of publication: 2021

Target audience: An internal document for ZHAW's internal and external stakeholders.

Main purpose: The purpose is to give a precise and transparent overview of ZHAW as an academic institution by presenting the most important numbers and figures, as well as the main achievements during the year 2020

Table 10: RRI-AIRR approach in the Annual Report 2020

Annual Report 2020	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	No	No	N/A
Responsible research and innovation (RRI) (the English concept)	No	No	No	No	Yes
Responsible research and innovation (the translated equivalent)	No	No	No	No	Yes
Research & Innovation	Yes	Yes	No	Yes	N/A
Sustainability, sustainable development	Yes	Yes	Yes	Yes	N/A
Open Access & Open Science	Yes	Yes	No	Yes	N/A
Societal engagement or public engagement	No	Yes	Yes	Yes	N/A
Scientific Education	No	No	Yes	No	Yes
Gender and diversity	No	Yes	Yes	No	N/A
Anticipation, foresight, vision, planning	No	Yes	Yes	Yes	N/A
Reflexivity, evaluation, self-evaluation	Yes	Yes	No	Yes	N/A
Responsiveness and adaptation	Yes	No	No	Yes	N/A



### **A concise review of the most relevant and interesting points of the document:**

The RRI concept is not mentioned as such inside the report, however the commitment of ZHAW to sustainability in general is a key focus. The good work of “ZHAW Sustainable” team starting in year 2020 is described in detail, welcoming the creation of the University’s first Sustainable Development Committee. For ZHAW, the ultimate goal is to get recognised as a leading University in the field of sustainable development at national and international level. Special emphasis is given on the research and innovation initiative that was supported by the Zurich Cantonal Council, where ZHAW was awarded a grant to participate in the digital transformation together with other Swiss Universities. A lot of good examples from current projects are described giving an overview of how ZHAW has addressed the challenge of digitalisation during the COVID crisis, while managing to include and engage the society successfully within them. The internal strategy 2015-2025 had to be adapted in that matter to include digital transformation and sustainability. The aim was to show the commitment of ZHAW to the sustainable development of the economy and society by providing scientific foundations and innovations.

In addition, open access and open science receive great attention throughout the document. As a step towards the implementation of an Open Science Philosophy, a new service office was founded in Spring 2020 named “ZHAW Services Research Data”. The team is responsible to support ZHAW researchers during the whole research process from data collection and storage up to the publication in open access journals. The OER Policy was also launched at the same time as means to apply the sharing culture described in the internal strategy. It provides guidelines for the University Library on how to support lecturers in using and sharing open educational media. The “ZHAW digital collection” project continues to be the main digital open access repository of ZHAW. Although the term diversity is absent, the report refers to gender equality in ZHAW by giving the exact numbers and percentages of female students (53%) and female employees (50%).

The whole report is based on the reflection of the year 2020 focusing on the achievements of ZHAW and the departments in different projects and scientific areas. Descriptions of different goals and strategies for the future are outlined, e.g., life-long learning strategy, sustainability, or “education and digital transformation” strategy. The University Assembly has discussed its future orientation and planning in important subjects like the effective management of the COVID pandemic. Towards the implementation of the Quality Strategy (see document 9), the University launched a peer-review procedure for self-evaluation to improve its overall processes and the collaboration with the University management. Finally, a big success by the end of 2020 was the institutional accreditation of ZHAW from the Swiss Accreditation Council of AAQ, which awarded a certificate of excellence for ZHAW’s quality assurance system.

## **Summary of the interviews**

### **Brief overview of respondents**

As seen in the following table, a total of 8 experts in specific RRI keys from different departments and units of the organisation participated in the interviews. A good representation of men and women participants was achieved, as well as a representation of all hierarchy levels, namely senior, middle and junior. The interviews took place online from the 28<sup>th</sup> February until the 15<sup>th</sup> March 2022, they were recorded and transcribed and lasted 60-90 minutes.



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101006439

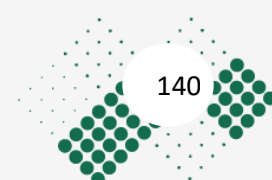




Table 11: Mapping of the interview respondents

Position	Level	Gender	Related RRI keys	Related AIRR dimensions
Dean/ Head of Sustainability	Senior	M	All	All
Lecturer/ Diversity Representative	Middle	F	Diversity/ Gender Equality, science education	Anticipation, Inclusiveness
Research Associate/ Gender Equality Representative	Middle	F	Diversity/ Gender Equality	Anticipation, Inclusiveness
Prof. Dr./ Lecturer of Business Ethics	Senior	M	Ethics, Science Education	Reflexivity, Responsiveness
Research Associate Higher Education Development	Junior	M	Science Education, Public Engagement	Anticipation, Reflexivity, Responsiveness
Research Associate R&D	Junior	M	Open Science, Science Education, Ethics, Public Engagement	All
Research Associate University Library	Middle	F	Open Science, Public Engagement	Anticipation, Responsiveness
Research Associate/ Head of Academic Affairs	Middle	M	Science Education, Ethics, Public Engagement	Anticipation, Responsiveness

## Framing of the RRI-AIRR approach in ZHAW

All participants, with one exception due to a previous involvement in similar research projects, were not familiar with the concept or the term of RRI. The invitation to the interview and the presentation of the current project served as a bridge to receive relevant information for creating a deeper understanding, while realising how their tasks and responsibilities in the organisation relate to it. There was a general agreement that it is a very exciting and interesting concept already apparent in the University Strategies and important for the institution as a whole, although the term RRI-AIRR as such is not officially used within ZHAW.

Based on their units, positions, expertise, and research foci, the respondents could relate to specific RRI keys better than others (see Table 11), although clearly science education was prominently relevant for everyone due to the nature of ZHAW as a public University. Regarding the AIRR dimensions, they seemed to be better aligned to their individual roles in terms of planning, evaluating, and implementing internal strategies such as ZHAW's sustainability and quality strategies. However, inclusiveness was still rather an unfamiliar term, addressed in rather abstract way by most and mainly by those who are experts in diversity/gender equality.

RRI received increased attention by the higher management units already a decade ago when the University's development strategies of 2015, like the Sustainability and University Strategy (See Table 1 & Table 8), were conceived and launched. The exact same year two other key events drove significant change: at national level the new HEPC Act that brought new priorities for all Swiss Universities and at global level the introduction of the SDGs that initiated the need for more societal engagement. On the other hand, RRI was and still is an important condition to achieve quality accreditations for academic institutions and as a result worldwide recognition, as some respondents underlined. Nevertheless, several elements of the RRI concept are a prerequisite for ZHAW to be eligible to apply for research grants from SNSF and funding programmes like



Horizon Europe. For most respondents it was clear that the RRI keys and AIRR dimensions are already reflected in the main actions and commitment of the University and are part of its foundation principles. Some participants particularly mentioned that all key and dimensions are identified and prioritised as significant themes not only by the President's Office, but also by the Strategic Units, the Committees, and all eight departments, although not everywhere equally formulated. Table 12 lists the main actors for RRI in the organisation according to the respondents.

Table 12: Mapping of the RRI key actors in ZHAW

Departments / units / programmes / committees	Related RRI keys	Related AIRR dimensions
Strategic Programme ZHAW Sustainable	Public Engagement	ALL
Diversity Unit	Diversity / Gender Equality	Inclusiveness
Sustainable Development Committee	Public Engagement	ALL
Diversity Committee	Diversity / Gender Equality	Inclusiveness
Strategic Initiative ZHAW Entrepreneurship	Science Education, Public Engagement	ALL
Strategic Affairs Unit R&D	Research Integrity, Science Education, Open Science, Public Engagement	ALL
University Library	Open Access, Science Education	Responsiveness
Quality Committee	Science Education	Reflexivity, Responsiveness
Higher Educational Development Unit	Science Education, Public Engagement	ALL

## RRI keys and AIRR dimensions in ZHAW

### Ethics

**Embeddedness:** Ethics is still at the process of being embedded and according to an interviewee "ZHAW is halfway through it". The University's Research Integrity Policy published by the SAAS provides the general guidelines. Schools like the SML and the SHP have developed their own departmental Codes of Ethics and Ethics Committees. However, as another respondent described "these Committees are mostly functioning like "toothless tigers", meaning they do not have the power to change or improve the current lack of an ethical framework at University level.

**Main barriers:** The dialogue between departments and between lecturers and students regarding ethical assessment is not yet well established, while decisions are mainly left to be taken by the Executive Board. There are implications on how ethics should be taught and tested in the courses offered due to the ethical standards being perceived differently among different disciplines, while constantly changing and evolving. Profit making was also proposed to be a barrier for universities.

**Main drivers (legal, cultural, structural and/or political):** On one hand the drivers are legal, as ZHAW, like all universities in Switzerland, must follow the federal and cantonal laws regarding research integrity. On the other hand, they can be political, such as the recent debate on whether ZHAW should discontinue research partnerships with Russian institutions, as they are perceived as unethical due to the Ukrainian war. For ZHAW, following ethical standards has always been part of the University's culture to show transparency and credibility to its various stakeholders and to guarantee a worldwide good reputation. Specifically, the



development of ethical consciousness was a condition for SML to receive the AACSB accreditation and to integrate the UN PRME principles.

*Good practices:* The creation of the ZHAW Research Data Base as a digital platform, where the public can have transparent information about all the current and past research projects in the University, the researchers and the publications.

*Monitoring and evaluation mechanisms and practices:* The Schools are responsible for the approval of their research proposals and to make sure that the main research process will be carried out respecting the existing research integrity policies. A more official evaluation mechanism like those found in American Universities is currently lacking. It was underlined by some that an Ethics Committee with representatives from all departments is currently being established and will focus explicitly on handling research integrity issues and the creation of an updated and uniformed Code of Ethics.

## Public engagement

*Embeddedness:* For the respondents this key goes hand in hand with the reason of existence of every academic institution in Switzerland and therefore has always been embedded in ZHAW. Since its founding days, the University has constantly strived to engage publicly by adjusting existing and developing new strategies and by supporting students and businesses through a variety of good practices. The creation of the University's Sustainability Strategy was a further step in this direction, as well as developing "ZHAW Sustainable" as a strategic programme under the President's Office.

*Main barriers:* The lack of financial resources from third parties and time are the main barriers for not being able to launch more initiatives in this area. For many members of the staff, a conflict of priorities lies at the background, as well as lack of information for the higher management units, bringing societal engagement to lower importance.

*Main drivers (legal, cultural, structural and/or political):* The University's culture as defined in its mission statement has clearly served as a significant driver for societal engagement. For ZHAW addressing societal needs and achieving positive societal impact is a mean to differentiate its position in the academic world regionally and internationally by becoming a well-recognised and respected institution. There is also a lot of motives coming from Europe, where open science/ open innovation initiatives were promoted creating a wave that strengthened the University's societal engagement even further.

*Good practices:* "ZHAW Impact" is the University's free of charge magazine that is published four times annually and provides information about research projects, studies and continuous learnings programmes. "ZHAW Impact Programme" promotes sustainable initiatives from students and research associates by providing financial resources. "ZHAW Entrepreneurship" is a recent strategic initiative from this programme that supports innovative start-ups through hackathons and incubation programmes, whereas there are a lot more initiatives taken from ZHAW Sustainable like think tanks, workshops, lunch seminars, participation in networks, etc.

*Monitoring and evaluation mechanisms and practices:* There are currently no evaluation mechanisms, but ZHAW Sustainable is working on gathering the data and planning to publish the first sustainability report until 2023, where the environmental and societal impact of the organisation will be officially monitored. The press releases and the numbers of publications in scientific journals are also monitored.

## Diversity/ Gender equality

*Embeddedness:* Diversity and gender equality have started being embedded already at the foundation of ZHAW in 2007. Back then, the focus was more on gender equality, while in recent years there has been shift



towards inclusion of more aspects of diversity. Nevertheless, much more action should be taken for a more effective implementation, especially in terms of hiring more women in leadership positions and also for establishing a diversity strategy. In terms of research, the School of Social Work is mainly responsible for doing research in this area.

*Main barriers:* Some respondents assumed that the University's Executive Board and the Council might have been guided by unconscious biases in their decisions and priorities. Reasons for this could be the relatively old average age, lack of relevant education and understanding of gender issues in research, as well as an unbalanced gender composition of these instances. As a result, the main strategic goals have concentrated for long time on environmental sustainability and tended to leave behind social sustainability, which resulted in a low focus on diversity. Political correctness is perceived differently by people, so it is sometimes challenging to come to agreement about the direction that needs to be followed. Ultimately, the low budget does not allow for further initiatives in this direction.

*Main drivers (legal, cultural, structural and/or political):* The Swiss Federal Law was the main driver, which has put political pressure to the President of the University to act, initiate and implement a gender equality management plan. More action is expected in equality of wages and there are federal initiatives for a larger representation of women in administrative boards. There has also been a lot of societal pressure due to strikes of women in the recent years for example that made the whole subject very relevant.

#### *Good practices:*

- a. Since 2007, the existence of the Diversity Committee has contributed immensely to inform and create awareness among the different departments and coordinate initiatives.
- b. the submission of the Gender Equality Management Plan to the Executive Board.
- c. the publishing of a report since 2016 for monitoring the gender equality numbers in the organisation.
- d. the "Respect" campaign for raising awareness.
- e. participation in diversity networks and establishing partnerships with businesses to develop projects for the students to investigate real cases of diversity.

*Monitoring and evaluation mechanisms and practices:* A report is published every two years that includes a detailed evaluation and monitoring of the number of women working in the University according to hierarchy level, the amount of their salaries in comparison to men in equal positions and recommendations for further developments in this area. However, there are no KPIs available for monitoring and no goals for diversity topics and there is no evaluation of the performance of the Diversity Unit.

#### *Open Science*

*Embeddedness:* Open science is quite well embedded with many initiatives run by the Strategic Affairs Office for R&D for Open Research Data Management and the University Library in the areas of open access to research publications, OER and citizenship access. ZHAW is the first and only University in Switzerland and among the few in Europe that has established an OER policy, as an interviewee explicitly stated. However, the respondents agreed that there is a lot to be done for a deeper implementation.

*Main barriers:* The high expenses asked by commercial journals limit the motivation for open access. The old structures do not facilitate the embeddedness, for example in the School of LSFM there are hardly journals to be found that are open access. "The Swiss culture is considered a barrier since it is a culture of owning rather than sharing", according to the opinion of one of the respondents.



*Main drivers* (legal, cultural, structural and/or political): Open Science was pushed legally at European and Swiss level. In Switzerland there is a national strategy that commands all research that is financed by public funds to be published in open access mode by 2024. For guaranteeing grants from SNSF and EU Commission for example, the implementation of open science policies from universities is also an important condition.

*Good practices:*

- a. "ZHAW Digital Collection" is an online platform for open access articles.
- b. Competence Centre OER is a team that provides information to lecturers and students on how to produce material that can be accessed from all over the globe.
- c. "ZHAW Services Research Data" is a service supporting researchers of the University during the whole data collection process and responsible to make the data open and reusable.
- d. a publishing fund from the University Library covers the cost to publish open access and serves as a motivation to the authors.

*Monitoring and evaluation mechanisms and practices:* An internal research project run by the University Library aims at monitoring the initiatives related to open science in the different departments of ZHAW.

## Science education

*Embeddedness:* Science education is the key that is the most embedded in the organisation, as ZHAW's main purpose as a University is to focus on research and let the results flow into teaching to equip students with the updated knowledge they need to prevail as professionals in society. The lecturers have for long time served as a bridge that connects students both with science and the practice. The research that is taking place always has as a goal to have a positive impact in society because it is financed by the society.

*Main barriers:* The whole operational environment of higher education institutions is becoming more and more complex, and this turns into a barrier as the structure needs to be readapted and changes need to take place. Other usual barriers are the low financial resources and the conflicts of interests on how and which topics the resources should be invested.

*Main drivers (legal, cultural, structural and/or political):* The main driver lies at ZHAW's own mission statement and the fact that its competitive advantage as a University of Applied Sciences is to bring the businesses close to the students. The demands that society puts into universities in terms of responsible education are also constantly increasing because universities prepare the students to become multipliers of responsible action.

*Good practices:*

- a. "MOOC Vision 2030" is an online course offered through the edX platform to the public and it focuses on social justice, among other subjects.
- b. Seminar series for the "Higher Education of The Future" offered to ZHAW staff and the public in collaboration with international experts.
- c. OER initiative from the University Library on sensitising and informing lectures and students about creating open educational material and teaching the use of creative commons.
- d. UN PRME initiative for integration of responsibility in the curricula and research projects of the different departments of SML.

*Monitoring and evaluation mechanisms and practices:* Every School in ZHAW has its own quality management team that is responsible for the frequent evaluation of the performance in the fields of lecturing, R&D,



continuous education and services based on the *Quality Management Strategy 2015-2025*. ZHAW Sustainable monitors how sustainability is embedded in the curricula of the different departments and in research projects.

## Anticipation

*Embeddedness:* This dimension is quite well embedded especially when looking at all the strategic offices, programmes and initiatives that have been established in the last few years in ZHAW. The work of ZHAW Sustainable, R&D Strategic Office and the Higher Educational Development Unit were outlined in particular by participants. The fact that strategies should at least look to the next 5 years was taken very seriously, especially by the respondents in senior management positions. However, there were also comments that in terms of gender equality there is lack of strategical thinking and better planning for the future.

*Main barriers:* The financial resources determine in which areas the planning and the strategies should focus. The staff seems to be demotivated to participate in the development of strategies, preferring to focus mostly on their own tasks, due to lack of financial incentives or because of a rather old-fashioned mindset that does not realise the importance of change.

*Main drivers (legal, cultural, structural and/or political):* All academic institutions, especially in Switzerland, are expected to anticipate and plan effectively for the future, addressing issues that are crucial like digitalisation, environmental impact etc.

*Good practices:* The structure of ZHAW is a good example on why anticipation mechanisms work well (See Figure 1), namely mainly due to the teams being divided in a very efficient way to promote strategic initiatives. The HED Unit runs the “Strategic Observatory”, which works closely together with expert committees from all over ZHAW in order to develop draft proposals for strategies that are then further submitted to the Executive Board for feedback.

*Monitoring and evaluation mechanisms and practices:* The strategic offices are responsible for the evaluation of the implementation of their respective strategies. A risk inventory at University level is formed annually where potential risks and future trends are concretely assessed.

## Inclusiveness

*Embeddedness:* From a student perspective, this dimension is well embedded in the organisation, as it is a very crucial aspect that allows them to focus exclusively on their studies without any disturbances. However, from an employee perspective, the inclusion of more women researchers and professors, as well as work and life balance, should be further improved.

*Main barriers:* Experience has shown that many employees are afraid to express freely about certain things regarding their working conditions, because they feel they will be discriminated. Change of culture in the organisation to achieve more inclusion is considered challenging.

*Main drivers (legal, cultural, structural and/or political):* Internationalisation is an important condition for guaranteeing accreditations, but it cannot be achieved without developing an inclusive environment in an organisation for people coming from different cultural backgrounds. The new laws and gender equality strategies were also mentioned as well as initiatives like UN PRME in SML.

*Good practices:* Since 2013, the Diversity Unit of ZHAW has assigned a representative for people with disabilities and since 2020 there is also a representative for the LGBTQ+ community and both are focused on the promotion of more initiatives in these areas. A survey was carried out in SML focusing on inclusive leadership to set light on the different perceptions of leaders. Furthermore, the “Respect” Campaign aimed





at increasing awareness among employees about a zero-tolerance attitude against any act of discrimination, mobbing and bullying. ZHAW offers special consulting services for students and employees free of charge.

*Monitoring and evaluation mechanisms and practices:* For the moment there are only general annual surveys evaluating the satisfaction of employees, where inclusiveness is only indirectly addressed through some of the questions. The School of Social Work and the Institute of Diversity and Social Integration is carrying further evaluation through research projects on that matter.

## Reflexivity

*Embeddedness:* This is a significant dimension in ZHAW in terms of the organisation running frequent self-evaluations to achieve higher quality of services provided. Most evaluations are carried out by the students and focus on lecturers, nevertheless there are surveys directed to the employees, too. ZHAW as a whole and the Schools in particular have been awarded with multiple accreditations that require continuous self-evaluations, as well as evaluations from third parties.

*Main barriers:* The quality strategy comes together with several hundreds of indicators creating an “illness” towards working hard on being overly perfect. The frequency and the importance that is given to these evaluations can be counterproductive for the employees. The students are overloaded with too many evaluations and these evaluations are not always representative of the performance of the lecturers.

*Main drivers (legal, cultural, structural and/or political):* Reflexivity is pushed by the Council, by the University’s mission statement and the accreditations. It is about the main ambition to stand out from other academic institutions and always becoming better.

*Good practices:* Since 2020, ZHAW is institutionally accredited according to the HEPC Act based on a self- and third-party evaluation that lasted two years. The work of the Quality Committee at ZHAW consisting of all the quality manager representatives from all Schools is another example. A staff satisfaction survey is run once a year in collaboration with an external consultant that gives insights into the perception of the employees about the organisation.

*Monitoring and evaluation mechanisms and practices:* Each School has its own mechanisms for quality assurance and implementation of the strategies. In the case of SML there are also reviews, as part of the renewal of the accreditations like AACSB, an organisation that sets its own special criteria for evaluation.

## Responsiveness

*Embeddedness:* Mixed views on the level of embeddedness in the organisation were reported. Some mentioned that the strategies and policies are not as fast and not as well implemented as they could and should be; especially when referring to gender equality. Some participants were convinced that ZHAW has managed to sufficiently respond to the big challenges of the time, for example the COVID pandemic.

*Main barriers:* There are not enough financial resources. It is difficult to decide how to respond when the expectations of the stakeholders are divided, like in the case of the implementation of the Sustainability Strategy. Taking own responsibility to implement things has been a challenge. There is lack of being proactive and taking own initiative from the side of the leaders. Although a risk assessment exists, a precise action plan in case of a pandemic event, or a nuclear war were never clearly defined.

*Main drivers (legal, cultural, structural and/or political):* The reviews that are taking place due to the accreditations are a very important driver that pushes for the actual implementation of the University’s strategies.



*Good practices:* The very fast response on the pandemic situation based on dialogue with the students and the employees to address their varied needs can be considered a good practice. Frequent Executive Board meetings also bring important contributions, as solutions are given fast due to the long but efficient discussions among the deans.

*Monitoring and evaluation mechanisms and practices:* The annual report of ZHAW is a well written document where the degree of responsiveness of the whole University is generally monitored. ZHAW Sustainable is also monitoring the research projects and other initiatives from the departments in terms of the degree of implementation of the sustainability strategy and the Green Impact Book.

## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in ZHAW

All the respondents agreed that there is room for further improvement and integration of the RRI-AIRR approach in the organisation. ZHAW should start by defining what kind of responsible leadership it wants and needs by providing the leaders, especially the human resources department, with the necessary knowledge. Better leadership training can serve as driver for change in the organisation and in the R&I process. A system should be created with KPIs for the whole University, because currently those have been developed only at SML level. Furthermore, there should be more exchange of information between the departments and efforts should be intensified to increase awareness of the RRI concept.

Regarding ethics, it was suggested that all departments should improve their coordination to promote ethical awareness among their staff members. They should work closely on forming clear definitions of ethical standards to comply with, because currently a misunderstanding is observed between conducting business in a responsible way, which does not always go along with conducting it in an ethical way. Enhancing mutual discourse was considered important to strengthen the implementation of ethical standards by the students and the staff in their research activities. A common understanding of what is ethical and what is not should be achieved and this can be done by offering more training programmes to the lecturers of all disciplines.

Encouraging diversity was highlighted as an important topic and it was mentioned that ZHAW should not be focused only on gender equality, but to all the different dimensions of diversity. Inclusiveness in ZHAW was found to be more victim-oriented, trying to fill in the existing gaps, whereas more action should be taken in showing the potential it brings to the organisation as a whole and how it can become a competitive advantage. Moreover, a greater embeddedness of inclusiveness in the strategy development process was proposed. Fostering a culture of diversity that sets the right atmosphere for employees of all genders – not only women as it is now the case – to get over their fears by talking more freely about equality and diversity issues was referred as crucial step forward.

As in science education, more incentives towards research on the RRI keys should be given through a clear definition of a research agenda. A transdisciplinary approach should be better embedded in teaching and the whole curricula should be reimagined with the RRI keys in mind, e.g., recommendation of an open summer School about the sustainable future of society offered to all master and bachelor programmes.

In the field of open access, a lot of efforts are currently focused on changing the mindset in ZHAW and make staff and students better informed and more aware of the benefits open science has to offer, like global reputation to the authors. In terms of reflexivity, the frequency of evaluations would be preferred to become less severe. Experience has shown that the outcomes are always the same, therefore a time span of three years instead of one would give the necessary space for a more effective implementation of the advice received.



Finally, it was mentioned that all RRI keys and AIRR dimensions are values that need to be discussed more often during the Executive Board meetings. This will encourage more reflection on them, checking, finding weaknesses, and defining areas of improvement. A discussion needs to be started because the Executive Board meetings are currently focused on issues of less importance, while concepts like RRI and this internal audit should be made a priority. The final report as deliverable of the current research task could further contribute into that direction.

## Summary of the focus group

### Brief overview of participants

In total 8 experts from units and departments of the organisation related to the RRI concept participated in the focus group, which took place on site on Monday, 28<sup>th</sup> March 2022, whereas one participant took part online through video conference. They were equally divided between men and women, and they represented all hierarchy levels, namely senior, middle, and junior. None of them were familiar with the RRI concept, therefore the focus group started with a brief presentation of the RRI-LEADERS project and continued with precise explanation of each of the RRI keys and AIRR dimensions followed by examples.

Table 13: Mapping of the focus group participants

Position	Level	Gender	Related RRI keys	Related AIRR dimensions
Research Associate ZHAW Sustainable	Middle	M	All	All
Prof.Dr./ Head of Education SML	Senior	F	Ethics, Science education	All
Research Associate/ Gender Equality Representative	Junior	F	Diversity/ Gender Equality, Ethics	Anticipation, Inclusiveness
Lecturer of Business Ethics	Middle	M	Ethics, Science Education	Reflexivity
Head Quality Development, Higher Education Development	Middle	F	Science Education, Public Engagement, Gender Equality	Anticipation, Reflexivity
Research Associate, Head R&D Unit	Senior	M	Open Access, Ethics, Public Engagement, Gender Equality	All
Research Associate, University Library	Junior	M	Open Access, Ethics	Reflexivity, Responsiveness
Head OER, University Library	Middle	F	Open Science, Ethics, Science Education	Anticipation, Reflexivity, Responsiveness

## Relevance of the RRI-AIRR approach in ZHAW

Table 14: Average score of RRI-AIRR approach in ZHAW

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	2.7	2.5
Ethics	1.7	1.9
Gender equality	2.4	2.1
Open access	2.4	2.2
Science education	2.6	1.7
Anticipation	2.0	2.4
Inclusiveness	2.0	2.4
Reflexivity	1.9	2.4
Responsiveness	2.0	2.1

(1 – being most relevant; 5 – being least relevant; average score from evaluation of participants)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439

## Embeddedness of the RRI-AIRR approach in the ZHAW

### Drivers

Drivers related to implementing RRI keys and AIRR dimensions in the organisation

The main drivers for all RRI keys and AIRR dimensions were agreed to be found in the University's strategic documents and policies but also in Swiss Law. **Science Education** is of course a crucial domain, prioritised and supported by all management levels, as ZHAW strives to provide its students with excellence in quality education. The frequent quality controls certainly serve as a good incentive for the members of staff to work harder towards this goal. With regards to SML, it was precisely mentioned that the accreditation of AACSB and its formal reward system and initiatives like UN PRME have been playing a significant role that pushes lecturers and researchers to continuously achieve more in research. In terms of **ethics**, on one hand the high demand from society on universities and on the other hand ZHAW students asking clear definitions on how research should be done has strengthened the organisation's focus on that matter. There is a discourse at ZHAW level on what kind of research should or should not be done and why. The principles that need to be followed by the departments encourage the integration of modules in the curricula like that of responsible leadership. For **Open Access or Open Science**, the University Library is providing financial support to researchers, as an incentive to encourage them to publish openly, which is considered effective to a certain extent. There has also been considered as a very important strategic goal and part of the public engagement of ZHAW to offer more open access publications since scientific journals became more expensive and universities could not afford the access to those as before. **Public Engagement** was named to be one of the University's most significant strategic goals, as transformation and the response to societal needs has been part of the mission statement since a long time and therefore integrated into important decisions of the management. **Gender equality and diversity** in general has also been forwarded as a societal need that must be efficiently addressed by public institutions like ZHAW, therefore fighting unconscious bias has been a key driver for the organisation. Examples such as dealing with integration issues from incoming students of different cultural backgrounds, the subject of work life balance among the employees and how senior managers react to those matters were noted as motives.

