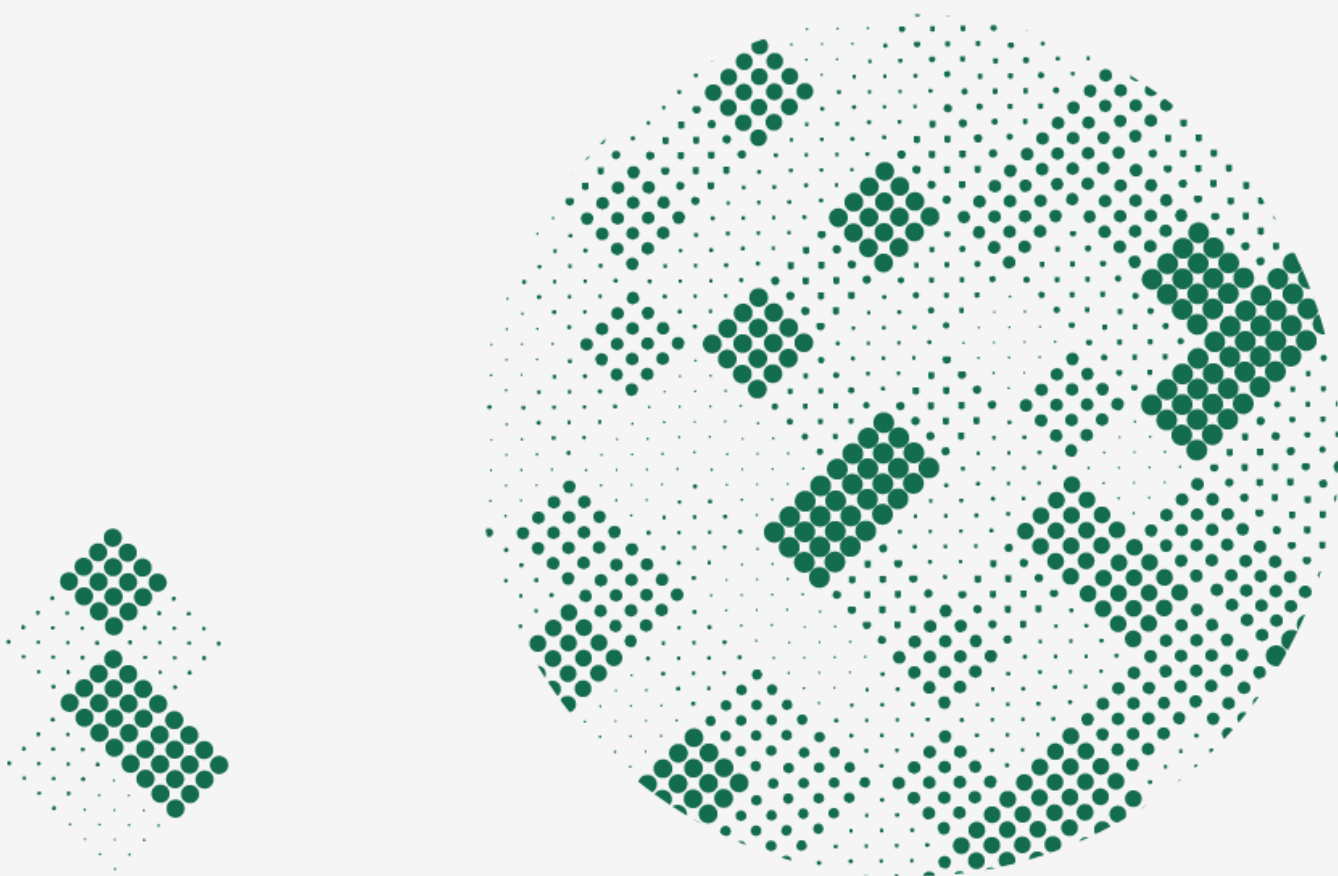




RESPONSIBLE
RESEARCH AND
INNOVATION IN
TERRITORIES

Deliverable 3.2

Report on results of Delphi survey per policy area and per RRI key



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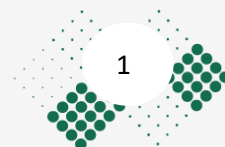
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Deliverable 3.2

REPORT ON RESULTS OF DELPHI SURVEY PER POLICY AREA AND PER RRI KEY

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P9	ECONOMIC DEVELOPMENT AGENCY OF SABADELL CITY COUNCIL	PROMOCIO ECONOMICA DE SABADELL	PES SL



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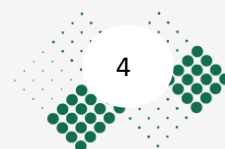


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List of acronyms / abbreviations used in this document

AIRR principles – Anticipation, Inclusiveness, Responsiveness and Reflexivity
R&D – Research and Development
DESI – Digital Economy and Society Index
EMAS – Eco-Management and Audit Scheme
EU – European Commission
FAIR – Findable, Accessible, Interoperable, Re-usable
GHG – Greenhouse Gas
ICT – Information and Communications Technology
IIS – Integrated Information System
ISN – Investor Support Network
IT – Information Technology
IoT – Internet of Things
NGO – Non-government organization
PET – Polyethylene Terephthalate
PPC – Public Power Corporation
R&D – Research and Development
RES – Renewable Energy Sources
R&I – Research and Innovation
RRI – Responsible Research and Innovation
RRI-LEADERS – Leveraging Leadership for Responsible Research and Innovation in Territories
RWM – Region of Western Macedonia
SMEs – Small and Medium Enterprises
SMELTS – Social, Management, Economic, Legal, Technology and Sustainability
STEM – Science, Technology, Engineering, and Mathematics
WP – Work Package



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, different R&I landscapes, and different dynamics among territorial actors.

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 different 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 involved territories will thus act as demonstrators for the potential of RRI on sub-national level. 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.”¹ 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 heavily 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, Responsiveness, and Reflexivity*, largely known as the AIRR dimensions.² RRI-LEADERS integrates these four dimensions into its methodological design and operational implementation.

¹ 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.

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



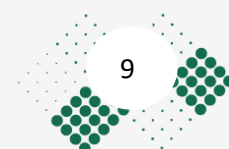
The overall implementation of RRI-LEADERS builds on the following methodology:

- *RRI Audits in the involved territories and partners*, which starts off the first stage of the co-creation approach in RRI-LEADERS. The partners will establish a clear baseline of existing practices and policy developments in the four territories that have already integrated or have the potential to integrate the RRI keys and the AIRR dimensions (Anticipation, Inclusiveness, Reflection, and Responsiveness), thus providing the grounds for mainstreaming the RRI-AIRR approach in relevant policy goals, implementation routines, and territorial (municipal/regional) strategies.
- *Delphi exploration of consensus about future orientations for RRI in the participating territories* defines another stage of the RRI-LEADERS' co-creation process. The Delphi method will be used to assess dissensus and barriers, and to develop consensus about possible and feasible future pathways for a better RRI-AIRR integration for each territory.
- The RRI-LEADERS co-creation process is not strictly linear. The next step in the process is the *Development of RRI-AIRR transformative outlooks in the participating territories*. For each participating territory a transformative outlook will be conceived, conceptualised, subjected to public scrutiny and validation through the involvement of non-organised and non-institutionalised citizens and community groups.
- A horizontal action of *Policy learning, and evaluation* runs throughout the project and will integrate insights from the previous activities and will promote a shared and future-oriented vision for RRI as a territorial leadership framework.
- To communicate effectively with their target groups, and to support the diffusion and exploitation of RRI-LEADERS policy outcomes, the partners dedicate efforts to streamline all strategic *communication and dissemination activities*. RRI-LEADERS partners will develop the tools to ensure that RRI-LEADERS' results reach out to the broadest range of interested audiences both within the participating territories and to a broader policy audience across the countries involved and to the EU.

Website of RRI-LEADERS: www.rri-leaders.eu



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Executive Summary

The **Deliverable 3.2 Report on results of Delphi survey per policy area and per RRI key** presents the Delphi survey results for the four participating territories:

- Region of Western Macedonia, Greece
- Sofia Municipality, Bulgaria
- Municipality of Thalwil, Switzerland
- City of Sabadell, Catalonia, Spain

The project objectives addressed by the deliverable are to:

- analyse the aggregated results of Delphi survey rounds per RRI key and AIRR dimensions and per policy areas (“compounding”) across the four territories, highlighting how each RRI key converges within territories and chosen policy areas;
- use these results to provide input to the development of the Territorial Outlooks.

A three-phase Delphi survey was carried out with the use of questionnaires and suitable expert panels. Each questionnaire included questions corresponding to specific policy objectives, which are characterised as “statements” in the rest of the document. The policy objectives were identified for each policy area and topic per territory by the research teams. The goal of the Delphi survey was to develop a consensus among the experts on solutions, barriers, best practices, and the importance of the integration of the RRI-AIRR concept in the context of the respective policy area. Consensus was defined based on the percentage of stakeholders who rated the importance of statements at the upper extremes of the Likert scales used across the questionnaires of the four territories.

In general, the AIRR dimensions seem to converge to a higher degree within territories and chosen policy areas compared to the RRI keys. According to the statistical analysis of the findings, the keys that appear most often among the questionnaire statements are Public Engagement and Science Education. Open Access comes next, while Gender Equality and Ethics emerge least frequently. Regarding the AIRR dimensions, Inclusiveness and Responsiveness are the dimensions with the highest percentage of occurrences, followed by Anticipatory Governance and Reflexivity, which appears in the smallest number of statements in the set of questionnaires.

Moreover, an important outcome of the three rounds of the Delphi survey is the number of statements that ultimately led to consensus. The highest percentages of consensus were reached in the Region of Western Macedonia. More specifically, 91.7% of the statements lead to consensus. The Municipality of Thalwil had the second highest percentage (64.3%), while the City of Sabadell followed with 55.29%. The lowest percentage of consensus appeared at Sofia Municipality with 47.69%.

Convergence of RRI keys and AIRR dimensions for the Region of Western Macedonia

For the region of Western Macedonia, the policy area that was investigated in the survey questionnaire was the “Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development ‘paradigm’”. Open Access and Science Education appear to be the most prominent RRI keys which are reflected in several statements on the territorial policy area, followed by Public Engagement. On



the other hand, the RRI keys of Ethics and Gender Equality were captured at a very low level. In terms of the AIRR dimensions, the dimension of Responsiveness appears most often in the statements of the questionnaire, something that has generally emerged as a result also in deliverable 2.2 (p.32) of the project.³ Anticipation and Inclusiveness dimensions are referred to several statements, while Reflexivity is reflected in the lowest number of responses. In Western Macedonia the number of statements that reached consensus is the highest compared to the other three regions.

Of all the answers, the ones that appear to be the most prominent, and even led to 100% of consensus, are:

- creating effective and decentralised mechanisms to identify education and retraining needs, in order to proceed with the upskilling of employees during the post-coal transition (Open Access, Responsive and Accountable Governance)
- inclusion of all local bodies towards a continuous and more vigorous promotion of entrepreneurship has been scored as crucial for the transition phase in Western Macedonia in combination with a more flexible regulatory and tax framework for businesses, as well as with a cooperation framework between academia and business (Responsible and Accountable Governance)
- provision of free land by the region to local businesses for the creation of energy communities that can invest in renewable energies (Responsible and Accountable Governance)
- integration of the RRI/AIRR concept in designing projects and creating sustainable mechanisms, considering the international experience (Anticipatory Governance)
- integration of digital transformation infrastructure (Science Education)

Convergence of RRI keys and AIRR dimensions for the Municipality of Thalwil, Switzerland

Energy transition was the territorial policy area of focus for the Municipality of Thalwil. More precisely they focused on reducing the use of fossil fuels and hence the greenhouse gas emissions, as well as reducing the total energy consumption on the territory of the Municipality. Science Education and Public Engagement were the two RRI keys that were primarily reflected in the statements, followed by Open Access in a quite high degree. Gender Equality and Ethics are completely absent from the statements that emerged from the Delphi study in Thalwil.

Like in Western Macedonia, Responsiveness is also dominant in the case of Thalwil, although not with the same degree of consensus. Of the 45 statements that apply to Responsible Governance, only 26 reached a final consensus between the stakeholders participating in the survey. Inclusiveness comes next with a high score also and a quite high number of statements reaching consensus. Taking into consideration the findings from former deliverables (Deliverable 2.2, p.70), Inclusion was considered an essential guiding principle of energy transition planning in the territorial context, which is evident from the results of the Delphi research too. Reflexivity appears in a relatively small number of statements, while Anticipatory Governance also shows a really low level of convergence with the territorial policy focus.

Some of the most prominent statements, in which RRI keys and AIRR dimensions have a significant role in the territorial policy objectives, are:

³ Deliverable 2.2. “Report on the RRI policy discourse in the involved territories”, p.32, <https://www.rri-leaders.eu/wp-content/uploads/2022/03/D2.2-Report-on-the-RRI-Policy-Discourse-in-the-Involved-Territories.pdf>

- promoting the local expansion of renewable energies (Public Engagement, Responsive and Accountable Governance)
- making successes visible (lighthouse projects) (Open Access)
- integrating the RRI/AIRR concept in the long-term planning of heat supply (Inclusiveness, Anticipatory Governance)
- expanding renewable energy networks taking into account the energy sources prioritised in the energy plan (Responsive and Accountable Governance)
- applying neutral energy advice at the expense of the Municipality in the event of pending heating system replacement (Science Education)

Convergence of RRI keys and AIRR dimensions for the City of Sabadell, Catalonia, Spain

For Sabadell, with a policy focus on Active Ageing, Public Engagement is the RRI key with the highest score regarding its reflection in the questionnaire's statements, followed by Science Education. In Sabadell, similarly to Sofia and in contrast to Western Macedonia and Thalwil, Ethics appears quite often in the statements. This finding does not come as a surprise, given the importance of Ethics in the policy foci of the circular economy and Active Ageing, as it involves sensitive social matters and subjects such as the environment and the elderly population. The key of Gender Equality, like in Western Macedonia and Thalwil, has almost zero appearance, although previous findings mention that Gender Equality is compulsory by the law, and appears in many territorial and national documents (Deliverable 2.2, p.90).⁴

Regarding the AIRR dimensions, the Delphi results showed that Inclusiveness is the dimension with the highest appearance and with a high level of consensus. Responsiveness follows, while Reflexivity is the least present AIRR dimension in the territorial policy area.

Some of the statements where RRI/AIRR approach is integrated with a high percentage of consensus are:

- wage improvement/economy incentives (Responsive and Accountable Governance)
- continuous evaluation of a participatory tool that will identify the challenges of the elderly by 2023 (Responsive and Accountable Governance)
- implementing technological tools that could be used by a vast majority of the population (Inclusiveness)
- enhancing the inclusion of users of a senior lab (Inclusiveness)
- guaranteeing the participation of all the agents from the quadruple helix (Inclusiveness, Public Engagement)
- improvement of working conditions (Ethics)

Convergence of RRI keys and AIRR dimensions for Sofia Municipality

For Sofia Municipality the survey was conducted using four questionnaires, one for each policy area of foci (Support to innovation; Digital transition and new skills/employment; Youth employment and entrepreneurship, and Sustainable urban development). The results of the Delphi survey reveal a more uniform distribution of the appearance of the RRI keys and the AIRR dimensions, compared to the other

⁴ Deliverable 2.2. "Report on the RRI policy discourse in the involved territories", p.90, <https://www.rri-leaders.eu/wp-content/uploads/2022/03/D2.2-Report-on-the-RRI-Policy-Discourse-in-the-Involved-Territories.pdf>

three territories. As for the RRI keys, Open Access appears in most of the questionnaire statements, followed by Public Engagement and Science Education. Finally, Sofia is the only territory where the keys of Gender Equality and Ethics were mostly referred in the statements.

Regarding the AIRR dimensions, Anticipatory Governance and Inclusiveness have appeared most in the questionnaire statements. These two dimensions of the Sofia survey appear more frequently than in the other three territories. On the other hand, the dimensions of Responsiveness and Reflexivity are less prominent in Sofia's statements. It should also be mentioned that the level of consensus of the statements related to the AIRR dimensions in this territory was the lowest.

The most prominent statements with the highest level of consensus are:

- creating a register of sustainable public procurement practices/ good practices (Public Engagement, Gender Equality, Open Access, Science Education, Ethics, Anticipatory Governance, Policy area: Sustainable urban development)
- regular data collection analysis, monitoring of performance indicators, evaluation of measures (Gender Equality, Policy area: Digital transition)
- encouraging digitalisation on a local, regional and international level (Open Access, Policy area: Support for innovation)
- creating a unified model/format for data collection in accordance with the requirements of national legislation and European regulations (Open Access, Ethics, Policy area: Sustainable urban development)
- necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality (Open Access, Ethics, Policy area: Sustainable urban development)
- digitalisation of administrative processes and services (Open Access, Policy area: Digital transition)
- integration of the RRI/AIRR concept in funding programmes (Public Engagement, Science Education, Ethics, Anticipatory, Responsive and Reflexivity, Policy area: Support for innovation)
- improving the digital skills of the administration (Science Education, Responsive and Accountable Governance, Policy area: Sustainable urban development)
- integration of RRI/AIRR concept by engaging stakeholders in the process of policy development, implementation, and evaluation (Inclusiveness, Policy area: Sustainable urban development)

Introduction

RRI-LEADERS: Leveraging Leadership for Responsible Research and Innovation in Territories, involves four different 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 involved territories will act as demonstrators for the potential of RRI on a sub-national level. 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.

RRI-LEADERS attempts to leverage leadership through three complementary tiers of planned intervention around RRI. For each of these tiers, RRI-LEADERS exemplifies leadership as a proactive, shared and responsible action towards setting ambitions for change and societal transformations, driving collaboration and agreement across societal actors, and striving for excellence and lasting impact in the pursuit of these ambitions. The three tiers of leadership intervention are interlinked into an operational progression, whereby each tier supports and enables the others as the project progresses:

- Tier 1 - Leveraging leadership in understanding of RRI proliferation and opportunities in the four territories.
- Tier 2 - Leveraging leadership in examining RRI construct relevance to territorial applications and its transformative potential.
- Tier 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.

This document represents *Project Deliverable 3.2 Report on results of Delphi survey per policy area and per RRI key* and is developed within the framework of *WP3 Delphi exploration of consensus about future orientations for RRI in the participating territories*. WP3 uses the Delphi questionnaire method to examine barriers, to support RRI practices as well as solutions to overcome those barriers and identify feasible future pathways for a better RRI integration for each one of the involved territories. WP3 belongs to the third tier of territorial leadership, as presented above.

