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TERRITORIES

Mapping Report for the Municipality of Thalwil

Adapted extract from the original deliverable 2.1

"Map on stakeholder relationships and interdependencies and report on stakeholder need, interest, power and influence"



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



Important note: This document is an adapted extract from deliverable 2.1 "Map on stakeholder relationships and interdependencies and report on stakeholder need, interest, power and influence", published in June 2021 <https://www.rri-leaders.eu/wp-content/uploads/2021/07/D2.1-Map-on-Stakeholder-Relationships.pdf>

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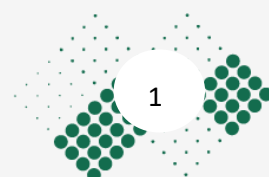
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Municipality of Thalwil: introduction and policy focus

Thalwil is located in the “Zimmerberg” region, on the left bank of the Lake Zurich and extends into the “Sihl Valley.” Although an independent municipality, the proximity to the City of Zurich shapes Thalwil's character strongly, enabling an active political, cultural and social lifestyle. Thus, being a quiet location, yet easily accessible by train, boat, car or bus – Thalwil holds a very high standard of living. Mentioned for the first time in 11th century, Thalwil developed from a farming village through a textile industry hotspot to an attractive residence and workplace.¹⁶

Thalwil is one of 162 municipalities of the Canton of Zurich. As of 2020, the population counts 18,263 inhabitants, growing at annual rates of 1%, with a proportion of foreigners of 29.6 percent. The population density lies at 3,300 people per km² and the mean age is 42.9 years. Whereas the age structure compares to that of the Canton of Zurich, the population density exceeds the Cantonal average threefold. This is commonly observed for municipalities located in the commuter belt of the City of Zurich. In 2019, 2.5 percent of the population were in need of social welfare programmes.



Thalwil and its surrounding municipalities are part of the district Horgen, which together with the City of Zurich and ten other districts constitute the Canton of Zurich. The Canton of Zurich is one of 26 Cantons of Switzerland and at the centre of economic importance for the surrounding territory.

¹⁶ Based on the greeting of the mayor of Thalwil, Märk Fankhauser. <https://www.thalwil.ch/willkommen>



Of a total workforce of 6,600 employees, about 84% are engaged in the 3rd sector. The same holds true for the workplaces. Out of 1,300 primarily small and medium size businesses, over 90% belong to the 3rd sector. Thalwil is amongst the most attractive tax locations in Switzerland. With an annual tax revenue of CHF 95 million, or CHF 5,300 per capita, Thalwil ranks well above Cantonal average. In 2020, Thalwil had an unemployment rate of 3.1%.

Thalwil peaks with the “Zimmerberg” ridge at 580 meters above sea level and has a total surface area of 552 hectares, divided into 46 percent settlement area, 23% forest area, 15% traffic area, 14% agricultural area and 2% waters.¹⁷

Thalwil provides many possibilities for local recreation and leisure activities: walking around the ponds, the forest or along the lake, sports activities at the indoor pool, the track club or the artificial ice rink, or participating in the cultural life of the community. Despite a broad range of services, per capita public spending is efficiently managed and up to 20% lower than the municipal average of the Canton of Zurich.



The logo of Thalwil in the form of a wave with the traditional municipal coat of arms.

In Switzerland, direct democracy has a long history. The federal constitution protects the autonomy of municipalities within the framework of cantonal law. The Swiss take pride in their federalist system, which is often referred to as “Sovereignty”, i.e. the people ultimately decide on policy initiatives. The municipality is led by the municipal council, the executive authority. The council consists of nine people, whereas the mayor of Thalwil is one of them. The municipal council is represented by many different parties, as it is usually the case with multi-party systems. The legislative authority is held by the citizens of Thalwil. On the four assemblies which are held each year, public expenses are budgeted, and tax rates are set.



Aerial view of Thalwil towards the City of Zurich. Thalwil lies between the Zimmerberg ridge and the lake of Zurich.



The Gattiker Pond with its characteristic bulrushes, as part of the coat of arms of Thalwil.

¹⁷ All municipal data retrieved from <https://www.zh.ch/de/politik-staat/gemeinden/gemeindeportraet.html>

In 1998, Thalwil started to commit to a sustainable development. Over the past 20 years, sustainability has become a major policy theme. After the adoption of Agenda 21, the municipal council introduced a steering group to support sustainable strategies. As part of the guiding principles written into the municipal code, sustainable development has become a central part of Thalwil's policy instruments. Since 2010, Thalwil is listed amongst the "Energy Cities," a label provided by the European Energy Award programme. Together with the surrounding municipalities, Thalwil engages actively to transform its energy system.¹⁸

With the RRI-LEADERS project, Thalwil receives additional support to tackle the energy transition and to face the challenges of climate change.

Summary of the interviews with stakeholders in Municipality of Thalwil

A total of 19 interviews were conducted, including interviews with representatives from the research sector, entrepreneurs and politicians from the municipality of Thalwil and the canton of Zurich. The guideline for the interviews was adapted in terms of the topic of energy transition. The findings from the interviews are presented in the three categories (research, policy, and business):

Research and Academia

Interviewees included representatives of universities of the Swiss Federal Institute of Technology (Switzerland), the University of Zurich (Switzerland), and the University of Hannover (Germany). Regarding the RRI keys, few of the interviewees had experience with the RRI approach. However, the RRI keys play a major role in the organisations, even if the results of the interviews cannot be generalised for the entire organisation.

Open access became a major issue at all surveyed universities. The state provides funds and resources to make publications and data available to the public free of charge. Not only students and researchers but also various stakeholders from society gain access to scientific knowledge concerning the policy topic.

In contrast, the topic of gender was reflected to be in the most cases a "checkbox". According to the respondents, although there are more and more female students at Swiss universities, especially in technical subjects, there are hardly any female doctoral students and postdocs, let alone female professors.

The issue of ethics was seen by many respondents in the context of research approval procedures. Approvals from the Ethics Council are required to conduct certain research projects, especially those that impact humans or animals. However, these approvals were perceived by our interviewees as nothing more than additional hurdles and "comments from unqualified scientists." It was criticised that there are hardly any standards for these approval procedures and that learning cycles within the ethics committees at the universities are missing. These committees need to be better structured and processes need to be reconsidered, according to the assessment of individual respondents. In the context of the policy topic energy transition, ethics is viewed as an "abstract" moral principle for responsibility for future generations.

¹⁸ Based on <https://www.thalwil.ch/nachhaltigeentwicklung>



Public engagement and science education were considered to take only a minor role in the context of how the university' sees the policy topic. Universities have the task of addressing/tackling societal problems and identifying possible solutions through R&D, even though researchers are not consultants. Nevertheless, science, especially through its teaching mission, makes an important contribution to the scientific education of society and thus to solve the societal problems associated with climate change (e.g., by developing technological solutions).

The researchers also voiced criticism of the RRI approach. Key point of criticism was based upon the fact that the theoretical approach does not consider the relationships between individual stakeholders and the question of power and resources.