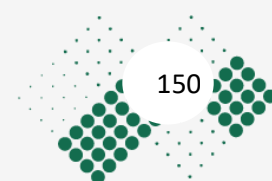
### Barriers

Barriers related to implementing RRI keys and AIRR dimensions in the organisation

The barriers that were mentioned regarding implementation of RRI were the same related to all keys and dimensions and they can mainly be summarised into lack of funds and lack of time. With regards to science education there was a debate about ZHAW as University of Applied Sciences being at a state of academisation that serves as a barrier due to the science conditions not being clear like in academic universities. The University's IPA system was criticised to prevent the realisation of further research projects in RRI topics due to the way resources are allocated. It was highlighted that a major number of the University's lecturers feel overloaded with their duties of teaching, acquiring research projects, doing research and publishing. For example, one participant expressed disappointment that when a research project is over then funding for publications is not always guaranteed. The different perception of ethics among the disciplines in the departments has prevented the creation of an Ethics Committee. Other barriers for open access rise from AACSB guidelines, which give a very inclusive list of scientific journals where publications should take place excluding for example German speaking journals. The concentration on reflexivity was thought to be too high and the fact that self-evaluations are taking place annually was considered counterproductive. The old-



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fashioned mindset by many employees and students about diversity and inclusiveness not only in ZHAW, but in society in general was also underlined, as well as the fact that discrimination and unconscious bias are still very evident and hard to be overcome. Finally, most participants agreed that there is a gap between anticipation and responsiveness. Implementation of the current strategies is not happening at a satisfactory level.

## Good practices

Over the course of the past year, the R&D Unit has established a working group that is focused on developing an Ethics Committee at ZHAW level with representatives from all the departments. Students are planned to be involved and give their opinion. An external expert, who is one of the authors of the Research Integrity guidelines by the SAAS is also included in the process. In the next session of this working group, hopefully the Committee will be put into action. As for science education, ZHAW Sustainable is running a working group on integrating sustainable topics further into the curricula of all departments across the University. ZHAW is the only University in Switzerland with an OER policy with funds and a dedicated team for it, while the President is the Head for Open Innovation for Swiss Universities. The fact that more than 70% of the University's partnerships are with private businesses was mentioned as best practice for public engagement. Another perfect example is the collaboration of ZHAW with municipalities like the city of Winterthur to turn it into a Smart City. For the strengthening of diversity awareness, the "Respect" campaign has been a success, whereas there is a lot of demand to participate in the peer groups that are organised. The offer of consultation by external experts for employees and students for diversity issues has also worked well. The initiation of research in social gerontology has been highlighted as good example.

The Strategic Observatory initiative by the HED Unit was mentioned as a very effective instrument for strengthening anticipation providing the opportunity to exchange with experts in the University and to identify the important strategic future topics in environment and society.

## Monitoring and evaluation

*Criteria or indicators for monitoring and evaluating the organisation's performance related to RRI keys and AIRR dimensions*

The evaluation for each of the RRI keys and dimensions takes place by each of the departments separately and it does not happen on a ZHAW level. Accreditations like that of AACSB in SML use their own special indicators to evaluate anticipation and responsiveness at the department. The University Library monitors the open access level by arranging meetings with each of the departments, where it informs their representatives about their performance in terms of the percentage of publishing open access using different metrics. Some departments have more funds for open access in comparison to others which of course influences the rate accordingly. The gender equality plan and the related report were mentioned as a good practice where standardisation was achieved by monitoring the numbers of female students and employees per department, the salaries, and their position in hierarchy level. However, no evaluation mechanisms for ethics, public engagement or inclusiveness were reported.

## Recommendations

The Gender Equality, diversity and discrimination policies should be updated and better foresee measures for inclusiveness. Moreover, diversity and inclusiveness should be better defined and there should be more dialogue about inclusiveness of different cultures and different age groups. There is a need of principles so



that the whole culture in ZHAW will change, especially at the management level, as this will in the end make a bigger difference on a daily basis than the policies. More thought should be given to the allocation of resources to let them serve as incentives for more research on topics related to the RRI keys and AIRR dimensions. Many of the strategies on science education are defined by people who are not teaching and who cannot understand the effect of their decisions, and this is a fact that needs to be taken into account in the future. Public engagement should be strengthened as momentarily a lot is done internally rather externally. More actions should be taken to inform and increase the rate of open access in the other departments because for the moment only in the School of Engineering and the LSFM there are the higher rates.

As for anticipation, the Strategic Observatory should be taking place more often than only every 1.5 years considering that changes are happening much faster. More sounding boards, meaning groups where ideas and plans are discussed for their feasibility, with the inclusion of external stakeholders were considered a good idea for more effective anticipation. However, it is very important to promote exchange between departments and all disciplines as to how to respond and implement the existing strategies and get over the barriers that are found at departmental level. Also, it should be clear who in the department is responsible for implementing the strategy. However, it should not be forgotten that an institutional culture should be better embraced to achieve that rather than a departmental culture. A lot of benefits could be derived by concentrating on responding to the needs of the students rather than to the policies imposed by ZHAW, as there is high potential from this perspective. Reflexivity should be further stretched over time, and it should be left at each department to decide the discourse and how often it should happen, due to the difference in size and in the accreditation procedures.

## Conclusions

This report focused on an internal audit of the embeddedness of the RRI-AIRR concept, namely the RRI keys and AIRR dimensions in ZHAW. The review was based on a document analysis of the University's policies, strategies and annual report, on 8 personal interviews with experts and on a focus group with 8 participants. The results revealed interesting insights on the position of the RRI-AIRR approach in ZHAW, which may be assessed as strong overall. All the keys and dimensions have been found to be very relevant and strongly linked to the work of all the respondents, some to a higher and some to a lesser extent, although most of them admitted that they were not exactly aware of the RRI-AIRR concept before the audit took place.

A closer look at the documents has shown that even though the RRI terminology is missing, there is still a policy for each of the RRI keys that has been established and has been serving as a roadmap for the whole organisation. Regarding the AIRR dimensions, there is a lot to be found particularly in ZHAW's strategies, however inclusiveness is not as well integrated as it would have been expected and is often missing from the documents. On the other hand, in the practice, it was discovered that there is a gap between anticipation and responsiveness, meaning a lot of work has been done on developing strategies and planning for the future, but there is a lack on the implementation of them. There was also common agreement that too much effort and time are invested in reflexivity, which serves as a barrier for more efficiency in responsiveness. Several good examples of best practices regarding all the RRI keys were explicitly mentioned. Science education is predominantly the key that has the most importance, as it is connected to the mission statement and the nature of ZHAW as university. Especially in the field of open access/ open innovation ZHAW seems to take a pioneering role compared to other institutions in Switzerland and abroad. A gender equality plan is already in place for some time, while an Ethics Committee is currently being developed. More initiatives were





mentioned with regards to public engagement and the collaboration with private businesses, but there is certainly space for improvement in strengthening the position of ZHAW in this area.

Along the reviewing process, the precise actors that play a key role for the integration of the RRI keys and AIRR dimensions inside the organisation were identified. On one hand there are the strategic initiatives like ZHAW Entrepreneurship and the strategic programme of ZHAW Sustainable for public engagement. The Sustainability Committee has a responsive role, dedicated to the implementation of the Sustainability Strategy. The Strategic Affairs Office for R&D focuses on research integrity, ethics and open science. The Strategic Office for Academic Affairs is directed towards science education. The HED Unit is also very important for developing and bringing strategies to the president's and executive board's attention focusing on anticipation. The Diversity Unit develops the policies on the topics of diversity/ gender equality/discrimination and to a certain extent also performs monitoring tasks. Research on this topic is left to the School of Social Work. The Diversity Committee with representatives from all 8 Schools is responsible for discussion and further adaptation of gender equality and inclusiveness. In open science the University Library with dedicated teams in Open Access and OER is the main actor, however, the proactive role of the University's President is also worth to mention. Finally, reflexivity is left to the Quality Committees of each of the departments and the Quality Committee at ZHAW level, who focus on self-evaluation and the renewal of accreditations.

Although it was generally understood that all the RRI keys and AIRR dimensions are quite well embedded in the organisation, there were a lot of suggestions for further improvement. Increasing awareness of the importance of each of the keys among the Executive Board and the management at all levels was considered important. Better allocation of resources for more research on these topics could be very beneficial and it could further strengthen science education. For research integrity and ethics, the development of a Committee at ZHAW level is underway and will bring more standardisation on the topic. A change of institutional culture with regards to gender equality and most of all diversity should be more encouraged and get better established, while evaluation mechanisms should be launched. The same holds true for cultivating a new mindset towards the usefulness of open science and publishing in open access, which is still missing. The AIRR dimensions should be all considered of equal significance for the organisation and overconcentration on anticipation and reflexivity should be rather avoided. Inclusiveness and responsiveness should be more efficiently addressed in the policies and in the practice.



# Internal RRI review of LGA-WM

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## List of acronyms / abbreviations used in this document

RRI – Responsible Research and Innovation

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

R&I – Research and innovation

LGA-WM – Local Government Association of Western Macedonia

JTP – Just Transition Plan

CERTH – Centre for Research and Technology Hellas

GDPR – General Data Protection Regulation

GRD – Green Rural Deal

## Executive Summary

LGA-WM is a relatively small public organisational unit that operates at a hybrid form. This means that its work ranges from the promotion of certain policies (such as the coordination of the local political actors towards the achievement of the energy transition), to purely administrative duties for the Municipalities (such as the completion of a public procurement) and implementation of research projects. LGA-WM can autonomously implement research activities such as research projects or act as the operational tool of the elected members of the Supervisory Board to implement procedural activities, regarding Municipal requests. In that sense, the integration of the specific RRI keys / AIRR dimensions has been detected in those two distinct forms. The internal documents of the organisation showed that RRI keys / AIRR dimensions are included in general, but mostly indirectly. For instance, the keys of Ethics and Gender Equality are directly included, while Responsiveness and Reflexivity mainly accrue from the interpretation of the organisation's aims and personnel duties.

The interviews showed that LGA-WM's personnel already possesses an adequate level of comprehension of the RRI/AIRR approach, given their answers on the level of relevance of the RRI/AIRR approach in LGA-WM. However, clear differences in the level of integration of the specific RRI keys and AIRR dimensions have been detected. For instance, Ethics and Public Engagement are partially implemented due to both the legal obligation of LGA-WM accrued from the internal documents, as well as the organisational aim to practically implement ethical policies and be engaged in activities that benefit the wider societal segments. Reflexivity and Responsiveness, as the two most conceptually connected AIRR dimensions, are practised at the level in the organisation, implying the engagement of the Supervisory Board in adopting and directing policies, designed to cope with the local society needs. This is a clear sign of the organisational focus of LGA-WM, which is to be reflexive and respond to top local policy issues and problems that need to be taken care of. Indeed, LGA-WM is considered as sufficiently reflexive and responsive, specifically regarding the post-lignite transition of Western Macedonia, as the top priority policy issue currently implemented in the region, which is also the policy focus in the RRI LEADERS project. On the contrary, the lowest integration is noted in the



Gender Equality RRI key, a finding that is mainly connected to the non-representation of women in the Supervisory Board of the organisation.

Regarding the suggestions related to a more effective integration of the RRI / AIRR approach, the prime conclusion of the focus group is that LGA-WM should be focused even more intensively on the implementation of research projects that exclusively deal with the top policy areas of the region. Post-lignite energy transition, as the top policy priority issue, followed by sustainable development and digital transformation are the most prominent policy areas that LGA-WM should focus its research activity on. Moreover, other important measures such as the transformation of the organisation's website to a user-friendly research portal that can maximise the dissemination and exploitation of the findings of the research projects that LGA-WM is involved with, has been also pointed out. In general, the RRI/AIRR approach is found to be efficiently integrated in the organisation, with minor interventions needed that could maximise the RRI effects.

## Introduction

### Type of organisation and legal form

Local Government Association of Western Macedonia (LGA-WM) is a Public Legal Entity of Private Law.

### Organisational structure (text or organigramme)

The organisational structure of the LGA-WM consists of five (5) administrative bodies, accruing from the Municipalities of the Region of Western Macedonia and a Director of the organisation. The bodies are:

- a) The President
- b) The Board of Directors
- c) The Executive Committee
- d) The General Assembly
- e) The Supervisory Board

Decisions at a strategic level are taken by the Board of Directors, headed by the President, while decisions at an operational level are taken by the Director of the organisation.

### Number of employees

The Local Government Association of Western Macedonia currently employs seven individuals as permanent staff and three (3) individuals as contracted staff.

### Mission or main purpose of the organisation

The general mission of the Local Government Association of Western Macedonia is to promote cooperation between the thirteen Municipalities of the Region of Western Macedonia and implement policies and practices on the municipalities' behalf.

### Brief presentation

Local Government Association of Western Macedonia (LGA-WM) is a public body implementing a significant variety of actions regarding local governance of the region. Major activities include strengthening the cooperation between the 13 municipalities that are members of the LGA-WM, the research of issues related



to local governance and local development and the collection / processing of data and information on general and specific issues, regarding the mission and work of the municipalities. Furthermore, the organisation promotes the training of the staff members of the municipal bodies, the cooperation with LGAs, representing other Greek regions and local authorities, as well as the cooperation with private and research organisations, regarding the implementation of studies and policy practises about the region. Specifically, regarding the set-up of scientific studies and the implementation of European and national research projects, LGA-WM plays a prominent role as it is the main body implementing this type of activities at a regional level. It is strengthening and supporting the initiatives that enhance decentralisation and local growth and is undertaking any actions that may lead to the improvement and protection of life, protection of the environment and the enhancement of social cohesion.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

The Local Government Association of Western Macedonia (LGA-WM) is amongst the prime bodies of the region that not only participate but direct the actions and activities regarding the implementation of the territorial innovation eco-system. LGA-WM operates as an intermediate link between the local society (represented by the municipalities of the region) and the entrepreneurial, as well as the research and academia community. This indicates that the organisation is directing the local business and research activities towards the coverage of the local society needs, focusing on major sectors of the territorial innovation system. More specifically, LGA-WM is coordinating initiatives, focusing on the post-coal transition through innovative and sustainable practices, the digital transformation of the area in major local economy sectors such as agriculture and tourism and the upgrade of the local infrastructures. LGA-WM does that by coordinating all stakeholders' groups (society, business, research/academia) to the common goal of the maximisation of social benefits for the local community.

LGA-WM is currently implementing seven research projects in the areas of sustainable post-coal transition, sustainable tourism through innovative practices, smooth inclusion of the migrant communities into the local societal and business networks and more. That indicates that the organisation itself operates as a regional innovation anchor, directly implementing activities about innovative policies, procedures, and methodologies. These projects also promote organisational networking, since LGA-WM is cooperating as a project partner with other local business, policymaking, and research organisations. Such organisations are the University of Western Macedonia, the prime local research organisation of CERTH and local businesses participating in project implementation.

## Review of the relevant internal organisational documents

### 1. Presidential Decree 75

#### Summary of the document

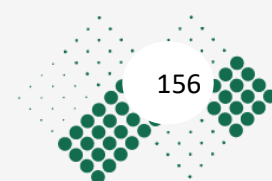
Year of publication: 2011

Target Audience: Mixed-purpose Document

Main Purpose: The document contains the general operating principles of LGAs, including their purpose, the financial resources, and the description of its bodies, which consists of the General Assembly of LGA, the Administrative Board, the Executive Committee, the Supervisory Board, and the President of the LGA-WM.



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### Place of RRI-AIRR approach in the document – a table:

Presidential Decree 75 / 2011	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document if it is not there?
Societal engagement or Public Engagement	No	Yes	Yes	No	N/A
Gender Equality	No	Yes	No	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	N/A
Compliance with Ethics	No	Yes	Yes	Yes	N/A

### A concise review of the most relevant and interesting points of the document:

It is the first document setting the ground for the legal establishment of the Local Government Association of Western Macedonia, in the broader frame of the Local Government Associations at national level. The document includes guidelines for data protection and anonymity, indirectly referring to some of the general principles of the General Data Protection Regulation (GDPR), by foreseeing the protection of non-identifiable basic information that can be considered as personal data such as full names, home addresses, ID numbers, e-addresses, emails and more. So, this indicates that Gender Equality is indirectly mentioned, as well as compliance with Ethics, making them both already implemented values. Moreover, the document urges LGA-WM top administration to be engaged in local society issues and engage at the same time LGA Municipal member in the implementation and coping of local policy issues of major importance, indirectly making Public Engagement as a goal value. Furthermore, the document clearly adopts specific RRI Keys / AIRR dimensions, such as Open Access (in the transparency of the establishment and electoral procedures of the LGA bodies), Gender Equality (equal participation of both sexes in the procedures) and Reflexivity as the clearly set role of the LGAs gives the organisation the ability to reflect on social, financial and environmental changes.

## 2. Internal Services Organisation & Staff Ranking of the Local Government Association of Western Macedonia

### Summary of the document

Year of publication: 2013

Target Audience: Internal Document

Main Purpose: This document refers to the operational framework of the LGA-WM exclusively, as a distinct LGA amongst the rest of the LGAs at national level. It defines the organisational structure of the services of the Local Government Association of Western Macedonia in administrative units, the responsibilities of the administrative units, the duties of the heads of the administrative units and the categories, the number of positions and the necessary special formal qualifications of the staff.



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#### Place of RRI-AIRR approach in the document – a table:

Internal Services Organisation & Staff Ranking of the Local Government Association of Western Macedonia	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document if it is not there?
Responsibility	No	Yes	No	No	N/A
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A
Responsiveness and adaptation	No	Yes	No	No	N/A
Gender Equality	No	Yes	No	No	N/A
Compliance with Ethics	No	Yes	No	No	N/A

#### A concise review of the most relevant and interesting points of the document:

This document includes the procedures, presenting how each organisational member should operate in its legally set role and position. The document also complies with the General Data Protection Regulation (GDPR) by including specific regulations for the protection of sensitive personal data. The principles of the document are highly correlated with the specific RRI Keys / AIRR dimensions such as the Responsibility and Gender Equality of the decision-making mechanism of LGA-WM, the Reflexivity of the procedural framework to adapt employment needs to local society issues and Responsiveness in quickly reacting to the needs/requests of the Municipalities of the region.

### 3. Regulation of the Supervisory Board of the Local Government Association of Western Macedonia

#### Summary of the document

Year of publication: 2013

Target Audience: Internal Document

Main Purpose: This document establishes the jurisdictions and the operational principles of the Supervisory Board of LGA-WM. The Supervisory Board has prominent significance in the LGA-WM operation since it is the internal body that controls and checks the compliance of the organisation's decisions and operations with the legally set rules regarding transparency, equality in participation and validity of decisions.

#### Place of RRI-AIRR approach in the document – a table:

Regulation of the Supervisory Board of the Local Government Association of Western Macedonia	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document if it is not there?
Responsibility	No	Yes	Yes	No	N/A
Inclusiveness	No	No	No	No	Yes





Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A
Responsiveness and adaptation	No	Yes	No	No	N/A
Responsibility	No	Yes	Yes	No	N/A

**A concise review of the most relevant and interesting points of the document:**

The regulations / operations included in the document are about exercising control over the financial management of the LGA-WM, the examination of the books kept and of the necessary legal supporting documents, as well as the preparation of reports on the financial management of the LGA-WM. The document indirectly foresees specific RRI Keys/AIRR dimensions in its articles such as the ways and procedures of participation of the staff of the LGA-WM in the Meetings of the Supervisory Board for the provision of data, explanations, clarifications, etc. Moreover, specific RRI/AIRR keys are directly implemented during the execution of research projects by the LGA-WM, such as Reflexivity, Responsiveness, and Inclusiveness. More specifically, since the Supervisory Board is responsible for making the strategic decisions that directly or indirectly affect the community, it must be able to adapt its decisions to the current social and organisational needs and it must be reactive to emerging or important issues regarding the organisation and the local community (Responsiveness). Furthermore, the Supervisory Board is responsible for including actors from all four quadruple helices into its decisions, especially regarding the coping of top priority issues such as energy transition. The jurisdiction of the President to react according to his will also foresee high levels of Responsiveness to specific situations, regarding legal validity and social sensitivity. These decisions may also apply to the control of data protection, as well as the implementation of efficient Quality Assurance Plans per project.

## 4. Regulation of staff of the Local Government Association of Western Macedonia

### Summary of the document

Year of publication: 2013

Target Audience: Internal Document

Main Purpose: The document is about the implementation of the proper procedures regarding the recruitment, operation, rights, and obligations of LGA-WM's current and future staff. The text contains the regulatory framework about the organisation's staff planning, categories of staff, general and specific staff qualifications, submission of supporting documents, promotions evaluation systems, compensations, and allowances, etc.

### Place of RRI-AIRR approach in the document – a table:

Regulation of staff of the Local Government Association of Western Macedonia	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document if it is not there?
Responsibility	No	Yes	Yes	No	N/A
Anticipation, foresight, vision, planning	No	No	No	No	Yes



Reflexivity, evaluation, self-evaluation	No	Yes	No	No	N/A
Gender Equality	No	Yes	No	No	N/A
Compliance with Ethics	No	Yes	No	No	N/A

#### A concise review of the most relevant and interesting points of the document:

The document includes specific articles for full GDPR adoption (Article 14 of personal data management) and for quality assurance control in operational procedures (Article 16). However, the text foresees the direct implementation of specific RRI Keys / AIRR dimensions, which are embedded in specific articles of the regulation. For instance, Article 8 foresees Gender Equality in the recruitment process, Article 16 - in the evaluation process and Article 20 obliges the organisation to maintain absolute equality in gender issues. Article 19 directly implements responsibility in the staff behaviour regarding the implementation of their daily duties as such, to fulfil their ulterior goal to contribute to the social well-being and especially in specific matters such as social, ethical, and environmental responsivity. Also, the Reflexivity is shown by the foresaw of the document that staff must be able to predict and adopt forthcoming difficulties and top priority issues. Article 19 is directly related to the transformation of the region of WM towards a sustainable coal-free area. Anticipation is indirectly foreseen by guiding staff to be able to predict unacceptable circumstances and react on them. There are provisions in the document that force the staff to embed Ethics in their daily working activities.

## 5. Rules of Procedure of the Board of Directors of the Local Government Association of Western Macedonia

### Summary of the document

Year of publication: 2013

Target Audience: Internal Document

Main Purpose: This organisational document regulates the operation of the Board of Directors of the LGA-WM. In simple words, it sets the procedural framework under which the organisation takes decisions regarding operational, as well as strategic issues. These decisions may deal with issues ranging from the election of the new president to the participation of LGA in a policy or research project.

#### Place of RRI-AIRR approach in the document – a table:

Rules of Procedure of the Board of Directors of the Local Government Association of Western Macedonia	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document if it is not there?
Responsibility	No	Yes	No	No	No
Societal engagement or Public Engagement	No	Yes	No	No	No



Anticipation, foresight, vision, planning	No	Yes	No	No	No
Responsiveness and adaptation	No	Yes	No	No	No

**A concise review of the most relevant and interesting points of the document:**

The Board of Directors is responsible for evaluating the decisions that the organisation is taking with regards to compliance with the law and the organisational and strategic aims. GDPR is adopted in the regulatory framework of securing personal data management of all organisation's managerial staff and high-ranking officers. Quality assurance control is ensured by the commitment of the Board to continuously supervise the implementation of operational decisions. Regarding RRI Keys / AIRR dimensions, Gender Equality is also adopted in all electoral and procedural processes of officers and the president. Public Engagement is contained in the article providing the Inclusion and Engagement of all societal groups. Anticipation is expressed through the obligations of the Board of Directors to take decisions driven by the general societal benefit and the distinct effects that may be accrued from specific decisions. Responsiveness is adopted by the demand of the Board of Directors to respond to emerging political and administrative circumstances regarding both LGA-WM, as well as the Municipalities it represents. This document may strengthen post-coal transition by allowing the organisation to be engaged in the implementation of strategic decisions (such as participation in development projects) under a specifically set framework.

## 6. Rules of Operation of the Executive Committee of the Local Government Association of Western Macedonia

**Summary of the document**

Year of publication: 2013

Target Audience: Internal Document

Main Purpose: This document foresees the operational framework of the Executive Committee of LGA-WM. The Executive Committee is the body that is engaged in the implementation of the procedural decisions of LGA (while the Board of Directors is responsible for the strategic ones).

**Place of RRI-AIRR approach in the document – a table:**

Rules of Operation of the Executive Committee of the Local Government Association of Western	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	No
Societal engagement or Public Engagement	No	Yes	Yes	No	No

**A concise review of the most relevant and interesting points of the document:**

The document foresees the preparation of the budget by the Executive Committee and the report of revenues and expenditures of LGA-WM and draws up the programme of these activities which is then submitted to the Board of Directors for approval. The Executive Committee also exercises all the



responsibilities that are transferred by the Board of Directors. Responsiveness is foreseen in the Executive Committee's actions by having the obligation to respond to pressing procedural and societal issues by informing the President and Board of Directors about the possible effects accrued from a strategic decision and the procedural steps that may be taken to resolve the situations.

An overall view of the documents that have been studied reveals a moderate implementation of some RRI keys such as Responsibility and Public Engagement. The former is implemented because of the obligation of the organisation to be able to cope with emerging issues and the latter is related to the regulation that LGA-WM should promote the cooperation between all actors of LGA-WM for the resolution of organisational issues. Responsiveness, Inclusiveness and Anticipation are indirectly foreseen in the policy documents, which is an element that may promote the participation of LGA-WM in the post-coal transition process. According to those documents, LGA-WM could participate in open and democratic electoral procedures, promote an open dialogue and consultation in the post-coal transition and direct/coordinate the Municipalities to an effective and beneficial participation in the most important local society issues such as energy transition (Public Engagement). Furthermore, LGA-WM has the framework that not only allows it but obliges the organisation to be engaged in shaping a vision for fair transition in the region of WM (Anticipation). Moreover, LGA demonstrates the ability to adapt to change, based on the expectations of society. Therefore, it proposes changes, new regulatory standards and procedures that facilitate the application of responsible research and innovation (Responsiveness).

## Summary of the interviews

### Brief overview of respondents

In total nine interviewees participated, four females and five males. These include the Director of the organisation, seven employees (one ICT expert, one financial manager, one regular staff and four scientific experts) and a member of the Board of Directors. The scientific experts are exclusively engaged with the implementation of research projects as they have experience in science, as well as in applying the RRI framework in the context of regional innovation systems.