The report features the following chapters:

- The introductory chapter makes a short introduction to the RRI-LEADERS project and explains the contribution of the current report in the project's development. It also briefly explains the RRI framework and the AIRR dimensions.
- Chapter 1 explains the methodology for the analysis of the questionnaire results.
- Chapters 2 presents the Demographic overview of Delphi survey results.
- Chapter 3 provides an analysis of aggregated results per RRI key across territories.
- Chapter 4 provides an analysis of the aggregated results per AIRR dimensions across territories.
- Chapter 5 is the concluding chapter where a compound analysis is presented regarding the aggregated results of the four territories.



RRI and AIRR Definitions

The **RRI policy framework** of the European Commission includes **five thematic keys**: research Ethics, Public Engagement, Science Education, Gender Equality, and Open Access.

- **Public Engagement** is about bringing together researchers, policymakers, industry and civil society organisations and NGOs, as well as citizens, to deliberate on matters of science and technology.
- **Gender Equality** is about fostering gender balance in research teams, ensuring gender balance in decision-making in research, and integrating gender dimension in the research and innovation content.
- **Open Access** is about making research findings available free of charge for readers.
- **Science Education** is about making science more attractive to young people (STEM – science, technology, engineering, and mathematics) as well as teaching and learning of science to non-scientists, such as school children, college students, or adults within the general public.
- **Ethics** is about conducting research in such a way that allows others to have confidence and trust in the methods and findings of research.

AIRR Dimensions

- **Anticipatory Governance** is focused on harnessing the collective intelligence and wisdom of collaborating organisations and citizens from a given territory (city, region, or state) to address strategic risks while at the same time capitalises on emerging opportunities so as to meet the set policy goals of the said territory.⁵ Anticipatory Governance approaches include foresight, technology assessment, horizon scanning, scenarios, vision assessment, etc.
- **Inclusiveness** deals with the integration of perspectives from a wide range of societal actors (including non-organised and non-institutionalised citizens and community groups) and their involvement in multi-stage co-creation processes in a wide range of policy areas.
- **Reflexivity** implies encouraging reflection about societal circumstances in order to reassess practices and adjust initiatives.⁶
- **Responsive and Accountable Governance** places societal needs in the focus of plans and actions of public leadership and governance, and as well engages society in the processes of policy design and decision-making, as well as policy implementation, monitoring, and evaluation. It further develops institutions, structures, systems, and practices that promote the involvement and participation of the people and ensure equal access to services by all.⁷

⁵ Jose Ramos (Action Foresight), Ida Uusikyla and Nguyen Tuan Luong (UNDP Viet Nam) (2020). *Anticipatory Governance — A Primer*. Posted on February 18, 2020 at

<https://www.vn.undp.org/content/vietnam/en/home/blog/AnticipatoryGovernance.html>.

⁶ Peter H. Feindt & Sabine Weiland (2018). 'Reflexivity: exploring the concept and assessing its critical potential for sustainable development.' Introduction to the special issue, *Journal of Environmental Policy & Planning*, 20:6, 661-674, DOI:

[10.1080/1523908X.2018.1532562](https://doi.org/10.1080/1523908X.2018.1532562).

⁷ Department of Economic and Social Affairs – United Nations (2015). *Responsive and Accountable Public Governance. 2015 World Public Sector Report*. Publication ST/ESA/PAD/SER.E/187, accessible at

<https://publicadministration.un.org/publications/content/PDFs/World%20Public%20Sector%20Report2015.pdf>.



Chapter 1: Methodology

The current report is part of *WP3 Delphi exploration of consensus about future orientations for RRI in the participating territories*. WP3 used the Delphi method to examine barriers to achieving policy objectives identified in the different territories and solutions to overcome those barriers and to identify future pathways for a better RRI integration in the four territories.

This report presents the results of the three-phase Delphi survey. The development of the survey proceeded in the following way: as a first step of the preparation phase, the questionnaire for the first Delphi round was developed, then the expert panels in each territory were defined, and lastly, the pilot testing of the questionnaires with selected territorial stakeholders was completed and the feedback was integrated into the final questionnaire.

With regard to the panel composition, a two-step approach was followed to identify suitable experts for inclusion in the Delphi panels. In a first step, the most important system elements and change factors were identified for each policy focus in each territory. In a second step, experts that are closely linked to these key elements and thus have the leverage to make the necessary changes to advance the policy focus were identified. This included different stakeholder groups such as policymakers, business representatives, researchers, and representatives from civil organizations (such as NGOs). For each Delphi-study, at least 30 experts were identified and asked to participate.

Three rounds of the Delphi study were conducted to reach a consensus about feasible future paths for better RRI integration in each territory. The number of Delphi studies conducted varied between the territories:

- in Thalwil (Switzerland) one Delphi study investigated the policy focus of the energy transition;
- four Delphi studies were conducted in Sofia (Bulgaria) to investigate the four policy foci at hand (i.e., Support for innovation; Sustainable urban development; Youth employment and entrepreneurship; Digital transition and new skills);
- one Delphi study was conducted in the region of Western Macedonia (Greece). The three policy foci under investigation were (a) the development of a stakeholder engagement strategy within the course of the post-coal transition road map, (b) the strengthening of policymaking systems involving different modes of territorial governance of the post-coal transition strategy, and (c) the development of a methodology aiming to a smooth and innovative transition from the coal value chain towards an alternative development ‘paradigm’. Instead of working with three different questionnaires, one questionnaire was developed, combining the three policy foci within the respective territory;
- one Delphi study was conducted in Sabadell (Spain), investigating the policy focus of Active Ageing.

The Delphi survey took place between January and April 2022. In each round, panellists were invited via email to take part in the study. Data were collected using an online tool (Unipark) and the panellists had at least two weeks to provide their answers. After one week, they received a reminder email. If necessary, phone calls were carried out to increase the response rate and to avoid dropouts.

• 1st Round

Data collection for Round 1 started at the end of January 2022 and lasted until mid-February. The online questionnaire included open and closed questions. For each policy area and each topic, several policy



objectives were identified by the research teams and presented to the participants. After a short introduction to the policy area and to the policy objectives, participants were asked to indicate a maximum of three barriers, solutions, and out-of-the-box solutions to achieve each policy objective, as well as a maximum of three ways to integrate the RRI-keys and AIRR-dimensions in this process. After providing their answers in an open format, participants were presented with best practices for each topic and asked to rate the importance of these best practices on a scale from 1 (“not important at all”) to 7 (“very important”).⁸

- 2nd Round

Data collection for Round 2 took place in March 2022. The online questionnaire included closed questions only. The open answers from Round 1 regarding the barriers, solutions, and ways to integrate the RRI-AIRR concept were categorised using qualitative content analysis. This process resulted in statements for each policy objective which were included in the questionnaire and participants rated their importance using the same 7-point scale from Round 1.⁹ In addition, participants received feedback on the panel’s answers regarding the importance of the best practices for each topic from Round 1 in the form of statistical measures (i.e., median, and standard deviation), as well as column charts. The feedback was directly incorporated into the questionnaire and participants were then asked, with this information at hand, to re-evaluate the importance of the best practices, using the same scale from Round 1.

- 3rd Round

Data collection for Round 3 was conducted in April 2022. The online questionnaire included closed questions only. Participants received feedback on the panel’s answers regarding the importance of the barriers, solutions, and ways to integrate the RRI-AIRR concept for each policy objective from Round 2 in the form of statistical measures (i.e., median, and standard deviation) as well as column charts. Again, the feedback was directly incorporated into the questionnaire and participants were then asked to re-evaluate the importance of the statements, using the same scale from Round 1 and Round 2.

The goal of the Delphi studies was to develop a consensus among the experts on how to advance the policy focus at hand. Consensus was defined as percentage agreement in all studies across the territories. Specifically, consensus was reached if 75% of the experts rated the importance of the statement or best practice with a 6 or a 7 on the 7-point scale. The chosen cut-off of 75% corresponds to the median threshold identified in a systematic review of Delphi studies by Diamond et al. (2014)¹⁰. The only exception was the Delphi study conducted in Western Macedonia (Greece), where consensus was reached if 85% of participants rated the importance with a 4 or a 5 on the 5-point scale. In Western Macedonia there was a relatively high amount of consensus. Therefore, in this case based on the study by Barrios et al., (2021),

⁸ The same scale was used across the territories and across the different rounds. Only in the Delphi study conducted in the region of Western Macedonia (Greece), a scale from 1 (“not important at all”) to 5 (“very important”) was used in all rounds.

⁹ In case that the panelists’ statements and the best practices were combined for more than 120 questions, the most mentioned and important/relevant statements were selected by the research teams to make sure that the length of the questionnaire remained manageable for the participants,

¹⁰ Diamond, I. R., Grant, R. C., Feldman, B. M., Pencharz, P. B., Ling, S. C., Moore, A. M., & Wales, P. W. (2014). Defining consensus: a systematic review recommends methodologic criteria for reporting of Delphi studies. *Journal of clinical epidemiology*, 67(4), 401-409. <https://doi.org/10.1016/j.jclinepi.2013.12.002>

identifying that the range of a threshold percentage reported as accepted consensus is very wide (50-97%), a higher threshold was selected after the second round.¹¹

The current report analyses the statistical data of the Delphi studies to develop a compound analysis highlighting how each RRI key and AIRR dimension was integrated into each of the 4 territories under study.

¹¹Barrios, M., Guilera, G., Nuno, L. and Gomez-Benito, J. (2021). Consensus in the delphi method: What makes a decision change? *Journal of Technological Forecasting & Social Change*, 163, 120484.
https://webmail.uowm.gr/roundcube/?_task=mail&_frame=1&_mbox=INBOX&_uid=121711&_part=2&_action=get&_extwin=1



Chapter 2: Overview of Delphi survey and participants characteristics

2.1. Western Macedonia

The three rounds of the Delphi survey in Western Macedonia focused on the following three policy areas:

- “Develop a stakeholder engagement strategy within the course of the post-coal transition road map”
- “Strengthen policy-making systems involving different modes of territorial governance of the post-coal transition strategy”
- “Develop a methodology aiming to a smooth and innovative transition from the coal value chain towards an alternative development ‘paradigm’”

It was considered very difficult for Western Macedonia to find 25 participants, and even different ones, to answer each of the three total questionnaires, corresponding to the three policy areas of the territory. For this reason, it was decided to conduct the survey with one questionnaire containing all three policy areas. Therefore, the policy area survey questionnaire focused on was:

- Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'.

The advantage of this approach was that it was more feasible to identify about 30 experts to conduct the research, but the disadvantage was that the size of the questionnaire was quite large. The questionnaire included twelve policy objectives and was divided into five topics, namely:

- Fostering Entrepreneurship
- Energy Efficiency
- Environmental Sustainability
- Promoting research and innovation and integrating modern technology
- Governance of the transition

For Western Macedonia the total number of statements used in the questionnaire was 150. In the analysis of the present deliverable all statements were used except those that reflect the barriers, which for Western Macedonia were 24 in total. The focus was put on solutions and was to integrate the RRI-AIRR concept, with the aim to identify feasible future pathways to advance the policy areas in the territories and to form a basis for the development of transformational outlooks, which will be the next step of the project. However, barriers were the building blocks to identify the problematic aspects for the advancement of the policy areas under investigation in the territories and helped the process to develop consensus about possible and feasible future pathways for a better RRI integration. Barriers were also important in paving the way for the solutions, out of the box solutions and RRI/AIRR integration elements for each statement.

The first round lasted from February 6 to February 23. The second round started on March 14 and concluded on April 6 and the third and final round took place between April 18 and April 26. Table 1 provides a brief overview of participants in each of the three Delphi rounds.



Table 1: Participants in the Delphi survey for the Region of Western Macedonia

	Total number of participants	Female	Male	Academia and research	Policymakers	Industry and business	Civil society
First round	25	8	13	16	2	6	0
Second round	23	7	15	12	2	8	1
Third round	20	6	13	10	2	7	1

Regarding the level of education, in the first round 96% of the participants had higher education and 4% did not answer. In the second round, 90% of the participants had higher education and 10% did not answer. The average age of the participants was 46 years in the first round, 43 years in the second, and 41 years in the third round. The youngest participant was 23 years old and the oldest was 58 years old.

The main problem during the Delphi survey, especially in the first and second rounds, was the long duration of the questionnaire. In the first round, a considerable number of participants exceeded 2 hours to complete the questionnaire. The second round required less time than the first one. However, it was also quite time-consuming. This problem did not arise in the third round, as the questionnaire was shorter.

2.2. Sabadell

The policy areas of the Delphi Survey in Sabadell focused on making the territorial innovation ecosystem more inclusive and better aligned with societal challenges, while respecting and promoting sustainability.

The questionnaire included five policy objectives all of which referred to the topic of active ageing. For Sabadell, the total number of statements used in the questionnaire was 87. In the analysis of this particular deliverable, all statements were used except those that reflect the barriers, which for Sabadell were 20 in total.

The first round lasted from January 28 to February 16. The second round started on March 14 and concluded on March 29. The third and final round took place between April 06 and April 20. Table 2 provides a brief overview of participants in each of the three Delphi rounds.

Table 2: Participants in the Delphi survey for the City of Sabadell

	Total number of participants	Female	Male	Missing	Academia and research	Policymakers	Industry and business	Civil society
First round	20	7	13	0	12	5	2	1
Second round	16	10	3	3	8	5	2	1
Third round	14	7	5	2	10	2	0	2

In the first round, 8 participants had secondary school education level and the rest (12) had higher education. In the second round, 6 participants had secondary school education and 10 had higher education. In the third round, 4 participants had secondary school education, and 10 had higher education. The average age of participants was 52 in round 1, 53 in round 2 and 51 years in round 3. The youngest participant was 26 years old, and the oldest was 74 years old.

The main problem encountered in this territory was the participants' commitment in all three rounds of the research. The number of participants decreased during the rounds, despite the fact that other people were invited to participate in the survey after the first round.

2.3. Thalwil

The Delphi Survey in Thalwil was about promoting energy transition and more specifically the exit from a fossil-driven energy market to a renewable energy market without CO² emissions which constitutes a central concern in the sustainability policy of the community of Thalwil.

The questionnaire included eight policy objectives and was divided into five topics, namely:

- Mobility
- Housing/buildings
- Financing
- Municipality
- Society

The total number of statements used in the questionnaire was 111. In the analysis of the present deliverable all statements were used except those that reflect the barriers, which for Thalwil were 24 in total.

The first round lasted from January 28 to February 14. The second round started on March 14 and concluded on March 28 and the third and final round took place between April 11 and April 27. The table below presents a brief overview of participants in each of the three Delphi rounds.

Table 3: Participants in the Delphi survey for the Municipality of Thalwil

	Total number of participants	Female	Male	Academia and research	Policymakers	Industry and business	Civil society
First round	37	7	30	6	16	10	5
Second round	33	7	24	5	13	9	6
Third round	25	4	21	5	8	6	6

In the first round, 5% of the participants had secondary school education level and the rest (95%) had higher education. In the second round, the results are similar with 6% of the participants having secondary school education and 94% higher education. In the third round, 16% of the participants had secondary school education and 84% had higher education. The average age of participants was 53 in round 1, 54 in round 2 and 56 in round 3. The youngest participant was 25, and the oldest was 71 years old.

Even though the length of the questionnaire was quite long, especially in the first round, no major problems were encountered, and the recruiting and management of the panel was efficiently implemented.

2.4. Sofia

The Delphi survey in the Sofia Municipality was more complex compared to the other three territories, as the study focused on four different policy areas: Support for innovation; Sustainable urban development; Digital transition and new skills; and Youth employment and entrepreneurship. In the policy areas Support for innovation and Youth employment and entrepreneurship, the survey questions focused on three policy objectives, while in the other two policy areas, four policy objectives were under scrutiny.

Sofia therefore used a total of four questionnaires, one for each policy area. The questionnaire consisted of open and closed statements. Given the complexity of the survey, which included 14 policy objectives from 4 different policy areas, the questionnaires were not additionally divided into topics.

The total number of statements used in the questionnaire was 196. In the analysis of the present deliverable, all statements were used except those that reflect the barriers, which for Sofia were 42 in total.

The first round lasted from January 31 to February 15. The second round started on March 15 and concluded on March 30. The third and final round took place between April 14 and April 30. The table below gives an overview of the participants in all three rounds and all policy areas.

Table 4: Participants in the Delphi survey for Sofia Municipality

	Total number of participants	Female	Male	Academia and research	Policymakers	Industry and business	Civil society
First round	40	29	11	10	10	9	11
Second round	28	18	8	9	5	6	8
Third round	16	11	5	8	2	0	6

All participants in the survey had higher education. The average age of participants was 44 in round 1, 45 in round 2 and 46 in round 3. The youngest participant was 25, and the oldest was 71 years old. When invited to participate in the first round, participants were asked to complete two surveys: some were asked to complete Support for innovation and Sustainable urban development surveys, while the others worked with Digital transition and new skills, and Youth employment and entrepreneurship policy areas. However, some participants, and in fact a large majority of them in the third round, completed all four questionnaires.

A problem encountered during the Delphi survey was a considerable drop-out rate between rounds, especially among policymakers and business and industry representatives. Of nine business representatives, who took part in the first round, none has completed the survey in the third round. In addition to the drop-out, another problem that might be noted was a noticeable shortening of time the participants spent for completing the survey. Taking into consideration that the first round included open questions, which naturally take more time, the time most participants used for completing the surveys was unusually short (between 5 and 15 minutes in the second round, and just from 2 to 9 minutes in the third round).

Chapter 3: Results of Delphi survey per RRI key

3.1 Introduction

In the following paragraphs we present all the aggregated results of the three Delphi survey rounds. More precisely, we have developed separate tables for each RRI key in which we present the statements in terms of solutions for overcoming the main barriers in the given policy area, measures for the integration of the RRI/AIRR concept as well as the best practices. There is a separate table for each territory, apart from Sofia Municipality, which has four tables on the account of having four questionnaires for each of its policy areas. The penultimate column indicates whether the consensus was reached regarding the given statement, and the final column contains the percentage of consensus. The last row presents the cumulative results regarding the number of statements pertaining to a particular RRI key or AIRR dimension.

3.2 Public Engagement

Public Engagement applied to 88 of the statements studied in the questionnaires (the same number of statements also concern Science Education). Public Engagement was relevant for 20.05% of the total number of statements (439), and for 13.21% of the statements for which consensus was reached.

In the Swiss Municipality of Thalwil, Public Engagement was reflected as particularly important. As for the consensus percentages, Western Macedonia shows the highest with 100. In Thalwil this percentage is about 73, followed by Sabadell with 63.64, while in Sofia it was 50 percent.