Regarding the AIRR dimensions: Anticipation is part of the nature of research, to be able to recognise social problems at an early stage and thus to help shape R&D-based solutions concerning the energy transition by taking different perspectives. Anticipation is especially important for research sites to be able to set a planning character for the orientation of the departments. Evaluation is important in the context of research taking advantage of the experience when they make mistakes. It was mentioned here that there are often regular meetings of the research group within the departments, reports are often made, and scientific findings are recorded in publications, which in turn are discussed further by other researchers.

Regarding the energy transition in Thalwil, scholars were not able to provide much insight into the topic of the energy transition in Thalwil, as they are not interacting with the municipality. In sum, the interviews provided overall opinions for the policy topic and thus provided further recommendations to consider engaging additional stakeholders.

Policy, Civil Society Organisations and Citizens

Most interviews with policymakers/societal stakeholders were conducted at the territorial level and represented a range of different perspectives on the issues surrounding the energy transition in the municipality. Good networking of the various actors in the municipality has an impact on the speed of progress in policy topic in our municipality. The municipality launched a broad spectrum of initiatives in the field of energy transition and energy saving as well as in the field of biological and social sustainability.

Regarding RRI keys, they are considered as a key proponent of a sustainable energy transition and of a strong civic engagement in the community. The Swiss social order is built from the bottom up, so citizens in Switzerland have a strong say compared to other countries with direct democracy.

Concerning public engagement, most political stakeholders, therefore, emphasised the need to enhance more awareness-raising activities and thus enhancing the involvement of the population in taking various measures. An interesting instrument of Swiss democracy is therefore the "Initiative", which is launched by individual citizens of the community and which, if it finds a large majority, can set laws in motion.

As for open access, interviewees emphasised the need to improve community access to public data. This improvement concerns, on the one hand, support for concrete investments (e.g., in the areas of heating, mobility). On the other hand, standardised monitoring of previous activities is needed to gather a stepwise learning cycle. Due to the strong anchoring of the topic of sustainability in the municipality law, the municipality has been awarded the energy label "Energy City". In addition, the topic of sustainability is deeply rooted in the municipal administration and there are numerous experts responsible for energy issues in the



municipality. In recent years, many houses have been renovated and connected to the municipality's heating systems. However, it is important to continue to work on transparency of data to build trust in the community's activities and thus in the community's commitment to the energy transition.

Regarding science education, the topic of education was highlighted by all community representatives. It is important to raise inhabitants' awareness of the policy topic by providing facts through science education while they are still in school to create a willingness to invest in energy-neutral projects in the community.

Gender equality did not appear to be an issue in the community currently linked to the topic of the energy transition, since gender-equality was not seen as part of the climate transition by Swiss stakeholders. At the same time, the researchers found that there are hardly any women who make their voices heard and get involved in community politics, as community leaders or active politicians.

As for the AIRR-dimensions, regarding anticipation, many interviewees proudly emphasised that there is a sustainability group in the community that, if requested, reviews community activities from a sustainability perspective and ensures that sustainability issues are also socially acceptable, thus encompassing various aspects of sustainability. Also, in a Swiss comparison at national level, this committee is a real best practice example and thus an important indication for cantonal authorities of the depth of the anchoring sustainability in the municipality beyond the political orientation and the timing of the legislature. In terms of reflection, respondents criticised the lack of a well-formalised/standardised evaluation of sustainability activities. This would require a clearer division of responsibilities and the creation of resources. Another major issue was the responsiveness of the city administration to current trends and issues. The administration is already working swiftly on topics in order to implement energy transition in the municipality through the anchored expert commissions and thus hope for a high level of commitment from the population. However, a broader engagement of the population is required by different stakeholders, apart from the individuals who are often involved.

Business

The businesspeople of a municipality are a particularly important group for the implementation of the energy transition. While some researchers were familiar with the RRI principles, the representatives of the municipality of Thalwil had in most cases no knowledge of the RRI theory. This may also be because Switzerland, as a non-EU country, had low contact with the RRI terminology and thus other approaches were prominently used, especially in the context of climate change and CSR (e.g., the smart city approach). Many politicians highlighted the role of tradesmen in the municipality of Thalwil who install technological solutions for the energy transition in houses, but also in the mobility sector. From experience, most tradesmen intuitively use RRI-keys such as open access, while other RRI-keys such as gender or ethics have no specific significance in the context of the energy transition. The interviews with local business owners have shown that the companies would also like to see a stronger sustainability debate and a change in budgets. This would create new markets in many areas (e.g., heating or mobility) and is often due to a lack of incentives and public funding, e.g., in open access data or bureaucracy in administration. In the discussions, interviewees suggested ways to raise awareness of the energy transition process among different segments of the population, for example, for youth in school and for seniors in public workshops, for homeowners with showrooms for new heating technologies.

Regarding AIRR dimensions, more than the other respondents, business-owners need to incorporate and



standardise the AIRR dimensions such as anticipation and responsiveness into their business practices. Problems, customer needs, risks, and resources must be initially anticipated, and spontaneous responses to change are required. Evaluations are also very important to save costs in the future. The involvement of different stakeholders is often based on different expert opinions in technical processes.

In recent years, the municipality has made great progress in the policy topic and is also concerned with exploring new avenues to tackle the energy transition by creating various commissions to anchor the goals firmly (e.g., through “Energy labels”). However, it was clearly stated by all stakeholders that a stronger commitment in the field of energy transition is necessary and that even more different perspectives in the community need to be considered. Monitoring of existing activities, projects and achieved goals is a key to attract additional stakeholders for participation in the territorial topic in the community.

Municipality of Thalwil focus group discussion

The focus group took place on April 28, 2021, online via Zoom, with 15 participants, as follows: 4 from research and academia; 3 from policy making; 3 from civil society; 5 from business.

Summary of discussions

The results of the interviews, in particular the suggestions on how Thalwil can advance the energy transition, were summarised in two RRI keys in advance of the focus group. While the first RRI key addressed the inclusion of different stakeholders (diversity and inclusiveness), the second key referred to open access to data. Previously, the interviews highlighted the need for greater societal engagement to attract broader and heterogeneous participation from different segments of the population committed to the issue of the energy transition. The topic for key two, the need to make different data (e.g., possibilities and calculations for solar areas, funding opportunities, but also ongoing activities in the field of energy transition in the municipality) transparent for the population, also emerged from the interviews.

Attendees were divided then into two groups so that each group had a representative sample of the various stakeholders. This approach was recommended to be able to generate a high level of discourse in the focus group. Both groups took place in breakout rooms via Zoom and used the Miro Board. The participants of the two groups worked in parallel on the same topics, with an intensive exchange taking place in both. The primary goal of this focus group was not to find solutions but to better understand the perspectives and tasks with respect to the various stakeholders. For this purpose, participants were asked one after the other to present and discuss their different opinion. Finally, participants of the two groups were invited to meet again in one room at the end of the meeting to discuss all results. This resulted in the following recommendations:

INVOLVEMENT - PUBLIC ENGAGEMENT

Firstly, the topic of awareness raising, and knowledge transfer was discussed, as according to the participants there is a lack of awareness among the population on the topic of energy transition and climate change. Therefore, it is necessary to develop differentiated measures for different stakeholder groups that communicate on the one hand the municipal, cantonal and Swiss climate protection goals and on the other hand the urgency for an individual commitment (i.e., clarify goals and communicate urgency). Explicitly, three



groups of stakeholders were mentioned that have received little attention in climate protection activities so far but make up a large part of the population: senior citizens, students, and homeowners.