### Framing of the RRI-AIRR approach in the Local Government Association of Western Macedonia

Four interviewees are familiar with the concept of RRI – this is especially valid for two of the scientific experts. The ones with moderate understanding were marginally aware of how the research could potentially be implemented by embedding the general principles of “responsibility” to the extent of affecting the wider social benefits. The rest of the interviewees were not familiar with the RRI concept and an extensive introductory briefing by the project's working team was conducted to make them acquainted with the general principles of RRI concept.

Most of the interviewees considered the majority of the RRI keys / AIRR dimensions as part of their responsibilities to some extent. First, the Director, as well as other organisational members, consider Gender Equality and Public Engagement as the prime RRI keys implemented in the organisation. Gender Equality is manifested through the gender-balanced workforce in LGA-WM and the commitment of the organisation to pay equal attention to both genders. Public Engagement touches the core of the organisation's primary aim, which is the engagement of all societal actors into the active policymaking. LGA-WM is setting specific goals about the societal benefits, regarding both the organisation's regular activities, as well as its participation in



the research projects. The main AIRR dimensions that are integrated into the interviewees' responsibilities are Inclusiveness and Anticipation. Inclusiveness is integrated through the inclusion of all the quadruple helix actors in the research projects they are implementing, including actors from the policymaking, business, NGOs, and academia sectors. The interaction and inclusion of these stakeholder groups is part of their daily activities. The staff of LGA-WM is also applying Inclusiveness, through their constant interaction with all municipal stakeholders, as well as the active inclusion of local businesses and NGOs in municipal activities such as public works, training, communication events etc.

Anticipation is also significantly implemented in the organisation according to the interviewees' views. All research projects that LGA-WM is currently implementing have been designed, based on their accordance with local policy goals such as energy transition, regional innovation systems, digital transformation, people with disabilities etc. There are specific targets, related to the fulfilment of the local societal needs, that have been set in these projects and the interviewees who are engaged with them have been working with their design, as well as their implementation since day one. That indicates an efficient level of experience of those employees, in comprehending the local needs and Anticipating situations and solutions, integrated into the local political circumstances.

Furthermore, The RRI-AIRR approach plays a crucial role in the organisation, regarding both the overall philosophy of the approach, as well as distinct RRI keys and AIRR dimensions. LGA-WM is an organisation that actively promotes and implements Gender Equality. Thus, research programmes promoting Gender Equality and human rights are currently being implemented (projects: e-United, ALL-IN), as well as daily activities informing the citizens of the region for the necessity of adopting Gender Equality and women's human and work rights (participation / organisation of events about women's rights, sexual harassment, etc.) Open Access is also promoted by allowing citizens to access all information and data about both research projects and the regular organisation's activities. The main concerns are primarily related to the effectiveness of the implemented policies and activities of the organisation in practically improving the daily life of citizens. This concern is directly related to the Reflexivity of the organisation to adapt the policy and project principles to societal needs and the Responsiveness to promote sustainable development for the region through them.

The main RRI-AIRR actors in the organisation are primarily the employees at LGA-WM. Both the scientific experts, as well as the regular staff are actively implementing the RRI principles. The scientific experts do that through the design of the projects that the LGA-WM is participating into, since they initially choose the calls, submit the project proposals which are specifically designed to address local needs, and then implement the projects accordingly. Moreover, the President of LGA-WM, along with the Supervisory Board and the Executive Committee, can also be considered primary RRI-AIRR actors in the organisations. This is so, since they are the ones deciding the level of Responsiveness that LGA-WM demonstrates regarding the reaction to the local society's issues and regarding the Reflexivity in adjusting policies that allow the embedment of the RRI keys / AIRR dimensions.

Concluding, the integration of specific RRI keys have brought the organisation to its current positive position. Ethics, for instance, has led to the exclusive adoption of research programmes that analyse and address crucial (for the region) societal, as well as financial issues that have resulted in benefitting the four groups of the quadruple helix (Policy, Society, Academia, Businesses). RRI-LEADERS is a project that is concerned with the integration of the RRI-AIRR approach in the harsh energy transition that the region of Western Macedonia is going through. The integration of Open Access has led to the improvement of the networking facilities and infrastructures that allow the organisation to effectively publicise project results and research data. Gender Equality is implemented in the organisation under specific standards regarding both the workforce balance between males-females, as well as by executing projects that promote the participation of women in the societal well-being and the protection of their rights. A key event that has strengthened the integration of



responsibility in the organisation is the implementation of the first Policy Learning Workshop under the framework of the RRI-LEADERS project. During the event, best practices that apply the RRI/AIRR approach in the four involved territories have been presented, allowing LGA-WM to obtain crucial information on how to successfully integrate the RRI/AIRR framework.

## RRI keys and AIRR dimensions in the Local Government Association of Western Macedonia

### Ethics

**Embeddedness:** LGA-WM highly promotes Ethics principles in research & innovation through implementing specific research activities that can benefit the local well-being, ruled by ethical regulations and research integrity training. The Green Rural Deal (GRD) project is an example of ethical research since it employs researchers, evaluated under a specific (ethical) framework, which foresees conducting research under just and harmless (to the social and environmental sustainability) ways that can benefit the local society.

**Main barriers:** The main barrier that has been recorded is the conflict of interests between elected members of the Supervisory Board who promote contradicting policies based on their own personal (political) views. Elected members (Mayors) appeared to often promote their personal agendas amongst societal members at the expense of Ethics. This may lead to unequal distribution and reach of support policies and their benefits amongst the different territories (in the region of Western Macedonia) and different individuals, implying that some specific Municipalities in the region of Western Macedonia may be benefited more in comparison to others, taking advantage of those financial and development instruments.

**Main drivers (legal, cultural, structural and/or political):** The pre-existing working culture of employees has already a strong base in implementing basic ethical rules. However, the Ethics key in the implementation of research projects has brought to the LGA a new paradigm in adopting Ethics with regarding the equal distribution of both the project benefits and the organisation's regular activities to all four quadruple helices. This means that research projects should be chosen according to their capability to equally benefit all Municipalities of Western Macedonia and the same should be the case for LGA's regular daily activities which sometimes may benefit some specific regions more, in comparison to others. Legal drivers of Ethics, such as the legal obligation of the organisation to work for the benefit of all 13 municipalities in the region and ensure the interests of all societal segments in the involved territories (included in the "Presidential Decree 75" document and the "Internal Services Organisation & Staff Ranking of the Local Government Association of Western Macedonia" document), constitute a prime driver of Ethics integration. Moreover, the actual "nature" of LGA-WM itself is to promote Ethics in the public dialogue, so it can be considered a driver.

**Good practices:** The design and implementation of the inter-municipal information system that allowed all municipalities of the region of Western Macedonia to have fast internet connection and allow all citizens to benefit from new technologies is an indication of the high standards of Ethics in the governance of research and innovation.

**Monitoring and evaluation mechanisms and practices:** No formal evaluation practises have been set regarding the integration of Ethics in LGA's activities.

### Public Engagement

**Embeddedness:** Public Engagement is highly implemented in LGA-WM. Typical working duties of LGA-WM foresee the coordination of local municipalities that need to work together to implement scientific and





technological activities in the interest of the local community. This is valid even further for LGA-WM during its effort to maximise the local benefit. Moreover, the research activities of LGA-WM in executing specific research projects about priority policy issues such as energy transition, has led the organisation to bring together top regional policymakers from the public sector, the academia and NGOs.

**Main barriers:** No significant barriers have been identified. The most common barrier is the difficulty to engage and coordinate the 13 mayors of the 13 municipalities of the Region of Western Macedonia to share common targets and goals that can benefit the wider public of the region.

**Main drivers (legal, cultural, structural and/or political):** One of the main drivers of LGA-WM is the vision of the organisation to primarily operate as a “leader” in implementing core local policies such as the post-lignite transition rather than as a typical manager in implementing policies directed by superior bodies. This engages the organisation in the execution of public-benefit activities. The goal of the local policymakers to implement a successful energy transition for the financial development of the region is a key driver for Public Engagement. Thus, LGA-WM implements Public Engagement by bringing together important local policy actors such as the respective municipalities and researchers. This can be considered an either structural or legal driver of LGA-WM.

**Good practices:** LGA’s active promotion of the public consultation regarding the post-coal transition can be classified as a good practice. Through the implementation of specific research projects (DeCarb, Green Rural Deal), LGA-WM managed to gather all societal actors together, including the appointed-by-government head of the post-coal transition. The goal has been to consult the local actors in uncovering the most effective and local benefit-oriented strategies that should be implemented in the region, according to the Just Transition Plan (JSP).

**Monitoring and evaluation mechanisms and practices:** No formal practises have been set in measuring the level of Public Engagement applied in the organisation. However, the commitment of the organisation to be engaged in research projects that mainly include the analysis of crucial local issues such as the post-lignite transition, entrepreneurship support, innovative tourism and more is considered an informal practise. In this sense, the implementation of these procedures constitutes an evaluation mechanism for Public Engagement in the organisation.

### Gender Equality

**Embeddedness:** Gender Equality is fully implemented internally, since the manager of the organisation and almost half of LGA’s personnel are women and no discrimination of any kind has been ever recorded in the work environment. However, Gender Equality is not implemented in terms of the representation of women in the Supervisory Board of the organisation.

**Main barriers:** The main barrier regarding the absence of women in the Supervisory Board of LGA-WM is the nature of the body itself. The members of the Supervisory Board are elected through the municipal elections taking place every four year at national level. The outcome of these elections cannot be predicted, and the vote of people cannot be directed. Therefore, lack of women in the Supervisory Board is not a question of ineffective implementation of Gender Equality in the organisation, or misleading and/or defective practices regarding that specific RRI key. Perhaps an obligatory quota for women in the Supervisory Board could further promote the integration of that specific key. Furthermore, the wider question regards the actual reason that people do not vote for women as much as for men.

**Main drivers (legal, cultural, structural and/or political):** The legal obligation (driver) of the organisation, as included in the internal documents, is to provide equal rights and opportunities to both sexes. In the framework of implementing this specific obligation, LGA-WM is fully adopting Gender Equality internally.



Moreover, the organisational culture includes the preservation of Gender Equality, which is proven by the balanced equilibrium regarding the participation of men/women in the organisational workforce, as well as the female general director of the organisation.

**Good practices:** LGA-WM promotes Gender Equality internally, as well as externally. The internal promotion concerns the balanced participation of both sexes in the organisational procedures. The external promotion takes place through the organisation or the constant participation of LGA-WM in informative events regarding Gender Equality and other discrimination practises.

**Monitoring and evaluation mechanisms and practices:** There are no formal mechanisms in investigating Gender Equality in the organisation.

### Open Access

**Embeddedness:** Open Access is implemented in the organisation at a moderate level. Research activities, such as deliverables from research projects that LGA-WM is currently implementing, are available online on the organisation's website. An improvement that is currently under planning, would be the creation of a user-friendly digital platform that will include all the scientific findings from the projects that have been implemented in the past.

**Main barriers:** One of the main barriers that have been identified is the fact that the communication obligations and activities, related to the research programmes, are often insufficiently supported. This is a result of the unsuitable website of the organisation, which does not have the form of a digital platform that can support the upload of large documents, nor can ensure easy access to a database designed to process a large number of people that make digital transactions. Therefore, this specific RRI key, i.e., Open Access to the programmes, which have already been implemented or are being implemented, needs further improvement. Moreover, the dissemination of information in the internal operation of the organisation also needs further improvement, so that all employees in LGA-WM can have access to data and information regarding the better operation of the organisation and in order to widen their knowledge and consequently to be more productive in carrying out their tasks.

**Main drivers (legal, cultural, structural and/or political):** The legal obligation of the organisation is to publish some of the self-governing procedures it handles (such as contracts, assignments, etc.) on specific public platforms (DIAVGEIA, KHMDHS). This obligation is implemented to a very satisfactory degree. Also, in the context of research projects, some of the obligations that are set, deal with the communication activities of the projects, such as publications of deliverables in the personal accounts of the partners' social media, and on the official website of the organisation.

**Good practices:** In the context of the implementation of European programmes by LGA- WM, the organisation either organises various workshops / information events or participates in them, as a result of which it disseminates its work to the general public. The organisation has also, over the years, published or participated in publications on purely scientific issues, which are accessible to the public. The technological equipment of the organisation can meet the daily obligations of the organisation, but it also processes more complex digital operations (live streaming, web portals etc.). Also, the conference room is structured in such a way that it gives access even if one is watching an event remotely.

**Monitoring and evaluation mechanisms and practices:** Apart from the mandatory publications on specific platforms and social media of some documents and deliverables processed by the organisation, no specific monitoring mechanism has been defined. An informal monitoring and evaluation mechanism could be considered the number of seminars and information events, organised by the organisation and the impact it has on social media, based on the publications it uploads there and on its website.



## Science Education

**Embeddedness:** LGA-WM has implemented and is still implementing a series of research projects that exclusively focus on scientific issues which are directly connected to the top policy issues of the local community (such as energy transition). This has led to an efficient level of embeddedness of Science Education, since several worthy young scientists from the local community, willing to further explore scientific ways of adopting innovation principles, have been attracted. Moreover, the organisation offers a state-of-the-art working environment that provides the latest technological means for researchers to exercise their activities in the most effective way.

**Main barriers:** The prime barrier is the “nature” of LGA-WM, which is not a purely research or (even more) education organisation. LGA-WM implements research projects only as secondary activities, implemented amongst its primary duties, related to the promotion of municipal activities. However, LGA-WM has implemented numerous vocational and training activities for municipal staff, executives, and locally elected political personnel.

**Main drivers (legal, cultural, structural and/or political):** The main driver of LGA-WM in implementing Science Education is its cultural commitment to be engaged in activities that contribute to the handling of key local issues and problems. In this sense, LGA-WM is constantly participating in the implementation of specific research projects, which deal with coping with core local issues such as post-lignite transition.

**Good practices:** As already stated, LGA-WM has already implemented several research projects in the past and it is currently implementing seven (7) research projects about core local, as well as international issues, such as post-lignite transition, entrepreneurship practises, innovative tourism, migration and more. In this framework, LGA-WM has either exclusively published or participated in several scientific publications regarding purely scientific issues that indirectly include RRI principles. Such publications are the “Re-assessment of Planning Instruments: New Approaches and Strategies towards Regional and Local Development” and “Policies and Tools for efficient design of broadband development” both conducted under the framework of Interreg Europe Programmes. Moreover, LGA-WM is frequently either organising or participating in information events and seminars, regarding specific scientific and policy practises. Such an example are the short seminars in entrepreneurship in public schools of the region of Western Macedonia that were conducted a few years ago or frequent events about the results of research projects that LGA-WM is participating into.

**Monitoring and evaluation mechanisms and practices:** No formal evaluation mechanisms have been set for Science Education. However, the number of research projects that LGA-WM is participating in, or the number of seminars/workshops, can be both considered informal, but clear indices of the level of Science Education.

## Anticipation

**Embeddedness:** The embeddedness of Anticipation is sufficient in LGA-WM. The organisation has already planned to implement specific research activities that exclusively focus on coping with the local high priority policy issues. Through these research projects, LGA-WM has already calculated specific performance indicators and policy instruments that can measure and evaluate the upcoming policies of energy transition. In this frame, LGA-WM has already started the initiation of an observatory of energy-transition, a research organisation that will be focused on conducting and evaluating studies and policies about energy transition.

**Main barriers:** The activities of LGA-WM are connected to three dimensions: operational, political and scientific/research. The main barriers concern the political dimension where the political activities regarding the proper design and the fulfilment of political goals are absent, due to the. The political staff of the LGA-WM (Supervisory Board) has not Anticipated possible outcomes and designed suitable actions in coping with



urgent issues for the region of Western Macedonia. Such an example is the long-known post-lignite transition and coping with the high unemployment rates that would follow as a result (ex-personnel of the lignite power units). Such a policy plan never occurred. Furthermore, LGA-WM often shows a lack of initiative regarding important policy issues, not bringing them for submission, discussion, and implementation to the Supervisory Board. It mainly operates as a supportive body in Anticipation policies, rather than as a policymaker.

**Main drivers (legal, cultural, structural and/or political):** The primary drivers for the Anticipation dimension are related to the need of coping with the harsh effects of the crucial political transformation taking place in the region, namely the post-lignite transition. The corresponding drivers are mainly political since the post-lignite transition is a primarily political issue and LGA-WM is a core political instrument for that purpose.

**Good practices:** Regarding the operational dimension, LGA-WM has successfully integrated Anticipation, since the organisation prepares effective operational level action plans for coping with hot local issues. Such an example is the preservation of the organisation's annual cash reserves that led to the availability of a high amount of money, which was finally attributed to the acquisition of a new building that can serve the public interest in the most effective way. The scientific direction includes even more anticipatory actions, since LGA-WM is constantly implementing research projects, related to the central policy issues of the region, such as the post-lignite transition. In this framework, specific deliverables are being developed, foreseeing specific action plans and policy instruments for dealing with the top policy priorities. Such examples are the RRI-LEADERS and the Green Rural Deal (GRD) projects, which include the initiation of activities, methodological instruments, and policy frameworks for dealing with the post-lignite transition in the region.

**Monitoring and evaluation mechanisms and practices:** No formal evaluation mechanisms have been set. The informal evaluation mechanisms are directly related to the results of the research projects that are related to the core policy issues. Thus, the successful implementation of core policy-related projects constitutes a valid evaluation mechanism.

### Inclusiveness

**Embeddedness:** Inclusiveness is adopted in the organisation. LGA-WM, as the coordinating body that represents the 13 Municipalities of the region, is making constant efforts to include every single one of them in the strategic decisions that concern the region, such as the energy transition. Moreover, the organisation is making ongoing efforts to include every single local society actor from academia, civil society/NGOs and even the business sector into the social dialogue, as well as in the research projects, where LGA-WM is involved, that concern top policy issues (e.g., energy transition).

**Main barriers:** LGA-WM is representing 13 Municipalities in the region of Western Macedonia. The lack of Inclusiveness often takes place because of the unequal distribution of the beneficial policies that the organisation is implementing - some municipalities are benefitting more, either due to the specific scope of projects or for procedural reasons that take place because of the significant differences in basic financial and social indicators, as well as the political actions of some members of the Supervisory Board, which favour their own municipality against the rest of the municipalities in the region.

**Main drivers (legal, cultural, structural and/or political):** The culture of LGA-WM is to conduct regular research activities specifically targeted to cope with the local top policy issues, such as post-lignite transition, unemployment, and digital transition. Moreover, the legal obligation of the organisation is to serve the local community through the achievement of the goals, set by the Supervisory Board, exclusively consisting of elected members, representing the 13 Municipalities of Western Macedonia.

**Good practices:** LGA-WM is always planning policies that can equally benefit all the societal segments. To this end, the implementation of research projects such as 'RRI-LEADERS', 'GRD Deal', 'Prominent Plus' where



all municipalities can equally benefit, is considered a major indicator of Inclusiveness. This is so since the local four groups of the quadruple helix (policymakers, NGOs, academia, business) are equally included into the aforementioned research projects, which are specifically implemented for the region of Western Macedonia.

**Monitoring and evaluation mechanisms and practices:** No formal mechanisms have been set. An informal indicator of the level of Inclusiveness is the number of Municipality beneficiaries that benefit from both the regular operational activities of the organisation, as well as the research programmes it participates in.

### Reflexivity

**Embeddedness:** LGA-WM is adequately reflexive in identifying the emerging strategic issues of the region and directing the Municipalities it represents in taking decisions that deal with them. The significant local society needs, emerging from the energy transition, is an example where LGA-WM has been active in clearly identifying essential issues, such as land restoration and effective training of municipal personnel, setting at the same time the framework of activities by the Municipalities.

**Main barriers:** The dimension of Reflexivity is directly related to Anticipation, Inclusiveness and mainly Responsiveness, which is its next step. As a result, the already mentioned barriers, related to Anticipation and Inclusiveness, are also valid in the case of Reflexivity. An inadequate level of qualifications and specialised competences by the local policymakers, as well as the local workforce is observed, resulting in insufficient levels of Reflexivity. Another important barrier that leads to lack of Reflexivity is the imbalanced distribution of duties, working tasks and responsibilities between local and national policymakers. Furthermore, another main barrier is the lack of promotion of LGA- WM's initiatives to the wider local public with regards to its reflexive activities about the top policy issues.

**Main drivers (legal, cultural, structural and/or political):** The legal obligation of the LGA-WM (PD 75/2011), is to be supportive to the citizens' needs, which is executed to a satisfactory degree. Moreover, the operational and scientific workforce of LGA-WM is obliged to design, adopt and implement policies, focused on the Reflexivity levels, related to coping with top policy issues. The organisation also conducts research activities and participates in European projects that address the main issues in the society (transition to post-lignite era).

**Good practices:** Taking into consideration the constant focus of LGA-WM in coping with top-priority issues for the local society, it has managed to be involved and implement research projects, which concern these specific issues (e.g., post- lignite transition, digital transformation, etc.). Also, the employees in the organisation are constantly trained to be able to comprehend and adapt to the needs of the society. The training activities are either organised by the organisation itself or by other organisations, in which LGA-WM participates as a regular attendant. The organisation takes initiatives and transforms them into actions. One such example is the training of elected officials and municipal executives on current issues. Finally, an important initiative is the creation of an observatory of energy transition, a research organisation that will be focused on conducting and evaluating studies and policies about energy transition. This activity is still under construction, but when completed and enriched with results/deliverables/programme proceedings, it will be beneficial for the civil society.

**Monitoring and evaluation mechanisms and practices:** Although the measurement indicators are very important for the organisation to self-evaluate, no monitoring mechanism has been set.





## Responsiveness

**Embeddedness:** The Responsiveness of LGA-WM has to do with the initiation of clear activity frameworks regarding top policy issues for the region. For instance, LGA-WM has already worked on the effects from the energy transition for the local community through the research projects it participates in (RRI-LEADERS, GRD), which are already showing an efficient level of embeddedness of the Responsiveness dimension.

**Main barriers:** Since this key is directly related to the Anticipation and Reflexivity dimensions, its barriers are connected to the three aspects that LGA-WM is operating under, namely political, scientific and operational. Regarding the political scope, the main barrier is the limited Responsiveness that the political personnel of the organisation show (shaping the Supervisory Board) primarily, as a result of lack of proper political planning, and the so-called political cost, which implies taking improper political decisions that may “benefit the few and harm the many”.

**Main drivers (legal, cultural, structural and/or political):** LGA-WM’s organisational aim and legal obligation is the promotion of the social benefits through the implementation of primary and secondary activities on behalf of the local municipalities (Presidential Decree 75). Therefore, the prime legal/structural driver of LGA-WM is to respond to long-standing or emergency issues, which is happening constantly. Moreover, the culture of the organisation is to respond and quickly adopt policies that may ease the local social well-being.

**Good practices:** Regarding the operational scope, the organisation shows high levels of Responsiveness in quickly responding to challenges and problems that may emerge. These problems or issues are often related to implementing bureaucratic decisions in a quick and effective way and promote informative activities related to social core issues (seminars in post-lignite transition, entrepreneurship, etc.). Regarding the scientific scope, the main practise that LGA-WM shows full Responsiveness into is the participation and implementation of research projects exclusively related to the local top policy issues, such as the post-lignite transition and entrepreneurship promotion to cope with the high unemployment levels of the region.

**Monitoring and evaluation mechanisms and practices:** No formal evaluation practises for measuring the Responsiveness level have been set.

## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in the Local Government Association of Western Macedonia

LGA-WM should implement a holistic planning of activities, which shall be primarily focused on the most important policy issues of the Region of Western Macedonia. Post-lignite transition is considered the top policy issue of the region and LGA-WM should apply an annual plan of activities, both regarding the implementation of research projects, as well as regular activities. Thus, at the end of each year, an overall detailed plan of distinct activities regarding research projects, regular activities and communication-dissemination activities should be approved and activated. This will reinforce the integration of Anticipation since the organisation will plan targeted actions in coping with specific issues and problems. Furthermore, this will strengthen the integration of Responsiveness since it will offer LGA-WM a tool to respond to important issues in a more structured and effective way.

Moreover, the focus of the organisation on the implementation of research projects that exclusively deal with the region’s top priority issues (such as post-lignite transition) should be further strengthened. This will enhance the Reflexivity of the organisation to cope with the regional main policies in a more scientific way





and contribute the most to the implementation of the most effective scientific practices. It will also be a form of increased Science Education in the organisation, since it may trigger the local scientific community that is concerned with local policy issues to take advantage and further process the scientific findings of the implemented research projects.

Furthermore, the increased pressure of the organisation (mainly through the Supervisory Board) to the local policymakers to be further engaged to resolving top priority issues should increase the level of Reflexivity to create a more effective local political system. LGA-WM should seek the greater involvement of the local political personnel by constantly informing them about the necessities of innovative activities and prospects for the sustainable development.

## Summary of the focus group

### Brief overview of participants

The same nine interviewees took part in the focus group (four females and five males). These are the Director of the organisation, eight employees and a member of the Board of Directors. Apart of the Director, one ICT expert of the organisation, one financial manager, one regular staff and four scientific experts were interviewed. The scientific experts are exclusively engaged with the implementation of research projects, having a level of experience in scientific aspects such as RRI and regional innovation systems. In total, four interviewees are familiar with the concept of RRI. Two of the scientific experts are considered fully familiar and two moderately familiar

### Relevance of the RRI-AIRR approach in the Local Government Association of Western Macedonia\*

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public Engagement	2,33	2,11
Ethics	1,44	1,78
Gender Equality	1,89	2,67
Open Access	1,78	2,33
Science Education	2,22	2,56
Anticipation	1,89	2,33
Inclusiveness	1,78	2,22
Reflexivity	1,89	2,11
Responsiveness	2,00	2,22

(1 – being most relevant; 5 – being least relevant; average score from evaluation of participants)

\* The means of the RRI keys / dimensions have been calculated, amongst the nine (9) participants who took part in the focus group.

### Embeddedness of the RRI-AIRR approach in the Local Government Association of Western Macedonia

#### Drivers

Apart from the drivers already mentioned in the interviews, the participants in the focus group also stated the willingness of LGA-WM to develop as a research organisation that will be able to take advantage of specific high-level scientific findings through the implementation of the research projects. So far, LGA-WM



has been implementing research projects as an additional or secondary activity, exclusively focusing on specific thematic subjects regarding top priority policy issues. The prospect of further developing the project portfolio to implementing more thematic subjects is a driver for adopting Science Education more effectively. To do so, the organisation will employ more scientists and researchers that may be able to produce research findings which could be more attractive for further scientific assessment by the research community, thus, ensuring the inclusion of a wider variety of thematic subjects and policy issues.

### Barriers

Bureaucracy is a prime barrier for implementing all four AIRR dimensions. Anticipation cannot be implemented in an effective way if the planning of the organisation stumbles at bureaucratic entanglements regarding the adoption of specific plans by the higher hierarchy. Furthermore, Inclusiveness cannot be efficiently integrated, if the inclusion of a wider variety of societal actors and beneficiaries is hardly achieved, due to legal ambiguities or operational malfunctions. Moreover, Reflexivity is hard to catch when the bureaucratic procedures interfere with the design of reactive policies to emergency policy issues. These procedures prevent LGA-WM from implementing the proper policies to quickly respond to emerging issues such as the effects of early delignification, causing unemployment and underdevelopment for the region of Western Macedonia.

### Good practices

Apart from the practises already mentioned in the interviews, a good practise that emerged in the focus group is the constant improvement of LGA's website to an Open Access user-friendly digital platform that will allow users to be navigated to LGA's activities, as well as the findings and deliverables of the research projects that LGA has already implemented or currently implements. By this approach, related to both Open Access and Inclusiveness, the organisation will maximise the dissemination of the scientific findings, allowing the local scientific community to actively cooperate in promoting scientific practices and research, focused on the most important policy issues.

### Monitoring and evaluation

No formal evaluation practises for measuring the Responsiveness level have been set.