The region of Western Macedonia has as its policy area to develop a clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'. Regarding Public Engagement, the most prominent statements that reached consensus were:

- participation of representatives of social and productive bodies in the committee of university research programmes for the advancement of the policy area,
- creation of networks of investors interested in public procurement of innovation and their access to finance for investment in the region,
- the integration of the RRI/AIRR concept in the involvement of local government, academia, business, and citizens in governance,
- development of a digital platform for open dialogue.

Regarding Sabadell, with its policy area of creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities, the most important aspects that reached consensus were:

- to guarantee commitment of all agents and
- to carry out a proper communication and dissemination campaign.



In the Municipality of Thalwil the statements considered to be most important for the policy area of the Energy Transition regarding Public Engagement were:

- to promote the local expansion of renewable energies and
- to integrate RRI/AIRR concept in the dialog with stakeholders relevant in energy issues.

Sofia Municipality had four policy areas and for this reason it created four separate questionnaires. For the first policy area, “Support for innovation”, the most important statement referring to the Public Engagement key was the Inclusion of the beneficiaries of RRI/AIRR requirements in funding programmes. For the second policy area, “Sustainable Urban Development”, it was deemed essential to create a register of sustainable public procurement practices/good practices, as well as to engage stakeholders in the process of policy development. As for the policy area of “Digital Transition”, the most prominent solution was the cooperation with the IT sector and the engagement of stakeholders and citizens in decision-making and for improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart, and cost-effective solutions by 2025. Lastly, regarding the policy area of “Youth Employment and Entrepreneurship”, the most prominent solutions were:

- collaboration with universities, laboratories, and businesses during the implementation of projects, as well as
- conducting of joint consultations with youth organisations, which are active in the Advisory Council on Youth Policies at Sofia Municipality, organising trainings and informing youth organisations and other stakeholders about RRI/AIRR.

Moreover, Public Engagement was crucial for the implementation of the Youth Strategy and the involvement of youth organisations in the process of reporting and evaluating results.



Table 5: RWM's Public Engagement Key / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI KEY: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030	A holistic roadmap towards a zero-emission economy			Yes	87%
	2. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model	Creation of networks of investors interested in public procurement of innovation and their access to finance for investments in the region			Yes	91%
		Regional fund - with the participation of Municipalities - to finance start-ups and existing businesses			Yes	85%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use		Creation of an open interactive information platform on field developments		Yes	87%
			Collaborative participation of public bodies / research		Yes	91%



			institutions / businesses in the rehabilitation process			
Governance of the transition	1. Development of an effective system of transition governance by involving regional structures in governance		Involvement of local government, academia, business, and citizens in governance		Yes	91%
				Planning decision process based on more than a regional level	Yes	96%
	2. Development of a more effective social dialogue between the actors of the quadruple helix	Participation of representatives of social and productive bodies in the committee of university research programmes			Yes	96%
				Development of a digital platform for open dialogue	Yes	91%
				Systematic consultation between social partners	Yes	83%
	3. Development of a social security framework	Actions for the restoration of confidence (by the institutions), with the citizens co-shaping the policies for changing the productive model of the region			Yes	87%
Total number of statements where Public Engagement appears		5	3	2	10	10

Table 6: Sabadell's Public Engagement Key / Policy Area: Improving elderly people's ageing and health

Region of Sabadell
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities.
RRI KEY: PUBLIC ENGAGEMENT



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

Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Solar panels in nursing homes: Increase by 15% the number of photovoltaic panels installed in public and private nursing homes by 2030	Carry out a proper communication and dissemination campaign			No	71%
		Consider citizen in decision making			No	57%
			Facilitate/Improve the participation of the quadruple helix (academia/research, policy makers, industry/business and civil society)		No	71%
	2. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Carry out a proper communication and dissemination campaign			Yes	93%
			Commitment of the quadruple helix		Yes	93%
	3. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals	Dissemination campaigns about the work of social and healthcare personnel			No	43%
	4. Create a participatory tool to identify the challenges of the elderly by 2023.	Guarantee plural participation			Yes	93%
			Guarantee the commitment of all the agents		Yes	100%

	5. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Carry out a proper dissemination campaign			Yes	86%
		Direct end-user participation through participation programmes			Yes	100%
			Commitment of all the agents		Yes	93%
Total number of statements where Public Engagement appears		7	4	0	7	11

Table 7: Thalwil's Public Engagement Key / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
RRI Key: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Mobility	1. All vehicles registered in the municipality of Thalwil should be operated in a CO ₂ -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)	Promoting the local expansion of renewable energies			Yes	96%
		Support projects for car-free settlements			No	68%
		Reduce physical mobility through digitization (home office)			No	40%



		Promote slow traffic (physical activity)			Yes	76%
			Involve all stakeholders in concept development		No	72%
			Administration takes on exemplary role in sustainable mobility		Yes	80%
Housing/Buildings	By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources	Municipality helps companies to lease their roof areas by means of contracting			No	68%
		Develop financial products for renovations in cooperation with the private sector			No	60%
		Check feasibility of cross-border projects (municipal boundary or lot boundary)			Yes	84%
			Carry out information events		No	68%
				Organic waste from households and businesses is collected and processed locally into biogas, which is then converted into electricity and heat in combined heat and power plants	Yes	79%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil	Continue and expand existing support programmes			Yes	92%
			Conduct information campaign		Yes	84%



			Enlist the support of the scientific community		Yes	76%
Municipality	1. Every two years until 2050, the municipality should produce a complete and comprehensive balance of the territorial energy and greenhouse gas amount	Increase cooperation with other municipalities			Yes	76%
		Launch competition between municipalities (energy challenge)			No	12%
		Universities develop a monitoring tool based on surveys			No	28%
			Enlist the support of the scientific community		Yes	80%
			Actively communicate progress		Yes	92%
	2. The role model effect of the municipal administration with regard to energy issues for the population and businesses should be strengthened	More communication in the field of energy and climate			Yes	84%
			Exchange and cooperation with other municipalities, universities, and civil society		Yes	88%
Society	1. Circular economy approaches should be systematically promoted for consumer goods and services	Design attractive recycling offer (shorter distances, pick-up system)			Yes	92%
		Create acceptance through information and communication			Yes	76%
		Promote repair offers (repair cafe)			Yes	76%

		Regular pick-up and drop-off days for consumer goods			Yes	80%
	2. The involvement of the public in energy issues should be promoted	More communication in energy and climate			Yes	76%
		Strengthen existing partnerships and use synergies			Yes	92%
		Introduce an energy or environment day			No	72%
		Community app as information and discussion portal			No	12%
		"Future" workshop, where energy topics are specifically addressed			Yes	84%
			Dialog with all relevant stakeholders		Yes	96%
	3. Visibility of all energy policy measures in the municipality should be improved	Open house of new energy facilities/light towers			Yes	84%
			Dialogue with all relevant stakeholders		Yes	91%
Total number of statements where Public Engagement appears		22	10	1	24	33

Table 8: Sofia's Public Engagement Key / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
RRI KEY: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Organising events, festivals, competitions, hackathons, annual awards for initiatives that contribute to the objective			No	33%
			Conducting a communication and information campaign, targeted at the general public, aiming to get people acquainted with the benefits of RRI/AIRR		No	64%
			Promotion of achievements in the field of innovation by research institutes, universities, businesses, in order to integrate appropriate ideas and products in the management of Sofia Municipality and in the provision of public services		No	71%
			Establishment of multifunctional or thematic working groups for advocacy and capacity building, aiming at creating horizontal links between stakeholders		No	57%
				Promoting the use of online consultations with citizens	No	45%

	2. Setting up funding instruments for support to innovation start-ups and companies by 2030		Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030		Citizens' monitoring and control of the implementation of the policies for open data and free access to data		No	73%
Total number of statements where Public Engagement appears		1	5	1	1	7

Table 9: Sofia's Public Engagement Key / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
RRI KEY: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
			Engagement of citizens and stakeholders in the process - NGOs, businesses, academia		Yes	85%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%



		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/ good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023		The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	4. Developing a data policy framework for Sofia		Engaging stakeholders in the process of policy		Yes	92%



	municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing, and opening of data are well defined by 2025		development, implementation and evaluation			
				Enhancing participatory urban planning	No	25%
				Including citizens perspectives in circular economy policies	No	33%
Total number of statements where Public Engagement appears		7	3	5	7	15

Table 10: Sofia's Public Engagement Key / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
RRI KEY: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart and cost-effective solutions by 2025	Cooperation with the IT sector and engagement of stakeholders and citizens in decision-making and implementation of the objective			Yes	85%
		Organising competitions, contests for finding innovative solutions by start-ups, universities, etc.			No	54%
		Implementation of partnership projects, involving consultants, businesses, municipal experts, citizens and other stakeholders			Yes	77%



	2. New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Rating of services, evaluation by citizens as an incentive to implement the policy			Yes	77%
	3. Include the gender dimension in the Innovation Strategy for Smart Specialisation of Sofia by 2027		Informing the public, creating incentives and awards for good practices that support equality and diversity		No	69%
Total number of statements where Public Engagement appears		4	1	0	3	5

Table 11: Sofia's Public Engagement Key / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: PUBLIC ENGAGEMENT						
Topic	Policy Objective	Solution	Integration	Best Practice	Statements reached consensus	% Consensus
	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030		The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Collaboration with universities, laboratories, and businesses during the implementation of projects			Yes	83%
			The funding program should include requirements about Open Access, Gender Equality, Ethics and Public Engagement		Yes	75%



	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023	Conducting joint consultations with youth organisations, which are active in the Advisory Council on Youth Policies at Sofia Municipality			Yes	83%
		Organising forums with the participation of stakeholders (academia, civil society organisations, business, state administration) in order to discuss targeted measures and actions to reach the objective			Yes	75%
			Organising trainings and informing youth organisations and other stakeholders about RRI/AIRR		Yes	83%
			Public discussion about the measures and the implementation of the Youth Strategy, involvement of youth organisations in the process of reporting and evaluation of results		Yes	83%
		Total number of statements where Public Engagement appears		3	4	0

3.3 Gender Equality

Gender Equality is associated with 31 statements that were studied in the questionnaires. Considering the total number of statements in the research, this constitutes 7% of the total statements. Gender Equality is mostly reflected in the statements of Sofia Municipality with 18.83%, compared to the almost negligible 1.39% and 0.79% percentages for the city of Sabadell and the region of Western Macedonia respectively. It is noteworthy that in Thalwil, this percentage was zero. Regarding the consensus findings, Western Macedonia again showed the highest with 100%, in Sofia Municipality the percentage was about 44% and in Sabadell this percentage was zero.

For Western Macedonia the most important step for integrating RRI/AIRR concept into its policy area is to have in place measures to enhance sustainable competitiveness so that workers can work more effectively and prevent inequalities in the labour market. In Sabadell, suggestions were made regarding the key of Gender Equality, however they did not reach a consensus. Regarding Sofia Municipality, the most prominent solution regarding Gender Equality in the policy area of sustainable urban development is to create a register of sustainable public procurement practices/good practices, and in the policy area of digital transition, regular data collection, analysis, monitoring of performance indicators, evaluation of measures is important.

Considering the statements that reached consensus regarding Gender Equality, for the Region of Western Macedonia, the most prominent was the integration of the RRI concept in measures to enhance sustainable competitiveness so that workers can work more effectively and prevent inequalities in the labour market.

Regarding the City of Sabadell, the only statement for Gender Equality was the integration of the gender perspective in training.

For Sofia Municipality the policy area “Support for Innovation”, the most prominent statement linked to Gender Equality was the integration of RRI concepts in funding instruments, targeted at women and other unrepresented groups, willing to innovate.

Regarding the policy area of “Sustainable Urban Development”, the most prominent statement was the creation of a register of sustainable public procurement practices/good practices.

As for the policy area of “Digital Transition”, the most prominent statement was the development of a regular data collection, analysis, monitoring of performance indicators, and evaluation of measures. And finally for the last policy area “Youth Employment and Entrepreneurship”, the most prominent statement was the development of measures targeted at specific groups - women, migrants, disadvantaged people in order to address their needs and to equalise deficits in the municipal economy.



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Table 12: RWM's Gender Equality Key / Policy Area: Clean energy transition strategy.

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy		Measures to enhance sustainable competitiveness so that workers can work more effectively and prevent inequalities in the labour market		Yes	91%
Total number of statements where Gender Equality appears		0	1	0	1	1

Table 13: Sabadell's Gender Equality Key / Policy Area: Improving elderly people's ageing and health.

Region of Sabadell						
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals		Integrate gender perspective in training		No	71%
Total number of statements where Gender Equality appears		0	1	0	0	1



Table 14: Sofia 's Gender Equality Key / Policy Area: Support for Innovation.

Sofia Municipality						
Policy Area: Support for Innovation						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030		Including funding instruments, targeted at women and other unrepresented groups, willing to innovate		No	53%
Total number of statements Gender Equality appears		1	1	0	0	2



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Table 15: Sofia 's Gender Equality Key / Policy Area: Sustainable urban development.

Sofia Municipality						
Policy Area: Sustainable urban development						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/good practices			Yes	92%



		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023		The curriculum should include modules, dedicated to the application of RRI		Yes	77%
Total number of statements where Gender Equality appears		7	1	3	5	11



Table 16: Sofia 's Gender Equality Key / Policy Area: Digital transition.

Sofia Municipality						
Policy Area: Digital transition						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing and opening of data are well defined by 2025	Implementation of European rules and directives as well as good European practices			Yes	85%
		Conducting an information campaign, promoting good examples and role models to achieve the objective			Yes	77%
		Regular data collection, analysis, monitoring of performance indicators, evaluation of measures			Yes	92%
		Media campaigns, cultural programmes, engaging celebrities in promoting good practices to achieve the objective			No	69%
		Introduction of standards for Gender Equality and diversity in the administration			No	69%
		Advisory council to Sofia Municipality, aiming to assist in developing the strategy, which is composed of women, who are experts on the topic			No	31%
			Extensive consultations and involvement of organisations and experts in the decision-making process		Yes	85%
			Inclusion of measures, supporting young people and women in		Yes	85%



			science, support for minority and vulnerable groups			
			Informing the public, creating incentives and awards for good practices that support equality and diversity		No	69%
Total number of statements where Gender Equality appears		6	3	0	5	9

Table 17: Sofia 's Gender Equality Key / Policy Area: Youth employment and entrepreneurship.

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: GENDER EQUALITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030		The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Including measures targeted at certain target groups - women, migrants, disadvantaged people in order to address their needs and to equalise deficits in the municipal economy			Yes	83%
			The funding program should include requirements about Open Access, Gender		Yes	75%



			Equality, Ethics and Public Engagement			
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023	Requirement about having their own organisational plans for Gender Equality, Inclusion and diversity (for programme Europe, programme Culture etc.) when funding youth initiatives			Yes	75%
		Legislation that determines quotas for certain positions, which are dominated by one of the genders			No	42%
			Regular sociological surveys regarding the level of Gender Equality, Inclusion, and diversity on the territory of Sofia Municipality		No	50%
				Promote entrepreneurship among women by addressing inequalities and other gender-related issues	No	58%
Total number of statements where Gender Equality appears		3	3	1	3	7



3.4 Open Access

The key of Open Access appears in a total of 83 statements in the four territories, out of which 51 have reached consensus. Considering this number as a percentage of the total number of statements in the research, which is 439, 18.91% of all statements and 11.62% of the statements ultimately led to consensus. In the region of Western Macedonia most statements (93.3%) reached consensus, followed by Sofia Municipality with approximately 55% and the City of Sabadell with 50%. Open Access was considered mostly important for Sofia Municipality with 29.22% of the statements referring to this key.

With its focus on energy transition, for Western Macedonia the solutions reached full consensus for the advancement of the policy area were:

- creation of effective and decentralised mechanisms to identify education and retraining needs,
- integration of digital transformation infrastructure as well as IT and ICT solutions (e.g., open digital platforms) for social dialogue and public consultation.

In Sabadell, it is important to guarantee the Open Access through suitable participation processes for Open Access. In the Municipality of Thalwil the most important solution for Open Access was to make successes visible (lighthouse projects).

Regarding the policy area, “Support for Innovation” in Sofia Municipality, the most important statement referring to Open Access was the best practice to encourage digitisation on a local, regional, and international level. With respect to the policy area of “Sustainable Urban Development”, Open Access was linked to creating a unified model/format for data collection in accordance with the requirements of national legislation and European regulations; the necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality was also considered of importance.

Regarding “Digital Transition”, the solutions of the digitisation of all processes with Open Access and open data for stakeholders and the digitalisation of administrative processes and services were the most prominent ones. In terms of RRI/AIRR integration, the integration of the e-infrastructure and service platform for vulnerable target groups into a smart city platform was the most prominent one. The key of Open Access was not reflected in a satisfactory level for the policy area of “Youth Employment and Entrepreneurship”.