Retirees and the elderly could be brought on board through lecture series, family advisory councils, community gardens. One participant suggested organising a large group conference in the form of a World Cafe. Other strategies were also discussed. Regarding the group of students/youth, similar approaches as for the other age groups were discussed among the participants, who generally agreed that climate change starts in school. Sustainable (spatial) development (and building culture) should generally become a topic in schools. Furthermore, it was discussed to what extent seniors or young people can be included in the common dialogue by establishing a (youth) climate council. Pupils are the future decision-makers and need to develop a good understanding of climate change at an early stage. Future activities and formats in schools were also discussed and named: For example, project weeks could be organised in schools. (<https://www.solecole.ch> as an example of what can come out of it). It was further emphasised that young people have little contact with local politics – yet there are many committed young people (see climate strike, corporate responsibility initiative). Participants called on politicians to involve young people more in political processes. If young people are more involved in political work, they are also more willing to take responsibility later and get involved. It was also suggested that students should be sensitised of the topic of energy transition through practical projects at universities and technical colleges, e.g., by calculating solar panels for roofs in the city. This is a very simple tool. The students could then present their results to residents and homeowners. Through the university's guidance, there would be a discourse in communities where students and residents are dealing with energy transition issues.

Homeowners were identified as a very important group in the field of energy transition in communities already in the interviews. Therefore, two representatives of the Thalwil Homeowners Association (so-called HEV) were explicitly invited to the focus group. Various problems and conditions for the involvement of homeowners (mainly elderly people) were then discussed and highlighted. It became clear that homeowners are the crucial key for the energy transition and thus for the RRI-LEADERS project. However, their problems and motivations are very complex. Two reasons were given for the lack of motivation to invest money in new heating systems. First, the possibilities, the importance of renovating the house facade, replacing heating systems (e.g., oil heating), even innovative new solutions, may be unknown in this stakeholder group. One participant suggested making example projects in communities public, thus making technical possibilities/handiness of technical solutions and their implementation visible. This would require sample catalogue that is not only available as a brochure to the homeowners' association but should reach a broader public and be accessible as a showcase and not only on paper. The questionable financial feasibility of such conversion and investment projects was mentioned by the homeowners' association as a further motivation-reducing point. Pensioners usually have difficulty obtaining loans for renovation work or do not have the necessary financial strength themselves. Therefore, one participant requested that there should be special mortgages for retirees, as they usually cannot get a normal mortgage for a renovation. This sparked a discussion among the group on the topic of financing renovations. It was also noted that there is little incentive for older homeowners. In the end, a consensus emerged that older homeowner often no longer have a mortgage on their pension, so financing often emerges as a problem here in addition to motivation, and seniors are happy to pass the renovation issue on to their children. To push these issues, many participants were sure that intensive discussions with building owners will be necessary, as well as a broad campaign targeting proven channels such as newspapers/magazines to raise awareness about CO₂-neutral and sustainable renovation.



There was also a lively exchange on the topic of how information campaigns should be approached to involve various stakeholders, including those with differing opinions. From this point of view, information channels, media strategies, and responsibilities were discussed. It was agreed that something needs to be done, such as launching an information campaign via public media, newsletters, webpage, etc. There was a suggestion that the municipality could start an information campaign via e.g., energy service providers. The possibility of a larger discussion, in the form of the Thalwil Climate Summit, was also raised, which could be a "digital platform for information, forum, neighbourhood solutions, etc." In general, social media played a major role in the discussions, and our participants felt that social media should be linked to age-appropriate activities. Communication should be very much target group oriented. This also requires more regular information events and stronger networking of the actors in the community to plan and implement such projects. To act supra-regionally, new formats of exchange and communication are also necessary, such as regular round tables with experts in the community, where the population can get critical questions answered (e.g., in the form of the so-called 'Ökopolis Energie-Apero').

An important point during the meeting was also the attempt to think beyond existing formats (e.g., proposal for a new section in media such as the Zürichseezeitung, TeleZüri on the topic of energy and sustainability) and to consider how digitalisation, know-how, and new technologies can help to make strategies visible. Critical voices were also raised, as it was noted that information/awareness-raising at the individual level is sometimes very difficult, as the data is not accessible. However, providers are bound by data protection. This also concerns the question of switching from other energy sources, e.g., to solar capacities, and making these potentials visible to all stakeholders. One solution for this was seen by the focus group participants in the possibility of working with aggregated data, e.g., on a neighbourhood level.

OPEN ACCESS

The second major pillar of this focus group was the topic open access to data. Various new fields/applications/conditions and areas were found that would be particularly important for the topic of energy transition in the municipality of Thalwil. Based on the results of the previous interviews and confirmed in the focus group was that there is a lack of knowledge about subsidies and grants among many community residents. There is also a lack of knowledge about heating options, advantages/disadvantages of certain heating concepts, optimal energy consumption after renovation, or alternative "responsive concepts and strategies." There is a lack of user-friendly data and tools that end-users in the community could use to check their roof areas, e.g., for photovoltaics. Participants mentioned that laws and incentives are constantly changing, information is often unclear or changes over the years. More transparency through an online solution could help. In the opinion of the participants, the data concerning the municipality should be made visible in various places in the municipality so that, on the one hand, data protection is guaranteed, but the necessary data is prepared in an unbureaucratic and user-oriented manner. Supraregional cooperation in this area with federal agencies (such as Swisstopos.ch) or start-ups would also be conceivable. New technologies in the field of artificial intelligence should also be used where they are needed for decision-makers. What remains open is the question of responsibility and what means can be used to get federal/cantonal/municipal/private agencies to make datasets "available" to the public. Two very specific points were raised in the group. One was the suggestion to further reduce bureaucracy and most importantly, an overhaul in the building department would be urgently needed. The second point was related to the current lack of monitoring of current and past activities of the municipality in the field of energy transition. Very specifically, the question arose, "Who should be responsible for monitoring open access?"



Profiles of stakeholder organisations from the territory of Municipality of Thalwil

The profiles of the following stakeholder organisations are presented in Annex A to the current report.