## Recommendations

An important recommendation is related the total transformation of the organisation's website to a research portal that will offer a holistic choice to researchers and scientists to download, process and access the organisation's scientific results from the ongoing and already implemented research projects. This portal will have the form of a multi-dimensional digital platform that will also allow researchers to digitally interact with each other and cooperate during the implementation of significant for the region scientific issues. For instance, scientific approaches to new technologies regarding post-coal transition such as energy storage and hydrogen power generation could be promoted through the platform by presenting scientific findings from related projects and then promoting the scientific "dialogue". This recommendation is related to Open Access and Science Education, as well as Inclusiveness.

Another recommendation is for the LGA to implement separate annual action and communication plans, pre-setting specific targets and deliverables. These actions will be based on the deliverables of LGA's ongoing research projects, as well as the potential and regular daily activities of the organisation. The policy focus of the annual activity plan will be based on promoting important local policy issues by implementing scheduled extra activities (communication campaigns, seminars, workshops, etc.) at specific time periods. This recommendation is directly connected to the Responsiveness of the organisation, which has to be able to adapt itself to the demands of the key ongoing policy issues.



## Conclusions

Considering the actual size and the main organisational purpose of LGA-WM, the RRI-AIRR approach is integrated in a moderate, but adequate way. LGA-WM can be considered a “hybrid” organisation, working on both operational and political level. The political dimension of the organisation concerns the participation of elected individuals in the administration of the organisation. This implies that LGA-WM produces “policy”, making the organisation a direct policymaker at a local level. The RRI/AIRR keys/dimensions that are integrated concern both levels. The whole approach is primarily implemented ‘indirectly’ since most of the keys and directions are not specifically mentioned in the organisational documents, but they are implemented according to the organisation’s strategy. LGA-WM’s organisational documents provide an adequate framework for the integration of the RRI-AIRR approach, and the interviewees demonstrated a significant comprehension of the approach, at both theoretical and practical level.

Regarding the differentiation of the integration levels of specific RRI keys and AIRR dimensions, the most prominent RRI key is Ethics, followed by Public Engagement. Ethics is integrated in the organisational documents, as there is legal obligation by the organisation to follow specific rules with regards to the common societal benefits. For instance, P.D. 75 and the Regulation of Staff of the LGA-WM include distinct references on implementing work duties in line with ethical standards. Public Engagement is integrated through the implementation of the wider purpose of the organisation, which is to engage most of the societal actors (policymakers, businesses, NGOs, academia) in the political sphere. Thus, LGA-WM is directly engaging its political personnel (through the Supervisory Board) to the administration of RRI activities, its scientific personnel to the actual implementation of RRI activities (through the implementation of the research projects), the local NGOs as project partners in synergic activities and the local community as the final receiver of the benefits accrued from the implementation of research projects. Reflexivity is integrated through the dedication of the organisation to implement research and daily activities, directly connected to the local important policy issues. For instance, RRI LEADERS and GRD projects are just a few of the initiatives that LGA-WM implements that deal with the post-lignite transition, which is the main policy issue of the region in the current period. Open Access is also significantly integrated since LGA-WM is legally obliged and organisationally focused on exposing and distributing its research findings and daily activities through its digital means (website), as well as via several communications events and seminars, focused on informing the local community.

LGA-WM is a relatively small, but multi-level organisation, considering its administrative structure. The Supervisory Board is the prime administrative body that takes the strategic decisions on the organisation’s behalf, being responsible for implementing the RRI/AIRR approach on a strategic level. According to the relevant documents, the Supervisory Board allows the top administration of the organisation to be engaged in activities that may improve the wider local well-being, as far as they are fully legal and do not cause conflicting local interests (amongst Municipalities and between different societal segments) In that sense, Anticipation and Reflexivity are primarily implemented through its decisions. For instance, the implementation of the GRD project by LGA-WM foresees the initiation of a methodology tool that evaluates transformative policies for the region of Western Macedonia. That tool can sufficiently cover the needs for evaluation of policies in the energy-transition period that has just started in the region, and it has already evaluated proposed policies regarding local unemployment and restoration of degraded areas. The Executive Committee of LGA-WM is responsible for the planning and implementation of activities accruing from dealing with priority policy issues, being the body responsible for integrating Reflexivity and Responsiveness in the organisation’s decisions, as well as open access. Such an example is the scheduled creation of an Observatory of Energy Transition, where all local society issues regarding the energy transition will be published and submitted for implementation to the responsible bodies. Moreover, it is the responsible body that monitors



the adequacy of the organisation's policies and practices on a legal basis, as well as their concurrence with the organisational purposes. The necessary level of Inclusiveness is secured by including the societal actors that may be benefited by those specific practices. Most importantly, the administrative and research personnel of LGA-WM operate as the main body that implements the RRI/AIRR approach in the organisation. The implementation of the research projects is being done by the researchers of the organisation, while the administrative personnel carefully plan and selects the projects that LGA-WM will participate into. In that sense, Reflexivity and Responsiveness are being integrated through the actions of this organisational body.

The integration and implementation of the RRI-AIRR approach in the organisation can be further enhanced by improving the integration of specific RRI keys/AIRR dimensions. First, the key of Open Access can be boosted by transforming the organisation's website to a user-friendly digital repository which could include all the research findings of the projects that the organisation already has or is currently implementing. This way, scientists, and researchers from the local or international community can gain access to valuable research data that can be further processed to lead to new directions in the research related to the important policy issues (post-lignite transition, hydrogen technology, batter technology, etc.). The capability of the transformed digital portal to allow interactive public consultations on top scientific and policy issues, including all societal groups, may considerably enhance Anticipation, since the organisation can plan the activity frameworks, related to specific policy matters, indicated by the societal actors.

The focus of LGA-WM on implementing research projects that exclusively deal with the top policy issues of the region is another aspect that can significantly improve RRI integration. Research projects that deal with the implementation of important local policy issues such as post-lignite transition may improve the Responsiveness levels, since LGA-WM would thus respond to the local policy issues by participating in relevant research projects. Finally, Reflexivity integration could be also enhanced by engaging LGA-WM to be a counsellor or partner to local top policy and research projects, implemented by other organisations (local University, The Region of Western Macedonia, CERTH, etc.), thus adapting itself to new alternative dimensions in addressing the most significant local policy aspects.



# Internal RRI review of SDA

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## List of acronyms / abbreviations used in this document

RRI - Responsible Research and Innovation

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

R&I – Research and innovation

SDA – Sofia Development Association

SMC – Sofia Municipal Council

DPP – Data Protection Policy

RPO – Research performing organisation

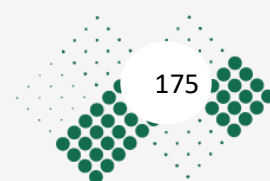
## Executive Summary

This internal RRI review describes the challenges, choices and opportunities of applying an RRI-AIRR approach throughout Sofia Development Association (SDA, Bulgaria). The analysis is based on critical reflection of SDA's internal documents and regulations; one round of interviews as well as one focus group, both with SDA staff members. This research has been used to derive general recommendations for improving the application of individual RRI keys or the overall RRI-AIRR framework in SDA's activities to achieve the organisation's long-term goals and mission for sustainable urban development of Sofia Municipality. The review shows that SDA has been following principles and values similar to the keys and dimensions included in RRI-AIRR, even though these have not been formally institutionalised in the organisation's statute and programme documents. At the same time, the interviews and focus group illustrate a learning process that has been triggered by the participation in the *RRI-LEADERS* project, which has already contributed to important results for the organisation (for example, drafting a gender equality plan). The analysis of documents and interviews indicates that RRI-AIRR could be of benefit for SDA for three different functions: expanding municipal policy and strategic agendas, bringing actors and communities together within the local eco-innovation system, and rethinking R&I governance with respect to forward-planning, inclusiveness, and responsiveness in tackling societal challenges at city level.

This internal RRI review report has the following structure. It starts with a brief description of the organisation; then the analysis reflects on general findings from the internal review of documents. Next, the report focuses on the results of the interviews and focus groups conducted within the organisation. The final section discusses some recommendations for SDA on how to make RRI work in practice, for the benefit of the staff members, the organisation, and its partners/networks.



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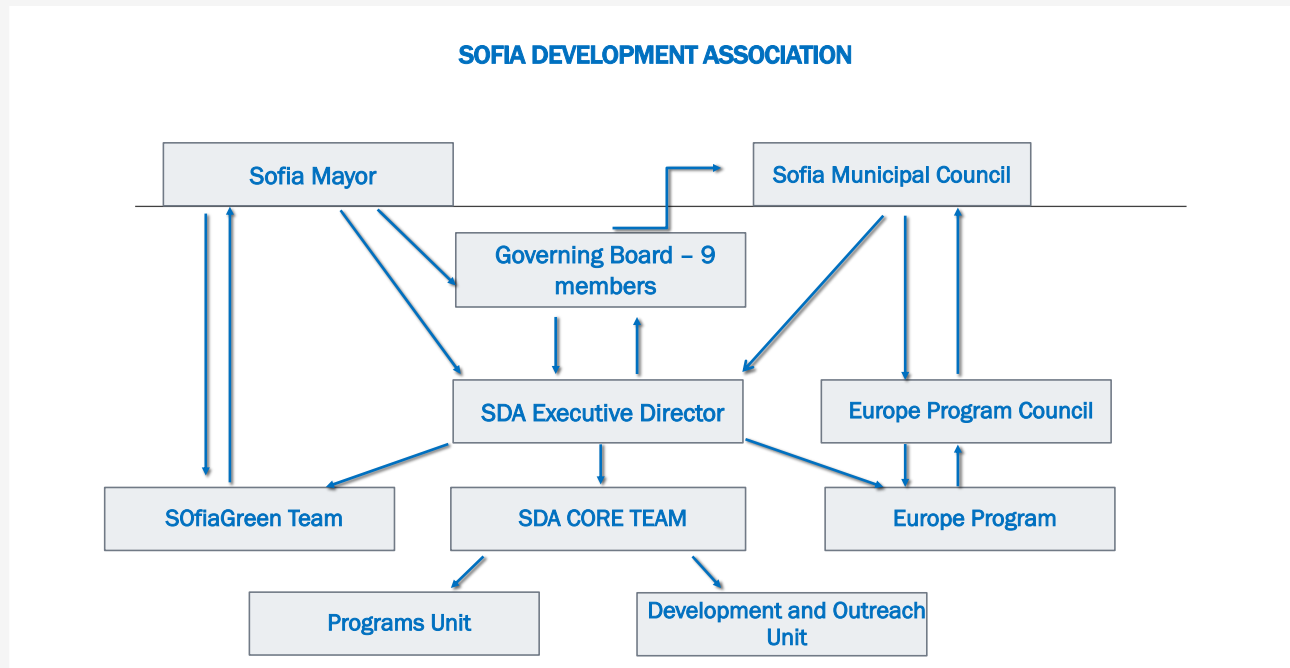


## Introduction

### Type of organisation and legal form.

Sofia Development Association (SDA) is a not-for-profit non-governmental organisation, working for public benefit.

### Organisational structure of SDA



### Number of employees

SDA is managed by an executive director and a Governing Board. Governing Board members are elected by Sofia Municipal Council, where seven of them are municipal councillors, nominated by the Chair of the Municipal Council, and two are representatives of the administration of Sofia Municipality, nominated by the Mayor of Sofia Municipality.

The Mayor of Sofia Municipality nominates the candidates for the position of executive director which is then voted by the Municipal Council. Chairperson of the Governing Board is the chairperson of the Municipal Council. The Board has steering functions, decides upon the general setup and restructuring of SDA; defines and votes the programmes and operations strategy of the organisation; and approves the annual report and budget of SDA.

Currently, SDA has seven full-time employees. The SofiaGreen unit of SDA which is responsible for environmental projects and Sofia's application for European Green Capital, has four full-time employees. The Europe Programme unit of SDA, a small grant-making programme supporting civic actions, has 3 full-time employees.





## Mission or main purpose of the organisation

The Statute defines the mission and purpose of SDA as follows:

- To preserve the city's legacy and centuries-old culture, and help Sofia grow as a modern European metropolis;
- To inspire and engage the city residents in entrepreneurship and initiatives for sustainable development;
- To strengthen the relationship between science, education and the business as a factor for dynamic and sustainable growth; to attract expert and scientific talent to tackle short- and long-term challenges in the city's development;
- To facilitate the continued dialogue between civil society, private and public institutions, and the municipal administration in order to build a social environment based on respect for ethnic and cultural diversity and democratic values;
- To promote ecological awareness and urban environment supporting personal growth, culture and sports in Sofia;
- To support policymaking through successful communication with local communities and engaging citizens in the implementation of policies for urban development.

To implement the mission, the organisation works in the following main fields: (a) policy analysis and development of strategic documents, as mandated by Sofia Municipality; (b) research and innovation activities related to the city's development; (c) support for dialogue and cooperation between civil society, public administration and citizens for building a tolerant multicultural city environment; (d) sustainable urban development and environmental protection. In this role, SDA has established itself as a vital point for connecting local government, civil society, and non-governmental organisations. Besides these areas of core expertise, SDA works actively in education and culture, both through the elaboration of policy concepts and the implementation of public-facing, on-the-ground actions and initiatives. Key methods of implementation include project development, studies and analyses, training and education activities, research and publications, public campaigns and networking.

## Brief presentation

Sofia Development Association is a resource centre for research, analyses, innovations and experiment, which facilitates the ongoing dialogue between Sofia Municipality, civil society, the private sector, and academic institutions. SDA was established by Sofia Municipal Council, with Resolution № 348 / 08.07.2010. It is an independent organisation, registered by Sofia City Court on 16.08.2010 in public benefit under the Not-for-Profit Legal Entities Act.

Over the years, Sofia Development Association has established itself not only as a sandbox for innovation, but also as a valuable partner in the formulation and implementation of public policies, through the focused support of innovative solutions and investment in human capital.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

As a municipal foundation, SDA supports the efforts of Sofia Municipality to promote better integration of key players in the research and innovation ecosystem for value chain creation. SDA follows an inclusive, interdisciplinary and cross-sectoral approach, implementing innovative pilot projects at municipal level, through wide-ranging support for knowledge and innovation communities.



SDA plays two main roles in the territorial innovation ecosystem. First, at the level of policy and strategic development and implementation, linking together municipal public bodies, stakeholders and end users in the definition of strategic agendas for urban development. SDA has co-authored the Innovation Strategy for Smart Specialisation of Sofia (RIS3) and is responsible for the annual action plans for the implementation and monitoring of RIS3.

At the same time, SDA performs important functions as a value creation supporter, providing facilities and infrastructure as well as access to expertise for young innovators and entrepreneurs for idea generation and design of new projects and services. SDA fulfils this role through [SofiaLab](#), an urban living lab. SofiaLab carries out activities, focused on four pillars: Debate, Learning, Innovation, and Demonstration, which represent the entire cycle of building an innovation ecosystem. In addition, SDA organises many hackathons, datathons and innovation competitions at municipal level to support innovation and digital skills acquisition.

## Review of the relevant internal organisational documents

### Reviewed documents

Document title	Content
Articles of Association, 2010	Mission and objectives of the organisation; institutional structure, governing bodies, rules of operation
Annual reports 2017 - 2020	Description of the annual activities of SDA, objectives, and achievements
Internal Rules and Regulations, 2019	Operational and management rules of the organisation
Data protection policy	Internal rules, binding for all SDA staff with regard to the GDPR

### 1. Articles of Association of Sofia Development Association

The *Articles of Association*<sup>17</sup> (hereafter *Articles*) of Sofia Development Association is a public document, detailing the purpose of establishment and the institutional structure of the organisation. The Articles are an inseparable part of the incorporation of SDA in 2010 as a not-for-profit non-governmental organisation, according to the Law on Non-profit Legal Entities in Bulgaria.<sup>18</sup>

#### Place of RRI-AIRR approach in the document:

Articles of Association	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsible research and innovation (the translated equivalent)	No	No	Yes	No	Potentially, but would require a decision of the Municipal Council

<sup>17</sup> [https://sofia-da.eu/images/documents/sofia\\_municipality\\_articles\\_eng\\_2016.pdf](https://sofia-da.eu/images/documents/sofia_municipality_articles_eng_2016.pdf)

<sup>18</sup> <http://blacksea.bcnl.org/en/articles/40-bulgaria-law-on-nonprofit-legal-entities.html>



Research ethics or research integrity	No	No	No	No	No
Societal engagement or public engagement	No	Yes	Yes	No	Yes
Gender and diversity	No	No	No	No	Yes
Open access and open science	No	No	No	No	Yes
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	Yes	Yes	Yes	No	
Inclusiveness	Yes	Yes	Yes	No	Yes
Reflexivity, evaluation, self-evaluation	No	Yes	No	No	Yes
Responsiveness and adaptation	No	Yes	To an extent	No	Yes

The *Articles* describe the incorporation of SDA, its main objectives, governing bodies, operational procedures, decision-making procedures, financial management, and reporting mechanisms. Since SDA is established as a municipal foundation by Sofia Municipal Council (SMC), the *Articles* also detail the communication and oversight mechanisms of SDA by SMC. By their nature, the *Articles* do not provide details about the content of activities or specific methods that SDA uses to achieve its objectives. Therefore, there is no specific mention of RRI or AIRR, or any of the respective keys and dimensions. “**Responsibility**” is not referred to in the sense of RRI, but as related to “**transparency**”, “**accountability**”, and “**good governance**”. The powers of SDA’s Governing Board and of the executive director are outlined, but neither of the two managing bodies is specifically tasked with RRI-AIRR implementation.

Reference is made to “**public engagement**” in the description of SDA’s objectives, e.g., Art. 4 and related paragraphs: 4.1.4. “To establish fora for ongoing dialogue between civil society, the business, state institutions, the municipal administration for building a public environment respecting the ethnic and cultural diversity of the region and modern democratic values.” Similarly, Art. 4.1.6 makes reference to the “involvement of local communities” in training and initiatives contributing to the implementation of urban development policies. In Art. 4.2.8 and 4.2.9 there is specific mention of carrying out “public campaigns”, “establishing partnerships” and “transfer of good practices” with both local and European counterparts.

Arts. 4.2.3 and 4.2.4 make reference to “data collection”, “preparing analyses and scientifically based forecasts for urban development”, which could be broadly construed to fit the overall objective of RRI-AIRR.

As concerns the AIRR principles, this document refers to all four of them, even though a different terminology is used. The document details the procedures for forward planning, ensuring that it is in line with SDA’s main goals and mission. Art. 13 and Art. 14 describe in detail the procedures for planning, reporting, and approval of SDA’s annual reports by the Municipal Council. The procedures correspond to the AIRR principles of anticipation, responsiveness, reflexivity, (self)evaluation, and aim to ensure quality of the results and an ongoing process of internal and external monitoring.

Overall, while the document does not specifically refer to RRI-AIRR, single articles and paragraphs reflect the general objectives of the framework. A revision of the document and subsequent approval by SMC would be required in order to introduce any of the related keys. While there is potential to do so (cf. the table above), that would entail effectively redefining the original vision and mission for SDA towards a more research- and innovation-focused entity (and expanding Art. 4.1.3 in the 2016 Statute). Over the years, SDA has assumed increasingly more research and analytical tasks and has conducted studies, commissioned by Sofia

Municipality; it has also established itself as an important player in the city innovation landscape (notably, through SofiaLab).

## 2. Data Protection Policy

SDA's *Data Protection Policy* was approved in 2019, in response to the GDPR<sup>19</sup> requirements for introducing institutional data protection rules and nominating a data protection officer. The document has a mixed purpose: it is an internal document, detailing the procedures that SDA has adopted for handling personal data in working with external counterparts and data subjects. The policy outlines also the types of data collected, stored and used with regard to SDA staff members.

### Place of RRI-AIRR approach in the document:

Data Protection Policy	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes (in the sense of handling data in good conscience)	Yes, responsibilities as defined in the GDPR	No	Yes
Gender and diversity	No	Yes (as an object of GDPR regulations)	In line with GDPR	No	Yes
Open access and open science	No	No	No	No	Potentially
Science education	No	No	No	No	Potentially
Anticipation, foresight, vision, planning	No	No	No	No	No
Inclusiveness	No	No	No	No	No
Reflexivity, evaluation, self-evaluation	No	Yes (in the sense of accountability and regular review of the DPP)	No	No	Potentially, as part of annual policy implementation reviews

The Data Protection Policy (DPP) is by default focused on the process of collecting, storing, analysing, and sharing personal data (as defined by the GDPR). SDA's DPP underlines that data must be processed fairly and for specified purposes, based on the subject's consent or other legitimate grounds laid down by law. It also lists the six grounds for processing personal data, which include *consent, contract, public interests, legal obligations, legitimate interests, and vital interests*.

The document does not mention RRI or AIRR, nor does it focus on any of the RRI keys or AIRR principles. It does refer to responsibility understood as the obligation of the institution and the data protection officer to handle personal data in a responsible manner. DPP ensures that a person's privacy is protected and adequate measures are in place to guarantee data security no matter where or by whom data is stored or processed

<sup>19</sup> The European Regulation 2016/679 (General Data Protection Regulation - GDPR) "on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)" has been published on 4 May 2016 in the Official Journal of the European Union and entered into force on 25 May 2016, but it applies from 25 May 2018.



and throughout the whole procedure, including the transmission of data internally and when shared with third parties.

Any other reference to RRI-related terms is made within the framework of GDPR; while data protection has some bearing on the topic of open access, research ethics, gender and diversity, none of these is subject of the DPP outside of the context of GDPR. Should SDA's main mission and tasks be redefined in the future to encompass more research and innovation-linked activities, the DPP should then also include new sections on data protection measures with regard to research ethics, research results, access to research data, gender dimensions of research, etc.

### 3. SDA Internal Rules and Regulations

The *Internal Rules and Regulations* (IRR) were approved by SMC in 2016, and have been revised to reflect changes in SDA's governing bodies. The IRR is an internal document and includes the organisational structure of SDA, internal control system and main operating principles, the responsibilities of Board members, policies & procedures, recruitment and performance evaluation procedures, and the rules governing transactions with third parties (natural persons and legal entities). The core content of the IRR draws upon SDA's *Articles of Association*, in particular, the parts related to SDA's mission, objectives, and tasks (see above).

#### Place of RRI-AIRR approach in the document:

Internal Rules and Regulations	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	Yes
Research ethics or research integrity	No	No	Not directly	No	Potentially
Societal engagement or public engagement	No	Yes	Yes	No	Yes
Gender and diversity	No	Yes	No	No	Yes
Open access and open science	No	No	Yes	No	Yes
Science education	No	Yes	Yes	No	Yes
Anticipation, foresight, vision, planning	No	Yes	Yes	No	Yes
Inclusiveness	No	Yes	In connection with other priorities	No	Yes
Reflexivity, evaluation, self-evaluation	No	Yes	Yes	No	Yes
Responsiveness and adaptation	N/A	Yes	Yes	No	Yes

The IRR does not focus on RRI-AIRR but some articles may be interpreted within the perspective of the RRI-AIRR framework. The IRR has several sections, beginning with SDA's objectives, annual activity planning, financial management, human resources management, etc. Some of these sections mention RRI keys and AIRR dimensions but these are not defined as methodological guidelines or main principles of operation of the organisation.



For example, Section 2, art. 2.3 *ff.*, “Objectives of SDA,” states that SDA should “foster relations between science, education and the business as factors for sustainable growth...attracting academic and scientific expertise for tackling the short- and long-term problems in urban development”. Clearly, this objective bears similarities with the RRI keys for societal engagement, responsible and open science, science education, as well as the AIRR dimensions linked to vision, planning, and responsiveness. Art. 12 states that SDA may enter into partnerships with other organisations for the purpose of achieving its objectives, which may be interpreted in the framework of societal engagement (RRI key) and inclusiveness (AIRR dimension).

While Art. 10 and Art. 11 specify the conditions under which natural and legal persons may receive financial support by SDA (e.g., for taking part in training organised by SDA, covering expenses for participation in events, etc.), there is no mention of gender equality or diversity principles as eligibility or selection criteria for the candidates. It is advisable to consider revising the Internal Rules and Regulations for the purpose of including explicit provisions regarding gender equality and diversity.

Section 3, Arts. 13 and 14 provide detailed instructions regarding annual planning, evaluation, reporting and monitoring. The articles are fully in line with the **AIRR dimensions** for *anticipation, planning, (self) reflexivity* and *evaluation*. Section 5, Internal Document Circulation and Archiving, details the steps for generating documents, levels of access to each document, as well as steps for data storage and archiving. Given that documents are increasingly generated and stored in digital format only, it may be useful to include provisions in the IRR regarding document generation, access and sharing via cloud-based services. These provisions could also include references to open access and data sharing as related to all data gathered by SDA through own research, analysis and other project activities. This is also an opportunity to capitalise on the interest to further advance the notion of ‘openness’ at all levels of organisational activities and interactions with stakeholders and policy- and decision-makers. Furthermore, incorporation of statements on data ethics/data management in hiring practices could be beneficial in developing an organisational culture and individual ethos that uphold RRI.

Organisational practices and guidelines about recruitment, appointments and employment (e.g. in relation to the gender and diversity key), or about how research is planned for (ethics), as well as how it is conducted and reported (societal engagement, science education, open access and open science) could also be considered for inclusion in the IRR.

Since the IRR have been approved by the municipal council in 2016, prior to the establishment of SofiaLab, it is also recommended to review the IRR and include relevant provisions about the Lab’s activities, most of which relate to RRI. The creation of SofiaLab is an important organisational change and an opportunity to promote RRI to all lab users and collaborators. A revised mandate for SDA and SofiaLab, furthering RRI keys or dimensions will be an important driver for sustaining the current efforts to implement RRI and to strengthen the innovation and research ecosystems at municipal level with regard to their contribution to policymaking and implementation.

## 4. SDA Annual Reports of Activity

The annual reports are prepared and submitted to SDA’s Governing Board by the end of May each calendar year for review and approval, and are subsequently voted by the Municipal Council. The annual review of the reports by the Council is combined with setting the objectives for SDA for the following year; Council decisions outline the work programme priorities, activities and projects that SDA is expected to implement in the short- and mid-term. The annual report is written in Bulgarian and in English, and following its approval, it is published on SDA’s institutional website.





In what follows, the annual reports from 2017 to 2020 are reviewed. This period is chosen since it reflects a new direction in programming for SDA that increasingly focuses on research and innovation-related activities. For example, the Innovation Strategy for Smart Specialisation of Sofia (RIS3) was written and approved in 2016, which has served as a driver of change and has led to new initiatives promoting research and innovation, fostering the creation of communities of practice and innovation at municipal level. Naturally, these activities have a more explicit relevance to RRI and AIRR; the table below indicates which keys and dimensions are included in the annual reports.