Table 18: RWM 's Open Access Key / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030			Electronic Portal for The Enhancement and Monitoring of Employment	No	83%
				Integrated Information System (IIS)	Yes	87%
				Investor Support Network (ISN)	Yes	96%
	2. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model	Creation of networks of investors interested in public procurement of innovation and their access to finance for investments in the region			Yes	91%
			Inclusion of all segments of society (working citizens, businesses, students, unemployed) in providing a framework of economic incentives		Yes	95%
	3. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy.	Creation of effective and decentralised mechanisms to identify education and retraining needs			Yes	100%
		Creating an effective and up-to-date platform to connect demand with the labour market			Yes	86%



Energy Efficiency	1. Hydrogen technologies and their use in post-lignite regions	Direct promotion and implementation of the hydrogen technology development proposal of the "White Dragon" consortium			Yes	87%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use		Creation of an open interactive information platform on field developments		Yes	87%
Promoting research and innovation and integrating modern technology	1. Development of supporting digital infrastructures and services of smart communities	Integration of digital transformation infrastructure			Yes	100%
				Integrated Information System	Yes	91%
Governance of the transition	1. Development of an effective system of transition governance by involving regional structures in governance			The Transition Observatory	Yes	95%
	2. Development of a more effective social dialogue between the actors of the quadruple helix	IT and ICT solutions (e.g., open digital platforms) for social dialogue and public consultation			Yes	100%
			Promoting Open Access to disseminate the results among quadruple-helix stakeholders for transparent knowledge transfer, innovations, and collaborations		Yes	96%
				Development of a digital platform for open dialogue	Yes	91%
Total number of statements where Open Access appears		6	3	6	14	15



Table 19: Sabadell's Open Access Key / Policy Area: Improving elderly people's ageing and health

Region of Sabadell						
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023		Ensure the transparency and Open Access		No	57%
	2. Create a participatory tool to identify the challenges of the elderly by 2023.	Design an excellent communication and dissemination campaign to make this tool widely known			No	36%
		Perform several actions in the city that give visibility to the tool			Yes	79%
	3. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023		Guarantee the Open Access through suitable participation processes		Yes	93%
Total number of statements where Open Access appears		2	2	0	2	4



Table 20: Thalwil's Open Access Key / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
RRI Key: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Housing/Buildings	1. By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources			The municipality attempts to fully exploit the realistically usable energy potential (economic potential minus protected objects and solar thermal energy) of the entire Thalwil building stock and presents an expansion strategy for this purpose.	Yes	94%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil		Clearly and transparently disclose financial flows		Yes	76%
Municipality	1. Every two years until 2050, the municipality should produce a complete and comprehensive balance of the territorial energy and greenhouse gas amount	Digital dashboards with live data of energy demand			No	20%
		Universities develop a monitoring tool based on surveys			No	28%
			Significantly increase data availability		No	68%
			Actively communicate progress		Yes	92%



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				With the help of smart meters, the energy consumption of municipally owned buildings is to be optimized. In addition, a corresponding visualization will draw attention to the conscious use of energy.	No	73%
				The energy and greenhouse gas balances drawn up are published on the municipality's website, progress is shown, and attention is drawn to the necessary reduction paths.	Yes	83%
	2. The role model effect of the municipal administration with regard to energy issues for the population and businesses should be strengthened	More communication in the field of energy and climate			Yes	84%
Society	1. Circular economy approaches should be systematically promoted for consumer goods and services	Create acceptance through information and communication			Yes	76%
			Making information material widely available		No	68%
	2. The involvement of the public in energy issues should be promoted	More communication in the area of energy and climate			Yes	76%
		Community app as information and discussion portal			No	12%
	3. Visibility of all energy policy measures in the municipality should be improved	Visibility of energy topics (graphs and interactive dashboards)			No	68%



		Put more energy topics up on website			No	64%
		Make successes visible (lighthouse projects)			Yes	96%
		Visualize progress (tree planting, barometers, etc.)			Yes	88%
		Open house of new energy facilities/light towers.			Yes	84%
			Making information material widely available		No	72%
Total number of statements where Open Access appears		11	5	3	10	19

Table 21: Sofia's Open Access Key / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIIR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Effective use of ICT, building an online platform/portal and communication channels for cooperation with all stakeholders			No	60%
			Promotion of achievements in the field of innovation by research institutes,		No	71%



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			universities, businesses, in order to integrate appropriate ideas and products in the management of Sofia Municipality and in the provision of public services			
			Establishment of multifunctional or thematic working groups for advocacy and capacity building, aiming at creating horizontal links between stakeholders		No	57%
				Promoting the use of online consultations with citizens	No	45%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030		Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030	Promoting digitalisation, the use of new technologies and artificial intelligence in the management of administrative processes			Yes	87%
			Introduction of Open Access to data and information, constant feedback from stakeholders		No	73%
			Strict application of a code of Ethics to increase the trust of data controllers and users in the system		No	67%
				Encourage digitisation on a local, regional, and international level	Yes	100%
				A support point for entrepreneurs	No	64%
	Total number of statements where Open Access appears		2	5	3	3
					10	



Table 22: Sofia's Open Access Key / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Creating a digital platform for smart governance and provision of services, related to RRI			Yes	85%
		Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
		Creating databases with solutions and Open Access tools that can be used by all stakeholders			Yes	77%
			Using the expert potential of businesses, academia, and NGOs through a platform for exchange of information		Yes	77%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/good practices			Yes	92%



		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023		The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	4. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing and opening of data are well defined by 2025	Creation of a unified model/format for data collection in accordance with the requirements of national legislation and European regulations			Yes	100%
		Necessity to have rules for coordination and synchronisation of the units that are			Yes	100%



		involved in data management processes in Sofia Municipality				
		Creating a cloud server for the municipal administration, which allows access to data of employees who are outside of the municipal network	Use of open data, open code, full publicity and transparency of the process		Yes	77%
					Yes	77%
				Improving open data release of local governments	No	67%
Total number of statements where Open Access appears		12	3	4	12	19

Table 23: Sofia's Open Access Key / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart and cost-effective solutions by 2025	Digitisation of all processes with Open Access and open data for stakeholders			Yes	92%
		Allowing private companies to create free of charge elements while respecting property rights and access to data			No	69%
			Providing Open Access to data, facilitating third-party technology solutions		Yes	77%



	2. Improving social Inclusion especially of vulnerable groups and minorities, creating new social e-services adapted to people with disabilities, providing an accessible and inclusive environment for senior citizens by 2025			Introduce citizens and tourists to history through the digitisation of cultural sites	No	30%
		Establishment of centres for shared access to digital devices and to the internet for the target groups			Yes	85%
		Technological solutions such as a chatbot, designed specifically for the elderly in order to facilitate them when using digital services and devices			No	46%
			Integration of the e-infrastructure and service platform for the target groups into a smart city platform		Yes	92%
	3. New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Digitalisation of administrative processes and services			Yes	92%
		Establishment of a virtual office, general information desk of Sofia Municipality			Yes	85%
			Introduction of Open Access to data and information, constant feedback from stakeholders		Yes	77%
			Citizens' monitoring and control of the implementation of the policies for open data and free access to data		No	62%
				Building e-governance	Yes	85%



Total number of statements where Open Access appears	6	4	2	8	12
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Table 24: Sofia's Open Access Key / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: OPEN ACCESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030		The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030		Open Access to data and research results, provision of access to data for start-ups		No	67%
			The funding program should include requirements about Open Access, Gender Equality, Ethics and Public Engagement		Yes	75%
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023	Extensive information campaign and support to organisations, working on the topic			Yes	75%
Total number of statements where Open Access appears		1	3	0	2	4



3.5 Science Education

Science Education appears in 88 statements that were included in the questionnaires. This corresponds to 20.05% of the total statements and 13.21% of the statements that ultimately led to consensus, constituting together with Public Engagement the most reflected two keys in the statements for the four territories in total.

As for the consensus percentages, Western Macedonia shows the highest (93.33%), followed by Sabadell with 66.67, and Thalwil with 60.61%, while in Sofia this was only 58.06%.

In Western Macedonia, the most prominent suggested best practice for the advancement of Science Education towards the energy transition was the Investor Support Network (ISN), as well as the inclusion of all segments of society (working citizens, businesses, students, unemployed) in providing a framework of economic incentives towards RRI/AIRR integration. For the Region of Sabadell, the most prominent one was the training and assessing of younger workers by experienced employees over 50 years old.

For the Municipality of Thalwil, the most important statement associated with Science Education was the best practice where non-institutional property owners can apply for neutral energy advice at the expense of the municipality in the event of a pending heating system replacement.

For Sofia Municipality the Delphi survey revealed regarding Science Education that for the policy area “Support for Innovation” the most prominent statement was the inclusion of RRI/AIRR application requirements in funding programmes. As regards the area of “Sustainable Urban Development”, the most important solution was the improvement of administrative digital skills and respectively for the policy area of “Digital Transition” the most prominent solution was to increase the capacity and digital competencies of the administration. Also, for the case of statements related to “Youth Employment and Entrepreneurship” policy, Scientific Education was not significantly reflected.



Table 25: RWM's Science Education Key / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030			Electronic Portal for The Enhancement and Monitoring of Employment	No	91%
				Integrated Information System (IIS)	Yes	87%
				Investor Support Network (ISN)	Yes	96%
	2. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model	Creation of networks of investors interested in public procurement of innovation and their access to finance for investments in the region			Yes	91%
			Inclusion of all segments of society (working citizens, businesses, students, unemployed) in providing a framework of economic incentives		Yes	95%
	3. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy.	Creation of effective and decentralised mechanisms to identify education and retraining needs			Yes	100%
		Creating an effective and up-to-date platform to connect demand with the labour market			Yes	86%



Energy Efficiency	1.	Hydrogen technologies and their use in post-lignite regions	Direct promotion and implementation of the hydrogen technology development proposal of the "White Dragon" consortium			Yes	87%
Environmental Sustainability	1.	Restoration of degraded areas and facilities and their change of use		Creation of an open interactive information platform on field developments		Yes	87%
Promoting research and innovation and integrating modern technology	1.	Development of supporting digital infrastructures and services of smart communities	Integration of digital transformation infrastructure			Yes	100%
					Integrated Information System	Yes	91%
Governance of the transition	1.	Development of an effective system of transition governance by involving regional structures in governance			The Transition Observatory	Yes	95%
	2.	Development of a more effective social dialogue between the actors of the quadruple helix	IT and ICT solutions (e.g., open digital platforms) for social dialogue and public consultation			Yes	100%
				Promoting Open Access to disseminate the results among quadruple-helix stakeholders for transparent knowledge transfer, innovations, and collaborations		Yes	96%
					Development of a digital platform for open dialogue	Yes	91%
Total number of statements where Science Education appears			6	3	6	14	15



Table 26: Sabadell's Science Education Key / Policy Area: Improving elderly people's ageing and health

Region of Sabadell						
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Look for participation in well-known meeting spaces (community centres/municipal centres, elderly people centres, etc.			Yes	86%
	2. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals	Co-creation projects between senior and junior healthcare professionals			No	50%
		Senior healthcare professionals are the ones who define training			No	71%
		Senior healthcare professionals have less workload in exchange for training junior professionals			No	71%
				Employees over 50 years of age take on the function of training and assessing younger workers. The more experienced older employees work alongside their younger colleagues carrying out the same tasks mentoring them on various aspects of the job. This process allows the	Yes	94%



				transfer of experience, as well as technical and methodological knowledge, from older to younger workers. In other words, the older employees not only carry out the required production tasks, but also provide on-the-job training		
	3. Create a participatory tool to identify the challenges of the elderly by 2023	Free workshops to bring elderly people closer to technology (digital training)			Yes	93%
	4. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Provide technological training to elderly people			Yes	86%
		Prepare professionals with didactic capacity			Yes	86%
			Co-creation of good practices		Yes	93%
Total number of statements where Science Education appears		7	1	1	6	9

Table 27: Thalwil's Science Education Key / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
RRI Key: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus



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

Mobility	1. All vehicles registered in the municipality of Thalwil's should be operated in a CO ² -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)	Promoting the local expansion of renewable energies			Yes	96%
		Promote slow traffic (physical activity)			Yes	76%
Housing/Buildings	1. By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources		Carry out information events		No	68%
				Non-institutional property owners can apply for neutral energy advice at the expense of the municipality in the event of a pending heating system replacement	Yes	97%
				The energy consulting is offered by local energy experts on behalf of the municipality and aims at optimising the energy consumption of private properties	Yes	91%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil		Conduct information campaign		Yes	84%
			Clearly and transparently disclose financial flows		Yes	76%



			Enlist the support of the scientific community		Yes	76%
Municipality	1. Every two years until 2050, the municipality should produce a complete and comprehensive balance of the territorial energy and greenhouse gas amount	Launch competition between municipalities (energy challenge)			No	12%
		Digital dashboards with live data of energy demand			No	20%
		Universities develop a monitoring tool based on surveys			No	28%
			Enlist the support of the scientific community		Yes	80%
			Actively communicate progress		Yes	92%
	2. The role model effect of the municipal administration regarding energy issues for the population and businesses should be strengthened	Internal training and sensitization of municipal staff			Yes	92%
		Energy transition as a challenge between municipalities (gamification)			No	16%
			Train administrative staff on energy issues		Yes	84%
				The energy and greenhouse gas balances drawn up are published on the municipality's website, progress is shown, and attention is drawn to the necessary reduction paths	Yes	85%

Society	1. Circular economy approaches should be systematically promoted for consumer goods and services	Create acceptance through information and communication			Yes	76%
		Campaigns with ambassadors or influencers			No	36%
			Making information material widely available		No	68%
	2. The involvement of the public in energy issues should be promoted	More communication in energy and climate			Yes	76%
		Introduce an energy or environment day			No	72%
		Community app as information and discussion portal			No	12%
		"Future" workshop, where energy topics are specifically addressed			Yes	84%
			Making science more practical (environmental training)		Yes	76%
	3. Visibility of all energy policy measures in the municipality should be improved	Visibility of energy topics (graphs and interactive dashboards)			No	68%
		Put more energy topics up on website			No	64%
		Make successes visible (lighthouse projects)			Yes	96%



		Visualize progress (tree planting, barometers, etc.)			Yes	86%
		Open house of new energy facilities/light towers.			Yes	84%
			Making information material widely available		No	72%
				As part of a project, students are to learn how they can actively help shape the energy transition in the community. To this end, renewable energy systems and energy-saving measures will be addressed. The results will be presented publicly at the end of the project	Yes	94%
				An energy educational trail is to make energy a playful experience and is aimed at schools and families. QR codes can be used to find out what exactly energy is, how renewable energy is used locally and how it can be saved	No	58%
Total number of statements where Science Education appears		18	10	5	20	33



Table 28: Sofia's Science Education Key / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030	Organising hackathons, datatons for the design of funding tools for start-ups and innovative companies			No	20%
			Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
Total number of statements where Science Education appears		2	1	0	1	3



Table 29: Sofia's Science Education Key / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of	Yes	85%



				RRI/AIRR as well as establishment of a helpdesk service for the municipal administration		
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023	Implementation of curricula that involves universities and research organisations			Yes	77%
		Development of a modern ICT platform that allows flexible training and self-learning			Yes	92%
		Organising design seminars and innovation camps for the municipal administration and other stakeholders in order to create programmes			Yes	77%
			Creating programmes through co-design ateliers, research, consultations with universities and businesses		No	54%
			Inclusion of cases, related to innovations, aimed at different target groups, in the training programmes		Yes	77%
			The curriculum should include modules, dedicated to the application of RRI		Yes	77%



	4. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing and opening of data are well defined by 2025	Improving the digital skills of the administration			Yes	100%
		Conducting hackathons, contests, competitions that support the achievement of this goal			No	46%
		Inclusion of PhD students from universities and research institutes, who are specialising in ICT			No	54%
	Total number of statements where Science Education appears		13	3	3	11

Table 30: Sofia's Science Education Key / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Increasing the capacity and digital competencies of the administration			Yes	100%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Creating financial instruments, aiming to develop technological solutions, in partnership with businesses and target groups			Yes	92%
		Providing training and information, access to digital devices and digital services to target groups			Yes	92%



		Establishment of centres for shared access to digital devices and to the internet for the target groups			Yes	85%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023	Conducting specialised trainings for handling data/digital technologies for the administration			Yes	92%
		Active work with IT businesses and research institutes, using their R&D programmes to develop unconventional solutions			Yes	85%
Total number of statements where Science Education appears		6	0	0	6	6

Table 31: Sofia's Science Education Key / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: SCIENCE EDUCATION						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030		The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
Total number of statements where Science Education appears		0	1	0	0	1



3.6 Ethics

Ethics is linked with only 30 of the statements studied in the questionnaires and therefore along with Gender Equality was the least cited key in the survey. If the number is recorded as a percentage of the total number of statements in the research (439), this is 6.8% of the statements that appear in total and 3.6% of the statements that ultimately led to consensus. As for the consensus percentages, Western Macedonia shows the highest, 100%, followed by Sabadell with 50% and Sofia Municipality with 47.62%.

Across all four territories, only in Sofia Municipality Ethics were rated as important. For the Swiss Municipality of Thalwil the reference to this key was absent, while for the region of Western Macedonia and the City of Sabadell a level of appearance can be noted as a common feature.

Regarding Ethics in the Region of Western Macedonia, the most prominent suggestion was from the policy objective of upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy as far as the integration of RRI/AIRR is the measures that can be taken in order to enhance sustainable competitiveness. With those measures the workers can actually work more effectively and prevent inequalities in the labour market.

From the Region of Sabadell, the most prominent solution regarding Ethics was the improvement of working conditions. For Sofia Municipality and the policy area of support for innovation, the most prominent aspect for the integration of RRI/AIRR is that funding programmes should include requirements for the application of RRI/AIRR by the beneficiaries. For the policy area of sustainable urban development, the most prominent solution is to create a unified model/format for data collection in accordance with the requirements of national legislation and European regulations as well as the necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality.

With respect to Ethics and Sofia's "Digital Transition" policy area the most prominent solution was the implementation of European rules and directives as well as good European practices and regarding "Youth Employment and Entrepreneurship" the most important was the necessity for funding program to include requirements about Open Access, Gender Equality, Ethics, and Public Engagement.

Table 32: RWM's Ethics Key / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy		Measures to enhance sustainable competitiveness so that workers can work more effectively and prevent inequalities in the labour market		Yes	91%
Energy Efficiency	1. Hydrogen technologies and their use in post-lignite regions			Storage and use of green hydrogen	Yes	75%
Promoting research and innovation and integrating modern technology	1. Development of supporting digital infrastructures and services of smart communities.			Smart Farming	Yes	75%
Total number of statements where Ethics appears		0	1	2	3	3

Table 33: Sabadell's Ethics Key / Policy Area: Improving elderly people's ageing and health.

Region of Sabadell						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						



RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Ensure a plural representative sample			Yes	79%
			Definition of good Ethics and Ethics quality		Yes	93%
	2. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals	Improvement of working conditions			Yes	100%
				Polibienestar (University of Valencia) has one initiative consisting of detecting the needs of people in labour exclusion risk and those of elderly people. Once they have been detected, the next step is to develop strategies to increase the opportunities of people in labour exclusion risk of finding a job through their training in the social and health care field to improve the quality of life of elderly people. This action contributes to the sustainability and efficiency of public policies. The main challenge is making health care systems sustainable (promoting the quality of life, creating jobs, promoting sustainable home care, incrementing the customer's satisfaction)	No	63%
				ActivAge is building the first European interoperable and open IoT ecosystem enabling the deployment, at a large scale, of IoT based services for Active and Healthy Ageing. This ecosystem will be integrating thousands of devices to collect	No	38%
	3. Create a participatory tool to identify the challenges of the elderly by 2023					

				and analyse environmental and lifestyle information, identify needs, and provide customised solutions, while ensuring data privacy and security		
	4. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Creation of a quality stamp that validates the suitability of the product for elderly people			No	71%
Total number of statements where Ethics appears		3	1	2	3	6

Table 34: Sofia's Ethics Key / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030		Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%

	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030		Strict application of a code of Ethics to increase the trust of data controllers and users in the system		No	67%
Total number of statements where Ethics appears		1	2	0	1	3

Table 35: Sofia's Ethics Key / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	4. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
	5. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%

		Creating a register of sustainable public procurement practices/good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizen's board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	6. Developing staff training programmes for municipal administration for public sector innovations by 2023		The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	7. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing and opening of data are well defined by 2025	Creation of a unified model/format for data collection in accordance with the requirements of national legislation and European regulations			Yes	100%
		Necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality			Yes	100%

Total number of statements where Ethics appears	9	1	3	7	13
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Table 36: Sofia's Ethics Key / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart and cost-effective solutions by 2025	Allowing private companies to create free of charge elements while respecting property rights and access to data			No	69%
	2. New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Strict application of a code of Ethics to increase the trust of data controllers and users in the system			No	62%
	3. Include the gender dimension in the Innovation Strategy for Smart Specialisation of Sofia by 2027	Implementation of European rules and directives as well as good European practices			Yes	85%
Total number of statements where Ethics appears		3	0	0	1	3



Table 37: Sofia's Ethics Key / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: ETHICS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030		The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030		The funding program should include requirements about Open Access, Gender Equality, Ethics and Public Engagement		Yes	75%
Total number of statements where Ethics appears		0	2	0	1	2



Chapter 4: Results of Delphi survey per AIRR dimensions

4.1 Introduction

In the following section, we present all the aggregated results of the three Delphi survey rounds regarding the AIRR dimensions. The tables that follow in this section present the statements in terms of solutions for overcoming the main barriers in the given policy area, measures for integration of the RRI/AIRR concept as well as the best practices. The penultimate column indicates whether the consensus was reached regarding the given statement, and the final column reports the percentage of consensus. The last row presents the cumulative results regarding the number of statements pertaining to a particular AIRR dimension.