Policy makers

- People of Thalwil
- Municipal Council of Thalwil
- Political Parties
- Municipal commissions of Thalwil
- Commission (“Steuerungsgruppe”) for Sustainability Thalwil

Research and academia

- ETH Zurich – Swiss Federal Institute of Technology
- UZH – University of Zurich
- OST – Eastern Switzerland University of Applied Sciences
- SCCER CREST – Swiss Competence Center for Energy Research
- ZHAW – Zurich University of Applied Sciences of Management and Law
- ZHAW – Zurich University of Applied Sciences School of Engineering

NGOs and Associations

- Oekopolis
- HGV Thalwil (Small trade and industry association Thalwil)
- Location Development Zimmerberg-Sihlthal
- Homeowners’ association (“Hauseigentümerverschein”)

Utilities

- Energie 360°
- ewz – Utility of the City of Zurich
- EKZ – Utility of the Canton of Zurich
- Gas Wasser Thalwil (Gas Water Thalwil)
- EZS (Cooperative within the Energy Region Zimmerberg)



Annex Mapped RRI stakeholders

Mapped RRI stakeholders in the Municipality of Thalwil

■ Policy makers

Name of stakeholder organisation (and abbreviation): Federal Department of the Environment, Transport, Energy and Communications DETEC	
Profile of the organisation	DETEC deals with infrastructure and environmental matters. Modern transport routes, communication networks, and the power grid all fall under its remit. However, DETEC also deals with issues relating to the environment and health and safety. DETEC's task is to ensure sustainable development and the provision of basic public services in the interests of society, the environment, and the economy. Located at the heart of Europe, Switzerland is dependent on modern transport infrastructure, efficient communications and electricity networks. The Swiss Federal Office of Energy (SFOE) is the office responsible for all questions relating to energy supply and energy use within the Federal Department of the Environment, Transport, Energy and Communication (DETEC) of Switzerland. The Energy Buildings Section of the Swiss Federal Office of Energy supports cantonal projects and municipalities.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI framework is relevant for DETEC because its basic principles include transparency in strategic and spatial planning and the possibility for citizens and experts to participate in a dialogue on energy measures. DETEC is a state department that is concretely involved in promoting activities in the municipalities, and in offerings advice. DETEC assumes that in the context of the energy transition, everyone has a responsibility, starting with the institutions and ending with the citizens.
Relevance of RRI keys to the stakeholder organisation	Public engagement is central to the ministry, the administration, and the energy transition. Currently, work is being done in the municipalities to involve multiple stakeholders in the administration and thus to anchor environmental policy issues more firmly. Gender: A lot of emphasis is being placed on gender balance in the administration, and the recruitment process is being changed to achieve this.
Relevance of AIRR dimensions to the stakeholder organisation	For an authority, the AIRR dimensions are a central anchor. DETEC also develops future models at the political level and tries to bring them to the communities for application. This process is fundamentally critical to finding solutions for the energy transition. Nevertheless, the agency evaluates and develops activities and policy processes in a standardised manner.



Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	DETEC is responsible at the federal level for providing the new CO2 law and at the government level for promoting the corresponding activities to put the law into practice. DETEC also provides roadshows and specific support in the field of energy transition and could support Thalwil with specific funding.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	On a macro level, the authority could indirectly support the AIRR dimensions in a municipality like Thalwil by providing laws and guidelines that the municipalities have to comply with. However, it also creates a strong future orientation of climate policy in the municipalities through financial incentives.
Website of the organisation	https://www.uvek.admin.ch/uvek/en/home.html

Name of stakeholder organisation (and abbreviation): Green Party and Oekopolis	
Profile of the organisation	Association that deals with sustainability processes. Founded 20 years ago. At that time, the city government established a sustainability steering group, which is still influenced by Oekopolis. Oekopolis is an important regional association that bundles civic engagement in the field of environmental policy and plans and develops numerous activities in Thalwil in the field of energy transition.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI framework is relevant to the respondent's involvement in the association (Oekopolis). The task of the association is also to create transparency about the activities in the Zimmerberg region (around Thalwil) about sustainability and energy transition projects and to mediate between local companies and citizens' initiatives.
Relevance of RRI keys to the stakeholder organisation	<p>Although Oekopolis is not familiar with the RRI framework, the principles are of great importance for the ecological association in Thalwil.</p> <p>From the information provided Oekopolis, ethics in the moral sense of sustainability is the overarching goal of the association's activities. The association is active in promoting public engagement and regularly organises activities in different areas of the community to strengthen the aspect of sustainability among citizens.</p> <p>The association tries to have women on the board of directors, thus promoting gender equality. Gender must be considered as an ethical goal, according to the interviewee.</p>



	Science education plays an important role as Oekopolis works against so-called "fake news" and is focused on educating citizens about their sustainable actions. The association tries to argue logically and factually. The association is more technically and scientifically oriented. There is a newsletter twice a year with different sustainability topics.
Relevance of AIRR dimensions to the stakeholder organisation	Oekopolis considers AIRR dimensions, especially anticipation, as key to find long-term energy solutions for the community, especially through future scenarios in different areas such as housing or mobility. These models are necessary to integrate social aspects in the innovation process to make them feasible in the community. In particular, the association aims to increase the activation of people who are outside the association. Reflection can help to reflect on which people are still excluded from innovation processes in the community. This promotes a learning process and thus the energy transition.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	The association is crucial for the RRI Leader project. In the community, the association acts as a thought leader for the energy transition through his many involvements.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	Through its network, through its task in the community, the association can increasingly stimulate participatory and reflexive action and thus strongly influence the sustainability processes in the community and administration.
Website of the organisation	https://gruene-zh.ch/grüne-thalwil

Name of stakeholder organisation (and abbreviation): Christian Democratic Party CVP - Thalwil	
Profile of the organisation	The Christian Democratic Party of Switzerland (CVP) is a political party in Switzerland. In its party programme, the CVP described its position as liberal-social, whereby it wanted to combine liberal principles and guarantee basic social rights in the context of the so-called social market economy. The CVP is seen as a representative for families and small and medium-sized enterprises. It is elected by about 6% of the population in the national elections but provides a vice-councillor and thus has great influence in the municipality.



Relevance of Responsible Research and Innovation to the stakeholder organisation	The CVP is active in local and city government. According to the CVP, the energy transition must be tackled at all levels. Not only from the top down, but also from the bottom up, e.g., through citizens' initiatives. The CVP sees itself as a driving force for the energy turnaround. In particular, the way to reach the Energy City label (see Best Practices) is closely linked and based on the principles of RRI.
Relevance of RRI keys to the stakeholder organisation	The party is strongly oriented toward certain RRI keys. In particular, the topic of citizen participation and communication is a central component of the party's political work. According to CVP, better evaluation strategies in the municipality are needed to ensure the quality of political projects and their implementation. Ethics and openness: The CVP emphasise that ethics and openness are important in political activity and that politicians must deal with the facts together with the population. In addition, the community is increasingly incorporating science education and perspective into its work through the work of sustainability commissions, especially on sustainability issues. Public engagement, participatory processes are very much motivated by the party. E.g., lakefront planning is a workshop with a very different political process. Here citizens were able to contribute their thoughts. Gender is a big issue for the party as it tries to include all people, regardless of gender, in the political process. The party sees itself as a driver of open access, especially when it comes to public data.
Relevance of AIRR dimensions to the stakeholder organisation	All AIRR aspects are considered important for CVP.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	CVP, as a political party with a focus on housing, can play a very important role in the energy transition issue because it can adopt and implement measures on open access and the promotion of alternative energy technologies.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with medium levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	The involvement and shaping of the political process in Thalwil are an important task of the party. The CVP is an important stakeholder for the project that it has direct influence on the shaping of administration and politics. In particular, the topic of energy transition can be further anchored in the community by the party, in its various committees, and thus AIRR dimensions can be developed.
Website of the organisation	https://cvp-thalwil.ch