**Place of RRI-AIRR approach in the document:**

SDA Annual Reports	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	No	Yes	Yes	No	Yes
Responsible research and innovation (RRI) (the English concept)	No	No	Yes	No	Yes
Responsible research and innovation (the translated equivalent)	No	Yes, but using different terms	Yes	Yes	Yes
Research ethics or research integrity	No	Yes	No	No	Yes
Societal engagement or public engagement	No	Yes	Yes	Yes	Yes
Gender and diversity	No	Yes	Yes	No	Yes
Open access and open science	No	Yes	Yes	No	Yes
Science education	No	Yes	Yes	No	No
Anticipation, foresight, vision, planning	Yes	Yes	Yes	No	Yes
Inclusiveness	No	Yes	Yes	Yes (as related to activities)	Yes
Reflexivity, evaluation, self-evaluation	Yes	Yes	Yes	Yes	Yes
Responsiveness and adaptation	No	Yes	Yes	No	Yes
Communities of knowledge and innovation	Yes (AR 2020)	Yes	Yes	Yes	Yes

The following review of the annual reports for 2017, 2018, 2019 and 2020 focuses more closely on the sections which identify the programme priorities of SDA for each of those years. The priorities are set by the Municipal Council. As with the other documents referred to above, RRI and AIRR are not a key object of the reports. However, some aspects of the **RRI-AIRR framework are defined as foci of the SDA programme areas**



(e.g., *innovation, societal engagement, open science, science education*). The priorities themselves gradually evolve from the implementation of individual projects of interest to the municipality into thematic areas of (core) competence (of SDA) which are based on or seek to encourage innovative models for urban development. Clearly visible is a growing emphasis on building up the research and innovation capacity of SDA as well as positioning SDA and the municipality as key enablers for developing strong ecosystems of knowledge and innovation in the city. Accordingly, the initiatives, projects, and partnerships pursued by SDA progressively focus on experimentation, testing and piloting innovative solutions in the fields of education, culture, digital transition, smart city, green and sustainable development. Parallel to broadening the thematic scope of SDA's work, the organisation's involvement in local, national and international networks which support research and innovation has intensified as well (e.g., cooperation with JRC, EIT Climate KIC, EIT Urban Mobility, EUROCIITIES, national and EU universities, research and technology clusters, etc.).

Starting in 2017, four recurring annual priorities become part of SDA's portfolio. In 2017, a new programme area is introduced, that is, *Investments in Human Capital Through Training and Education* (named in 2018 *Innovations and Experiment; Innovations in Action* in 2019, and *Communities of Innovation and Knowledge* in 2020). Other recurring programme areas include, for example, *Skills for the Future* (2018), *Civic Participation in the Decision-making Process and Digital Democracy* (since 2017); it is subsequently named *Civic Participation and Digital Democracy* (2018), *Civic Participation* (2019), *Active Citizenship* (2020). As written in the 2018 annual report, "[t]his programme area aims to foster civic participation in the process of decision-making at the municipal level by organising public discussions, consultations, thematic conferences, and public polls on matters related to culture, education, social policies and urban development. Expected results include the establishment of platforms for the participation and collaboration of all stakeholders." The last programme *SOfiaGreen* (established in 2016) aims to support the city's policy and civic initiatives for sustainable and environmentally-friendly development, working in close collaboration with non-governmental organisations, businesses, and public institutions.

To achieve the objectives of these programme areas, SDA implements the Innovation Strategy for Smart Specialisation of Sofia (as per Council Resolution 108/23.02.2017), runs the municipal Fund for Innovations (small grants programme), Programme Europe (providing grants to local civil society organisations), and since 2018, SofiaLab, a living lab which is also a member of the European Network of Living Labs.

The annual reports themselves exemplify the full cycle of *anticipation, planning, implementation, reflexivity, (self)evaluation*, as derived from the AIRR dimensions. The focus on inclusiveness increases throughout the years and so do the ongoing efforts to respond to the needs of various stakeholder groups in the most adequate and comprehensive way (for example, the *Program The Crisis as an Opportunity*, which provided small grants to NGOs during the Covid-19 pandemic, to support their operations and facilitate their transition to a digital working environment). This programme is an excellent demonstration of the capability to swiftly respond to external challenges through responsible use and management of public funds.

The annual programme priorities and the initiatives described in the reports highlight a number of good practices addressing different RRI keys (for example, *public engagement, innovation, open access*); however, still lacking are good standalone practices for gender equality, research ethics, research integrity, although each of these elements has been emphasised in one way or another in project activities.

Overall, we can conclude that while the RRI-AIRR framework is not formally defined as an organisational strategy for SDA, an approach *approximating* RRI-AIRR has been consistently followed and has helped SDA address specific institutional challenges in promoting the take-up of research and innovation in policy-making in a proactive and open way. The content analysis of the institutional documents shows which RRI-AIRR keys have the potential to be mainstreamed within SDA. Given SDA's structure, mission and mandate, a balance must be obtained so that the adoption of RRI-AIRR keys answers to the concrete undertakings of SDA while



also promoting uniform messages about the importance of responsible research and innovation at municipal level (across administrative units) and stakeholder networks engaged in R&I.

The review of internal documents and organisational practices has unveiled interesting dynamics and institutional processes that are affecting SDA's work, and has helped us learn how RRI-related practices have led to improved organisational traits (e.g., evolution in structure, staff recruitment, programme design, internal/external relations, partnerships). The full adoption of the goals for RRI-related work (including the five keys, but potentially expanded in order to be adapted to the organisations' own understanding of responsibility and responsible innovation practices) will depend on external factors (i.e., decisions by SMC) as well as further internal developments.

## Summary of the interviews

### Brief overview of respondents

A total number of 9 staff members were interviewed (online and in-person), among them 3 persons holding management level positions, 3 persons holding expert level positions, and 3 persons holding coordinator/administrative assistant positions; all female.

The interviews have been semi-structured, using questionnaires developed by ARC Fund, and discussed and approved by the consortium. The interview results have been critically reflected upon to obtain general discussion points for collective reflection at the following focus group, and to derive the general recommendations for this internal review.

### Framing of the RRI-AIRR approach in SDA

All of the interviewees confirmed that they are familiar with the concept of RRI; all but two interviewees have first come across the framework through their work on the *RRI-LEADERS* project. Some have decided to expand their knowledge through further independent reading. Similar to what has been already observed in the focus groups and participatory workshop held in the beginning of the project with quadruple helix experts, the **core meaning, role and significance of the RRI-AIRR** elements are implicitly known and understood, and are **de facto** applied. However, they are not framed in the same theoretical terminology, nor have they been consolidated into an official organisational discourse encompassing programme priorities and activities. While the substantive and processual elements of the RRI-AIRR framework are intuitively grasped by participants, they need to "translate" them into language that is relatable to their own responsibilities and that is commonplace for most other partners and participants in SDA-organised activities. Thus, the lack of conceptual clarity may hamper further diffusion and embedding RRI-AIRR in organisational documents and approach; interviewees shared the perception that at the level of practice, subtle theoretical distinctions do not seem to have a strong bearing (this might be different for research- and innovation-intensive organisations, research funders, etc.). This is particularly pronounced in the case of the *ethics* key, where other competing concepts such as *integrity, honesty and responsibility* are well-understood and internalised as principles of individual conduct and organisational culture.

None of the RRI-AIRR keys and dimensions *as such* are included in the staff members job descriptions. However, most of the interviewees associate with the RRI keys, in particular **public engagement, open access, gender equality**; less relevant are research ethics and science education. Staff members engaged in communication, public awareness and information activities consider public engagement and gender



equality as integral to their responsibilities. For all staff members (both those in management positions as well as in lower-level positions), **ethics** and **responsibility** (even responsiveness), equate to a strong sense of social accountability and commitment, and both are considered to be key prerequisites for everyone working in a public institution or a non-profit organisation which is funded by public money (be it fully or partially).

Overall, respondents perceive **RRI-AIRR as an add-on**, rather than as a central focus of the organisation's work. Promoting and facilitating **public engagement**, for example, echoes key elements of SDA's mission (see above) and the assumption that a non-profit civil society organisation by definition operates through inclusive, deliberative, open, transparent approaches. At the same time, interviewees agree that knowledge and awareness of RRI-AIRR could make them more reflexive, and - as a result - more attentive to analysing potential benefits and drawbacks in planning project activities; in other words, more **responsive** and **anticipative**.

The lack of mandates in relation to RRI keys and AIRR dimensions is seen as a barrier to fully adopt the framework. The interviewees do not identify any hierarchy with respect to the main RRI-AIRR actors in the organisation, given the organisation's size and structure. A slight preference is given to the management level when it comes to AIRR dimensions; the opinion is that the institutionalisation and operationalisation of **anticipation, inclusiveness, reflexivity** in organisational procedures should be the task of the governing bodies.

In conclusion, we can say that the RRI-AIRR approach will **augment** (and not replace) existing organisational practices and help the organisation focus on the implementation of certain programme priorities as set by Sofia Municipality. The organisation may consider developing specific policies on societal engagement, on ethics and open access, in order to aid the future policy-making process and to focus the public attention on those questions. Support for multi-actor dialogue between policy makers, researchers, industry and civil society, NGOs, and citizens is one of the main tasks defined in the organisation's statute; it is SDA's *raison d'être*. Engaging with the RRI-AIRR framework has so far enabled the organisation to better articulate the missing elements in our approach and to chart out viable measures for improvement.

## RRI keys and AIRR dimensions in SDA

In what follows, the report presents the main considerations regarding the RRI keys and AIRR dimensions, as derived from the interviews and the document analysis.

### Ethics

**Embeddedness:** Relevant stipulations available in the Child Protection Policies, Gender Equality Plan,<sup>20</sup> Internal Rules and Regulations.

**Main barriers:** Specific functions and responsibilities need to be assigned to a staff member for handling ethics-related issues. It is important to note that the understanding of ethics at organisational level is broader than the emphasis placed on research ethics in the RRI framework. There is no mention of non-discrimination, diversity or gender equality in the Statute.

**Main drivers** (legal, cultural, structural and/or political): Main drivers for implementing this RRI key are existing organisational documents, legal and political obligations related to SDA's mission. In addition, expectations from stakeholders and the public for institutional integrity, as well as an overlap with traditional

<sup>20</sup> The Gender Equality Plan is not subject to the internal RRI review as it was adopted after the deadlines for the report.



scientific values and norms ensure adherence to ethics. The ethics key is seen as a good in itself and has been part of the institutional culture since its establishment.

**Good practices:** The following practice may be classified also under other keys (for example, responsiveness, inclusiveness). Since 2020, SDA has been working with Maria's World, a non-profit social services provider, which offers counselling and employment support to people with disabilities. As part of their counselling programme, SDA offers part-time employment to a client of Maria's World for cleaning the office. Maria's World is one of the organisations which has helped establish the Social Services Advisory Board to the Mayor of the Sofia Municipality.

**Monitoring and evaluation mechanisms and practices:** Annual reviews of performance, annual reports of activity. Elaboration of organisational policy on research ethics, including a Code of Conduct, is one recommendation that will be proposed for discussion to SDA's management and Governing Board.

## Public engagement

**Embeddedness:** All internal documents, notably *Statute*, *Annual Activity Reports* and *Work Programmes* (including *ad hoc* assignments from Sofia Municipality). Public engagement is both ingrained in the culture and the mandate of the organisation, and is one of the RRI keys in which the organisation has built significant expertise since its establishment.

**Main barriers:** No structural or cultural barriers are identified; lack of human and financial resources as well as time to design comprehensive public engagement strategies, relevant to different stakeholder groups and partner networks could be considered barriers for specific projects/missions.

**Main drivers** (legal, cultural, structural and/or political): SDA has mandates and responsibilities for the implementation of municipal strategies (for example, RIS3, the Municipal Strategy for Culture, Youth Strategy), which by default require broad public engagement and collaboration with stakeholders from various sectors and with various capacity to influence the policy process.

**Good practices:** Stakeholders are mobilised through networking, but also through their inclusion in pilot programmes, events, public campaigns; through *ad hoc* and permanent consultative bodies with stakeholder participation (e.g., Programme Council for Program Europe); signing memoranda of cooperation. In addition, through SofiaLab we have gained significant experience in public engagement, which has become an underlying principle for informing policy-making and collaboration with local authorities. We consistently apply the *living lab approach* for developing forward-looking, inclusive, and responsive research and innovations at municipal level; perfecting the methods of co-creation and co-design to inspire and support a variety of solutions (technological, digital, and conventional) to urban living challenges. SofiaLab follows a strategic agenda for bringing new actors and expanding the community of stakeholders in the R&I system, through specially designed cooperation models (service packages), offered to civil society organisations which adhere to the values and principles of SDA. All societal engagement activities and their results are reported in SDA's Annual Reports.

**Monitoring and evaluation mechanisms and practices:** Review of progress and achievement of KPIs for public engagement in project activities; stakeholder feedback; Annual Activity Report, submitted to the Municipal Council.

## Gender equality

**Embeddedness:** Gender Equality Plan, Internal Rules and Regulations

**Main barriers:** General lack of understanding of gender equality (GE) and diversity in public and policy discourse; lack of reliable data about the status quo and needs for change; lack of dedicated programmes



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



and funding to systematically approach gender equality issues in R&I programme design, implementation, and communicating to the public. No references in the core organisation documents on non-discrimination and diversity. Current gender composition of the staff - all female.

**Main drivers** (legal, cultural, structural and/or political): Newly introduced Gender Equality Plan 2022, inspired by the RRI-LEADERS project. The plan will streamline the institutional and individual efforts for dealing with GE issues at various organisation levels. Similar to the ethics key, social expectations also serve as drivers for change. Ethical conduct and respect for gender equality and diversity are legitimate expectations held by important stakeholders, and this has the capacity to influence the organisation and consequently, pave the way for RRI-coherent activities with regard to GE.

**Good practices:** In all project activities, we apply a rule for gender balance and diversity, striving to achieve equitable representation of either gender. Starting in 2022, we also have introduced specific indicators for involving non-binary people in project activities.

**Monitoring and evaluation mechanisms and practices:** Indicators for monitoring and evaluation are included in the GE Plan; first evaluation of the Plan is foreseen for the end of 2022.

### Open access

**Embeddedness:** Mentioned in some documents but no standalone policy for open access available.

**Main barriers:** Lack of specific institutional requirements regarding open access; this also has to do with the fact that SDA does not conduct pure research activities as done by RPOs or universities. Limited organisational resources (time, human resources) for implementation.

**Main drivers** (legal, cultural, structural and/or political): Regulatory provisions at EU level regarding open science, citizen science and co-creation agendas; these can be considered in a broader perspective with reference to RRI. Another strong driver could be the existence of bodies (for example, in the form of commissions, advisory bodies to the Mayor) monitoring organisational practices with respect to open access at SDA partner organisations (e.g., universities).

**Good practices:** Publications produced with financial support of EU programmes are available on SDA's online media channels; project website with open access to all publications produced by SDA and partners.

**Monitoring and evaluation mechanisms and practices:** No dedicated mechanisms or practices exist as yet.

### Science education

**Embeddedness:** References in various programming and project documents.

**Main barriers:** The key has specific significance for research-performing organisations; it is not directly connected to the organisation's main programme areas (no explicit mandate).

**Main drivers** (legal, cultural, structural and/or political): The implementation of RIS3, which envisions efforts to make science and research careers more attractive to young people. Public engagement activities involving science and research community (e.g., Academy of Visionaries, Innovation Camp, [hackathons](#) and [student competitions](#), the first [NFT datathon](#)) can be used as a tool for increasing the public trust in science and for legitimising public R&I spending.

**Good practices:** Advisory Board on Science and Technology at the Mayor's office, established with the support of SDA; the Board advises the Mayor on policy and practical steps to support science and research, and facilitate the uptake of scientific output. A second good practice is the annual competition, [The Big One Next to Me](#), organised in the past nine years at a local school with secondary and high school students. The





competition encourages participation in STEM, the development of digital skills and creation of online content, through interactive challenges which pair younger and older students with mentors from the school, universities and businesses.

**Monitoring and evaluation mechanisms and practices:** No dedicated mechanisms or practices exist as yet.

### AIRR dimensions

With regard to the AIRR dimensions, none of the four (*anticipation, inclusiveness, reflexivity and responsiveness*) is specifically referred to in organisation documents. Related concepts are found in various programme and institutional reports. *Anticipation* is interpreted by staff members as akin to critically assessing risks (including financial) and major assumptions; being proactive in terms of considering likely impacts of project-related work and studies; articulating possible negative/positive effects of certain policy initiatives; and foreseeing appropriate corrective actions, including through the cooperation with target groups and stakeholders. Anticipation is also associated with the capacity to align the organisation's priorities with those of the local and national government, as well as with those at EU level, especially in the areas of city and regional development. *Inclusion* is largely seen to mean the involvement of stakeholders and general public in different stages of the policymaking process and in the co-design/co-creation of solutions to urban challenges. *Responsibility* and responsiveness are mostly associated with the general, ethics-derived requirement for strict adherence to one's professional obligations. At the same time, *responsiveness* is also valued as a sign of good governance, when a change in the (policy and political) agenda is needed to achieve a socially relevant and desired outcome. An example of responsible and responsive decision-making is the programme *The Crisis as an Opportunity*; launched by Sofia Municipality and administered by SDA, the programme provided much-needed grants to local civil society organisations in the midst of the Covid-19 pandemic to help them adapt to a digital working environment. *Reflexivity* is largely associated with regular monitoring and reporting of activities, against the set KPIs and objectives.

Main barriers include the lack of sufficient understanding of the AIRR concept and its potential positive impact on organisational performance; lack of human resources (e.g., an organisational unit catering to specific keys or dimensions and dedicated implementation and reporting on the AIRR framework; lack of experts to guide the process). Structural drivers may include designing a dedicated (pilot) programme for implementing some dimensions or integrating them into existing practices (along with the integration of RRI keys). Revisions in procedure, such as planning processes, could also contribute to a better integration of AIRR within the operations. SDA will pursue networking and collaboration with stakeholders with experience in AIRR in order to establish tried and tested mechanisms for the implementation of the dimensions.

It is also worth noting that currently (at the time of writing this report), SDA is coordinating - on behalf of Sofia Municipality - the revision process of the municipal culture strategy for the next ten years. Capitalising on the experience gained in *RRI-LEADERS*, we have adopted RRI keys and AIRR dimensions in organising an inclusive and participatory process of strategy making, which utilises research results and seeks to provide an ambitious vision for culture and the arts in the city, responding to the needs of the sector but also attempting to tackle grand future challenges. The process involves surveys, co-design meetings with stakeholders, and public consultations.

### Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in SDA

Most of the interviewed staff members consider the inclusion of RRI elements in organisational routines important for the institutionalisation of RRI not only by SDA but also – at best - across departments and units of the municipal administration as well as by key R&I ecosystem stakeholders. Initial steps in this respect can



be about recruitment, appointments and employment (e.g. in relation to the gender and diversity key), or about how strategic interventions are planned (considering the long-term impact on target groups, as in the example of the culture strategy development).

Further opportunities for integration of the RRI-AIRR approach will be explored with regard to defining the annual programme objectives and horizontal/cross-cutting priorities for the municipal grant-making programmes (such as Programme Europe and Fund for Social Innovations). Proposals for amending the evaluation criteria to include RRI-AIRR related concepts will be developed and submitted for inclusion in the programme guidelines.

## Summary of the focus group

### Brief overview of participants

The focus group, conducted in person in March 2022, included 8 persons from the SDA staff, all female. Three persons hold management and executive positions; the rest hold expert and coordination positions. All participants stated that they are familiar with RRI; half of the participants have taken part in activities implemented under the *RRI-LEADERS* project and reported more in-depth understanding of the RRI-AIRR concept and its application.

### Mapping of the internal organisational resources

Position / job title*	Related RRI keys	Related AIRR dimensions
Executive Director	Public engagement, gender equality, open access, ethics	Anticipation, vision, planning, responsiveness Reflexivity, (self)evaluation
Director of Programmes	Open access and open science Research ethics / research integrity	Anticipation, inclusiveness, responsiveness
Director of Development and Outreach	Societal engagement or public engagement, gender equality, ethics, open access	Inclusiveness, responsiveness, reflexivity
Coordinators /experts	Public engagement, ethics, gender equality	Anticipation, inclusiveness, reflexivity

### Relevance of the RRI-AIRR approach in SDA

Participants were asked to rate the relevance of the RRI-AIRR dimensions to their own work as well as to the organisation. The table below lists the results.

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	1	1
Ethics	1.25	1.25
Gender equality	2.38	2.25
Open access	2.13	2.13
Science education	2.63	2.13
Anticipation	1.38	1.13
Inclusiveness	1.38	1.25
Reflexivity	1.25	1.25
Responsiveness	1.38	1.13

(1 – being least relevant; 5 – being most relevant; average score from evaluation of participants)



Not surprisingly, **public engagement** is unanimously rated as the most important/relevant to both each staff member's work as well as to the entire organisation. **Public engagement** is understood as effective citizen participation and involvement, but also more broadly as conducive to the required levels of transparency and accountability in SDA's work, and, by extension, of the work of Sofia Municipality. Similar arguments were provided in rating the importance of **ethics**; the score given is the same with regard to personal responsibility and integrity, as well as to the institutional mandate and public image/reputation of SDA. Responses are evenly distributed among participants with a management position and those at lower levels of the organisational hierarchy.

**Gender equality, science education, and open access** are rated as more relevant to the organisation than to individual positions. The **AIRR dimensions** are again viewed by the majority as applicable more to the organisation as a whole vs. the individual duties and professional responsibilities. These responses largely confirm also the information obtained in the individual interviews, namely, that the RRI-AIRR keys and dimensions pertain to an organisation's (desired) positioning within the R&I ecosystem and are, in most cases, aligned with the achievement of long-term objectives for improved institutional capacity for R&I performance and governance. As indicated above, at this point, staff job descriptions and assignments do not include RRI-AIRR objectives, and only some of SDA's internal documents refer to concepts similar to RRI-AIRR.

Focus group participants agreed that at institutional level the main purpose of RRI would be to ensure broad involvement in R&I processes and facilitating transdisciplinary collaboration, with the inclusion of all relevant stakeholders. Given the profile of SDA as a municipal foundation, which works with and for the local government on various urban development issues, RRI-AIRR seems useful for influencing the policy agendas and expanding the community involvement in the process. The emphasis that RRI places on transforming the *science (research) – society relationships* (through research ethics, science education, open access), was seen as pertinent to many activities and projects implemented by SDA; examples included the work with universities on designing a mobile app for alternative mobility, [SofiaCoin](#); activities for clean air, environmental protection, European Green Capital, and innovation hackathons.

Concerning the AIRR dimensions, participants see them as relevant to a structured perspective needed for developing forward-looking, inclusive policies and long-term programmes. Pursuing some or all of the dimensions could contribute to a more successful alignment of municipal policies and local R&I actors to societal needs, values and expectations, generating at the same time a positive structural change, e.g., bringing stakeholders together, better monitoring, assessment and accountability of undertakings.

Another major lesson of the focus group was that a mechanism is needed to integrate **reflexivity** in all stages of our work; this is important for the performance of each staff member as well as for better contextualising the (implementation of) mission of SDA in view of the challenges we are facing today (e.g., digital transition, Covid-19 pandemic, post-war Europe, etc.). Along the same lines was the argument that consistently and coherently following an RRI-AIRR methodology is time-demanding and requires additional resources, both human and financial; this is especially challenging for a small organisation like SDA which is not research-performing and is almost fully project-funded. The focus group discussions therefore concluded that an adjusted RRI-AIRR framework, tailored to the needs of the organisation could be a more effective approach instead of adopting RRI-AIRR only formally, for its own sake.



## 5. Embeddedness of the RRI-AIRR approach in SDA

### Drivers

RRI-AIRR keys and dimensions are not formally embedded in any institutional documents and there are no organisational structures or staff members responsible for implementation. Focus group participants agreed that it is important to undertake steps to change this, starting with the development of internal guidelines and instructions on how to apply RRI-AIRR. The guidelines should be aligned with existing organisational policies and priorities, having in mind also the tasks assigned to SDA by the Municipal Council.

Another important driver could be the implementation of the RIS3, which is up for revision in the upcoming year; this is an opportunity to try and integrate in a more systematic way applicable RRI-AIRR elements (such as *science education, ethics, open access, anticipation, responsiveness*), in order to improve the innovation potential of the regional R&I ecosystem.

SDA will collaborate with local research and innovation organisations, as well as with EU entities and projects funded under Horizon Europe to adopt good practices for RRI-AIRR implementation.

### Barriers

While SDA recognises the importance of RRI, its profile and current portfolio do not require introducing the entire framework in the organisation's everyday work. At the same time, focus group participants agreed that with the increasing focus on transformative technologies, digitalisation of work, and the growing number of innovation-related activities carried out or facilitated by SDA and SofiaLab, the systematic introduction of some or all RRI-AIRR dimensions would improve the capacity and leadership role of the organisation.

In this respect the major barriers identified by the participants concern the lack of professional expertise and professional bodies to support the introduction of RRI-AIRR. Further challenges relate to the absence of adequate management tools addressing RRI or single persons acting as "mentors" for RRI. Currently, there are no incentives encouraging NGOs or public bodies to adopt RRI.

Finally, lack of resources (time and human resources) is also a critical barrier to RRI; given the small size of the organisation, on the one hand, and a very broad portfolio, on the other, the implementation of RRI would require additional efforts that cannot be secured at this point. A long-term goal for SDA would be to integrate the tasks for dealing with RRI or aspects of AIRR within the scope of the programming unit (responsible for project development and management), potentially also expanding the responsibilities of a (new) staff member.

### Good practices

A good practice is SofiaLab, an urban living lab run by SDA, which opened in September 2018, with support from the project "New Generation Skills", funded by INTERREG Danube and Sofia Municipality. Since 2018, over 6000 people have participated in events organised by the Lab. The primary goal of SofiaLab is to support the improvement of the digital, creative and entrepreneurial skills of young people in Sofia. The Lab has the ambition to use digital technologies as a way to ensure the transition to smart living and sustainable development in the everyday citizen's context. It boosts bottom-up and citizen-centred approaches for improving policy-making, regional policy development initiatives, digital regulations and public efforts to build a fair and equitable digital future. The Lab is an important tool for implementing Sofia Smart Specialisation Strategy. A key principle of SofiaLab is effective public engagement, through communication and awareness-raising; co-design and co-creation; and co-implementation. In the past four years, SofiaLab and SDA have organised many initiatives supporting experimentation-driven innovations and entrepreneurship by young people in Sofia.



## Monitoring and evaluation

No specific criteria or indicators for monitoring and evaluating the organisation's performance related to RRI keys and AIRR dimensions have been consistently followed thus far, considering the fact that SDA does not have an RRI-AIRR related policy. Indicators measuring comparable outcomes (e.g. stakeholder engagement, gender-based interventions for youth participation, etc.) are applied in various project-related activities.

## Recommendations

The following recommendations have been formulated as a result of the document analysis and the discussions in the focus group and interviews.

1. Based on the initial review of SDA's internal documents, a **further in-depth analysis** can be planned to decide which new organisational elements and practices may be introduced so that RRI-AIRR are streamlined into all organisational processes and become routine. Discussions and consultations with SDA's Governing Board will be necessary to define specific RRI-related mandates and to draw up action plans for their implementation, ensuring synergy with the existing work programmes and priorities of SDA.
2. At institutional level, SDA can start the process by **creating internal guidelines** to complement organisational policies and help make RRI-AIRR keys and dimensions actionable for all employees. Guidelines may focus on specific aspects of RRI-AIRR, for example, those that are currently less practiced by SDA (ethics, science education, anticipation, reflexivity, (self)evaluation). An overview of existing toolkits and instruments for RRI (for example, the Societal Readiness Tool created under the Horizon2020-funded project NewHoRRizon) can be done to choose the most appropriate ways to introduce and implement RRI-AIRR.
3. **Leverage the expertise and experience of local stakeholders:** SDA should proactively seek cooperation and networking with stakeholders adhering to RRI, by including them in pilot programmes, events, and projects. The foundation for further collaboration has been already set through the activities under the *RRI-LEADERS* project. Following an RRI-based framework is an important tool for expanding the communities of knowledge and innovation which are instrumental for achieving SDA's long-term goals.
4. Measures to improve RRI-AIRR implementation by SDA staff: To reach a desired level of understanding and capacity to pursue RRI-AIRR, effective **organisational learning processes** need to be created. Making information and learning resources available will enable RRI-AIRR diffusion and adoption by the staff members; designing feedback mechanisms with KPIs about difficulties/success in the implementation of the respective RRI keys is also recommended. Investing in training and education of the staff about how to perform more advanced forms of public engagement using digital technologies, adherence to ethics principles, etc., can be an important step for building up professional skills and capacity.