4.2 Anticipatory Governance

The dimension of Anticipatory Governance in relation to the total number of statements in the survey reaches 23.2%. In addition, the dimension of Anticipatory Governance appears more often in Sofia Municipality and also in Western Macedonia with 38.9% and 23.02% respectively. The other two territories show quite low percentages regarding this dimension.

In the region of Western Macedonia, with its focus on energy transition and with a fair transition plan in progress, Anticipatory Governance was highly reflected in:

- creating of an innovation zone with generous incentives and benefits for start-ups and spin-offs and
- designing of projects and sustainable mechanisms, considering the international experience.

For the city of Sabadell, with a focus on active ageing, Anticipatory Governance was deemed as important towards the development of a Senior Lab, which is a Swiss interinstitutional and interdisciplinary of applied research and development platform, focusing on issues of quality of life and autonomy for elderly people. The Lab will work according to the principles of a “living lab” with a community formed by individuals, public agents, associations, universities, and companies to offer and test innovative solutions and its mission will be to develop concrete and innovative solutions in the active ageing field with and for elderly people.

For the Municipality of Thalwil Anticipatory Governance was the least reflected dimension, appearing only in six statements, with four of them leading to consensus. The most important aspect which emerged from the research results was the integration of the RRI-AIRR concept to the long-term planning in heat supply.

Finally, in Sofia Municipality for the policy area “Support for Innovation” Anticipatory Governance was reflected in a high percentage for inclusiveness of RRI/AIRR application requirements by the beneficiaries in funding programmes.

With regard to the second policy area, “Sustainable Urban Development”, the Delphi survey identified the creation of a register of sustainable public procurement practices/good practices as important.

Regarding “Digital Transition”, the two most important solutions reflecting this dimension were:

- provision of training, information and the access to digital devices and digital services to vulnerable groups, and second,
- attraction and selection of staff with the necessary skills, including hiring young people in the administration.

Finally, about the fourth policy area of “Youth Employment and Entrepreneurship”, this dimension was assessed as important in many solutions based on the very high consensus. These included the active use of European programmes and funds from the Municipal Guarantee Fund for SMEs to achieve the objective of a 5% increase of funding by 2030; the development, implementation, and evaluation of the funding program in collaboration with youth organisations (including during the selection of projects), and the collaboration with businesses and European programmes, aiming to provide additional funding for young entrepreneurs. In terms of the RRI/AIRR integration the most important aspect was the development of a local strategy for innovation and start-ups in collaboration with research units and businesses.

Table 38: RWM's Anticipatory Governance Dimension/ Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030	Provision of flexible financial assets by central/local authorities in the form of subsidies, tax cuts, etc.			Yes	96%
		Utilisation of existing infrastructure for new investments, in particular infrastructure from PPC, municipal buildings, etc.			Yes	87%
			Implementation of a holistic investment plan that will include specific economic objectives		Yes	96%
				Electronic Portal for The Enhancement and Monitoring of Employment	No	83%
				Investor Support Network (ISN)	Yes	96%
				Align investment incentives and disincentives to support a low-carbon agenda	Yes	87%

	1. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model			IT facilities, bio- & nanotechnology, as well as medical facilities	No	83%
					Yes	
	1. Linking research to production, promoting start-up entrepreneurship, and creating business spin-offs	Creating an innovation zone with generous incentives and benefits for start-ups and spin-offs			Yes	100%
			Design of projects and creation of sustainable mechanisms, considering the international experience		Yes	100%
				Creation of a Green Data Centre and Mega Computer Centre	No	78%
Energy Efficiency	1. Improvement of energy efficiency in affordable systems and "clean" energy infrastructure	Incentivising attracting investment in green energy			Yes	87%
			Spatial and urban planning that will include elements of forecasting, vision evaluation and evaluation of developments in the field of technology		Yes	96%
	2. Strengthening affordable and clean energy systems and		Creation of an innovation zone focusing on energy technologies		Yes	91%

	infrastructure, including storage technologies			Promotion with clean fuels and development of charging and supply networks	Yes	87%
	3. Hydrogen technologies and their use in post-lignite regions	Design of a roadmap for the development and manufacture of hydrogen in the region			Yes	90%
				Construction of hydrogen plants	Yes	91%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use	Legal obligation of PPC to release the huge areas it has committed, for the creation of photovoltaics, so that they can be used for productive activities			Yes	87%
				Energy crops on run-down areas	No	78%
				Development of a Wind Park	No	61%
				Development of a Solar Park	No	78%
				Applications of geothermal energy or hydroelectric energy	Yes	87%
Promoting research and innovation and integrating modern technology	1. Development of supporting digital infrastructures and services of smart communities			Development of applications and solutions for smart tourism and culture	No	83%
Governance of the transition	1. Development of an effective system of transition governance by involving regional structures in governance	Independent body for monitoring and controlling administrative/procedural decisions on the transition			Yes	91%
				Financial resources for the transition	Yes	92%
	2. Development of a more effective social dialogue between the actors of the quadruple helix	Implementation of flagship investments that will set the tone and help boost the optimism of stakeholders and the need to participate in the public debate			Yes	91%

	3. Development of a social security framework	Policy and social agreement for the development and implementation of a social security framework in the long term			Yes	91%
			Postponement of the transition to a later time to ensure		Yes	85%
			The development of a monitoring mechanism the inputs – outputs of the social security framework		Yes	96%
				Termination of work in the lignite sector, transfer of former lignite employees to another public organisation	No	48%
Total number of statements where Anticipatory Governance appears		9	5	15	21	29

Table 39: Sabadell's Anticipatory Governance Dimension/ Policy Area: Improving elderly people's ageing and health

Region of Sabadell						
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities						
RRI DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Solar panels in nursing homes: Increase by 15% the number of photovoltaic	Elaboration of specific regulations/law that make their financing clear and regulate the			Yes	79%



	panels installed in public and private nursing homes by 2030	obligation of having photovoltaics panels in nursing homes				
			Previous analysis to anticipate needs		No	64%
	2. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023			Senior Lab is a Swiss interinstitutional and interdisciplinary of applied research and development platform, focusing on issues of quality of life and autonomy for elderly people. It works according to the principles of a “living lab” with a community formed by individuals, public agents, associations, universities, and companies to offer and test innovative solutions. The mission is to develop concrete and innovative solutions in the active ageing field with and for elderly people	Yes	94%
	3. Create a participatory tool to identify the challenges of the elderly by 2023	Develop a barometer that allows to evaluate the tool			Yes	86%
			Systematic reflection on the possible pros and cons of the tool		No	34%
				ActivAge is building the first European interoperable and open IoT ecosystem enabling the deployment, at a large scale, of IoT based services for Active and Healthy Ageing. This ecosystem will be integrating thousands of	No	38%

				devices to collect and analyse environmental and lifestyle information, identify needs, and provide customised solutions, while ensuring data privacy and security		
	4. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023			<p>PRODUTECH Digital Innovation Hub Platform's mission is to foster the digital transformation of the manufacturing industry, via the gathering of a critical mass of capacities, the networking of stakeholders and the nurturing of the ecosystem, towards the deployment of added value support services that enable, potentiate, and further industry modernization.</p> <p>PRODUTECH Cluster's DIH Platform gathers regional initiatives and stakeholders in a one-stop gateway for digitalization support and further leveraging cooperation at European scale (e.g., networking of pilot initiatives and services under Vanguard Initiative)</p>	No	38%
Total number of statements where Anticipatory Governance appears		2	2	3	3	7



Table 40: Thalwil's Anticipatory Governance Dimension/ Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
AIRR DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Mobility	1. All vehicles registered in the municipality of Thalwil should be operated in a CO ² -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)		Long-term planning & budgeting of charging infrastructure expansion		Yes	84%
				The administration analyses the existing sharing offer and tries to strengthen the offer further in the direction of e-mobility with the help of a concept	No	48%
				The administration is developing an overall concept for charging infrastructure that identifies suitable locations and is seeking contact with private providers to provide a coordinated supply	No	64%
Housing/Buildings	1. By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources	Check feasibility of cross-border projects (municipal boundary or lot boundary)			Yes	84%
			Long-term planning in heat supply		Yes	96%
				The municipality attempts to fully exploit the realistically usable energy potential	Yes	94%

				(economic potential minus protected objects and solar thermal energy) of the entire Thalwil building stock and presents an expansion strategy for this purpose		
Total number of statements where Anticipatory Governance appears	1	2	3	4	6	

Table 41: Sofia's Anticipatory Governance Dimension/ Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
AIRR DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
		Developing a strategy, which includes key priorities for horizontal cooperation, addressing the needs of stakeholders, as well as concrete measures for implementation and provision of feedback			No	27%
		Applying the living labs method in order to experiment and scale innovations (social, technological), which shall be then introduced throughout the city			No	43%

2. Setting up funding instruments for support to innovation start-ups and companies by 2030	Creating a joint (administration, universities and businesses) research infrastructure in order to address topics of public importance			No	64%
	Establishment of a coordination unit in Sofia Municipality with a program for innovation management and financial instruments, which has clear thematic/sectoral priorities for each year			No	53%
	Establishing partnerships with existing private funds in order to create new financial instruments and ensure support for start-ups and innovation companies			No	73%
	Creating grants for long-term programmes such as ones supporting innovative green projects as well as cultural, social or environmental projects			No	53%
	To create a sustainable funding fund by making deductions from the profit of already supported start-ups and to combine it with crowdfunding			No	47%
	Creating a physical space where mentoring, consulting and expert support for innovative start-ups is available			No	73%
	Organising hackathons, datatons for the design of funding tools for start-ups and innovative companies.			No	20%

			Establishment of a municipal unit/advisory council with the participation of experts in order to manage, monitor and evaluate project applications		No	53%
			Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
				Support the creation of sustainable business start-ups	No	55%
				Stimulating youth employment by start-up support programmes	No	73%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030	Introducing innovations in specific fields and directorates through pilot projects and pilot areas, which are then implemented on a larger scale			Yes	87%
		Ministry of Innovation and Growth to develop a special program for innovation and for improving governance at local and national level			Yes	80%
		Developing capacity for creating and managing innovations in Sofia Municipality through exchange of good practices and involvement of stakeholders' experts			Yes	87%
		Establishment of a specialised unit for Flagship projects in Sofia Municipality, which shall coordinate the introduction of innovations in the field of governance			No	67%

		Promoting digitalisation, the use of new technologies and artificial intelligence in the management of administrative processes			Yes	87%
		Attracting experts from other fields to management positions in Sofia Municipality in order to implement such projects			No	73%
Total number of statements where Anticipatory Governance appears		16	2	2	5	20

Table 42: Sofia's Anticipatory Governance Dimension/ Policy Area: Sustainable Urban Development

Sofia Municipality						
Policy Area: Sustainable urban development						
AIRR DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025.	Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
		Creating conditions for transparency, accountability and monitoring through open data			Yes	77%
				Developing smart cities through the Social, Management, Economic, Legal, Technology and Sustainability (SMELTS) framework	No	33%
				Enhancing impact investing for addressing social challenges	No	25%
	2. New public procurement procedures developed, which	Development of a methodology and specialised trainings for introduction of the procedures			No	62%

	include RRI keys and AIRR dimensions by 2025	Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/good practices.			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
			Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration		Yes	85%
			Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures		No	46%
			Organising an information campaign that explains the benefits of public procurement, executed in line with RRI		No	31%
				Implement a green public procurement plan	No	67%
				Facilitate green public procurement and develop technical specifications related to its implementation	Yes	83%

				Facilitate sustainable public procurement	No	58%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023	Introduction of standards regarding the competencies of the administration as well as certification of the administration			Yes	77%
		Creating appropriate incentives for career development of the experts at the administration			Yes	85%
		Conducting internal competitions/ hackathons in order to gather ideas about the content of programmes as well as about innovations to be introduced by the administration			No	38%
			The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	4. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing and opening of data are well defined by 2025			Enhancing participatory urban planning	No	25%
Total number of statements where Anticipatory Governance appears		11	4	6	9	21

Table 43: Sofia's Anticipatory Governance Dimension/ Policy Area: Digital Transition

Sofia Municipality
Policy Area: Digital transition
AIRR DIMENSION: ANTICIPATORY GOVERNANCE



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

Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart and cost-effective solutions by 2025			Implement smart grid technologies throughout the city	No	60%
	2 Improving social Inclusion especially of vulnerable groups and minorities, creating new social e-services adapted to people with disabilities, providing an accessible and inclusive environment for senior citizens by 2025	Providing training and information, access to digital devices and digital services to target groups			Yes	92%
	3. New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Attracting and selecting staff with the necessary skills, attracting young people to the administration			Yes	92%
		Active work with IT businesses and research institutes, using their R&D programmes to develop unconventional solutions			Yes	85%
	4. Include the gender dimension in the Innovation Strategy for Smart Specialisation of Sofia by 2027	Introduction of standards for Gender Equality and diversity in the administration			No	69%
		Advisory council to Sofia Municipality, aiming to assist in developing the strategy, which is composed of women, who are experts on the topic			No	31%
			Extensive consultations and involvement of organisations and experts in the decision-making process		Yes	85%
	Total number of statements Anticipatory Governance appears		5	1	1	4



Table 44: Sofia's Anticipatory Governance Dimension/ Policy Area: Youth Employment and Entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
AIRR DIMENSION: ANTICIPATORY GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030	Creating an ecosystem that supports young innovators and start-ups (technological parks, research institutes, digital innovation hubs)			Yes	83%
		Active use of European programmes and funds from the Municipal Guarantee Fund for SMEs to achieve the objective			Yes	92%
		Development, implementation, evaluation of the funding program in collaboration with youth organisations (including during the selection of projects)			Yes	92%
		Linking funding to the implementation of pilot projects/ innovations, related to specific municipal policies, target groups, etc.			Yes	83%
			The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
			Regular surveys among young people, innovators, founders of start-ups, etc. in order to anticipate their long-term needs and plan appropriate financial		Yes	92%

			instruments in collaboration with them			
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Preparation of mentoring programmes and ensuring conditions that support young entrepreneurs in testing and implementing their ideas			No	67%
		Collaboration with businesses and European programmes, aiming to provide additional funding for young entrepreneurs			Yes	92%
			Develop a local strategy for innovation and start-ups in collaboration with research units and businesses		Yes	92%
				Create a business centre that will attract smart, sustainable businesses	No	37%
				Promoting returnee entrepreneurship	No	74%
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023	Conducting joint consultations with youth organisations, which are active in the Advisory Council on Youth Policies at Sofia Municipality			Yes	83%
Total number of statements Anticipatory Governance appears		7	3	2	8	12



4.3 Inclusiveness

Inclusiveness was the dimension with the highest resonance in the statements with a total of 33.71%. Regarding the percentage of statements that eventually reached a consensus after the three rounds of the Delphi survey, the Municipality of Thalwil had the highest percentage of statements that incorporate the dimension of Inclusiveness.

Regarding the Region of Western Macedonia, in the dimension of Inclusiveness, the most important solutions where the dimension was reflected was the development of synergies with the university and local research centres and the creation of structures/collaborations with representatives of the quadruple helix (Scientific Bodies, Enterprises, Governance Bodies, Civil Society).

As for the RRI/AIRR integration for the advancement of the policy area the most important aspect was the commitment of all local bodies (Local Authorities, Public Bodies, Entrepreneurship, Citizens, University) for continuous and strong promotion of start-up entrepreneurship at central and regional level.

For the Region of Sabadell, the survey results revealed as the most prominent solutions the following:

- guarantee of the participation of all the agents from the quadruple helix,
- enhancement of the inclusion of users and implementation of technological tools that could be used by a vast majority of the population.

As for the Municipality of Thalwil, the cooperation with retailers and local businesses and the development of solutions with the private sector was the statement where Inclusiveness was mostly referred. Moreover, the findings showed that exploiting synergies with existing associations and NGOs as well as a dialog with all relevant stakeholders towards energy issues is also considered important.

For Sofia Municipality regarding Inclusiveness in the policy area of “Support for Innovation” the most prominent aspect was Inclusiveness of the RRI/AIRR application requirements by the beneficiaries for the funding programmes.

For the policy area of “Sustainable Urban Development”, Inclusiveness was highly deemed as important towards the creation of a register of sustainable public procurement practices/good practices and engaging stakeholders in the process of policy development, implementation, and evaluation.

In terms of “Digital Transition”, the most important solutions that emerged were:

- creation of financial instruments, aiming to develop technological solutions, in partnership with businesses and target groups
- provision of training and information, access to digital devices and digital services to vulnerable groups
- selection of staff with the necessary skills, as well as the attraction of young people to the administration



- integration of the e-infrastructure and service platform for the target groups into a smart city platform
- use of the expert potential of local universities, research units and businesses to achieve the objective of improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart, and cost-effective solutions by 2025.

Finally, for the policy area of “Youth Employment and Entrepreneurship”, Inclusiveness found high resonance towards:

- collaboration with businesses and European programmes, aiming to provide additional funding for young entrepreneurs; and the development, implementation, and evaluation of a funding program for young innovators in collaboration with youth organisations (including during the selection of projects)
- regular surveys among young people, innovators, founders of start-ups, etc. to anticipate their long-term needs and plan appropriate financial instruments in collaboration with them
- collaboration between research institutes and businesses
- linking funding with educational programmes or joint initiatives with the business
- development of a local strategy for innovation and start-ups in collaboration with research units and businesses.