Name of stakeholder organisation (and abbreviation): The liberal party Function Municipal President Party FDP Thalwil	
Profile of the organisation	The party's core demands are more and better jobs, stronger national cohesion, secure social services, and a lean and citizen-friendly state. Their motto "The liberal original - since 1848" is intended to express that the FDP, together with its liberal predecessor movements, has helped shape Swiss political life since the founding of the federal state in 1848. The FDP also wants to promote novel and highly cost-effective environmental technologies that reduce climate-damaging greenhouse gas emissions by technically removing carbon dioxide (CO ₂) from the air. This can be achieved either with permanent elimination through negative emission technologies, e.g., CO ₂ binding to rocks used as a raw material, or with periodic reuse with CO ₂ recycling and chemical conversion into fuels, such as kerosene and methane gas, which thereby become CO ₂ -neutral.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI framework is relevant to the CVP as a political party because it implements transparency, public engagement, ethics. The FDP is very successful in the community. Political parties need to develop the RRI principles if they want to be successful and lead the citizens well in a community. The interviewee also leads the sustainability group in the community, which has discovered anticipation, especially scenario testing, as a very important tool for the energy transition. With its contributions, the steering group is an important player for the energy transition in Thalwil.
Relevance of RRI keys to the stakeholder organisation	Although the interviewee is not familiar with the RRI concept, it is very important to his work in the community. Public engagement In addition to various activities in the community, the interviewee tries to unite companies, citizens and administration. Broad citizen engagement plays a major role in the party's goals and their implementation. The party must explain its activities and share them with citizens.
Relevance of AIRR dimensions to the stakeholder organisation	Anticipation is practiced by the community leadership in various areas, e.g., in the administration or in many commissions. In view of technological developments and decisions of the legislator at the cantonal level, it is very important to plan and to define the budget and the scope of the municipality. Reflection , the local government makes every four years a profilogramme of activities in the field of energy transition with 120 questions. All activities of the municipality are previously assessed from the point of view of sustainability and then evaluated so that the citizen can see what has been achieved.

Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transfer	The party is very important for the RRI Leader project and above all plays a central role for the commitment to energy transition in the municipality of Thalwil, a mediator between the wishes of the population, the economy, and the climate goals.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	The party has a shaping power for all RRI keys within the territorial policy and can also initiate new activities guided by RRI-keys.
Website of the organisation	https://cvp-thalwil.ch

Name of stakeholder organisation (and abbreviation): Kanton Zürich the Construction Directorate. Office for Waste, Water, Energy and Air	
Profile of the organisation	The Energy Department prepares all the decisions that are adopted by the Federal Council and then transfers them into practice. According to its own statements, the office is on the side of the legislator and responsible for energy improvements in various areas like buildings. The Department ensures the protection and sustainable use of natural resources in the Canton of Zurich. As a supervisory authority, it also ensures the supply of clean drinking water and electrical energy, the environmentally sound disposal of waste and wastewater, and protection against flooding.
Relevance of Responsible Research and Innovation to the stakeholder organisation	<p>RRI is critical for the agency to chart a legal course based on AIRR dimensions such as anticipation, reflection, and adaptability, and then help implement it.</p> <p>According to the department, the main actor for the energy transition is the state, and the administration, which should make the most of the framework within the framework of state laws. The government must draw the framework for the industry and develop new technologies and future scenarios and involve from science. As further tasks are consulting - this is firstly the framework with the law as well as the enforcement, then the training of experts, the financial support the third level is the consulting of private individuals and of craftsmen (implementers).</p>



Relevance of RRI keys to the stakeholder organisation	<p>The RRI keys indirectly play a major role in the daily work of the office. For example, public engagement is important because life cycles (e.g., for heating systems) are particularly long in the building sector. Therefore, in the case of heating, it is critical to make the right investments now. The Department is trying to make municipalities aware of these issues and is offering direct incentives. Cost and benefit calculations must be publicly available, so open access is very important. According to the department, it is important that there is a wide range of investments in the field of energy production, home renovation to develop durable and resource-efficient systems. Therefore, prototypes need to be showcased and information needs to be available to stakeholders.</p> <p>Open access: to achieve these goals, funding incentives, and current data should be made transparent to both homeowners and tradespeople as it relates to. The department performs these tasks and is guided by the RRI keys.</p>
Relevance of AIRR dimensions to the stakeholder organisation	<p>The AIRR dimensions 'reflectivity' and 'anticipation' are seen as steps in the work to evaluate future perspectives. There are also specific evaluation tools that ensure a standardised reflection process on ongoing projects and thus contribute to the quality management of the agency.</p>
<p>Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus:</p> <ul style="list-style-type: none"> - Energy transition 	<p>Society does not yet see the dimensions of climate change issue. If there are problems with heating, for example, people simply buy an existing system out of their comfort zone. The department offers incentives, financing, and consulting services for communities like Thalwil, where the so-called roadshows are also offered to inform investors and homeowners.</p> <p>Building Directorate Office for Waste, Water, Energy and Air support the development of sustainable buildings with low energy requirements and high value retention. To this end, they advise and inform the population with information events in the communities. With practical energy seminars, they ensure the transfer of knowledge to experts. They certify energy buildings in the canton and grant subsidies to promote energy-saving measures on buildings.</p>
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<p>A road show with heating experts is organised, and then roadshows are held in the communities and municipalities to present different options. Scientific education is considered a priority as the building technology is becoming more complex, and installers need to be well-trained. The department supports thorough research and educates itself in the industry. The department offers very concrete support and</p>

	incentives for the municipality of Thalwil, but it can also call for participation, documentation and reflection.
Website of the organisation	https://www.zh.ch/content/dam/zhweb/bilder-dokumente/organisation/audirektion

Name of stakeholder organisation (and abbreviation): Protestant Party Thalwil	
Profile of the organisation	Protestant Party Thalwil is a political party in Thalwil that is committed to Christian values and participates in the political process in Thalwil.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The Evangelical Party Thalwil tries to develop its own approaches and ideas also in the field of energy transition, indirectly relying on the RRI keys.
Relevance of RRI keys to the stakeholder organisation	The RRI approach is unknown to the representative of the Protestant party, yet the party acts in modus operandi according to the rules of the RRI concept. For a political party, public engagement is important because, on the one hand, it must reflect the needs of the population in its activities, and on the other hand, it must communicate its ideas and measures to the population. The Evangelical Party Thalwil is also committed to regularly updating the population by providing data on political issues and information via social media, which also relates to the RRI key "open access". Gender is an issue in the composition of the leadership of the Evangelical Party, they try to work on strategies that promote gender balance in the leadership of the party.
Relevance of AIRR dimensions to the stakeholder organisation	Anticipation: The Protestant Party Thalwil tries to interweave current problems and innovative future solutions via future scenarios. This is an essential part of the political work of a party on the topic of climate change and energy transition. Inclusion: In addition, from the perspective of the Evangelical Party Thalwil, it is also important to offer events that involve various social groups in the solution process.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy Transition	Although the party currently has no great political significance for the community, as it can only muster a few votes, the Evangelical Party Thalwil nevertheless supports the energy turnaround and thus stimulates discourse within the community. The party is an important anchor of political discourse on ecological issues in the community.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with low levels of experience in RRI ■ Stakeholders with low levels of influence on RRI in practice
How can stakeholder contribute to the adoption of	Thus, the stakeholder can conditionally contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance.