Monitoring change and progress review could be done through the regular (6-monthly) internal staff meetings dedicated to organisational planning and evaluation.

5. **Better communication of RRI-AIRR values** to SDA stakeholders and partner networks, to promote the wider uptake of the framework keys and dimensions. Proposals will be made to Programme Europe and the Fund for Social Innovations, administered by SDA, to include RRI-related requirements to the prospective applicants (for example, presence of gender equality plans, implementation of public engagement activities, open access rules, etc.)

A standing RRI-AIRR policy could mean further advantages for SDA with regard to fulfilling funder requirements in seeking grant money for the organisation's own projects.



**6. Definition of responsibilities regarding the organisation's open access policy.** It would be beneficial for SDA to elaborate a policy on open access, which is aligned with the policies of relevant innovation ecosystem stakeholders (such as universities and those engaged in the implementation of RIS3, the Culture Strategy of Sofia, the Youth Strategy of Sofia, etc.). The policy should seek a balanced approach, accounting both for the need to support open access standards for research funded by public money, but also, at the same time, adhering to IPR and copyright regulations.

## Conclusions

The internal review shows that the RRI-AIRR framework is not necessarily an endpoint, but an opportunity for a continued learning process and a commitment to uphold values and principles which can improve the organisation's capacity to lead and support the regional innovation ecosystem. Although the RRI-AIRR concepts are not novel, they are yet to be fully integrated in internal policy documents and fully operationalised, taking into account the specific structure, vision, and mission of SDA.

As evidenced, no RRI-AIRR keys and dimensions, as defined and applied within the *RRI-LEADERS* project, are currently included in organisational documents and practices. The findings indicate that positioning RRI within a non-governmental organisation requires certain adaptation of the RRI-AIRR framework to identify the best mix of keys and dimensions, which can generate positive change at institutional and individual staff levels. While many of the keys are highly relevant, for example, public engagement, open access, gender equality, anticipation and inclusiveness, we are yet to find the best way to make them part of the organisation routines and overall approach. The creation of effective organisational learning processes requires thinking through feedback mechanisms and the establishment of some baseline measures for achievement; ideally, these will be aligned also with the level of experience and implementation of RRI-AIRR in local stakeholder organisations, which are part of the regional R&I networks.

The document review and focus group have identified specific barriers, such as lack of resources (financial, time, human, training, expertise), and have also pointed to the overall low level of uptake of RRI-AIRR in the innovation ecosystem (e.g., lack of policies, frameworks and formal structures supporting practices pertaining to RRI.). It was also established that adequate incentives are needed to make RRI-AIRR part of the long-term institutional development, not only of SDA, but also of other key actors in R&I, including relevant administrative units in the municipality, universities and RPOs, businesses. Through its involvement in the *RRI-LEADERS* project SDA has a unique chance to promote the introduction of RRI-AIRR keys and dimensions in territorial governance at Sofia Municipality and to improve the entire policy-making and implementation process.





# Internal RRI review of THA

Lead author: Benjamin Ueltschi

## List of acronyms / abbreviations used in this document

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

FSO – Federal Statistical Office

KPI – Key Performance Indicator

OGD – Open Government Data

THA – Thalwil Municipal Administration

RRI - Responsible Research and Innovation

R&I – Research and innovation

## Executive Summary

Responsible Research and Innovation (RRI) is an approach that is increasingly being used in non-research institutions. This report examines the extent to which the RRI-AIRR approach is embedded in the Thalwil municipal administration (THA). RRI keys include ethics, gender equality, governance, open access, public engagement and science education. The key governance is further divided into the AIRR dimensions: anticipation, inclusiveness, reflexivity, responsiveness. Together, they have the ambition to make research more socially responsible. THA holds approximately 180 employees and it is organised into a total of nine departments, each of which provides essential services to the residents of Thalwil. In a first step, a selection of documents was analysed with regard to RRI keys and AIRR dimensions. A total of eight documents, including annual reports, statutes, ordinances and regulations were studied. In a second step, seven interviews with people from the upper management were carried out, each covering a different department. Although the RRI-AIRR approach was new for all participants, valuable ideas for a stronger embedding of RRI were assessed. Building on the previous insights from the document analysis and the interviews, an internal focus group was organised, offering the opportunity to crucially discuss the present results. Finally, the report concludes with a general overview of the most important findings for THA.

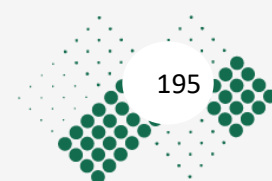
## Introduction

### The Municipality of Thalwil

The Municipality of Thalwil belongs to the Canton of Zurich and is one of over 2000 municipalities of Switzerland. As of 2020, the population counts 18,263 inhabitants, growing at annual rates of 1%, with a share of foreigners of 30%. The proximity to Zurich and low tax rates make Thalwil very attractive for well-paid commuters, in particular expats. Of a total workforce of 6,600 employees, about 84% engage in the third sector. The same holds true for the workplaces in Thalwil. Out of 1,300 primarily small and medium-sized businesses, over 90% belong to the third sector. Thalwil is amongst the most attractive tax locations worldwide. With an annual tax revenue of CHF 95 million, or CHF 5,300 per capita, Thalwil ranks well above Cantonal average. In 2020, Thalwil had an unemployment rate of 3.1%



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## Political system

In Switzerland, democracy has come a long way and forms what is today one of the strongest direct democratic states worldwide. The federal constitution protects the autonomy of municipalities within the framework of cantonal law. The Swiss take pride in their federalist system, which is often referred to as “Sovereignty”, i.e. the people ultimately decide on policy initiatives. The municipality is led by the municipal council, the so-called executive authority. The council consists of nine people, which is voted upon every four years. The municipal council is represented by many different parties, as it is usually the case with multi-party systems. The legislative authority is held by the citizens of Thalwil. On four municipal assembly meetings, which are held each year, public expenses are budgeted, and tax rates are set.

## Public administration and organisational structure

The main purpose of THA is to provide for all public services specified by the municipal code. The administration comprised of a total workforce of 176 employees (excl. teachers<sup>21</sup>) and 16 apprentices in 2020. THA is structured into so-called service centres, nine departments in total, each led by one of the nine respective municipal councillors. The municipal clerk is the head of THA, and acts as a link between THA and the municipal council. In March 2022, the citizens elected the executive through a postal vote. The new council members represent many different parties and political views. Despite long-term planning of THA, municipal councillors may have a strong impact on the current strategic alignment of their respective department.

The table below gives a brief overview of the most important tasks for each department. Although in principle determined by the municipal council, most of the Swiss municipalities show similar forms of organisational structure. For medium-sized municipalities the collaboration with neighbouring municipalities in the form of special purpose associations, e.g. for water treatment, waste management or for debt collection, is commonly observed. THA builds its services around the political framework and the needs of the people, reflected in the municipal code and municipal assemblies respectively.

Table 15: Thalwil Municipal Administration Departments and their corresponding Tasks

Department	Tasks
Presidial Department	HR, communications, salaries, pension fund, postal services
Financial Department	Accounting, tax office
Social Department	Social aid, asylum, youth and family work
Societal Department	Resident control, civil registry office, burial office, cultural events, integration support, sustainability office
Safety Department	Police, fire brigade, civil defence
Educational Department	School board and management, specialist agencies
Real Estate Department	Janitorial services, cleaning, forestry, sports
Debt Collection Department	Debt collection
Construction, Energy (and Environment) Department	Geomatics, planning, construction permits, utilities, civil engineering, road and park maintenance

With every new legislature, departments may be restructured, recomposed or moved. A recent example is the newly created environmental division, now part of the presidial department. This shows how the

<sup>21</sup> In contrast to other public services, some cantons have been organising schools in own communities. Thus, teachers within the Canton of Zurich are cantonal employees organised in distinct school districts. This historical characteristic is politically much debated.



organisational structure evolves over time and that certain issues get more resources depending on the perceived political urgency.

## Place of the organisation in the territorial innovation eco-system

Like every municipal administration, THA has an inherent reactive nature. With its slow processes and bureaucracy, THA is neither a driving force for change, nor particularly innovative with its work, as the primary goal is to fulfil its public orders. These limitations are often bound to restricted personnel and financial resources in order to keep public spending down. Nonetheless, issues such as digitalisation affect the entire administration, and some form of development and innovation takes place. Furthermore, some departments collaborate with technical universities and thus engage in practical research.

## Review of the relevant internal organisational documents

### 1. Guiding Principles 2018-2022

#### Brief summary of the document:

Year of publication: 2018

Target audience: Public

Main purpose: The Guiding Principles<sup>22</sup> are a set of values that are restated on every legislative term, i.e. every four years. The municipal council determines what priorities and thematic focuses they want to emphasise. The current Guiding Principles (2018-2022), published on the municipal website, are as follows:

- Living together – we place the well-being of the population at the centre of our thoughts and actions.
- Quality of life – we provide a broad offer while ensuring a stable budget with low and stable taxes.
- Municipal services – we promote employee potential and motivate employees to self-initiative.
- Information and communication – we inform openly and transparently [3], promote public engagement and the commitment of the population to help shape Thalwil for the future [2].
- Sustainable development – we always seek a balance between economic, ecological and social aspects, when making our decisions [1].
- Location promotion – we are committed that Thalwil remains a strong business location. We maintain contact with the business community, create favourable conditions for entrepreneurs and promote the involvement in cross-community projects and organisations [4].

Table 16: Place of RRI-AIRR approach in the Guiding Principles 2018-2022

Guiding Principles	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	Yes	Yes [1]	No	NA
Responsible research & innovation (the concept)	No	No	No	No	No
Responsible research & innovation (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No

<sup>22</sup> <https://www.thalwil.ch/politikleitbild>



Public engagement	No	Yes	Yes [2]	No	NA
Gender and diversity	No	No	No	No	Yes
Open access and science	No	Yes	Yes [3]	No	NA
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	No	No	No	No	Yes
Inclusiveness	No	Yes	Yes [4]	No	NA
Reflexivity, evaluation, self-evaluation	No	No	No	No	Yes
Responsiveness and adaptation	No	No	No	No	Yes

### A concise review of the most relevant and interesting points of the document:

Several elements of the RRI-AIRR framework are implicitly reflected in the current Guiding Principles. Responsibility as a value is expressed in the long-standing efforts towards sustainable development [1]. Open Access and Public Engagement becomes visible through the way the municipality wants to communicate [2,3]. And with the goal for more inclusion, THA wants to take a more active role in promoting Thalwil as a business location [4]. While the more research-related RRI keys and AIRR dimensions are not suitable for the Guiding Principles, the inclusion of diversity or anticipation would be appropriate.

## 2. Annual Report 2020

### Brief summary of the document:

Year of publication: 2021

Target audience: Public

Main purpose: The Annual Report 2020<sup>23</sup> summarises all operating and financial activities of the municipal administration, with the intention to provide public disclosure over the preceding year. The 70-page document is structured according to the nine departments and is accessible from the municipal homepage.

Table 17: Place of RRI-AIRR approach in the Annual Report 2020

Annual Report 2020	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	No
RRI (the concept)	No	No	No	No	No
RRI (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	Yes	Yes	Yes [1]	NA
Gender and diversity	No	No	No	No	No
Open access and science	No	Yes	Yes [2]	Yes	NA
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	No	Yes	Yes [3]	Yes [4]	NA

<sup>23</sup> <https://www.thalwil.ch/publikationen/320666>



Inclusiveness	No	No	Yes	Yes [5]	NA
Reflexivity, evaluation, self-evaluation	No	Yes	Yes [6]	Yes [7]	NA
Responsiveness and adaptation	No	No	No	No	No

### A concise review of the most relevant and interesting points of the document:

Given the size of THA, research and innovation do play a very minor role in daily operations. The Annual Report lists numerous activities, demonstrating how the administration engages socially: weekly news published on the website and social media, a digital village square to interact and debate on issues, information events for elderly people, lunch meetings for teenagers or free of charge advice for families [1]. During the pandemic social interaction was particularly emphasised. The digital transformation is forged ahead with goals such as further developing e-government services [2]. Existing tools for risk management and financial planning demonstrate the importance of anticipation and planning of the administration [4]. Additionally, the revision of the building and zoning regulations is planned for the current legislature [3]. With up to 30 % of foreigners in Thalwil, inclusiveness was discovered important for communal integration policies. Beside linguistic courses and a welcoming package, the municipality also hosts a weekly international café [5]. The recently revised municipal code is exemplary of how well the administration evaluates itself [7]. Furthermore, a controlling tool to efficiently track goals and address financial planning is being developed [6].

## 3. Legislative Goals 2018-2022

### Brief summary of the document:

Year of publication: 2018

Target audience: Employees of THA, Politics, Public

Main purpose: By analogy to the guiding principles, the Legislative Goals<sup>24</sup> are a set of goals given a particular focus for any legislature. While the municipal council ultimately makes the choice, administrative bodies may propose goals, and in case of selection are in charge of the goal. In the current legislature, twelve goals are defined:

1. Thalwil pursues a stable financial policy.
2. Thalwil is an attractive employer and commits to apprenticeship training.
3. Thalwil develops strategic measures to further digitalise the administration [2].
4. Thalwil reviews its current municipal code and adapts them as required [6].
5. Thalwil ensures that children, regardless of their origin, have the same educational opportunities [1].
6. Thalwil ensures the provision of care in accordance with the reviewed masterplan [4].
7. Thalwil develops a utilisation concept for the "Pfister"-site to increase its attractiveness and usage.
8. Thalwil promotes environmentally conscious and future-oriented thinking and acting in schools [3].
9. Thalwil promotes affordable housing and the mixing of the population structure [5].
10. Thalwil reduces its carbon emission from heat supply, increases the share of renewable power generation and continues to use the Energy City label.
11. Thalwil utilises large projects in the centre and on the lake to strengthen the economy and recreation.

<sup>24</sup> <https://www.thalwil.ch/publikationen/229876>



12. Thalwil commits to an efficient and effective operation of the local water supply system.

Table 18: Place of RRI-AIRR approach in the Legislative Goals 2018-2022

Legislative Goals	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	Yes
RRI (the concept)	No	No	No	No	No
RRI (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	No	No	No	Yes
Gender and diversity	No	Yes [1]	No	No	NA
Open access and science	No	Yes [2]	No	No	NA
Science education	No	Yes	Yes [3]	No	NA
Anticipation, foresight, vision, planning	No	Yes	Yes [4]	No	NA
Inclusiveness	No	Yes	No	Yes [5]	NA
Reflexivity, evaluation, self-evaluation	No	Yes	No	Yes [6]	NA
Responsiveness and adaptation	No	No	No	No	Yes

#### A concise review of the most relevant and interesting points of the document:

The demand for equal educational opportunities for children of all backgrounds has a positive impact on diversity [1]. The development of digitisation strategies should also strengthen open access [2]. Promoting environmental education in Thalwil's schools is a prime example of anchoring science education [3]. In order to ensure good care, the Masterplan Care Thalwil 2030 is intended to anticipate strategically far in advance [4]. The demand for affordable housing promotes a social mix and thus also strengthens inclusiveness [5]. The since revised municipal code shows the ability for critical questioning and self-reflection [6].

## 4. Annual Report 2017

#### Brief summary of the document:

Year of publication: 2018

Target audience: Public

Main purpose: The Annual Report 2017<sup>25</sup> is very similar in structure and length to the current version. The document is also structured alongside the nine departments and explains the most important key figures for each area, followed by the final report on the Legislative Goals 2014-2018. The document was analysed in order to compare it with the Annual Report 2020.

<sup>25</sup> <https://www.thalwil.ch/publikationen/148945>





Table 19: Place of RRI-AIRR approach in the Annual Report 2017

Annual Report 2017	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	No
RRI (the concept)	No	No	No	No	No
RRI (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	Yes	No	Yes [1]	NA
Gender and diversity	No	No	No	No	Yes [2]
Open access and science	No	Yes	No	Yes [3]	NA
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	No	Yes	No	Yes [4]	NA
Inclusiveness	No	Yes	No	Yes [1]	NA
Reflexivity, evaluation, self-evaluation	No	Yes	No	Yes [5]	NA
Responsiveness and adaptation	No	No	No	No	No

#### A concise review of the most relevant and interesting points of the document:

In analogy to the latest version of the annual plan, research in general and the RRI framework in particular are not addressed in any way. However, the keys and dimensions turn out relevant nonetheless and thus manifest themselves in various municipal issues. For the social department, public engagement (incl. inclusiveness) is daily business, be it in the form of social welfare, youth work, family counselling or in many other ways [1]. As for gender equality and diversity, a topic that has gained a lot in attention, one would search in vain. Despite that, the municipality strives to provide to the various disadvantaged groups [2]. Open access is mentioned again in the context of digitalisation (e.g. automated procurement) [3]. Since 2015, schools of Thalwil have been engaging in environmental education. Furthermore, science education is not mentioned. Anticipation and long term planning affects many of the departments: real estate, education, infrastructure and in particular the department of construction. Here, projects regarding civil engineering, transportation and energy planning are coordinated, where many of the concepts plan far beyond 10 years [4]. In order to evaluate employee satisfaction, the annual interviews were supplemented by a survey [5].

## 5. Municipal Code

#### Brief summary of the document:

Year of publication: 2021

Target audience: Public

Main purpose: The Municipal Code<sup>26</sup> is the central document, stating the municipal organisation and the various competences across the governing bodies. The Municipal Code is reviewed periodically and adjusted to the present needs of the administration. Cantonal authorities usually check every overhaul before it is approved by the people, i.e. the municipal assembly. The Municipal Code covers aspects like election

<sup>26</sup> <https://www.thalwil.ch/gdebehoerd/info/1424639>



procedures, basic principles, the structure of the municipal council and commissions, school community or the pension fund. The latest version has come into effect in 2022 and is available from the public law collection.<sup>27</sup>

Table 20: Place of RRI-AIRR approach in the Municipal Code

Municipal Code	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	Yes	No	No	No
Responsible research & innovation (the concept)	No	No	No	No	No
Responsible research & innovation (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	No	No	No	No
Gender and diversity	No	No	No	No	No
Open access and science	No	No	No	No	No
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	No	No	No	No	No
Inclusiveness	No	No	No	No	No
Reflexivity, evaluation, self-evaluation	No	No	No	No	No
Responsiveness and adaptation	No	No	No	No	No

#### A concise review of the most relevant and interesting points of the document:

The Municipal Code is a legal formal document, which mentions responsibility only in the context of what body is responsible for which activities. Theoretically, most of the RRI keys and AIRR dimensions could be included in the general provisions, as it is the case with sustainability (Art. 18), the principle of efficiency, transparency and citizen care (Art. 19) or the public disclosure of interests (Art. 20). However, it is questionable whether this is purposeful, as the Municipal Code emphasises the what and not the how. Other municipal documents such as strategies and action plans are much more suited to adopt elements of the RRI-AIRR framework.

<sup>27</sup> <https://www.thalwil.ch/gesetzessammlung>

## 6. Staff Regulations

### Brief summary of the document:

Year of publication: 2021

Target audience: Employees of THA

Main purpose: The Staff Regulations 2021<sup>28</sup> is the legal form of regulation for all municipal employees. It guides the employment contract and lists all rights and obligations of the employees. Municipal personnel ordinances have to follow cantonal guidelines, i.e. the Cantonal Personnel Act.<sup>29</sup> The current version was accepted at the municipal assembly in winter 2021.

Table 21: Place of RRI-AIRR approach in the Staff Regulations 2021

Staff Regulations 2021	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	No
Responsible research & innovation (the concept)	No	No	No	No	No
Responsible research & innovation (implicitly)	No	No	No	No	No
Research ethics	No	Yes	Yes [1]	No	NA
Public engagement	No	No	No	No	No
Gender and diversity	No	Yes	Yes [2]	No	NA
Open access and science	No	No	No	No	No
Science education	No	Yes	Yes [3]	No	NA
Anticipation, foresight, vision, planning	No	No	No	No	No
Inclusiveness	No	Yes	Yes [4]	No	NA
Reflexivity, evaluation, self-evaluation	No	No	No	No	No
Responsiveness and adaptation	No	No	No	No	No

### A concise review of the most relevant and interesting points of the document:

The Staff Regulations is a set of rules with very precise content and does not include any elements of the RRI-framework, nor does it address research in any way. However, some keys and dimensions are mentioned in the preamble:

- Is committed to the safety and health of its employees [1].
- Ensures equal opportunities and pay equity [2].
- Promotes and develops the potential of employees and motivates them to take the initiative and to think and act in an economic and sustainable manner [3].
- Promotes a climate of mutual trust by constantly fostering communication and dialogue between all levels and within; ensures an appropriate voice at all levels [4].

Furthermore, this formal document offers only limited possibilities for RRI-AIRR integration.

<sup>28</sup> <https://www.thalwil.ch/gdebehoerd/info/1424675>

<sup>29</sup> <http://www.zhlex.zh.ch/Erlass.html?Open&Ordnr=177.10,27.09.1998,01.07.1999,089>



## 7. Rules of Procedure of the Environmental Project Commission

### Brief summary of the document:

Year of publication: 2020

Target audience: Internal

Main purpose: The Rules of Procedure of the Environmental Project Commission were released by the municipal council.<sup>30</sup> This resolution describes the formal rules of the newly created environmental commission and is for internal use only.

Table 22: Place of RRI-AIRR approach in the Rules of Procedure of the Environmental Project Commission

Rules of Procedure of the Environmental Project Commission	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	No
Responsible research & innovation (the concept)	No	No	No	No	No
Responsible research & innovation (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	No	No	No	Yes [1]
Gender and diversity	No	No	No	No	Yes [2]
Open access and science	No	No	No	No	Yes [3]
Science education	No	No	No	No	No
Anticipation, foresight, vision, planning	No	No	No	No	No
Inclusiveness	No	No	No	No	No
Reflexivity, evaluation, self-evaluation	No	No	No	No	Yes [4]
Responsiveness and adaptation	No	No	No	No	No

### A concise review of the most relevant and interesting points of the document:

The 5-page document contains fourteen articles, which define tasks, purposes, members and competences regarding the environmental commission. The resolution does not cover the RRI-AIRR approach, but offers some options for embedding. Theoretically, commission meetings could be opened to the public [1]. When constituting the members under article 3, attention could be paid to a more balanced representation of the genders [2]. Although the document is published on the website, decisions of the commission are usually not publicly available [3]. Commission meetings are often held in absence of some members. The document could be extended to include an evaluation article that records absences and excludes members, if necessary [4]. By and large, the integration of the RRI-AIRR approach is not adequate in this formal document.

<sup>30</sup> <https://www.thalwil.ch/gdebehoerd/info/1466594>

## 8. Guidelines for the Promotion of Sustainable Energy Projects 2019-22

### Brief summary of the document:

Year of publication: 2020

Target audience: Homeowners and companies of Thalwil with the intention of energetic renovation.

Main purpose: The Guidelines for the promotion of sustainable energy projects 2019-2022<sup>31</sup> regulate the allocation of subsidies for energy projects by the municipality. As part of the municipal energy plan, a framework loan for sustainable projects was granted by the municipal council, covering a timeframe of four years.

Table 23: Place of RRI-AIRR approach in the Guidelines for the Promotion of Sustainable Energy Projects 2019-2022

Guidelines for the promotion of sustainable energy projects 2019-2022	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included, if it is not there?
Responsibility	No	No	No	No	No
Responsible research & innovation (the concept)	No	No	No	No	No
Responsible research & innovation (implicitly)	No	No	No	No	No
Research ethics	No	No	No	No	No
Public engagement	No	No	No	No	No
Gender and diversity	No	No	No	No	No
Open access and science	No	No	No	Yes [1]	NA
Science education	No	No	No	Yes [2]	NA
Anticipation, foresight, vision, planning	No	No	No	Yes [3]	NA
Inclusiveness	No	No	No	No	No
Reflexivity, evaluation, self-evaluation	No	No	No	No	No
Responsiveness and adaptation	No	No	No	No	No

### A concise review of the most relevant and interesting points of the document:

The guidelines cover consulting services such as energy coaching or operational optimisation, as well as construction measures. The RRI-AIRR approach is not taken into account here. However, some good practices are identified. The document provides a good overview of existing funding opportunities, especially from additional providers (cantonal and federal level) [1]. The guidelines provide important education regarding the complicated process of applying for funding [2]. The subsidies support households that rely on renewable energies at an early stage and thus make an important contribution to the energy transition [3].

<sup>31</sup> <https://www.thalwil.ch/bauverentsorgung/info/1437032>



## Summary of the interviews

### Brief overview of respondents

In March 2022, a total of seven interviews were conducted, both physical (N=6) and online (N=1). All interview lasted between 60 and 90 minutes. When selecting the interviewees, participants were chosen on the basis of different fields of activity, hierarchy levels and gender. The interviews followed a standardised scheme, but left room for individual answers. The following table gives a brief overview, whilst ensuring anonymity for the attendants.

Table 24: Mapping of the interview respondents

Field of activity	Level	Gender	Related RRI keys	Related AIRR dimensions
General Management	Senior	M	ALL	ALL
Communication	Junior	F	Diversity/ Gender Equality, Science Education, Open Access	Anticipation, Inclusiveness, Reflexivity
Utility	Mid	M	Diversity/Gender Equality, Ethics, Open Access	ALL
Social welfare	Senior	F	Diversity/ Gender Equality, Science Education, Open Access,	ALL
School management	Mid	M	Open Access	ALL
Spatial planning	Senior	M	ALL	ALL
Police	Senior	M	Public Engagement	Responsiveness

### Framing of the RRI-AIRR approach in the THA

As the previous audits revealed, the RRI-AIRR framework is largely unknown amongst all stakeholder groups along the quadruple helix that interact within the municipality of Thalwil. This picture also emerged for the interview partners within the municipal administration. However, some of the interviewees were familiar (N=2) or had initial contact (N=1) with the approach due to previous research conducted. After explaining the RRI-AIRR approach, most of the interviewees could relate to the keys and dimensions, while some (N=2) found the framework too theoretical and rather abstract.

The majority of the people interviewed (N=6), stated that most of the RRI keys and AIRR dimensions are part of their responsibility in relation to their work at THA. First and foremost, the AIRR dimensions were regarded as particularly relevant. This observation is in line with the growing awareness for good governance in the past decade. Depending on which department the interview partners belonged to, the general performance and the importance of each dimension was assessed differently. In regards to the RRI keys, the interviewees gave varying answers. While the key ethics was not perceived as relevant by anyone, the opposite was true for the key open access. Depending of the activity profile of the respective interview partner, the relevance of the remaining keys were rated very differently, and will be thoroughly elaborated in the next paragraph.

Apart from the Horizon 2020 project RRI-LEADERS, the RRI-AIRR approach does not have a stake in THA. However, this might change with the ongoing activities and implementation of the project. As one interviewee stated, the AIRR dimensions have the potential to become a modern framework for governance. For the moment, no main RRI-AIRR actors in THA can be identified. It is clear, that the upper management of THA will need to induce a further embedding of the RRI-AIRR approach.





As described in previous documents, it is important to emphasise that the principles of the RRI-AIRR approach are by no means new to the administration. For example, participatory processes have been practiced for a long time and are strongly anchored in THA. The same applies for diversity issues, where beyond gender, far more minority groups have been considered.

## RRI keys and AIRR dimensions in THA

### Ethics

***Embeddedness:*** Although ethics is very difficult to grasp, it occupies a special position within a directly democratically legitimated body such as THA. On the one hand, ethics is ensured through a state framework. Here laws and regulations set distinct boundaries and higher-level bodies on cantonal and federal level regulate the enforcement. In addition, international standards such as the human rights convention or ethical guidelines regarding research apply, as is the case for a modern constitutional state. On the other hand, the municipal code reflects the citizen's values and norms, which is ultimately executed by the administration. Furthermore, ethics reflects in questions of sustainability and thus also in the social justice debate when considering change processes. As a public body, THA has a very broadly based ethical legitimacy.