Table 45: RWM's Inclusiveness Dimension / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model.		Inclusion of all segments of society (working citizens, businesses, students, unemployed) in providing a framework of economic incentives		Yes	95%
	2. Linking research to production, promoting start-up entrepreneurship, and creating business spin-offs		Commitment of all local bodies (Local Authorities, Public Bodies, Entrepreneurship, Citizens, University) for continuous and strong promotion of start-up entrepreneurship at central and regional level		Yes	100%
	3. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy	Synergies with other relevant regions			No	75%
	4. Improvement of energy efficiency in affordable systems and "clean" energy infrastructure			Support of energy communities	Yes	91%

Energy Efficiency	1. Strengthening affordable and clean energy systems and infrastructure, including storage technologies	Implementation of synergies for clean energy infrastructure with the participation of PPC, the Region, energy municipalities and electricity storage companies			Yes	87%
		Bilateral agreements directly with producers without the intervention of the Energy Exchange			No	80%
		Collaborations between research organisations and companies			Yes	87%
	1. Hydrogen technologies and their use in post-lignite regions	Synergies with the university and local research centres			Yes	100%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use	Synergies (between businesses and local bodies) for production, recreation, and environmental upgrading actions			Yes	95%
			Collaborative participation of public bodies / research institutions / businesses in the rehabilitation process		Yes	91%
Promoting research and innovation and integrating modern technology	1. Development of supporting digital infrastructures and services of smart communities	Building a network of smart communities at inter-regional and international level			Yes	87%
		Ensure the involvement of representatives of civil society, including the social partners, consumer organisations and other stakeholders, in the formulation, implementation and monitoring of the policy objective			Yes	91%
Governance of the transition	1. Development of an effective system of transition governance by involving	Creation of structures/collaborations with representatives of the quadruple			Yes	100%

	regional structures in governance	helix (Scientific Bodies, Enterprises, Governance Bodies, Civil Society)				
		Networking at municipal/regional and interregional level			Yes	87%
			Involvement of local government, academia, business, and citizens in governance		Yes	91%
	2. Development of a more effective social dialogue between the actors of the quadruple helix	Equal participation of all parts of the quadruple helix			Yes	96%
		Participation of representatives of social and productive bodies in the committee of university research programmes			Yes	96%
			Open Access is very important to lay the foundations for a continuous cooperation and transmission of know-how by all actors of the quadruple helix		Yes	91%
Total number of statements where Inclusiveness appears		12	5	1	16	18

Table 46: Sabadell's Inclusiveness Dimension / Policy Area: Improving elderly people's ageing and health

Region of Sabadell
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities
AIRR DIMENSION: INCLUSIVENESS



Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Ensure a plural representative sample			Yes	79%
		Guarantee an intergenerational participation/involvement			Yes	79%
		Personalized participation according to situation and needs: face-to-face or online (depending on mobility and availability) and/or at home if it is necessary (participation of volunteers who assist the person during the process)			Yes	86%
		Generate an open creation process and participation of all the agents			Yes	86%
			Enhance the Inclusion of users		Yes	100%
				Senior Lab is a Swiss interinstitutional and interdisciplinary of applied research and development platform, focusing on issues of quality of life and autonomy for elderly people. It works according to the principles of a "living lab" with a community formed by individuals, public agents, associations, universities, and companies to offer and test innovative solutions. The	Yes	94%

				mission is to develop concrete and innovative solutions in the active ageing field with and for elderly people		
	2. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals	Co-creation projects between senior and junior healthcare professionals			No	50%
		Insert new ways and initiatives such as co-payment, public-private, self-managed cooperative, experiential workshops, "council of elders" or transfer programmes			Yes	93%
			Tackle issues in a transversal way		Yes	93%
				Polibienestar (University of Valencia) has one initiative consisting of detecting the needs of people in labour exclusion risk and those of elderly people. Once they have been detected, the next step is to develop strategies to increase the opportunities of people in labour exclusion risk of finding a job through their training in the social and health care field to improve the quality of life of elderly people. This action contributes to the sustainability and efficiency of public policies. The main challenge is making health care systems sustainable (promoting the quality of life, creating jobs, promoting	No	63%



				sustainable home care, incrementing the customer’s satisfaction)		
	3. Create a participatory tool to identify the challenges of the elderly by 2023.	Guarantee plural participation			Yes	93%
		Work with already existing groups			No	50%
		Guarantee age diversity			No	50%
		Guarantee the participation of all the agents from the quadruple helix			Yes	100%
			Representation of all social realities, guaranteeing the plurality of participants		Yes	93%
	4. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Ensure the most representative sampling			Yes	86%
		Promote intergenerational projects			Yes	86%
			Implement technological tools that could be used by a vast majority of the population		Yes	100%
Total number of statements where Inclusiveness appears		12	4	2	14	18

Table 47: Thalwil's Inclusiveness Dimension / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
AIRR DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Mobility	1. All vehicles registered in the municipality of Thalwil should be operated in a CO ² -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)	Support projects for car-free settlements			No	68%
		Promote slow traffic (physical activity)			Yes	76%
			Involve all stakeholders in concept development		No	72%
				Speed-30 not only improves the traffic flow, but also increases the attractiveness of the streets for non-motorized traffic. To this end, a survey of the population will examine the acceptance of Speed-30 and other measures to promote non-motorized traffic	No	52%
				Local companies should be given the opportunity to test eCargo bikes for transportation. This is to be triggered by a pilot project in cooperation with private providers	No	36%
				The administration is developing an overall concept for charging infrastructure that identifies suitable locations and is seeking contact with private providers to provide a coordinated supply	Yes	85%

Housing/ Buildings	1. By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources	Municipality helps companies to lease their roof areas by means of contracting			No	68%
		Develop financial products for renovations in cooperation with the private sector			No	60%
			Participatory involvement of the owners		Yes	80%
			Carry out information events		No	68%
				Organic waste from households and businesses is collected and processed locally into biogas, which is then converted into electricity and heat in combined heat and power plants	Yes	79%
				Non-institutional property owners can apply for neutral energy advice at the expense of the municipality in the event of a pending heating system replacement	Yes	97%
				The energy consulting is offered by local energy experts on behalf of the municipality and aims at optimizing the energy consumption of private properties	Yes	91%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil	Develop solutions with the private sector			Yes	96%
		Development of financing models in cooperation with Bank Thalwil			No	60%
			Enlist the support of the scientific community		Yes	76%
				The municipality builds photovoltaic systems on its own properties suitable for this purpose and finances the investment by selling	Yes	94%

				shares to the local population (solar fund)		
Municipality	1. Every two years until 2050, the municipality should produce a complete and comprehensive balance of the territorial energy and greenhouse gas amount	Increase cooperation with other municipalities			Yes	76%
		Launch competition between municipalities (energy challenge)			No	12%
			Enlist the support of the scientific community		Yes	80%
	2. The role model effect of the municipal administration with regard to energy issues for the population and businesses should be strengthened	Energy transition as a challenge between municipalities (gamification)			No	16%
			Promoting cooperation among community employees		No	50%
			Exchange and cooperation with other municipalities, universities, and civil society		Yes	88%
Society	1. Circular economy approaches should be systematically promoted for consumer goods and services	Design attractive recycling offer (shorter distances, pick-up system)			Yes	92%
		Campaigns with ambassadors or influencers			No	36%
		Cooperation with retailers and local businesses			Yes	100%
			Exploiting synergies with existing associations and NGOs		Yes	96%
			Making information material widely available		No	68%
		Create offers for participation (participation procedures)			Yes	92%

	2. The involvement of the public in energy issues should be promoted	Community app as information and discussion portal			No	12%
		"Future" workshop, where energy topics are specifically addressed			Yes	84%
			Dialog with all relevant stakeholders		Yes	96%
			Making science more practical (environmental training)		Yes	76%
	3. Visibility of all energy policy measures in the municipality should be improved	Open house of new energy facilities/light towers			Yes	84%
			Dialogue with all relevant stakeholders		Yes	91%
				As part of a project, students are to learn how they can actively help shape the energy transition in the community. To this end, renewable energy systems and energy-saving measures will be addressed. The results will be presented publicly at the end of the project	Yes	94%
				An energy educational trail is to make energy a playful experience and is aimed at schools and families. QR codes can be used to find out what exactly energy is, how renewable energy is used locally and how it can be saved	No	58%
Total number of statements where Inclusiveness appears		16	12	9	22	37

Table 48: Sofia's Inclusiveness Dimension / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
AIRR DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
		Effective use of ICT, building an online platform/portal and communication channels for cooperation with all stakeholders			No	60%
		Developing a strategy, which includes key priorities for horizontal cooperation, addressing the needs of stakeholders, as well as concrete measures for implementation and provision of feedback			No	27%
		Applying the living labs method to experiment and scale innovations (social, technological), which shall be then introduced throughout the city			No	43%
		Creating a joint (administration, universities, and businesses) research infrastructure in order to address topics of public importance			No	64%

			Conducting a communication and information campaign, targeted at the public, aiming to get people acquainted with the benefits of RRI/AIRR		No	64%
			Promotion of achievements in the field of innovation by research institutes, universities, businesses, to integrate appropriate ideas and products in the management of Sofia Municipality and in the provision of public services		No	71%
			Establishment of multifunctional or thematic working groups for advocacy and capacity building, aiming at creating horizontal links between stakeholders		No	57%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030	Establishment of a coordination unit in Sofia Municipality with a program for innovation management and financial instruments, which has clear thematic/sectoral priorities for each year			No	53%
		Establishing partnerships with existing private funds to create new financial instruments and ensure support for start-ups and innovation companies			No	73%
		Creating grants for long-term programmes such as ones supporting innovative green projects as well as cultural, social, or environmental projects			No	53%
		To create a sustainable funding fund by making deductions from the profit of already supported start-ups and to combine it with crowdfunding			No	47%

		Creating a physical space where mentoring, consulting and expert support for innovative start-ups is available			No	73%
			Establishment of a municipal unit/advisory council with the participation of experts to manage, monitor and evaluate project applications		No	53%
			Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
				Stimulating youth employment by start-up support programmes	No	73%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030	Introducing innovations in specific fields and directorates through pilot projects and pilot areas, which are then implemented on a larger scale			Yes	87%
		Attracting experts from other fields to management positions in Sofia Municipality in order to implement such projects			No	73%
			Introduction of Open Access to data and information, constant feedback from stakeholders		No	73%
				Bring creative entrepreneurs to abandoned shopping areas	No	45%
Total number of statements where Inclusiveness appears		12	6	2	2	20

Table 49: Sofia's Inclusiveness Dimension / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
AIRR DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Development of rules, methodology and criteria for evaluation and control, with the participation of stakeholders			Yes	85%
		Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
		Creating databases with solutions and Open Access tools that can be used by all stakeholders			Yes	77%
			Engagement of citizens and stakeholders in the process - NGOs, businesses, academia		Yes	85%
			Using the expert potential of businesses, academia, and NGOs through a platform for exchange of information		Yes	77%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses in order to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%

		Creating a register of sustainable public procurement practices/good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
			Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration		Yes	85%
			Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures		No	46%
			Organising an information campaign that explains the benefits of public procurement, executed in line with RRI		No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023	Implementation of curricula that involves universities and research organisations			Yes	77%
		Conducting internal competitions/hackathons in order to gather ideas about the content of programmes as well as about innovations to be introduced by the administration			No	38%
		Organising design seminars and innovation camps for the municipal administration and other stakeholders in order to create programmes			Yes	77%
			Creating programmes through co-design ateliers, research, consultations with universities and businesses		No	54%

			Inclusion of cases, related to innovations, aimed at different target groups, in the training programmes		Yes	77%
			The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	4. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing, and opening of data are well defined by 2025	Creating a cloud server for the municipal administration, which allows access to data of employees who are outside of the municipal network			Yes	77%
		Inclusion of PhD students from universities and research institutes, who are specialising in ICT			No	54%
			Engaging stakeholders in the process of policy development, implementation, and evaluation		Yes	92%
			Engaging stakeholders in the process of policy development, implementation, and evaluation		Yes	77%
				Enhancing participatory urban planning	No	25%
		Total number of statements where Inclusiveness appears		14	10	1

Table 50: Sofia's Inclusiveness Dimension / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
AIRR DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus



	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart, and cost-effective solutions by 2025	Cooperation with the IT sector and engagement of stakeholders and citizens in decision-making and implementation of the objective			Yes	85%
		Participation in European funding programmes or consultation in the field of digitalisation			Yes	85%
			Using the expert potential of local universities, research units and businesses to achieve the objective		Yes	92%
			Implementation of partnership projects, involving consultants, businesses, municipal experts, citizens and other stakeholders		Yes	77%
				Maintain and improve the public space and revive commercial zones by increasing civic involvement	No	60%
	2. Improving social Inclusion especially of vulnerable groups and minorities, creating new social e-services adapted to people with disabilities, providing an accessible and inclusive environment for senior citizens by 2025	Creating financial instruments, aiming to develop technological solutions, in partnership with businesses and target groups			Yes	92%
		Providing training and information, access to digital devices and digital services to target groups			Yes	92%
		Establishment of centres for shared access to digital devices and to the internet for the target groups			Yes	85%
		Implementation of joint projects with universities or start-ups for the technological creation of services			Yes	85%
		Technological solutions such as a chatbot, designed specifically for the elderly in order to facilitate them when using digital services and devices			No	46%

			Engaging vulnerable groups in the search for solutions and their implementation		Yes	85%	
			Representatives of the target groups to be appointed in the administration and to consult the search of solutions to the problems		No	46%	
			Integration of the e-infrastructure and service platform for the target groups into a smart city platform		Yes	92%	
				Improve living conditions by creating a one-stop shop that encompasses various mechanisms for home renovation	No	66%	
	3.	New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Attracting and selecting staff with the necessary skills, attracting young people to the administration		Yes	92%	
	4.	Include the gender dimension in the Innovation Strategy for Smart Specialisation of Sofia by 2027	Advisory council to Sofia Municipality, aiming to assist in developing the strategy, which is composed of women, who are experts on the topic		No	31%	
				Extensive consultations and involvement of organisations and experts in the decision-making process	Yes	85%	
				Inclusion of measures, supporting young people and women in science, support for minority and vulnerable groups	Yes	85%	
	Total number of statements where Inclusiveness appears		9	7	2	13	18

Table 51: Sofia's Inclusiveness Dimension / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
AIRR DIMENSION: INCLUSIVENESS						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030	Establishment of a local innovation/acceleration hub, provision of space, mentoring and infrastructure to young innovators			No	67%
		Development, implementation, evaluation of the funding program in collaboration with youth organisations (including during the selection of projects)			Yes	92%
			The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
			Regular surveys among young people, innovators, founders of start-ups, etc. to anticipate their long-term needs and plan appropriate financial instruments in collaboration with them		Yes	92%
			Collaboration with research institutes, businesses and linking funding with educational programmes or joint initiatives with the business		Yes	92%

	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Collaboration with universities, laboratories, and businesses during the implementation of projects			Yes	83%
		Collaboration with businesses and European programmes, aiming to provide additional funding for young entrepreneurs			Yes	92%
			Develop a local strategy for innovation and start-ups in collaboration with research units and businesses		Yes	92%
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023	Conducting joint consultations with youth organisations, which are active in the Advisory Council on Youth Policies at Sofia Municipality			Yes	83%
		Organising forums with the participation of stakeholders in order to discuss targeted measures and actions to reach the objective			Yes	75%
		Extensive information campaign and support to organisations, working on the topic			Yes	75%
		Position rotation/quotas for young people in the administration			No	58%
	Total number of statements where Inclusiveness appears		8	4	0	9



4.4 Reflexivity

Only 15.26% of the statements referred to the Reflexivity dimension, while an even smaller percentage ended up with consensus (10.02%). Of the four territories that participated in the survey, the Municipalities of Sofia and Thalwil showed the highest percentages of statements referring to Reflexivity, while for the city of Sabadell Reflexivity found little resonance.

For the Region of Western Macedonia, the most important solutions, best practices, and importance of RRI/AIRR integration that emerged regarding Reflexivity were:

- tax reduction for industries to encourage investment
- creation of a flexible legal framework for start-ups, by reducing/eliminating bureaucracy
- the creation of effective and decentralised mechanisms to identify education and retraining needs
- strengthening of research infrastructures, innovation hubs, areas of cooperation and the soil restoration and the land use adjustment
- integration of modern monitoring and evaluation tools.

For the Region of Sabadell, with a focus on “Active Ageing”, the development of a systemic evaluation by elderly people was highlighted as particularly important.

For the Municipality of Thalwil and its policy area of “Energy Transition”, Reflexivity is deemed as important for implementation of solutions for the private sector regarding the development of suitable instruments for the financing of the energy transition, as well as for the improvement of energy policy measures visibility.

For Sofia Municipality, for the policy area of “Support for Innovation”, the most prominent was including the RRI/AIRR application requirements by the beneficiaries in funding programmes. For the policy area of “Sustainable Urban Development”, the most important solution that emerged was the creation of a register of sustainable public procurement practices/good practices, whilst regarding “Digital Transition”, including Digital Economy and Society Index (DESI), as open data for the municipality emerged as the most prominent. Finally, for the policy area of “Youth Employment and Entrepreneurship” the development, implementation, and evaluation of the funding program in collaboration with youth organisations was highlighted as particularly important.