RRI principles and the AIRR dimensions within territorial governance?	Currently, the party is not sufficiently represented in the governance and administration of the municipality, yet the party can help shape the political process in the municipality and raise awareness of energy transition issues among its constituency through public activities.
Website of the organisation	https://evp-thalwil.ch/home

Name of stakeholder organisation (and abbreviation): Social Democratic Party of Thalwil	
Profile of the organisation	The Social Democratic Party of Thalwil (SP) is committed to social justice and democracy, decent working and living conditions, solidarity with the disadvantaged, and ecologically responsible action. The party fulfils this task through political information, actions, education, active community politics and the nomination of candidates for public offices. In the 2019 National Council elections, the SP had captured 15.18% voter share in Thalwil, having support from one in five voters. In its current policies, the SP represents classic social democratic positions. These include its advocacy for a strong state and public service, against far-reaching economic liberalisation but in favour of social liberalization, for more environmental and climate protection, for an opening of Switzerland in foreign policy, and a pacifist security policy
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI framework is relevant to Social Democratic Party because its key principles include transparency in strategic and spatial planning as well as opportunities for citizens and experts' participation in a dialogue about energy actions. However, starting with the institutions, interested parties should take responsibility in the overall process. The party provides input, to the municipal council and to commissions.
Relevance of RRI keys to the stakeholder organisation	<p>Although SP politicians are not familiar with the RRI framework, the party's modus operandi is close to RRI principles in practice. The application of the RRI keys at the SP relates primarily to political topics around energy transition, social family policy and shaping political work in the municipality of Thalwil.</p> <p>Ethics is ensured as the party understands energy-transition as an act of strength that has to be morally justified and achieved in a socially responsible manner. Social principles are considered to be very important. According to the SP, the energy transition should be implemented in a socially responsible manner.</p> <p>Gender equality is applied as the representatives of the SP assume that women should also be involved in politics at all levels. However, what is often not seen alongside gender is the integration of young people. Gender strategies are launched top-down in the party.</p>



	<p>Open access is supported as SP assumes, transparency to be very important for communities. Data should be freely available to the public.</p> <p>The party advocates for various formats to promote public engagement. Citizen forums do not yet exist. For important issues there are consultations and workshops lakefront planning. Public workshops are open for everyone who wants to participate and bring inputs.</p>
Relevance of AIRR dimensions to the stakeholder organisation	<p>All AIRR aspects are important for SP.</p> <p>Anticipation is practiced at various levels in dealing with the topic of energy transition, e.g. the sustainability commission is supported.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	<p>All four areas are relevant and connected to the work of the SP. The Social Party is not of major importance, as only every fifth voter opts for this party. Nevertheless, the party is currently involved in shaping the energy transition plan, and has explicitly integrated this topic into its election programme.</p>
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<p>Political parties should involve business and society in the energy transition. The community has to set concrete goals; we need an overarching goal (CO2-free). In doing so, the party can have an important influence on the political decision-making process in the community, based on AIRR dimensions. If that would be in the community bylaws, then the community needs to do that.</p>
Website of the organisation	<p>https://thalwil.spkantonzh.ch</p>

Name of stakeholder organisation (and abbreviation): Sustainability Steering Committee	
Profile of the organisation	<p>The Sustainability Steering Committee consists of members of the municipal council (one member acts as president) and other members elected by the municipal council.</p> <p>The Sustainability Steering Committee does not primarily initiate its projects but ensures that the aspects of sustainability are considered in planned projects. It therefore has mainly an initiating and controlling function. It delegates experts to work with the planning groups.</p>
Relevance of Responsible Research and Innovation to the stakeholder organisation	<p>The Sustainability Steering Committee has the specific goal of firmly anchoring sustainability in Thalwil, for example applying for the Energy City label. The RRI approach helps to think of sustainability as an overall</p>



	concept in such a way that various actors are anchored under the topic of sustainability.
Relevance of RRI keys to the stakeholder organisation	<p>There is familiarity with the RRI approach, especially through her research activities. The Sustainability Steering Group strictly adheres to the approaches and ideas of the RRI approach.</p> <p>Regarding the RRI keys, the topic of gender equality is often still given too little attention when it comes to planning new measures. Open access to data is an important issue for the Committee because this is a prerequisite for the Committee's work. At the same time, the decisions and plans of the Committee are communicated to the population, which requires open access to data and information. The Committee would like to initiate an active exchange among citizens in the sense of public engagement.</p>
Relevance of AIRR dimensions to the stakeholder organisation	<p>Anticipation: The Sustainability Steering Committee undertakes many projects and activities to anticipate the effects of climate change, such as currently participating in a project on research approaches for automated driving. This makes approaches to community solutions feasible at an earlier testing stage. The Sustainability Steering Committee is part of a forum for participation in the policy anticipation process. From the perspective of the Sustainability Steering Committee, the issue of sustainability not only encompasses environmental aspects, but is also thought of in social dimensions in the Commission. For the Committee, the involvement of various stakeholder groups from the local community is a prerequisite for finding new solutions and advancing the energy transition. At the moment the involvement of the Committee in policy decisions is decided on a case-by-case basis. There is currently no automatic mechanism that involves the body in all political processes in the community.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	<p>The Sustainability Steering Committee has a great role for the RRI-LEADERS project and for the topic of energy transfer in the municipality of Thalwil, as it exerts an influence on the political decision-making process. In the future, all political decisions should be examined by the committee for their added value for the topic of sustainability, so that the committee strongly promotes the topic of sustainability and especially the topic of energy transfer in the community.</p>
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR	<p>Since the Commission is a part of the community's policy-making body, their participation in the adoption of the RRI and AIRR principles will have a direct positive impact on the development and implementation of strategic and spatial planning policies at the community level.</p>

dimensions within territorial governance?	
Website of the organisation	https://www.thalwil.ch/nachhaltigeentwicklung

■ Civil society

Name of stakeholder: C. E.	
Profile of the stakeholder (person)	Working-age citizen living in the municipality of Thalwil, managing director of an IT consulting company.
Relevance of Responsible Research and Innovation to the stakeholder	The interviewee does not know the RRI concept, but he deems many elements important.
Relevance of RRI keys to the stakeholder	<p>Education: The civic member sees education as the crucial approach for the energy transition and thus very important for the community of Thalwil. Following the opinion of the civil society member, education (cantonal task) must also be influenced on a local level, e.g., through excursions or additional offers. In his opinion, children are still very receptive to the topic of sustainability and already understand the scope of the problems of the future. They also have the potential to contribute to climate neutrality and influence their parents. Overall, he thinks the community needs to reach out to "all citizens," plan information sessions and science education. He thinks it would be important to try to reach many people in the community, e.g., develop a platform for exchange.</p> <p>Public engagement: When it comes to the topic of citizen participation, according to the civic member, it is up to the municipality and the city council to provide a platform to engage with things. From the perspective of the civic actor, this is an important lever to drive the energy transition.</p> <p>Ethics: According to the civic member, ethics is important at the local level and must also be firmly anchored in the education sector. He sees ethics as a control and evaluation key at the same time. Therefore, ethical approaches are only possible if one has an idea of how our society functions, here the civic member sees the task of politics to break this down to the municipality.</p>
Relevance of AIRR dimensions to the stakeholder	Anticipation: There is a positive attitude towards the AIRR dimensions of community organisation. A difficulty is detected in the fact that if people do not act today, more efforts will be needed in 10 years to act on the energy transition. Participation is the right key to move forward in the energy transition. Knowing how the population of the municipality will develop - will the city need new buses, new railway lines. Forward thinking is necessary to plan ahead in spatial planning,