***Main barriers:*** A fundamental problem of ethical discourse is that it is practically non-existent in the day-to-day work of the administration. Stated in the interviews, the administrative staff simply follows the guidelines and generally do not reflect on ethical implications of their work. Another hurdle is posed by the municipal assembly meetings. Due to the low number of participants, a few hundred voters can tilt a decision in their favour. Although this is democratically completely legitimate, it has led to issues of representativeness in the past. In the meantime, the municipal code has been altered so that a postal vote is required for certain matters.

***Main drivers:*** Switzerland is amongst the most heavily regulated countries in the world. But more importantly, a large part of the population adheres to this ethical code. The combination of this strong top-down law framework and the possibility to place political concerns from bottom-up, builds a very solid direct democratic backbone. According to the interviewees, it remains crucial, that we also reflect on the meaning and purpose of certain regulations, and engage in a dialog with colleagues and other authorities.

***Good practices:*** For more than twenty years, THA has been striving for environmentally and socially compatible development, thus making sustainability a major political issue. In its core, sustainability is very much an ethical question. Following the adoption of the "Agenda 21", the municipal council set up a steering group to support sustainable strategies. As a result, sustainability is a firmly established goal for THA and is addressed through targeted measures: sustainable development is part of the current legislative goals, a sustainability commission advises the municipal council, projects go through an impact assessment and apply holistic cost-benefit analysis.

***Monitoring and evaluation:*** As mentioned previously, a distinction can be made between top-down and bottom-up monitoring. Cantonal authorities are obliged to verify the compliance of municipal work with the law in force. Opposite to this, internal rules and regulations ensure that daily operations comply with the current law. Furthermore, THA is also held accountable by the citizens of Thalwil.

### Public engagement

***Embeddedness:*** When assessing the relevance of RRI in regards of the energy transition, the key public engagement was the one most crucial for many stakeholders. In Switzerland, public engagement is very well established. It was recognised early on that in order to be politically successful, public engagement is de facto



required. Within THA, public engagement is synonymous for participatory processes<sup>32</sup>, i.e. political action and policy making should always include affected groups and the local population. In recent years, the awareness for the importance of engaging with the public has steadily risen.

*Main barriers:* The disadvantage of these strong individual rights manifest itself in construction projects. Here, the special interests of a few can significantly impede or even prevent socially desirable projects. In 2021, a long-standing lakefront design project was defeated by a few votes at the municipal assembly meeting. This happened after several information events, focus groups and the financial approval by a clear majority in the previous year. One could argue that with stronger public engagement, this would not have happened. In reality, only a small opposition is needed to considerably delay projects. The problem is that this minority is deliberately using the right of appeal to avert personal economic disadvantage (e.g. real estate losing value), even when the public good of the project clearly outweighs it. Furthermore, the Swiss expect a neutral attitude from its public administration, especially when talking politics. This fact can make public engagement considerably more difficult, since any exposure offers a potential target for critics. Following the recent annual report, the pandemic made it much more difficult to interact with the public in general.

*Main drivers:* The major driving force for public engagement are the basic political rights: voting, initiatives, referendums and the right to object, for example, to a decision about a construction project. The goal of the THA is to meet the citizen's needs proactively. Despite participatory processes being widely used, there are opportunities to integrate them into municipal processes in a more standardised way. As one interviewee pointed out, THA can benefit from public knowledge and should do so. This is partially happening in the various existing commissions, which advise the municipal council.

*Good practices:* THA uses a variety of tools to interact with its citizens: social work, focus groups, information events, workshops, commissions, information videos, digital discussion platforms, surveys and many more. In recent years, the administration has also tried to find new ways to engage with the population: provide a babysitter at municipal assembly meetings, hold an information event before a popular vote or organise a company aperitif to foster public-private partnerships. Recently, short videos about local voting topics received positive feedback and are likely to be used in the future.

*Monitoring and evaluation:* The annual report lists some statistics that quantify THA interaction activities. For example, the social department counts several consulting services, such as school social work, family and elderly counselling. Furthermore, it contains all voting figures of the past year. However, there are no key performance indicators (KPI) in place, which objectify public engagement efforts systematically.

## Diversity / Gender equality

*Embeddedness:* Although Switzerland introduced voting rights for women only in 1971, the equal opportunity act from 1996 has had a strong impact on gender equality. Furthermore, the SDG goal number 5<sup>33</sup> ensures gender equality and the empowerment of all woman and girls. According to the recent Global Gender Gap Report, Switzerland ranks 10<sup>th</sup> globally.<sup>34</sup> National surveys still find a significant gender pay gap, even though the gap has been steadily decreasing over the past 10 years.<sup>35</sup> In 2021, THA conducted two wage analyses and found differences of 5.8 % and 2.5 % in favour of men.<sup>36</sup> Besides pay gap analyses, other elements such

<sup>32</sup> <https://www.thalwil.ch/mitwirkung>

<sup>33</sup> <https://www.eda.admin.ch/agenda2030/en/home/agenda-2030/die-17-ziele-fuer-eine-nachhaltige-entwicklung/ziel-5-geschlechtergleichstellung-erreichen-und-alle-frauen.html>

<sup>34</sup> [https://www3.weforum.org/docs/WEF\\_GGGR\\_2021.pdf](https://www3.weforum.org/docs/WEF_GGGR_2021.pdf)

<sup>35</sup> <https://www.bfs.admin.ch/bfs/en/home/statistics/work-income/wages-income-employment-labour-costs/wage-levels-switzerland/wage-gap.html>

<sup>36</sup> <https://www.thalwil.ch/aktuellesinformationen/1370066>



as gay rights or discrimination protection laws matter when quantifying equality and tolerance within societies. Regarding THA, none of the interviewees raised serious concerns about gender equality and diversity issues, but agreed that there is room for improvement.

*Main barriers:* Depending on the department of the respondents, different attitudes to gender issues emerged. The more technical departments are supposedly still accustomed to traditional role models, i.e. secretaries are exclusively women. Other departments such as the social office see themselves as rather progressive in questions about gender and diversity. Apart from the staff regulations, where equal opportunities and pay equity are mentioned in the preamble, no internal documents address topics of gender and diversity. When confronted with this fact, most interviewees (N=5) stated that apart from the remaining wage gap, THA does not have an issue with gender equality. While some surrounding municipalities are increasingly looking at gender balance when recruiting new staff, THA focuses more on the professional qualities of the applicants.

*Main drivers:* THA has strived to consider all minorities within Thalwil. This is well reflected in the example of the municipal website or the annual report. Programmes for various disadvantaged groups are listed here: families, young people, people in need of care and migrants. The fact that gender is hardly mentioned on the website, may be interpreted in both ways. In terms of equal pay, the federal act of equal opportunity may have been the driving force. The interviews also revealed that the internal awareness for diversity has steadily increased, or even actively demanded by employees of THA.

*Good practices:* Institutionally, the annual pay gap analysis is certainly helpful to promote wage equity. The existing services for disadvantaged groups pursues the goal of a social catch basin, the characteristic of any welfare state. In reality, diversity issues are also partially minority issues. Current THA services include counselling for families and young people, an information point for housing and care in old age, integration support with language courses, asylum, state-organised social assistance and many more. Therefore, it is arguable whether the existing community services should be expanded for women. More obvious would be a contact point for questions of non-binary identity, which is only partially covered by the counselling.

*Monitoring and evaluation:* The federal office for gender equality monitors compliance with the equal opportunity act. One central element is the wage equality analysis, mandatory for all Swiss companies exceeding a hundred employees and thus applicable for THA.

## Open access

*Embeddedness:* In THA, open access does not have the significance as it does in research, where the national strategy demands all scientific publications originating from public funding to be fully available to the public by 2024.<sup>37</sup> The Federal Statistical Office (FSO) currently provides almost 7000 datasets from public and private institutions, a leading example for Open Government Data (OGD).<sup>38</sup> In many cases, data is essentially collected by local authorities and only then aggregated by FSO. But more relevant to the administration are topics of digitalisation. In the Canton of Zurich, cantonal law obliges the municipalities to publish the municipal law collection online.<sup>39</sup> More and more municipal services are being digitalised.

*Main barriers:* Most respondents found the pressure of digitalisation to be pervasive, but emphasise its importance. As medium-sized administration, THA is limited by financial and human resources, but too big not to move forward. Hurdles to digitalisation are, on the one hand, personnel lacking skills and on the other

<sup>37</sup> <https://www.swissuniversities.ch/en/topics/digitalisation/open-access/national-strategy-and-implementation-plan>

<sup>38</sup> <https://opendata.swiss/de>

<sup>39</sup> <https://www.zh.ch/de/politik-staat/gemeinden/gemeindeorganisation.html#-552162694>



hand, residents who struggle to adopt new digital solutions. This was recently confirmed in a large-scale survey about Swiss municipalities.<sup>40</sup> Interestingly, most communes work alone or in cooperation with private companies instead of joining forces with neighbouring municipalities.

*Main drivers:* Digitisation and the associated open access debate is being driven by many sides. On the one hand, THA must comply with federal and cantonal requirements. On the other hand, progressive citizens and employees want to use digital services for the sake of convenience alone: digital tax returns, digital reporting forms, and digital pleas to name a few. Smart city applications, such as building information modelling, remote meter reading, intelligent waste management, or smart metering will affect many departments strongly. In this context, issues of data protection and data accessibility will need to be balanced carefully.

*Good practices:* In accordance with Swiss law, THA is open and transparent: cash flows and financial indicators are disclosed, all official publications and all strategic documents are available online, authorities have disclosed their interest ties, all voting results and statistics are accessible. In addition, the municipal council has also spoken out positively in favour of transparency and digitisation. Possibly, future decisions by the council may become accessible to all citizens, as is already the case for some municipalities.

*Monitoring and evaluation:* Currently, there is no open access monitoring in place. However, THA does contribute to OGD and fully complies with cantonal authorities in regards to open data.

## Science education

*Embeddedness:* In daily operations, THA is not very science-oriented. For any administration, politics is fundamentally more important than science. Scientific findings tend to find their way into THA indirectly, either through purchased consulting services or collaborations with universities. In some way, cantonal authorities educate through their requirements, but the promotion of scientific education through THA is hardly recognised. Thus, science education is only relevant to the degree, where employees gain additional technical competences and a better understanding of the effects and interrelationships of their work.

*Main barriers:* One respondent answered that for most administrative tasks, scientific education is not particularly relevant, which is why it is renounced. Another respondent calls it is nice to have, but in reality a trade-off between having internal knowledge and buying external knowledge. While large municipalities can easily afford experts, in small communities one person often covers several activities at once, thus usually lacking thematic depth.

*Main drivers:* According to the interviewees, science education can be promoted by empowering employees and fostering competencies as the transfer of responsibility strengthens the competence of employees. In the social department, part-time employees who are studying or undergoing further training bring in new scientific methods, affecting the entire team. Science education may also be induced through the promotion of public engagement, exploiting expertise from the local population.

*Good practices:* For one thing, the widespread Swiss commission culture, which combines internal and external expertise and help shape decisions of the municipal council, especially in the areas of sustainability, environment or energy, but also in various other areas. Additionally, a cooperation with the Zurich University of Applied Sciences brings valuable scientific input into THA. Recent examples include project work on the adaptation to climate change or theses with look into spatial development of Thalwil. Within the administration, further training of employees is encouraged. In addition to financial support, THA also offers flexibility in terms of workload.

<sup>40</sup> <https://www.schweizer-gemeinde.ch/artikel/digitalisierung-gemeinden-haetten-gerne-mehr-davon>



*Monitoring and evaluation:* Science education is currently neither monitored, nor evaluated.

## Anticipation

*Embeddedness:* Depending on the department, the interviews revealed a mixed picture with regard to anticipation. Some believe the THA is very forward looking, others see the administration as slow and reactive. All respondents find anticipation important and particularly crucial in strategic and planning departments.

*Main barriers:* Since the administration is very much aligned with politics, the legislative period of 4 years may threaten development for short-term political success. This is counteracted with long-term planning and strategic documents over longer periods. However, as many decisions depend on cantonal regulations, foresighted action is not always rewarded and THA acts more reactive than proactive.

*Main drivers:* Recent events such as the pandemic and the war in Ukraine, have been systematically exposing weak points in the administration. During the pandemic, the entire school operation had to be completely overhauled. Another example, the processes of the social department were not prepared for the number of refugees from Ukraine. The respondents concluded that such stress tests promote anticipatory thinking. In this context, the necessity for a systematic issue management was raised.

*Good practices:* The administration has a large number of strategic documents to guide the development of the municipality in the coming decades: the Masterplan Care Thalwil 2030<sup>41</sup> intends to ensure care services in the long term; the Municipal Energy Plan<sup>42</sup> paves the way for a sustainable energy supply; the bicycle traffic concept aims to promote slow traffic<sup>43</sup>; the utility company outlines a target network planning of the gas supply, to name a few. Another working group is currently developing a climate master plan, where both adaptation and mitigation measures to climate change are addressed.

*Monitoring and evaluation:* In theory, all projects and undertakings of the municipality should be subject to a sustainability assessment. This comprises several instruments: a qualitative impact analysis and a quantitative assessment of cost and benefits, using the net present value. In reality, these methods are mainly used for larger projects.

## Inclusiveness

*Embeddedness:* In Switzerland, direct democracy is designed in such a way that all citizens can participate. Surveys show that the Swiss are more satisfied with politics and have more trust in politics than most surrounding OECD-countries.<sup>44</sup> Since everyone can influence the outcome of a vote, make an appeal, or submit a referendum, political inclusion is essential. Inclusion becomes particularly relevant when compromises are made in a multi-party system like Switzerland. This applies at every level: federal, cantonal and municipal policy-making. Perhaps this is one reason why participatory processes have followed a long tradition.

*Main barriers:* Independently from each other, respondents criticised an existent silo thinking mentality, i.e. a reluctance to share information with employees of different divisions in the same company, but without agreeing whether this is done willingly, as it may well result from a lack of resources and knowledge about other departments. Another internal effect is that management is strongly aligned with the current political

<sup>41</sup> <https://www.thalwil.ch/publikationen/63866>

<sup>42</sup> <https://www.thalwil.ch/energieplanung/39533>

<sup>43</sup> <https://www.thalwil.ch/publikationen/172120>

<sup>44</sup> <https://www.oecd-ilibrary.org/sites/1c258f55-en/index.html?itemId=/content/publication/1c258f55-en>





leader of each department, thus inhibiting inclusion. Since an administration usually acts in a neutral and impartial manner, THA is very cautious when communicating political matters publicly.

*Main drivers:* According to the respondents, any form of interaction with the population has a positive impact on inclusiveness. It is important for THA to engage in a dialog with its citizens and to work benevolently for common interests. However, inclusiveness is also central within the administration, because the transfer of responsibility improves the quality of work.

*Good practices:* THA has a variety of measures to strengthen inclusive processes: during four occasions a year, important issues are voted at the municipal assembly meeting; all citizens can stand for election to the various commissions; at information events the administration informs about general construction projects; THA organises the biennial culture days; weekly consultation hours with the mayor are open to all citizens; citizens can place their concerns at any time or obtain information directly from the responsible offices.

*Monitoring and evaluation:* Many key figures of the departments can be found in the annual report, such as the participation in votes, or how many consultations were conducted by the individual offices.

## Reflexivity

*Embeddedness:* In THA one encounters a flat hierarchy and people meet at eye level as is the case for large parts of the Swiss labour market, where this effect is further amplified by millennials, entering the workforce. Moreover, the ability to self-reflect is strongly influenced by the culture. Again, respondents disagreed about the administrative capacity for self-reflection. Some felt that the administration was simply fulfilling its legal mandate and that the internal structures were not designed for self-reflection. However, in departments where services affect people, a feedback culture among employees seems to be well established.

*Main barriers:* In general, municipal administrations are highly regulated from a technical point of view, but have little rules in the interpersonal affairs. An increased exchange among the employees in terms of interpersonal cooperation would certainly be beneficial. According to one respondent, self-reflection is mainly influenced and induced by management. The willingness to learn from others is vital. In smaller administrations like THA, one person only is often responsible for something, which may inhibit transparent feedback in everyday working life. Reasons why employees leave the administration are usually not investigated, although often related to the superior. The exit interview would be suitable for an analysis and self-reflection about the style of leadership.

*Main drivers:* THA is well networked and maintains a lively exchange with other municipalities, offices, and working groups. This increases the capacity for reflection. Within a department, employees should be encouraged to take different points of view, which also prevents a silo mentality.

*Good practices:* One of the few reflexive tools that are formally applied is the annual employee interview, defined by the staff regulations (Section 2.4), having the goal of assessing the employee, defining new goals and providing feedback to the supervisor.

*Monitoring and evaluation:* Apart from the fact that it is generally difficult to objectify reflexivity, only proxies can be measured. Two years ago, the human resource department introduced a new software for handling employee interviews in order to ensure quality around the process. This way it is possible to say whether the interviews were conducted or not, but not to what extent the interviews contribute to the personal development of the employees.

## Responsiveness

*Embeddedness:* The political system in Switzerland is often described as slow and bureaucratic. When reporting on responsiveness the respondents gave different opinions. Some departments see themselves as





proactive and dynamic, others describe themselves as sluggish and reactive. All respondents identified the lack of financial and human resources as the decisive factor. In order to keep tax rates low, only viable services are maintained. Politicians may falsely expect a proactive attitude by the administration, but this is not considered realistic. The pandemic has softened many norms and created new opportunities for a faster adaptation, but the basic organisation of THA remains rigid.

**Main barriers:** The two main barriers identified are scarce resources and slow processes. Responsiveness requires a proactive attitude. Some officials and politicians deliberately keep a low profile to avoid public exposure.

**Main drivers:** The continuous exchange of THA with the population leads to a constant exposure to the rules and processes of the employees. The desire for adaptation can therefore be triggered both internally (employees) and externally (citizens).

**Good practices:** A popular instrument in Swiss politics is the initiative. At the communal level, an individual or a party can submit it and the authorities are obliged to respond to it. This process is characterised by a great deal of responsiveness. Another strategy of TBA is to orient towards bigger administrations, i.e. the City of Zurich or surrounding progressive municipalities. For the current development of the master plan on climate, own ideas were deliberately combined with existing ones from other municipalities. Due to a good preparation, it was possible to respond very quickly to the wave of refugees from Ukraine.

**Monitoring and evaluation:** Currently there are no KPIs that monitor the performance in responsiveness.

## Summary of the focus group

### Brief overview of participants

Out of nine invitations, seven THA employees agreed to participate in the focus group. Due to last minute cancellations, only five employees were present. The focus group took place on Thursday, 31st March, lasted for a total of 3 hours and was held physically. Participants from all hierarchy levels, both genders and several departments were present. As only a few (N=2) were familiar with the RRI-AIRR approach, the focus group started with a brief introduction to the project RRI-LEADERS, followed by a short explanation about the RRI keys. Using a QR code, participants voted on the relevance of each key and dimension. The results were discussed immediately after. In the final phase of the focus group a large matrix was presented: for every key and every dimension, the participants were asked to write down good practices, hurdles, drivers and monitoring criteria. After an initial brainstorming phase, the results were discussed in the group. The subsequent paragraphs summarise the findings of the focus group.

Table 25: Mapping of the focus group participants

Field of activity	Level	Gender	Related RRI keys	Related AIRR dimensions
Management	Senior	M	ALL	ALL
Sustainability	Mid	F	ALL	ALL
Utility	Junior	M	ALL	ALL
Energy planning	Senior	MF	ALL	ALL
Spatial planning	Senior	M	ALL	ALL



## Relevance of the RRI-AIRR approach in the THA

The participants (N=5) of the focus group ranked the relevance of the keys and dimension consistently high. Science education and open access received the lowest scores. Except for responsiveness, all governance dimensions were considered highly relevant to personal work.

Table 26: Average score of RRI-AIRR approach in the THA (sample size too small)

RRI key / AIRR dimension	Relevance to your work	Relevance to the organisation
Public engagement	1.5	2.0
Ethics	1.2	1.0
Gender equality	1.5	1.0
Open access	3.0	1.7
Science education	2.5	2.5
Anticipation	1.2	1.7
Inclusiveness	1.2	1.7
Reflexivity	1.5	1.5
Responsiveness	4.5	1.0

(1 – being least relevant; 5 – being most relevant; average score from evaluation of participants)

## Embeddedness of the RRI-AIRR approach in the THA

In the following paragraphs, all points which were taken up in the focus group are briefly discussed.

### RRI-Keys

*Public Engagement* was defined as the degree to which the administration seeks to engage with its citizens. For example, committed citizens can be elected to various advisory commissions, contributing their expertise to develop the municipality. A good example is the lively interaction of THA with the association Ecopolis. Ecopolis has a strong influence on the community in terms of sustainability, and is actively committed to the energy transition. Change processes, in particular, should benefit from public engagement. As for the upcoming transformation of the heat supply from gas to renewable energy, an exchange with the population is essential. *Open Access* was discussed in the context of digitisation. The two big challenges for THA are the lack of data architecture and, with increasing digitalisation, questions around data protection. *Gender Equality / Diversity* issues are subject to debate in THA, but are not among the most important topics. The focus group agreed that in addition to distinctive social services, THA always advocates for minorities in many ways. The attitude towards *Science Education* was confirmed by the focus group. Scientific education is important in technically complex topics such as the energy transition. The distance to science is overcome by more exchange and collaboration with universities of applied sciences. *Ethics* was not addressed in the focus group.

### AIRR-Dimensions

*Anticipation* was understood as the ability to envision the future and recognise trends at an early stage. A recurring theme regarding anticipation, are master plans and strategies of THA. For most of the department, these strategies are an integral part of the work. These documents look far ahead and cover periods well beyond ten years. Examples include: the Guiding Principles, the Municipal Energy Plan, the Masterplan Care, the gas strategy or the developing climate master plan. Again, the threat to these long-term plans is stated to be the legislative period. These findings had already emerged from the interviews and were only confirmed



by the focus group. *Inclusiveness* was understood as the ability to involve other stakeholders in decision-making. The foundation for broad inclusion is provided by the citizens' political rights: voting rights, initiatives and appeals. Larger projects are usually developed in consultation with the population and require the approval of the voters at the urn. For example, a survey about a construction project was carried out with the help of a QR code at the parking lot. These participatory processes have a long history and are strongly embedded in THA operations. Furthermore, new laws and enactments can also have an inclusive effect. Citizens who abuse these rights for their own particular interests are a hurdle for inclusion. *Reflexivity* was defined as the ability to critically examine one's own processes and procedures. According to the focus group, it is strengthened by certifications such as the energy city label. The label defines clear goals and compares them with the actual state of the community. The silo thinking mentality, only taking a first-person perspective, was mentioned as being detrimental to reflexivity. *Responsiveness* was understood as the ability to react to external changes quickly and flexibly. Participation in research projects and collaborations with universities is expected to improve responsiveness. Since responsiveness means a lot of interaction with the public, the financial and human resources are decisive. As an example, the non-motorised traffic concept was mentioned, where a need of the population was responded to. Another example is the waste strategy where one has tried to make recycling as easy as possible to households in order to enable high recovery rates of recyclable materials.

## Conclusions

In Switzerland, the RRI-AIRR approach has been largely unknown and has not yet been taken up as a framework by any of the municipal administrations. Therefore, there is no specific mentioning of the RRI-AIRR approach in any of the documents studied. However, the present analysis shows that many of the RRI keys and AIRR dimensions are being used in operations of THA.

The annual report as well as other documents reveal how important public engagement is for the administration. This includes social welfare, counselling services for the elderly, families and young people, information events and much more. In terms of gender equality and diversity, equal opportunities and pay equity are stipulated in the staff regulations and the current legislative goals. THA intends to train its employees and educate students in environmental consciousness. Furthermore, nothing about science education could be found in the documents. Open access is mentioned in connection with the upcoming digitisation, but also the current guiding principles call for more transparency and openness. Most governance elements, i.e. the AIRR dimensions, are not mentioned as such, but appear in the form of good practices. In the case of anticipation, it is largely about the development of strategies. Key planning documents include the municipal structure plan, the energy plan and the climate master plan, but all departments have some form of development concept. Several of the documents examined identify inclusiveness as a goal for THA. Such as maintaining contacts with the business community, strengthening public relations, and ensuring a social balance. Internally, a climate of mutual trust should prevail and a dialog across all hierarchical levels must be enabled. Reflexivity manifests itself in the constant revision of the municipal code, annual employee performance reviews, and the emerging funding tool. Responsiveness was not addressed in any of the documents.



New policies are developed in the various commissions and presented to the municipal council. As the executive power, the municipal council has the authority to adopt new resolutions. But middle and senior management have also some leeway in the way they manage the department. The formal implementation of the RRI-AIRR approach would necessarily have to go through the municipal council. However, individual RRI keys and AIRR dimensions can easily be accentuated at the department or even at the division level.

Although THA has only been involved with the RRI-AIRR approach because of the EU project RRI-LEADERS, many of the RRI keys and AIRR dimensions are reflected in the values of the administration. The interviews revealed that the four elements of governance: anticipation, inclusiveness, reflexivity and responsiveness are important for the administration, but some of the RRI keys can also be strengthened. THA is expected to address problems more proactively and increase anticipation with the introduction of systematic issue management. In addition, more emphasis should be placed on the sustainability assessment. Supervisors should try to give more responsibility to employees through inclusiveness. This creates motivation, increases the quality of work and counteracts the silo mentality. Self-reflection can be encouraged through a lively exchange among employees, but must be supported by higher management. The systematic evaluation of the employee appraisals as well as the recording of reasons why employees leave THA increase reflexivity. Responsiveness is to be promoted through optimised processes and more financial and human resources. Ethical discourse should be fostered through the examination of existing rules and norms. After the pandemic, public engagement should be restored to previous levels, as THA can also benefit from public knowledge. Despite increasing awareness of diversity and gender issues, internal documents could better address this topic. Open access issues strongly affect the administration. More financial resources and employee training are needed to cope with the pressure of digitisation. Cooperation with neighbouring communities can conserve resources. All policy decisions should be made available to the public. In this context, issues of data protection and data accessibility must be thoroughly weighed. Science education is enhanced by empowering employees and promoting competencies. Through further training, employees bring new knowledge into the administration. Evaluation criteria for science education could provide more clarity about the current state of THA.

Further suggestions for integration of the RRI-AIRR approach were given by the focus group. The risk of long-term plans being disrupted by the municipal council's term of office should be minimised. External labels and certificates that have objective evaluation criteria can increase reflexivity. Change processes such as the energy transition should benefit greatly from public engagement. In terms of Open Access, two big challenges for THA are the lack of data architecture and issues about data protection. Science education can be promoted through closer dialogue between universities and the administration.



# Internal RRI review of PES SL

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## List of acronyms / abbreviations used in this document

RRI - Responsible Research and Innovation

AIRR – Anticipation, Inclusiveness, Reflexivity, Responsiveness

R&I – Research and innovation

## Executive Summary

This document presents to what extent the RRI keys and AIRR dimensions are implemented in *Promoció Econòmica de Sabadell* (PES). In order to explore this topic, 8 interviews were conducted and a focus group was organised by six members of the staff at PES.

In general terms, it is interesting to underline how RRI keys and AIRR dimensions are applied in the daily tasks of the organisation, however, the lack of existence of any explicit document related to RRI-AIRR deployment at PES makes their identification difficult by the employees.

Gender equality, inclusiveness and public engagement appear as the most prominent keys, while science education has little presence in the organisation.

Exploring AIRR dimensions has been more complicated than RRI keys. Generally, all of them seem to be taken into account, however, both the interviewees and focus group members found it difficult to define them when talking about concrete practices, programmes and tasks.