Table 52: RWM's Reflexivity Dimension / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI DIMENSION: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI/AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030	Provision of flexible financial assets by central/local authorities in the form of subsidies, tax cuts, etc.			Yes	96%
	2. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model	Tax reduction for industries to encourage investment			Yes	100%
				Strengthening of research infrastructures, innovation hubs, areas of cooperation	Yes	100%
	3. Linking research to production, promoting start-up entrepreneurship, and creating business spin-offs	Creation of a flexible legal framework for start-ups, by reducing/eliminating bureaucracy			Yes	100%
		Changing the legal framework of spin-offs to provide real incentives for their creation at local level			Yes	96%
	4. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy	Creation of effective and decentralised mechanisms to identify education and retraining needs			Yes	100%

Energy Efficiency	1. Strengthening affordable and clean energy systems and infrastructure, including storage technologies			Construction of heating and/or cooling units with heat and RES pumps	No	82%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use	Legal obligation of PPC to release the huge areas it has committed, for the creation of photovoltaics, so that they can be used for productive activities			Yes	87%
				Soil restoration and land use adjustment	Yes	100%
Promoting research and innovation and integrating modern technology	1. Development of supporting digital infrastructures and services of smart communities	Increase funding for the creation of such infrastructure for businesses and public institutions			Yes	91%
Governance of the transition	1. Development of an effective system of transition governance by involving regional structures in governance	Decentralisation of the governance system			Yes	87%
			Integration of modern monitoring and evaluation tools		Yes	100%
	2. Development of a social security framework			Direct payments, subsidies, compensations for active and former workers in the lignite sector	Yes	91%
Total number of statements where Reflexivity appears		7	1	5	12	13

Table 53: Sabadell's Reflexivity Dimension / Policy Area: Improving elderly people's ageing and health

Region of Sabadell
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities
AIRR DIMENSION: REFLEXIVITY



Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Perform a benchmarking of other initiatives and establish possible alliances			No	29%
		Generate an open creation process and participation of all the agents			Yes	86%
	2. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals		Reflect about the work done and their implications		Yes	86%
	3. Create a participatory tool to identify the challenges of the elderly by 2023.	Perform several actions in the city that give visibility to the tool			Yes	79%
	4. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Systemic evaluation by elderly people			Yes	93%
Total number of statements where Reflexivity appears		4	1	0	4	5

Table 54: Thalwil's Reflexivity Dimension / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
AIRR DIMENSION: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus



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

Mobility	1. All vehicles registered in the municipality of Thalwil should be operated in a CO ² -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)	Promote slow traffic (physical activity)			Yes	76%
				The administration analyses the existing sharing offer and tries to strengthen the offer further in the direction of e-mobility with the help of a concept	No	48%
				Speed-30 not only improves the traffic flow, but also increases the attractiveness of the streets for non-motorized traffic. To this end, a survey of the population will examine the acceptance of Speed-30 and other measures to promote non-motorized traffic	No	52%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil	Develop solutions with the private sector			Yes	96%
		Continue and expand existing support programmes			Yes	92%
		Development of financing models in cooperation with Bank Thalwil			No	60%
Municipality	1. The role model effect of the municipal administration with regard to energy issues for the population and businesses should be strengthened	Internal training and sensitization of municipal staff			Yes	92%
		Energy transition as a challenge between municipalities (gamification)			No	16%

			Train administrative staff on energy issues		Yes	84%
				The administration is reviewing the existing provisions on sustainable procurement and strengthening procurement criteria that are geared to low energy and resource consumption	Yes	91%
Society	1. The involvement of the public in energy issues should be promoted	"Future" workshop, where energy topics are specifically addressed			Yes	84%
			Dialog with all relevant stakeholders		Yes	76%
	2. Visibility of all energy policy measures in the municipality should be improved		Dialogue with all relevant stakeholders		Yes	91%
			Evaluation of measures taken to become an integral part of the process		Yes	96%
				As part of a project, students are to learn how they can actively help shape the energy transition in the community. To this end, renewable energy systems and energy-saving measures will be addressed. The results will be presented publicly at the end of the project	Yes	94%
				An energy educational trail is to make energy a playful experience and is aimed at	No	58%

				schools and families. QR codes can be used to find out what exactly energy is, how renewable energy is used locally and how it can be saved		
Total number of statements where Reflexivity appears	7	4	5	11	16	

Table 55: Sofia's Reflexivity Dimension / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
AIRR: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030	To create a sustainable funding fund by making deductions from the profit of already supported start-ups and to combine it with crowdfunding			No	47%
		Creating a physical space where mentoring, consulting and expert support for innovative start-ups is available			No	73%

			Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030		Introduction of Open Access to data and information, constant feedback from stakeholders		No	73%
Total number of statements where Reflexivity appears		3	2	0	1	5

Table 56: Sofia's Reflexivity Dimension / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
AIRR DIMENSION: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025	Unification of the social and the economic evaluation and digitalisation of the process			No	69%
		Development of rules, methodology and criteria for evaluation and control, with the participation of stakeholders			Yes	85%
		Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
			Creating conditions for transparency, accountability		Yes	77%

			and monitoring through open data			
				Enforce EMAS Regulations on public transport tenders	No	33%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%
		Annual award for the most successful public procurement, executed in line with RRI/AIRR.			No	15%
		Creating a register of sustainable public procurement practices/good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%

				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023	Introduction of standards regarding the competencies of the administration as well as certification of the administration			Yes	77%
		Creating appropriate incentives for career development of the experts at the administration			Yes	85%
			The curriculum should include modules, dedicated to the application of RRI		Yes	77%
Total number of statements where Reflexivity appears		11	2	4	9	17

Table 57: Sofia's Reflexivity Dimension / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
RRI DIMENSION: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Improving social inclusion especially of vulnerable groups and minorities, creating new social e-services adapted to people with disabilities, providing an accessible and inclusive		Representatives of the target groups to be appointed in the administration and to consult the search of solutions to the problems		No	46



	environment for senior citizens by 2025.					
	2. New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025	Rating of services, evaluation by citizens as an incentive to implement the policy			Yes	77
			Citizens' monitoring and control of the implementation of the policies for open data and free access to data		No	62
				Digital Economy and Society Index (DESI)	Yes	84
Total number of statements where Reflexivity appears		1	2	1	2	4

Table 58: Sofia's Reflexivity Dimension / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI DIMENSION: REFLEXIVITY						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030	Development of a preliminary financial program with a clear commitment by the responsible structures and institutions			Yes	83%
		Development, implementation, evaluation of the funding program in collaboration with youth organisations (including during the selection of projects)			Yes	92%



			The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Reinvesting profits from already funded companies back into the program in order to refill resources			Yes	75%
		Including measures targeted at certain target groups - women, migrants, disadvantaged people in order to address their needs and to equalize deficits in the municipal economy			Yes	83%
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023		Public discussion about the measures and the implementation of the Youth Strategy, involvement of youth organisations in the process of reporting and evaluation of results		Yes	83%
			Regular sociological surveys regarding the level of Gender Equality, Inclusion, and diversity on the territory of Sofia Municipality		No	50%
Total number of statements where Reflexivity appears		4	3	0	5	7

4.5 Responsive and Accountable Governance

The Municipality of Thalwil and the Region of Western Macedonia are the territories where the dimension of Responsive and Accountable Governance appears the most within the statements regarding the territorial policy areas.

Regarding the Region of Western Macedonia, concerning Responsive and Accountable Governance, the most important solution was the provision of free land by the Region and the Municipalities to local businesses for the creation of energy communities that will invest in RES and the creation of effective and decentralised mechanisms to identify education and retraining needs.

As for the integration aspect of the RRI/AIRR concept for the policy area advancement, a framework for cooperation between research/academics and businesses was rated as highly important. In term of best practices, the most prominent one was the establishment of an Innovation Zone that could help in the creation of start-ups and spin-offs.

Regarding the Region of Sabadell, the most important solution was:

- wage improvement and extra economy incentives,
- continuous evaluation of a tool that will be created to identify the challenges of the elderly in order to study its effectiveness.

For the Municipality of Thalwil, the most prominent solution that emerged regarding Responsive and Accountable Governance was the cooperation with retailers and local businesses towards circular economy. The best practice of renewable energy networks expansion, taking into account the energy sources prioritised in the energy plan (lake water, geothermal energy, biomass) also achieved high consensus.

Concerning Sofia Municipality, for the policy area of “Support for Innovation”, the most prominent statement was the inclusion of RRI/AIRR application requirements by the beneficiaries in funding programmes.

For “Sustainable Urban Development” the most important solution was the necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality, whilst regarding “Digital Transition” policies, increase of the capacity and digital competencies of the administration was deemed as important.

Finally, concerning “Youth Employment and Entrepreneurship”, the most prominent solution was the active use of European programmes and funds from the Municipal Guarantee Fund for SMEs to achieve the objective. In terms of RRI/AIRR integration for the advancement of the policy area, regular surveys among young people, innovators, founders of start-ups, etc., in order to anticipate their long-term needs; collaboration with research institutes, businesses as well as linking funding with educational programmes or joint initiatives with the business were the statements referring to Responsive and Accountable Governance with the highest importance ratings.



Table 59: RWM's Responsive and Accountable Governance Dimension / Policy Area: Clean energy transition strategy

Region of Western Macedonia						
Policy Area: Clean energy transition strategy based on stakeholder engagement, efficient territorial governance and development of a methodology aiming to a smooth and innovative transition towards an alternative development 'paradigm'						
RRI DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration	Best Practice	Statements reached consensus	% Consensus
Fostering Entrepreneurship	1. Transforming and evolving the competitiveness of existing companies that need support to transition to a zero-emission economy by 2030	Provision of flexible financial assets by central/local authorities in the form of subsidies, tax cuts, etc.			Yes	96%
			Implementation of a holistic investment plan that will include specific economic objectives		Yes	96%
			A framework for cooperation between research/academics and businesses		Yes	100%
				Investor Support Network (ISN)	Yes	96%
				Align investment incentives and disincentives to support a low-carbon agenda	Yes	87%
	2. Establishment and attraction of new businesses that create jobs and lead to economic diversification, modernisation, and transformation of the existing production model.	Free concession of land from the former mines for investment and agri-food activities			Yes	87%
			Integration into the local production model of research findings related to entrepreneurship, as well as their impact on the local community		Yes	87%



				Provision of land by the Regional Authority for the establishment of new businesses and relocation of existing local enterprises	Yes	96%
				Call for employees with similar skills to coal workers	No	61%
	3. Linking research to production, promoting start-up entrepreneurship, and creating business spin-offs	Creating an innovation zone with generous incentives and benefits for start-ups and spin-offs			Yes	100%
				Establishment of an Innovation Zone	Yes	100%
				Establishment of Academic Institutes	Yes	87%
				Financial support for start-ups	Yes	75%
	4. Upskilling and reskilling of employees of businesses that need support for their transition to a zero-emission economy	Creation of effective and decentralised mechanisms to identify education and retraining needs			Yes	100%
		An integrated approach to upskilling and reskilling including training and guidance			Yes	95%
		Creating an effective and up-to-date platform to connect demand with the labour market			Yes	86%
			Creation of effective, decentralised, and flexible training and retraining mechanisms that can meet society's expectations and the challenges of the market and climate change		Yes	100%
				Business grant program for the employment of the unemployed	No	78%



				Special preparation program for unemployed young people, aged 18-29 years	No	83%
Energy Efficiency	1. Improvement of energy efficiency in affordable systems and "clean" energy infrastructure	Completion of spatial and urban planning / interventions			Yes	96%
		Subsidies (on the part of the State and/or local authorities) for the purchase of electric cars and energy-friendly electrical appliances to the population of the region			No	65%
		Provision of free land by the Region and the Municipalities to local businesses for the creation of energy communities that will invest in RES			Yes	100%
			Increased funding for green, proven high value-added projects by companies		Yes	95%
				Energy upgrades of local public infrastructure	No	83%
				Energy upgrades of office buildings and production units	Yes	75%
				Support of energy communities	Yes	91%
	2. Strengthening affordable and clean energy systems and infrastructure, including storage technologies.	Generous financial support (from central and local authorities) for the adoption of clean systems			Yes	96%
		Upgrading and improvement of local energy infrastructure			Yes	96%
				Hydrogen and Energy Saving Node	Yes	87%
				Development of smart energy systems	Yes	91%

	3. Hydrogen technologies and their use in post-lignite regions	Implementation of the necessary infrastructure			Yes	87%
Environmental Sustainability	1. Restoration of degraded areas and facilities and their change of use	Implementation of holistic model for the rehabilitation of degraded areas			Yes	91%
		Creation of overlapping areas of cultivation, which will divide the area based on the topography into longitudinal vegetation flows, movements, uses			Yes	91%
				Free land provision	Yes	87%
Governance of the transition	1. Development of an effective system of transition governance by involving regional structures in governance			Improving the regulatory framework	Yes	91%
				Financial resources for the transition	Yes	92%
	2. Development of a more effective social dialogue between the actors of the quadruple helix	Implementation of flagship investments that will set the tone and help boost the optimism of stakeholders and the need to participate in the public debate			Yes	91%
	3. Development of a social security framework	Clear financial framework for interventions towards the social security framework			Yes	91%
				Direct payments, subsidies, compensations for active and former workers in the lignite sector	Yes	91%
				Early retirement or voluntary retirement scheme	No	52%
Total number of statements where Responsive & Accountable Governance appears		16	5	19	34	40

Table 60: Sabadell's Responsive and Accountable Governance Dimension / Policy Area: Improving elderly people's ageing and health

Region of Sabadell						
Policy Area: Improving elderly people's ageing and health. Creation of a space and a methodology for capturing the needs of the population over 60 and transforming them into business opportunities						
AIRR DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
Active Ageing	1. Solar panels in nursing homes: Increase by 15% the number of photovoltaic panels installed in public and private nursing homes by 2030	Grant/Subsidy for the installation of photovoltaic panels			Yes	93%
		Establishment of public-private alliances (from planning and installation to communication of benefits)			No	57%
		Perform crowdfunding campaigns			No	0%
		Apply discounts in the users' electric invoice according to the savings made with green energy consumption			No	57%
		Change of energetic model. No public roof without photovoltaic panels			No	64%
			Ability to readjust key elements to achieve the goals		No	71%
			Understand the new needs of the society/populations		Yes	93%



				FOSTERinMed Guidelines on building integration of photovoltaic in the Mediterranean area. To integrate photovoltaic elements into the building envelope (such as museums, civic centres, public institutions etc), establishing a symbiotic relationship between the architectural design, functional properties, and economic regenerative energy conversion. The photovoltaic modules thus replace conventional construction materials, taking over the function that these would otherwise perform	No	69%
				Boa Vista (Brazil) city purchases the photovoltaic solar panels using its own funds, grants and national or regional government, or by borrowing money using municipal bonds. It has become a national leader in the photovoltaic solar energy generation distributed through six projects on municipal roofs and a large self-generation plant	Yes	88%
	2. Create a senior lab: elderly people directly participate in the creation process of new products and services (showing the trends) by 2023	Ensure the commitment of public institutions			No	71%
	3. Prepare good professionals in the socio-sanitary field to attend elderly people by 2023, considering the expertise of senior professionals	Wage improvement/economy incentives			Yes	100%
		Incorporation of social incentives that facilitate their commitment (public acknowledge/recognition, internal promotion, work-life balance, etc)			Yes	93%



			Ability to incorporate new knowledge to new needs		Yes	93%
	4. Create a participatory tool to identify the challenges of the elderly by 2023	Develop a barometer that allows to evaluate the tool			Yes	86%
			Continuous evaluation of the tool effectiveness for its improvement		Yes	100%
	5. Development of pilot projects to design technology-based products, that include protocols for citizen participation and end-user with elderly people by 2023	Creation of a quality stamp that validates the suitability of the product for elderly people			No	71%
Total number of statements where Responsive and Accountable Governance appears		10	4	2	8	12

Table 61: Thalwil's Responsive and Accountable Governance Dimension / Policy Area: Energy Transition

Region of Thalwil						
Policy Area: Energy Transition						
AIRR DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus



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

Mobility	1. All vehicles registered in the municipality of Thalwil should be operated in a CO ² -neutral manner by 2050 (with biogas, electricity, hydrogen, or similar)	Adjustment of political environment (steering fees, subsidy programmes, tax incentives, emission regulations etc.)			No	72%
		Promoting the local expansion of renewable energies			Yes	96%
		Support projects for car-free settlements			No	68%
		Reduce physical mobility through digitization (home office)			No	40%
				The administration analyses the existing sharing offer and tries to strengthen the offer further in the direction of e-mobility with the help of a concept.	No	48%
				Speed-30 not only improves the traffic flow, but also increases the attractiveness of the streets for non-motorized traffic. To this end, a survey of the population will examine the acceptance of Speed-30 and other measures to promote non-motorized traffic.	No	52%
				Local companies should be given the opportunity to test eCargo bikes for transportation. This is to be triggered by a pilot project in cooperation with private providers.	No	36%
				The administration is developing an overall concept for charging infrastructure that identifies suitable locations and is seeking contact with private providers to provide a coordinated supply.	Yes	85%

				The municipality could produce its own fuels and supply the municipal vehicle fleet and private customers with them. This would be possible, for example, as part of the new construction of the wastewater treatment plant (ARA-Zimmerberg) in Thalwil (larger photovoltaic system, biogas, power-to-gas/liquid).	No	64%
Housing/Buildings	1. By 2050, Thalwil's building stock should be operated exclusively with renewable energy sources	Reduce financial hurdles and create incentives for investment			Yes	84%
		Simplify and accelerate approval procedures			No	64%
		Municipality helps companies to lease their roof areas by means of contracting			No	68%
		Develop financial products for renovations in cooperation with the private sector			No	60%
				The municipality attempts to fully exploit the realistically usable energy potential (economic potential minus protected objects and solar thermal energy) of the entire Thalwil building stock and presents an expansion strategy for this purpose	Yes	94%
				Organic waste from households and businesses is collected and processed locally into biogas, which is then converted into electricity and heat in combined heat and power plants	Yes	79%
				The expansion of renewable energy networks, considering the energy sources prioritized in the energy plan (lake water,	Yes	100%

				geothermal energy, biomass), is being driven forward in a targeted manner		
				Non-institutional property owners can apply for neutral energy advice at the expense of the municipality in the event of a pending heating system replacement	Yes	97%
				The energy consulting is offered by local energy experts on behalf of the municipality and aims at optimizing the energy consumption of private properties	Yes	91%
Financing	1. The municipality of Thalwil should develop suitable instruments for financing the energy transition in Thalwil	Develop solutions with the private sector			Yes	96%
		Continue and expand existing support programmes			Yes	92%
		Slight increase in tax rate			No	56%
		Temporary special tax to finance the energy transition			No	56%
		Development of financing models in cooperation with Bank Thalwil			No	60%
		Establish a Thalwil energy fund			No	72%
		Introduction of a Thalwil climate franc (analogous to Migros Culture Percentage)			No	60%
			Conduct information campaign		Yes	84%
				The municipality builds photovoltaic systems on its own properties suitable for this purpose and finances the investment by selling shares to the local population (solar fund)	Yes	94%



				The pension fund of the municipality commits to the sustainable investment of its assets. To this end, sustainable criteria are to be defined that are based on current green portfolios	Yes	85%
Municipality	1. Every two years until 2050, the municipality should produce a complete and comprehensive balance of the territorial energy and greenhouse gas amount	Alignment with national and cantonal standards			Yes	84%
		Set comprehensive GHG reporting as a legislative goal			Yes	96%
	2. The role model effect of the municipal administration regarding energy issues for the population and businesses should be strengthened	Internal training and sensitization of municipal staff			Yes	92%
		Award for exemplary behaviour (energy saving prize)			No	64%
		Establish sustainable energy production as an article in the municipal bylaws			Yes	88%
				With the help of smart meters, the energy consumption of municipally owned buildings is to be optimized. In addition, a corresponding visualization will draw attention to the conscious use of energy	No	73%
				The administration is reviewing the existing provisions on sustainable procurement and strengthening procurement criteria that are geared to low energy and resource consumption	Yes	91%
				The energy and greenhouse gas balances drawn up are published on the municipality's website, progress is shown, and attention is drawn to the necessary reduction paths	Yes	85%