	<p>where many changes are necessary to get on track with the energy transition.</p> <p>Inclusiveness: The civic member thinks that without having the people on board, the municipality cannot change anything in terms of energy transition. The people of the municipality need to be involved and the municipality needs to open multimedia channels to reach out and get the community on board. Inclusion is a key factor for the energy transition, from the perspective of civil society.</p>
Importance / role of the stakeholder within the territory in the context of the chosen policy focus: Energy Transition	Civil society is very important for the energy transition, because it can only be supported and implemented by a broad population initiative.
Relevance of the stakeholder to the objectives of RRI-LEADERS.	<p>Please indicate one of the four areas of relevance:</p> <ul style="list-style-type: none"> ■ Stakeholders with high levels of interest in relation to RRI in practice ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of power ■ Stakeholders with high levels of influence on RRI in practice <p>(As whole stakeholder group, not the single civic member)</p>
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<ul style="list-style-type: none"> ■ Through civil society organisations ■ Through political initiatives ■ Through voting behaviour
Website of the organisation	

Name of stakeholder: R. G.	
Profile of the stakeholder (person)	Working-age citizen with ties to the municipality of Thalwil.
Relevance of Responsible Research and Innovation to the stakeholder	Low relevance for the stakeholder as citizen, but relevant to her in her role as an employed person since she works for a regional planning and energy consulting firm.
Relevance of RRI keys to the stakeholder	For the respondent as a civil society actor, the RRI keys are relevant - in relation to the energy transition, especially public engagement, open access and science education. Open access can be used to address upcoming challenges, set new goals and accelerate them into society.
Relevance of AIRR dimensions to the stakeholder	The AIRR dimensions are hardly relevant and tangible for the respondent. The person has thought about the RRI dimensions on a



	<p>very abstract level and has not seen any reference to their social engagement.</p> <p>For the interviewee's work, however, anticipation plays the most important role. Here she understands, on the one hand, the informing character of future models. "But it can also be overwhelming and cause the individual to reject them". In particular, the interviewee sees a dependency between anticipation and power. Only people with decision-making power could implement anticipated solutions. "Is it the level of the community? Or the level of the individual? It's not the same". Inclusiveness: If the population is involved in the development of a goal, they are more likely to support it in the end, including the measures that are derived from it.</p> <p>Responsiveness is perceived by respondents as important at the individual level, but even more important at the community level.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: Energy Transition	<p>Important role – especially in Thalwil, civil society has shown its strength and influence (mostly through the civil society organisation).</p> <p>In Thalwil, the civil population has already had great influence and impact by exerting pressure on politics and has been able to demonstrate success in various sustainability issues over the past 20 years.</p>
Relevance of the stakeholder to the objectives of RRI-LEADERS.	<p>Please indicate one of the four areas of relevance:</p> <ul style="list-style-type: none"> ■ Stakeholders with high levels of interest in relation to RRI in practice ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of power ■ Stakeholders with high levels of influence on RRI <u>in practice</u> (as whole stakeholder group, not the single person)
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<ul style="list-style-type: none"> ■ Through civil society organisations ■ Through political initiatives ■ Through voting behaviour
Website of the organisation	

■ Research and Academia

Name of stakeholder organisation (and abbreviation): ETHZ- Institute for Traffic Planning and Transportation Systems	
Profile of the organisation	The Institute for Traffic Planning and Transportation Systems (ETHZ) generates new knowledge for planning, design, safety, operation, and maintenance of transport systems. transport planning, transport modelling, agent-based modelling, transport systems, traffic engineering and autonomous vehicles. ETHZ is one of the most prestigious universities in the world and regularly occupies top positions in university rankings. Numerous advanced studies for a doctorate in the technical, mathematical and natural sciences are possible. Currently, around 23,000 students and doctoral students are enrolled.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI-framework plays a major role for ETHZ in all respects. On the one hand, it is a matter of aligning one's own institute in such a way that it corresponds to the perspectives of RRI, RRI keys and AIRR dimensions, and on the other hand, ETHZ applies to many EU projects and integrates RRI also on the research side.
Relevance of RRI keys to the stakeholder organisation	While most keys describe the work process at a modern university in operational terms, some aspects of RRI play a special role: Gender is also an issue in research, e.g., when it comes to how the household organises mobility itself. Within the department, efforts are made to achieve a gender balance among staff. Currently there are 1/3 female PhDs, but few female postdocs. In the technical areas, there are often still too few female postdocs. Regarding open access to data and publications. While publications are now mostly open access and there is a budget for them, they have mostly been available on homepages for longer. In addition, the department is involved in standardization processes that set a standard for society.
Relevance of AIRR dimensions to the stakeholder organisation	All AIRR aspects are important for ETHZ. Anticipation is practiced to a certain extent since new research frameworks must also be found for future research. The department tries to integrate different resources for this purpose and to cooperate too much with other experts. Reflection is related to evaluating teaching, promotion as well the research and is regularly reflected and the growth goals of the staff are evaluated.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus:]Although the department is not directly linked to the municipality of Thalwil, there is generally a lively exchange between ETHZ and the civilian population and with the municipality of Thalwil. In Thalwil, some ETHZ scientists also work in the municipal administration, and both develop their projects or advise them with their scientific expertise.



- Energy transition	
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	While the work of the department tends to be basic research, which means that there are few resources for direct consulting projects. Nevertheless, research provides important information for the sustainable design of permissible infrastructure projects. The community of Thalwil also benefits directly or indirectly from this research.
Website of the organisation	https://www.ivt.ethz.ch

Name of stakeholder organisation (and abbreviation): University of Zurich, Digital Society Initiative, Ethical Research Department	
Profile of the organisation	Research areas of the department are ethics of information and communication systems, neuro-, and empirical ethics. Digital society, the impact of digital transformation on research and innovation outreach activities with external stakeholders, plus focus digital intelligence group, normative and empirical research, experiment, reaction.
Relevance of Responsible Research and Innovation to the stakeholder organisation	RRI is part of the research conducted by the Ethics Department. Researchers are intensively involved in ethical issues in various research areas and the application of ethics in the design of university research.
Relevance of RRI keys to the stakeholder organisation	Although RRI as a concept is unfamiliar, the RRI keys are of great importance to the research and operations of the department. E.g., open access to data is encouraged by university policy, especially the so-called green path, which requires open access publication of research results. Ethics, is also part of the department's research theme. The department is currently researching ethical issues in the field of digitization.
Relevance of AIRR dimensions to the stakeholder organisation	The AIRR dimensions are important to how the working group operates. The following example is considered a good measure of reflection: Twice a year, the department organises a day to reflect on current work practices and current issues. Retreat: twice a year the department organises a day outside the usual agenda. In terms of anticipation: new research topics are defined and identified in advance, based on current research trends and trends in society.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: - Energy transition	By taking a scientific point of view, the department could take on an advisory role on how issues of the policy topic can be further implemented in society from an ethical point of view and how the interaction between the various actors can be improved.