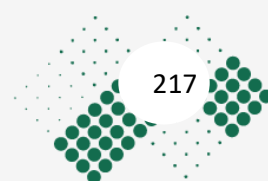
## Introduction

### Type of organisation and legal form

*Promoció econòmica de Sabadell* (PES) is a municipal Economic Development Agency with a legal form of Limited Company (Ltd.)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



## Organisational structure (organigramme)



## Number of employees

As of May 2022, PES has 185 employees (this number might change throughout the year because some job contracts last less than one year).

## Mission or main purpose of the organisation

*Promoció Econòmica de Sabadell* is a public organisation integrated in the Area of Economic Development and Administrative Impetus of the Sabadell City Council, dedicated to boost local economy through different programmes.

## Brief presentation

*Promoció Econòmica de Sabadell* is in charge of providing professional training and technical assistance services to people and companies. It offers support to people who want to improve their professional skills, find a new job or start a business, as well as to companies who want to settle down in the territory. Its services are divided in the following areas: professional formation, employment, professional guidance and job opportunity, creation and consolidation of companies, social and solidarity economy and strategic planning.

The Business Support department, where the RRI-LEADERS project is run, is in charge of providing training and technical assistance services for the inception of new businesses and their growth, acceleration and consolidation. In doing so, it provides the following services:

- Business advice.
- Municipal spaces (incubators and business centres).
- Workshops, seminars and other resources, aimed at schools that want to work on the topics of entrepreneurship.
- Supporting industrial activity areas in the city, focusing on investment attraction and easy landing of new companies in the area.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006439



- Promotion of social economy and solidarity.
- The Erasmus for Young Entrepreneurs project. PES supports the project as an intermediary organisation.

## Place of the organisation in the territorial innovation eco-system (Organisational networks)

PES is in the centre of the territorial innovation ecosystem. It has a key role in connecting stakeholders of the quadruple helix and in ensuring an active public engagement. It is connected to all kind of stakeholders due to the fact that it directly supports industries, companies and citizens, as well as academia and other local, regional and European administrations. All of them emerge as essential for the proper development of any innovation policy.

## Review of the relevant internal organisational documents

### 1. Local Action Plan

#### Brief summary of the document:

Year of publication: 2019

Target audience: internal document

Main purpose: With more than 25 years of experience in the city, the Economic Development Agency of Sabadell (*Promoció Econòmica de Sabadell*, PES) is an important example of Local Employment Service in Catalonia. This document analyses the economic activity in Sabadell (productive structure and economic sectors, reindustrialisation, mobility and transport, jobs creation, occupation and education) and draws the main action lines to be developed by PES following the guidelines set by the European Employment Strategy:

- Support people to help them to change jobs or return to work.
- Support companies to help them to start, consolidate and generate employment.
- Support the territory to promote economic development.

#### Place of RRI-AIRR approach in the document – a table:

Name of the document	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	NO	NO	NO	NO	YES
Responsible research and innovation (RRI) (the English concept)	NO	NO	NO	NO	YES
<i>Investigació i Innovació Responsable</i>	NO	NO	NO	NO	YES
Research ethics or research integrity	NO	NO	YES	NO	YES



Societal engagement or public engagement	NO	NO	YES	NO	YES
Gender and diversity	NO	YES	YES	YES	YES
Anticipation, foresight, vision, planning	NO	NO	YES	YES	YES
Inclusiveness	NO	YES	YES	YES	YES
Responsiveness and adaptation	NO	NO	NO	NO	YES

The document is consistent when talking about gender, diversity and inclusiveness because one of its main purposes is to support people on job hunting, business creation and training. The document stresses the diversity of people when using the different services deployed in PES. There are different people with different personal (young people, newcomers, seniors, etc.) and professional (unemployed, student, etc.) situations that require different approaches by PES technical services. Gender is also pointed out in the document as part of the inclusiveness strategy, but also in terms of offering programmes dedicated to all those people who have suffered gender-based violence.

In this sense, ethics and public engagement are 2 RRI keys that could be easily included when talking about creation of jobs and businesses.

Research ethics, public engagement, gender and diversity, anticipation and inclusiveness are identified as goal/value in the document when talking about the objectives of the action plan.

All good practices identified relied on different programmes developed by PES such as:

- UBICAT: dedicated to improve long-term unemployed people.
- *Projecte Singulars. Sabadell Talent Jove* (Singulars Project. Sabadell Young Talent). A 100% funded programme, launched in 2019 with the aim of facilitating access to training and guidance of specific job sectors. Target people are aged under 30 and unemployed.
- *Coaching per a majors de 45 anys* (+45 years old coaching). A career guidance service dedicated to coach people aged over 45 to improve their skills and gain self-confidence.

RRI is not directly referenced since the concept doesn't have a wide usage in PES.

## 2. How quality is worked at PES

### Brief summary of the document:

Year of publication: 2020

Target audience: intended for external audience

Main purpose: PES activity is based on the constant quality of services and the maximum satisfaction of its users. Thus, in 2003 PES started a process to achieve the certification of the ISO 9001 Standard for the activity of Occupational Training and RMI (*minimum insertion incomes*) measures. Following the example of certified activities, PES has already managed to extend the quality processes to all its services. Although this practice is not mandatory, it aims to guarantee the quality of services in all cases.



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This document describes PES engagement with quality through all its processes and services. It defines its objectives, values and its scope of actuation.

**Place of RRI-AIRR approach in the document – a table:**

Name of the document	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	NO	NO	NO	NO	YES
Responsible research and innovation (RRI) (the English concept)	NO	NO	NO	NO	YES
<i>Investigació i Innovació Responsable</i>	NO	NO	NO	NO	YES
Research ethics or research integrity	NO	NO	YES	NO	YES
Societal engagement or public engagement	NO	YES	YES	NO	YES
Gender and diversity	NO	YES	YES	YES	YES
Open access and open science	NO	NO	YES	YES	YES
Anticipation, foresight, vision, planning	NO	YES	YES	YES	YES
Inclusiveness	NO	YES	YES	YES	YES
Reflexivity, evaluation, self-evaluation	NO	YES	NO	YES	YES
Responsiveness and adaptation	NO	YES	NO	NO	YES

The document makes a clear reference to quality. This intrinsically implies several values such as anticipation and planning, inclusiveness, self-evaluation and adaptation in order to improve all internal processes. The document stresses the following commitments:

- Managing the quality of services according to the requirements of the ISO 9001 standard and constant improvement of their efficiency.
- Developing and improvement of strategic tools for staff organisation such as the Equality Plan, the Protocol for the Prevention of sexual harassment, etc.
- Ensuring that the organisation's communication and information is accurate, fully transparent with the activation of a Transparency Portal.
- Achieving the commitments adopted in the “Charter of Labour Services and Company” approved by the Municipal Plenary and publication of the committed indicators.



Although there is no clear mention of RRI keys and AIRR dimensions, they are mainly included in the document, because some of them like gender, diversity or public engagement are directly treated in PES services and activities.

### 3. Internal Plan of Gender Equality

#### Brief summary of the document:

Year of publication: 2013

Target audience: internal document

Main purpose: According to all municipal policies, related to gender equality, implemented in Sabadell, this document seeks to implement them internally. Thus, Sabadell Municipality is committed to guarantee gender equality among its workers and departments. The document is mainly based on data analysis and diagnosis and it seeks to be a strategic tool, aimed to boost workers' talent and gender equality.

#### Place of RRI-AIRR approach in the document – a table:

Name of the document	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	NO	YES	NO	NO	YES
Responsible research and innovation (RRI) (the English concept)	NO	NO	NO	NO	YES
<i>Investigació i Innovació Responsable</i>	NO	NO	NO	NO	YES
Research ethics or research integrity	YES	NO	YES	NO	YES
Gender and diversity	YES	YES	YES	YES	YES
Anticipation, foresight, vision, planning	NO	NO	YES	NO	YES
Inclusiveness	YES	YES	YES	YES	YES
Reflexivity, evaluation, self-evaluation	YES	YES	YES	NO	YES
Responsiveness and adaptation	YES	YES	YES	NO	YES

The document basically refers to gender issues as its main objective is to analyse them in the municipal structure and detect any strengths and weaknesses. Thus, AIRR dimensions gain importance when discussing how to deal with gender issues. In this sense, inclusiveness, reflexivity and responsiveness are clearly identified in the document when presenting the different phases of the action plan development: complex data compilation, evaluation and definition of improvement measures.



Other RRI keys are identified, but not directly referred to because the document is more focused on the gender and diversity keys. The RRI concept is not referred to directly either.

## 4. Annual Report 2020

### Brief summary of the document:

Year of publication: 2020

Target audience: intended for external audience

Main purpose: The document's objective is to collect and wrap up the main activities, carried out by PES in 2020. It is mainly based on basic indicators, related to services and users, as well as all those activities, performed in different PES departments.

### Place of RRI-AIRR approach in the document – a table:

Name of the document	Is it a key focus of the document?	Is it mentioned?	Is it identified as a goal or value?	Are any good practices identified?	Can it be included in the document, if it is not there?
Responsibility	NO	NO	YES	NO	YES
Responsible research and innovation (RRI) (the English concept)	NO	NO	NO	NO	YES
<i>Investigació i Innovació Responsable</i>	NO	NO	NO	NO	YES
Societal engagement or public engagement	NO	NO	YES	NO	YES
Gender and diversity	NO	YES	YES	YES	YES
Anticipation, foresight, vision, planning	NO	NO	YES	NO	YES
Inclusiveness	NO	NO	YES	NO	YES
Reflexivity, evaluation, self-evaluation	YES	NO	YES	NO	YES
Responsiveness and adaptation	YES	NO	YES	NO	YES

The Annual report is an empirical document which gives a snapshot of the annual activity. Gender and diversity are directly mentioned as they are intrinsic in the services, offered by PES, especially when referring to training and job hunting. AIRR dimensions like reflexivity and responsiveness play a key role in the document since its aim is to evaluate and improve PES services.



## Summary of the interviews

### Brief overview of respondents

A total of 8 members of staff were interviewed. 1 head of department (female), 2 programme managers (male and female), 4 technicians of business support (females) and 1 junior technician (female).

### Framing of the RRI-AIRR approach in PES

In general, the interviewees were not very familiar with the RRI-AIRR concept, which became obvious when we focused on RRI keys and AIRR dimensions. It is important to point out that three of them had never heard about the concept, so they needed additional information about it. One of them had heard about it, but was not able to define it, while four interviewees knew about the concept and defined it with the following statements:

*“A broader and more inclusive way of conducting research and innovation that takes into account the point of view of different stakeholders such as companies and citizens, in addition to research centres and public entities.”*

*“A way of applying social responsibility issues to research and innovation. Issues such as animal welfare, gender equality, responsible transport, etc.”*

*“I conceive the term as the formula that proposes the process of developing any product or service which integrates all stakeholders that participate in the process from the beginning (end user/ citizenship + research and innovation agents + companies). A successful formula that guarantees the necessary response to a societal challenge that includes all stakeholders’ interpretations.”*

*“A Research and Innovation process in which the different branches of the quadruple helix of innovation (research and knowledge, business, public administration and citizenship) are taken into account.”*

Among the interviewees that were familiar with the concept, one of them misconceived it, confusing and mixing it with the social responsibility one, while three of them rapidly associated it to the quadruple helix involvement. In doing so, they approached to the RRI key of public engagement. However, the rest of the RRI keys and AIRR dimensions were barely mentioned. Only the RRI key of gender equality was mentioned, as well as the AIRR dimensions of inclusiveness and responsiveness. It is interesting to point out that the association made between the public engagement RRI key and the quadruple helix participation is clearly linked to their daily tasks which require being in contact with a high number of stakeholders.

The interviewees saw some of the RRI Keys and AIRR dimensions as part of their responsibilities. When talking about their specific jobs some of them ranked ethics and gender equality as very relevant keys, as well as inclusiveness, since part of their daily tasks consist in supporting people in their professional development. Some of the programmes and activities they carry out such as women empowerment actions are directly linked to gender equality. They attend a wide scope of profiles (unemployed, students, entrepreneurs, consolidated businessmen and businesswomen...) so inclusiveness and ethics are implicit when employees at PES provide services to these target groups. Gender equality and inclusiveness were broadly mentioned in the relevant documents, presented in section 2 above, while ethics was identified as a value. Thus, all 3 keys





and dimensions (gender equality, ethics and inclusiveness) can be understood as important cornerstones of the organisation.

Public engagement was also mentioned by some interviewees as well as anticipation, especially by those who work in innovation programmes where the quadruple helix involvement is essential. Anticipation was seen as a very valuable AIRR dimension since it was considered a key attribute in project planning. It is also interesting to underline that job positions with more responsibility also introduced reflexivity and responsiveness as intrinsic dimensions of their duties.

Thus, we can conclude that the interviewees who are directly involved in offering services to people consider gender equality, ethics and inclusiveness as part of their responsibilities, which is in contrast to those, involved in project management and development, who focus on public engagement and anticipation. Finally, some staff members mentioned the open data RRI key, considering it relevant when they manage large amount of public data.

In relation to the role of RRI-AIRR in the organisation, the interviewees considered that RRI keys and AIRR dimensions play an important role in the Human Resources department and in the Organisation Committee. In this sense, both were understood as the main RRI-AIRR actors in the organisation. This fact is translated into the organisation documents which express a clear commitment in public engagement, gender and inclusiveness. So, in terms of existing initiatives, practices or processes in the organisation, the interviewees clearly talked about the 4 documents reviewed before. Also, they expressed the integration of the 4 helix in all the innovation projects developed, such as in the project Ininval·les<sup>45</sup> where multiple stakeholders take part, linking this fact to the public engagement key. They also explained the Empowering Women Entrepreneurship programme<sup>46</sup> as a good practice that integrates the gender equality key and the inclusiveness dimension.

Among the main concerns, the interviewees pointed out the lack of formal procedures to integrate RRI-AIRR principles in all the organisation departments and to transfer them to all the projects and activities.

When talking about possible practices to be conducted, they sent a clear message in favour of the implementation of RRI-AIRR values in the in the public-private collaboration procedures. For example, if the organisation needs to create a partnership with different stakeholders for a concrete project, the selection of stakeholders should also contemplate how RRI-AIRR principles are integrated by each stakeholder in their *modus operandi*.

The RRI-AIRR approach did not replace any other concept existing before, but all of the interviewees agreed that its values were introduced into the organisation gradually in parallel with the improvement of programmes and services, offered by PES. However, it is important to note that these principles were not linked to the RRI-AIRR concept. So, no specific document about RRI-AIRR exists.

All interviewees underlined how gender equality has improved a lot thanks to the deployment of concrete programmes at local and regional level and due to the implementation of the Internal Plan of Gender

<sup>45</sup> Ininval·les is a Territorial Specialisation and Competitiveness Project (PECT) in the framework of the Catalan Smart Specialisation Strategy (RIS3CAT). The PECT is a competitive mechanism to promote multiagent innovation projects that contribute to the economic transformation of their territories, promoting the local innovation ecosystems. Ininval·les is led by the Sabadell City Council and wants to promote the territory of Vallès as a driver for innovation and the industrial systems design. <https://ininvalles.cat/>

<sup>46</sup> Empowering Women Entrepreneurship. A programme dedicated to empowering women in business creation through mentoring, formation and networking. <https://sabadellempresa.cat/suport-empresarial/dones-emprendedores>



Equality. They paid attention to the inclusiveness dimension as it appears in the main organisation documents. They also stressed how participation in European projects has introduced a lot of RRI principles in the organisation, as they are eligibility criteria of the project calls. In this sense, participation in European projects is associated with the open access key and the anticipation, reflexivity and responsiveness dimensions. Finally, they highlighted the importance of the public engagement key when considering the engagement of all stakeholders of the innovation ecosystem.

## RRI keys and AIRR dimensions in PES

### Ethics

**Embeddedness:** Medium – High.

**Main barriers:** lack of knowledge among employees.

**Main drivers (legal, cultural, structural and/or political):** legal.

The approval of the regional law on transparency, access to public information and good government access (*Llei 19/2014 de transparència, accés a la informació pública i bon govern*) triggered a change on ethics in local public administrations.

**Good practices:** No concrete ethical policies exist in PES, but it is important to point out that, as a public organisation belonging to the City Council of Sabadell, it applies the same documents and practices than the City Council. In terms of ethics, an important effort has been done in promoting the “ethic post”: an internal channel through which all employees can address inquiries, ask for advice and provide everything they think is appropriate, regarding public ethics in the Sabadell City Council. Moreover, an ethic code dedicated to senior officers exists. This specific code was created in 2018 in order to guarantee ethics in high-level positions. It guides senior officers with public responsibility to act in accordance with ethics to guarantee democratic quality.

**Monitoring and evaluation mechanisms and practices:** The Public Ethics Commission was created: a professional board that monitors and evaluates the Code of Ethics.

### Public engagement

**Embeddedness:** High.

**Main barriers:** difficult to engage all stakeholders; citizens have a lack of participative culture.

**Main drivers (legal, cultural, structural and/or political):** cultural (despite the lack of culture for citizen participation in decision-making, there is an increasing demand to involve the public in public processes), structural (new formulas have been integrated in the public administration like participative procedures, public expositions or public forums) and political (EU remarks the necessity to integrate public engagement).

**Good practices:** public engagement is promoted in a large number of projects run by PES like Ininval·lès: a project that aims to promote research, technological development and innovation among companies transversally. The project takes into consideration all key stakeholders involved in the innovation ecosystem (4 helix).

**Monitoring and evaluation mechanisms and practices:** annual surveys and the “suggestion post-box”.

### Gender equality

**Embeddedness:** High.



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**Main barriers:** lack of knowledge. Although it is one of the most integrated keys in the organisation, some employees might still have a lack of knowledge of how to integrate it (probably, they don't know about the existence of an Internal Plan of Gender Equality).

**Main drivers (legal, cultural, structural and/or political):** political through the elaboration of specific plans and cultural (gender equality is broadly disseminated and naturally adopted).

**Good practices:** It is one of the dimensions with more good practices detected by the interviewees. They underline how visibility of women have increased in the last years and some initiatives have been created like the Empowering Women Entrepreneurship programme.

**Monitoring and evaluation mechanisms and practices:** annual surveys, the “suggestion post-box” and the Internal Plan of Gender Equality.

### Open access

**Embeddedness:** Medium.

**Main barriers:** lack of infrastructure and transparency.

**Main drivers (legal, cultural, structural and/or political):** legal and political through local and regional laws.

**Good practices:** The Local Economy Observatory of Sabadell<sup>47</sup> where monthly economic data is published and the Open data service<sup>48</sup> of Sabadell City Council.

**Monitoring and evaluation mechanisms and practices:** annual surveys and the “suggestion post-box”.

### Science education

**Embeddedness:** low.

**Main barriers:** lack of knowledge.

**Main drivers (legal, cultural, structural and/or political):** not identified.

**Good practices:** not identified.

**Monitoring and evaluation mechanisms and practices:** not identified.

### Anticipation

**Embeddedness:** Medium.

**Main barriers:** due to the volume of work, public administration tends to solve problems rather than to anticipate them.

**Main drivers (legal, cultural, structural and/or political):** existence of formal protocols on how to implement it (structural).

**Good practices:** not identified.

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<sup>47</sup> The Local Economy Observatory of Sabadell is in charge of studying, analysing and disseminate all the socioeconomic data of Sabadell. It is conceived as a strategic instrument for the economic development of the city. <https://www.vaporllonch.cat/observatori-economia-local>

<sup>48</sup> The Open Data service is a municipal portal created with the aim of promote the values of transparency in the Public Administration. It provides free data about the city of Sabadell and it promotes interoperability between administrations and society's access to public information. <https://opendata.sabadell.cat/ca/>



**Monitoring and evaluation mechanisms and practices:** not identified.

### Inclusiveness

**Embeddedness:** Medium-high.

**Main barriers:** although this dimension is implemented in the organisation, no formal tool or protocol to implement it systematically in all projects and activities exists.

**Main drivers (legal, cultural, structural and/or political):** cultural (inclusiveness is broadly disseminated).

**Good practices:** detected in training programmes and job services, offering opportunities to all people, among them:

-UBICAT: dedicated to improve long-term unemployed people.

-*Projecte Singulars. Sabadell Talent Jove*: dedicated to foster young people in specific sectors.

- *Coaching per a majors de 45 anys*: dedicated to coach 45+ years old people in job hunting.

**Monitoring and evaluation mechanisms and practices:** annual surveys and the “suggestion post-box”.

### Reflexivity

**Embeddedness:** low.

**Main barriers:** it is not considered as essential in the daily work.

**Main drivers (legal, cultural, structural and/or political):** not identified.

**Good practices:** not identified.

**Monitoring and evaluation mechanisms and practices:** How quality is worked at PES.

### Responsiveness

**Embeddedness:** medium.

**Main barriers:** although this dimension is implemented in the organisation, no formal tool or protocol to implement it systematically in all projects and activities exists.

**Main drivers (legal, cultural, structural and/or political):** cultural (city responsiveness is highly demanded by the citizens).

**Good practices:** not identified.

**Monitoring and evaluation mechanisms and practices:** annual surveys and the “suggestion post-box”.

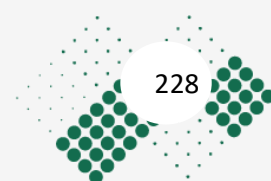
## Suggestions for further integration of RRI-AIRR approach, or individual keys and dimensions, into policies and practices in PES

All the interviewees expressed their concerns on the variability of RRI deployment in relation to the political party that leads the government. Some possible solutions to fix this variability could include creating a RRI-AIRR agreement. They made the following suggestions for further integration of RRI-AIRR:

*“It would be interesting to incorporate agile methodologies that allow innovation processes to be more flexible and faster. It would also be interesting to incorporate new key technologies to improve innovation management.”*



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*“Establishing an open innovation model that guarantees continuous improvement in the organisation and in the different projects in which we participate.”*

*“Organising information sessions on how to integrate RRI.”*

*“It would be great to do an education programme in female entrepreneurship and STEM (Science, Technology, Engineering and Mathematics) in Sabadell schools.”*

*“Teamwork could be boosted as a way to introduce RRI keys since different points of view and perspectives could be gathered from the different technicians of the section.”*

*“RRI principles should be integrated from the management department and extended through the human resources department.”*

## Summary of the focus group

### Brief overview of participants

The focus group was attended by six people. The group included a member of the Organisation Committee (male), the main person responsible for participation of the organisation in the RRI-LEADERS project (female), one programme manager (female), one technician (male) and with two administrative staff (female).

Only 50% of them were familiar with the concept of Responsible Research and Innovation.

### Relevance of the RRI-AIRR approach in PES

RRI key / AIRR dimension	Relevance to their work	Relevance to the organisation
Public engagement	1	1,5
Ethics	1,5	2
Gender equality	1,5	1,5
Open access	2	2,5
Science education	3,5	3,5
Anticipation	2	1,5
Inclusiveness	1,5	2
Reflexivity	2	2,5
Responsiveness	1,5	1,5

(1 – being most relevant; 5 – being least relevant; average score from evaluation of participants)

### Embeddedness of the RRI-AIRR approach in PES

#### Drivers

All focus group members agreed that public administration has to guarantee some of the RRI keys and AIRR dimensions like public engagement, gender equality, inclusiveness and open access. These principles not only need to be fostered by the organisation, but also by its employees. Thus, they underlined that employees always try to be coherent in their daily work with RRI principles.



They did not detect any specific drivers to implement RRI keys and AIRR dimensions, however they think that the creation of RRI actuation protocols, a guide of good practices, concrete trainings on RRI and information guides could be drivers for their implementation.

## Barriers

Focus group members detected 3 main barriers:

- The lack of competence in implementing RRI-AIRR principles. The framework should be implemented from the management office (RRI-AIRR implementation is too hierarchical and it does not depend on employees).
- Dependence on public grants to deploy specific actions or projects, related to RRI-AIRR.
- The lack of resources, dedicated to implement this kind of issues (RRI & AIRR).

## Good practices

In terms of good practices related to RRI keys and AIRR dimensions within the organisation they identified:

- The Internal Plan of Gender Equality
- Actions related to gender vocabulary (usage of specific vocabulary to not generate gender differences)
- The Empowering Women Entrepreneurship programme, dedicated to empowering women in business creation through mentoring, formation and networking.

## Monitoring and evaluation

They didn't have too much knowledge about indicators for monitoring and evaluating the organisation's performance, related to RRI keys and AIRR dimensions. However, they identified some mechanisms among their daily tasks. In reference to gender equality they measure the number of men and women to whom a service has been offered. They also measure the number of companies, entrepreneurs and start-ups created following gender criteria. Some other RRI keys and AIRR dimensions like responsiveness and open access can be measured through the evaluation questionnaires of the service.

The Local Economy Observatory of Sabadell was also identified as a mechanism of monitoring, because it generates monthly economic data.

## Recommendations

All focus group members clearly identified public engagement and gender equality as the two RRI keys integrated in the organisation. Two of them stressed how inclusiveness, reflexivity and open access should be guaranteed by any public administration and the respective employees, so it needs to be improved in such structures. Also, they agreed that all of the RRI keys and AIRR dimensions are important and should be improved in the future, since all of them are key in public administration. However, they underlined that it would be interesting to explore how to integrate science education and dissemination, the only RRI key that was not identified by anyone.





## Conclusions

The RRI-AIRR approach has a high relevance in PES because all RRI keys and dimensions are crucial for the correct deployment of any policy. In effect, public administration has to guarantee that all their policies and practices have as many RRI keys and AIRR dimensions as possible integrated in them. Since the daily work of the staff at PES is focused on helping people and companies, they considered the application of all RRI keys and AIRR dimensions very relevant.

However, no explicit document related to RRI-AIRR deployment exists and the main internal organisational documents do not make a clear reference to RRI keys and AIRR dimensions. Gender equality and inclusiveness appear to be the main keys identified in the internal documents. Some other principles like public engagement, reflexivity and responsiveness are considered as intrinsic in public administration practices.

As a public organisation, PES works to ensure all RRI-AIRR principles, with special focus to public engagement, ethics, gender equality and open access. Moreover, the City Council of Sabadell has been working on ethics, gender and transparency policies for a long time. In terms of ethics, an important effort has been made in promoting the “ethic post”: an internal channel via which all employees can address inquiries, ask for advice and provide everything they think is appropriate regarding public ethics in Sabadell City Council. The approval of the regional law on transparency, access to public information and good government access (*Llei 19/2014 de transparència, accés a la informació pública i bon govern*) has triggered a change on ethics in local public administrations. In the City Council of Sabadell, the approval of the Code of Ethics of senior officers in 2018 can be considered a key event. This specific code was created in order to guarantee ethics in high-level positions. It guides senior officers with public responsibility to act in accordance with ethics to guarantee democratic quality. The Code of Ethics is monitored and evaluated by a professional board.

Nevertheless, no specific person responsible for the governance, management, implementation, monitoring and evaluation of policies and practices pertaining to different RRI keys and AIRR dimensions exists. Human Resources is probably the department with a larger experience in implementing some of the RRI keys and AIRR dimensions, ensuring the proper development of internal practices with internal protocols, gender equality plans or regulation in gender vocabulary. They are in charge of detecting formative necessities and offering staff training in concrete issues mainly focused on gender equality or ethics. It is also important to point out that no specific document or formal protocol, dedicated to RRI-AIRR implementation exists at PES.

Integration and implementation of RRI-AIRR values need a global coverage from public administrations. Firstly, it is necessary to formally identify all RRI keys and AIRR dimensions and raise awareness of their importance. Staff know about concrete RRI keys and AIRR dimensions, but at present these are not applied systematically in all the procedures and activities. It is necessary to create RRI-AIRR protocols that workers could follow and apply in their daily tasks.