Society	1. Circular economy approaches should be systematically promoted for consumer goods and services	Design attractive recycling offer (shorter distances, pick-up system)			Yes	92%
		Promote repair offers (repair cafe)			Yes	76%
		Regular pick-up and drop-off days for consumer goods			Yes	80%
		Cooperation with retailers and local businesses			Yes	100%
	2. The involvement of the public in energy issues should be promoted	Introduce an energy or environment day			No	72%
	3. Visibility of all energy policy measures in the municipality should be improved			At highly frequented locations in Thalwil, separate waste containers should enable the separate collection of recyclable materials (PET, aluminium, glass)	Yes	88%
				As part of a project, students are to learn how they can actively help shape the energy transition in the community. To this end, renewable energy systems and energy-saving measures will be addressed. The results will be presented publicly at the end of the project	Yes	94%
				An energy educational trail is to make energy a playful experience and is aimed at schools and families. QR codes can be used to find out what exactly energy is, how renewable energy is used locally and how it can be saved	No	58%
Total number of statements where Responsive and Accountable Governance appears		25	1	19	26	45



Table 62: Sofia's Responsive and Accountable Governance Dimension / Policy Area: Support for Innovation

Sofia Municipality						
Policy Area: Support for Innovation						
AIRR DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Building horizontal communication links with stakeholders from research and academia, the private and civic sectors on RRI-AIRR approach in policies by 2023	Establishment of an analytical R&D unit in Sofia Municipality, which shall carry out the horizontal links and communication with academia, business associations and NGOs in the respective fields			No	20%
		Developing a strategy, which includes key priorities for horizontal cooperation, addressing the needs of stakeholders, as well as concrete measures for implementation and provision of feedback			No	27%
		Applying the living labs method to experiment and scale innovations (social, technological), which shall be then introduced throughout the city			No	43%
		Creating a joint (administration, universities, and businesses) research infrastructure in order to address topics of public importance			No	64%
	2. Setting up funding instruments for support to innovation start-ups and companies by 2030	To create a sustainable funding fund by making deductions from the profit of already supported start-ups and to combine it with crowdfunding			No	47%
		Creating a physical space where mentoring, consulting and expert support for innovative start-ups is available			No	73%



			Funding programmes should include requirements for application of RRI/AIRR by the beneficiaries		Yes	93%
	3. Sofia Municipality develops and implements Flagship projects for innovations in the public administration area by 2030		Introduction of Open Access to data and information, constant feedback from stakeholders		No	73%
			Citizens' monitoring and control of the implementation of the policies for open data and free access to data		No	73%
Total number of statements where Responsive and Accountable Governance appears		6	3	0	1	9

Table 63: Sofia's Responsive and Accountable Governance Dimension / Policy Area: Sustainable urban development

Sofia Municipality						
Policy Area: Sustainable urban development						
AIRR DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
-	1. Introducing social and economic impact assessment (besides ecological impact) of policies for sustainable urban development by 2025.	Increasing the administrative and expert capacity of Sofia Municipality			Yes	92%
		Creating a digital platform for smart governance and provision of services, related to RRI			Yes	85%
		Introducing RRI into all administrative procedures of Sofia Municipality			Yes	77%
	2. New public procurement procedures developed, which include RRI keys and AIRR dimensions by 2025	Development of a methodology and specialised trainings for introduction of the procedures			No	62%
		Application of good practices, cooperation with businesses to introduce the procedures			No	69%
		Pilot testing, assessment of experience and introduction in all administrative structures			Yes	77%

		Annual award for the most successful public procurement, executed in line with RRI/AIRR			No	15%
		Creating a register of sustainable public procurement practices/good practices			Yes	92%
		Introduction of blockchain management for public procurement processes and resources			No	62%
				Development of manuals for conducting public procurement procedures in line with the principles of RRI/AIRR as well as establishment of a helpdesk service for the municipal administration	Yes	85%
				Establishment of a citizens' board that exercises control over the administration during the implementation of the procedures	No	46%
				Organising an information campaign that explains the benefits of public procurement, executed in line with RRI	No	31%
	3. Developing staff training programmes for municipal administration for public sector innovations by 2023		The curriculum should include modules, dedicated to the application of RRI		Yes	77%
	4. Developing a data policy framework for Sofia municipality; using data for evidence-based policy making, where the processes of collection, sharing, storing, and opening of data are well defined by 2025	Necessity to have rules for coordination and synchronisation of the units that are involved in data management processes in Sofia Municipality			Yes	100%
Total number of statements where Responsive and Accountable Governance appears		10	1	3	8	14

Table 64: Sofia's Responsive and Accountable Governance Dimension / Policy Area: Digital transition

Sofia Municipality						
Policy Area: Digital transition						
AIRR DIMENSION: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration of RRI / AIRR Concept	Best Practice	Statements reached consensus	% Consensus
	1. Improving the connectivity and technical infrastructure in Sofia Municipality through environmentally friendly, user-friendly, smart, and cost-effective solutions by 2025	Increasing the capacity and digital competencies of the administration			Yes	100%
				Maintain and improve the public space and revive commercial zones by increasing civic involvement	No	60%
				Create a digital solution which will reduce the approval process for building applications	Yes	90%
				Implement smart grid technologies throughout the city	No	60%
	2. Improving social inclusion especially of vulnerable groups and minorities, creating new social e-services adapted to people with disabilities, providing an accessible and inclusive environment for senior citizens by 2025	Research on the needs and participation of the target groups in finding a systematic solution to the problem			Yes	92%
		Technological solutions such as a chatbot, designed specifically for the elderly to facilitate them when using digital services and devices			No	46%



			Engaging vulnerable groups in the search for solutions and their implementation		Yes	85%	
			Representatives of the target groups to be appointed in the administration and to consult the search of solutions to the problems		No	46%	
				Improve living conditions by creating a one-stop shop that encompasses various mechanisms for home renovation	No	66%	
	3.	New data policy allowing for optimising the dissemination of information to the public, including open data of the municipality, as well as internal communication of data and information amongst municipal units by 2025			Building e-governance	Yes	85%
					Digital Economy and Society Index (DESI)	Yes	84%
	4.	Include the gender dimension in the Innovation Strategy for Smart Specialisation of Sofia by 2027	Implementation of European rules and directives as well as good European practices			Yes	85%
			Regular data collection, analysis, monitoring of performance indicators, evaluation of measures			Yes	92%
				Informing the public, creating incentives and awards for good practices that support equality and diversity		No	69%
	Total number of statements where Responsive and Accountable Governance appears		5	3	6	8	14



Table 65: Sofia's Responsive and Accountable Governance Dimension / Policy Area: Youth employment and entrepreneurship

Sofia Municipality						
Policy Area: Youth employment and entrepreneurship						
RRI KEY: RESPONSIVE AND ACCOUNTABLE GOVERNANCE						
Topic	Policy Objective	Solution	Integration	Best Practice	Statements reached consensus	% Consensus
-	1. Secure municipal funding for young innovators and start-ups and increase funding by 5% by 2030	Development of a preliminary financial program with a clear commitment by the responsible structures and institutions			Yes	83%
		Creating an ecosystem that supports young innovators and start-ups (technological parks, research institutes, digital innovation hubs)			Yes	83%
		Active use of European programmes and funds from the Municipal Guarantee Fund for SMEs to achieve the objective			Yes	92%
		Establishment of a local innovation/acceleration hub, provision of space, mentoring and infrastructure to young innovators			No	67%
			The funding program shall include requirements for the application of RRI/AIRR by all beneficiaries		No	58%
			Regular surveys among young people, innovators, founders of start-ups, etc. in order to anticipate their long-term needs and plan appropriate financial instruments in collaboration with them		Yes	92%



			Collaboration with research institutes, businesses and linking funding with educational programmes or joint initiatives with the business		Yes	92%
				Provision of subsidised employment	No	37%
				Stimulate youth entrepreneurship and facilitate the realisation of business projects	No	63%
	2. Financing an innovative Start-ups Programme of the Municipal Guarantee Fund for SMEs and introducing new financial instruments for youth entrepreneurship by 2030	Establishment of municipal entrepreneurship centres that provide specialised support to young entrepreneurs			No	67%
		Reinvesting profits from already funded companies back into the program in order to refill resources			Yes	75%
	3. Include Gender Equality measures in a revised Youth Strategy of Sofia Municipality 2023		Public discussion about the measures and the implementation of the Youth Strategy, involvement of youth organisations in the process of reporting and evaluation of results		Yes	83%
	Total number of statements where Responsive and Accountable Governance appears		6	4	2	7



Chapter 5: Compound analysis and conclusions

This chapter presents the compound analysis of the Delphi results and the derived conclusions. The analysis is based on the previous chapters and, more specifically, on the statistic tables and the diagram presented below regarding the Delphi survey results in the four territories.

The first table (Table 66) presents the total number of statements (conventional and out-of-the-box solutions, measures for RRI-AIRR uptake in territorial policy-making, and good practices) referring to the RRI keys and the AIRR dimensions in all questionnaires for each territory. Additionally, the table presents the total number of statements that incorporate each of the keys and each of the dimensions, as well as the number of statements that have reached consensus. The table shows that the keys that are most often referred among the statements are Public Engagement and Science Education, with 88 statements each. Open Access comes next with 83 statements, while the smallest number of statements are associated with Gender Equality (31 statements) and Ethics (30 statements) respectively. Regarding the AIRR dimensions, Inclusiveness and Responsiveness are most prominently represented with 148 and 146 total statements respectively. Anticipatory Governance comes next with 102 statements and, lastly, Reflexivity appears in 67 statements. In general, the AIRR dimensions are much more often associated with the questionnaire statements compared to the RRI keys.

Regarding the Region of Western Macedonia, the largest number of statements refer to the dimensions of Anticipatory Governance and Responsiveness, and the RRI keys of Open Access and Science Education. For the City of Sabadell, the dimensions of Inclusiveness and Responsiveness, as well as the RRI key of Public Engagement are featured most often among the statements concerning their policy area. For the Municipality of Thalwil, Public Engagement, Science Education, Inclusiveness and Responsiveness are the most prominent keys and dimensions reflected in the survey statements for their policy area. Finally, for Municipality of Sofia across its four policy areas, the keys and dimensions that emerged most often are Public Engagement, Science Education, Anticipatory Governance, and Inclusiveness.

Table 67 presents the percentages of statements of each RRI key and AIRR dimension compared to the total number of statements for each region as well as the percentages of statements that reached consensus. Regarding the consensus levels, Responsiveness seems to have the highest consensus rate, as 20,96% of the total statements reach consensus for this dimension. On the contrary, Gender Equality has the lowest consensus rate with 3,19%.

The third table (Table 68) shows the extent to which the statements for each of the territories led to consensus. The highest level of consensus was reached in the Region of Western Macedonia, which is reflected in Figure 1. The Region of Western Macedonia reaches a total consensus of 100% regarding three of the five RRI keys, and overall, the level of consensus does not go down below the rate of 72.73%, for the Anticipatory Governance dimension. For the city of Sabadell, the largest percentage of statements that led to consensus is 80% regarding Reflexivity, while Gender Equality had the lowest rate (0%). The Municipality of



Thalwil also has high consensus rates. Particularly, the highest percentage concerns the Public Engagement key and reaches 72.73%, and the lowest percentage concerns the Open Access key and equals 52.63%. It should be noted that two of the keys of this territory (Gender Equality and Ethics) did not appear at all, so the consensus rate cannot be calculated. Sofia Municipality has the lowest rates of statements leading to consensus. In this regard, 58.06% of the statements associated with the Science Education key reached consensus, while only 29.33% of the statements referring to Inclusiveness reached consensus.

Furthermore, Figure 1 shows that the Region of Western Macedonia reaches a percentage of 91.7% of the statements that lead to consensus. The Municipality of Thalwil follows with 64.3%, and the City of Sabadell reaches 55.29%. The lowest percentage of consensus appears at the Sofia Municipality with 47.69%.



Table 66: Number of statements engaging RRI keys and AIRR dimensions and statements leading to consensus per territory

TERRITORIES	Total number of statements engaging keys/dimensions in all territorial questionnaires	RRI policy framework										AIRR Dimensions							
		Public Engagement		Gender Equality		Open Access		Science Education		Ethics		Anticipatory Governance		Inclusiveness		Reflexivity		Responsiveness	
		Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus	Total number	Consensus
Region of Western Macedonia, Greece	126	10	10	1	1	15	14	15	14	3	3	29	21	18	16	13	12	40	34
City of Sabadell, Catalonia, Spain	72	11	7	1	0	4	2	9	6	6	3	7	3	18	14	5	4	12	8
Municipality of Thalwil, Switzerland	87	33	24	0	0	19	10	33	20	0	0	6	4	37	22	16	11	45	26
Sofia Municipality, Bulgaria	154	34	17	29	13	45	25	31	18	21	10	60	26	75	22	33	17	49	24
TOTALS	439	88	58	31	14	83	51	88	58	30	16	102	54	148	74	67	44	146	92

Table 67: Percentages of statements integrating RRI keys and AIRR dimensions and statements leading to consensus per territory regarding the total number of statements

	RRI policy framework										AIRR Dimensions							
	Public Engagement		Gender Equality		Open Access		Science Education		Ethics		Anticipatory Governance		Inclusiveness		Reflexivity		Responsiveness	
TERRITORIES	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)	% (Total number in territory/Total number in all territories)	% (Consensus/Total number of statements in all territories)
Region of Western Macedonia, Greece	7.94%	7.94%	0.79%	0.79%	11.90%	11.11%	11.90%	11.11%	2.38%	2.38%	23.02%	16.67%	14.29%	12.70%	10.32%	9.52%	31.75%	26.98%
City of Sabadell, Catalonia, Spain	15.28%	9.72%	1.39%	0.00%	5.56%	2.78%	12.50%	8.33%	8.33%	4.17%	9.72%	4.17%	25.00%	19.44%	6.94%	5.56%	16.67%	11.11%
Municipality of Thalwil, Switzerland	37.93%	27.59%	0.00%	0.00%	21.84%	11.49%	37.93%	22.99%	0.00%	0.00%	6.90%	4.60%	42.53%	25.29%	18.39%	12.64%	51.72%	29.89%
Sofia Municipality, Bulgaria	22.08%	11.04%	18.83%	8.44%	29.22%	16.23%	20.13%	11.69%	13.64%	6.49%	38.96%	16.88%	48.70%	14.29%	21.43%	11.04%	31.82%	15.58%
Total %	20.05%	13.21%	7.06%	3.19%	18.91%	11.62%	20.05%	13.21%	6.83%	3.64%	23.23%	12.30%	33.71%	16.86%	15.26%	10.02%	33.26%	20.96%

Table 68: Percentages of statements integrating RRI keys and AIRR dimensions that lead to consensus per territory

	RRI policy framework					AIRR Dimensions			
	Public Engagement	Gender Equality	Open Access	Science Education	Ethics	Anticipatory Governance	Inclusiveness	Reflexivity	Responsiveness
TERRITORIES	% of statements leading to consensus								
Region of Western Macedonia, Greece	100.00%	100.00%	93.33%	93.33%	100.00%	72.41%	88.89%	92.31%	85.00%
City of Sabadell, Catalonia, Spain	63.64%	0.00%	50.00%	66.67%	50.00%	42.86%	77.78%	80.00%	66.67%
Municipality of Thalwil, Switzerland	72.73%	-	52.63%	60.61%	-	66.67%	59.46%	68.75%	57.78%
Sofia Municipality, Bulgaria	50.00%	44.83%	55.56%	58.06%	47.62%	43.33%	29.33%	51.52%	48.98%
Total % statements leading to consensus	65.91%	45.16%	61.45%	65.91%	53.33%	52.94%	50.00%	65.67%	63.01%

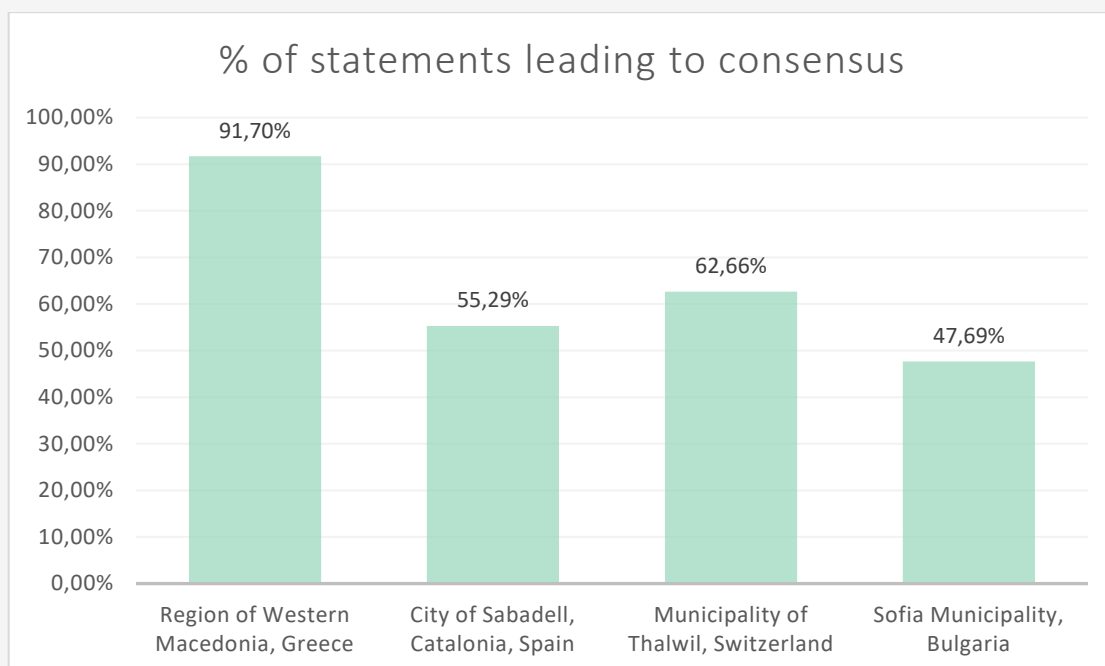


Figure 1: Percentage of statements per territory leading to consensus