Relevance of the stakeholder organisation to the objectives of RRI-LEADERS	<ul style="list-style-type: none"> ■ Stakeholders with high levels of experience in RRI ■ Stakeholders with low levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	An advisory role with a scientific perspective.
Website of the organisation	https://www.dsi.uzh.ch/en/about/team/management/mchristen.html

■ Business

Name of stakeholder organisation (and abbreviation): Electricity Utilities of the Canton of Zurich (EKZ)	
Profile of the organisation	EKZ is a Swiss energy supply company. EKZ employs around 1324 people and has a pipeline network of about 15,000-kilometres. It is an independent institution under cantonal public law. EKZ covers around 9% of Switzerland's total electricity demand.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI framework is highly relevant, even though the EKZ was not aware of the RRI framework. But many of the elements of the framework are highly relevant to this stakeholder. They do not have a large research department themselves, but as a large energy supplier, the EKZ have their own innovation strategy and they take care of responsible business and are in active exchange with their stakeholders.
Relevance of RRI keys to the stakeholder organisation	<p>EKZ considers all keys relevant.</p> <p>Ethics: very relevant, especially because of the political (owned by the canton and politicians have seats on the board of directors) and public exposure (company provides basic service to the whole society) of the company.</p> <p>Open access: a bit less relevant, however, the company is starting to consider the status of this RRI key more closely.</p> <p>Public engagement: very high relevance, there is even a separate department taking care of this.</p> <p>Gender equality: the company is officially “non-discriminatory”, with equal wages for equal work and with differences among gender types of less than 5%. In terms of the industry, however, EKZ tends to be male-heavy, but being non-discriminatory is in the DNA of the company.</p> <p>Scientific education: also, relevant and it is being promoted through a university fund, through projects, through “social sponsorships”, and by enabling and promoting further training among employees.</p>



Relevance of AIRR dimensions to the stakeholder organisation	<p>In general: high relevance.</p> <p>Diversification/inclusion: high relevance. E.g., there is a whole working group working on the topic diversity and gender equality.</p> <p>Additionally, the voting population of the area with their values and interests are actually indirectly represented at the very top of the company. Politicians legitimacy sit on the company's board of directors.</p> <p>Anticipation: Important, mostly through the topic of innovation. Innovation should certainly not be an end for EKZ. EKZ observes what other players in the same industry are doing. EKZ is not a first mover, but they observe, and if there is a new development (and a promising business case) on the horizon, they will be there. But they cannot afford to just invest and hope it will not be a loss, because they have an obligation towards the taxpayers as they are publicly owned. If they do F&I, then it has to correspond with an overriding mission/goal of the whole company.</p> <p>Reactivity: in terms of alignment with the changing needs of society. EKZ's Board of Directors is mostly represented by politicians elected by the people, so in this way the company responds to the changing will/needs of society. In addition, the company monitors current developments and checks how relevant they are.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: Energy Transition	High importance for the project, since EKZ covers around 9% of Switzerland's total electricity demand.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	<p>Please indicate one of the four areas of relevance:</p> <ul style="list-style-type: none"> ■ Stakeholders with high levels of power (1) ■ Stakeholders with high levels of influence on RRI in practice (2)
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<p>EKZ can make a valuable contribution to shaping the future of energy supply in the community in line with the AIRR dimensions.</p> <p>Examples given above.</p>
Website of the organisation	https://www.ekz.ch/de/privatkunden.html

Name of stakeholder organisation (and abbreviation): Energie 360° (e360)	
Profile of the organisation	Energie 360° (e360) is a Swiss company owned by the public sector. The main owner is the city of Zurich. It offers energy and e-mobility solutions nationwide. These include solutions for heating, cooling, electricity, grid services, and gas filling stations as well as electric charging stations and wood pellets. E360 implements energy networks based on renewable energy throughout Switzerland. Regionally, in addition to the city of Zurich, the company supplies natural gas and biogas to around 40 other municipalities in the canton of Zurich as well as 19 independent gas utilities. Energie 360° is the largest biogas reseller in Switzerland. The company employs around 290 people and operates a 1'300-kilometer gas pipeline network.
Relevance of Responsible Research and Innovation to the stakeholder organisation	The company assesses the relevance of Responsible Research and Innovation for the stakeholder organisation as Highly relevant. but the company was not aware of the RRI framework at the beginning of the conversation. Then the respondent realised that many elements of the framework are very relevant to this stakeholder. See below for details.
Relevance of RRI keys to the stakeholder organisation	Ethics: Energie 360° has only recently adopted a new Code of Conduct, thus expanding the topic of ethics. Therefore, a new compliance officer (a lawyer) was hired specifically for the area of ethics, who also supports the employees in ethical issues. Open access: Relevant, but it is a challenge for Energie 360° and the topic of data security is generally a big challenge in Switzerland due to different national regulations. The company itself has built up a certain amount of data over the years, which is already accessible internally. But there are increasing challenges in accessing building-related energy data that would be important for the region. Some of this data is held by the federal government, some by the canton, and some by the municipal inspectors. Unfortunately, Energie 360° cannot access all the data it would like to offer the best solution for customers. Scientific education: important for the company for several reasons: it enables the company to further qualify its employees and the company has recognised that this also has great economic potential. From the company's point of view, it is difficult for the company to sell certain (sustainable) products to customers because customers/society are not yet sufficiently informed. In the company's view, there is a need for scientific education of the population about sustainability. Gender equality: There are far more men than women in the technical fields. Internally, this is a big issue, as Energie 360° would like to attract more women to the industry. But the company is officially non-discriminatory in terms of wages.



Relevance of AIRR dimensions to the stakeholder organisation	<p>In general, the AIRR dimensions have high relevance for the stakeholder organisation.</p> <p>Anticipation was seen as particularly important by the respondents and is part of the company's DNA. The company perceives itself as particularly proactive and tries to offer solutions before the need for them arises. For example, it used to be a pure "natural gas" company, but at some point, the company realised that it would eventually cease to exist with this business model, so it deliberately launched a diversification strategy. Today, innovation is handled quite strategically, and the company has become more future-oriented, which is quite relevant. Equality and diversity are relevant issues in the company. Strict attention is paid to gender-equitable wage payments and attempts are made to keep an eye on the ratio of men and women.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: Energy Transition	The stakeholder organisation has a high importance within the area within the chosen policy focus, as it is an energy supplier used by many residents, especially in the municipality of Thalwil. Therefore, the company plays a direct role in the energy transition.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	<p>Please indicate one of the four areas of relevance:</p> <ul style="list-style-type: none"> ■ Stakeholders with high levels of power (1) ■ Stakeholders with high levels of influence on RRI in practice (2)
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	See examples above (RRI key / dimensions). The company must be seen as a direct stakeholder in the energy transition in Thalwil, i.e. it has to be directly involved in the community's anticipation processes on the topic of energy-saving and energy production.
Website of the organisation	https://www.energie360.ch/de/unternehmen/

Name of stakeholder organisation (and abbreviation): Energy Cooperative "Zimmerberg" (EGZ)	
Profile of the organisation	<p>The "Energy Cooperative Zimmerberg" (EGZ) is a SME, or rather a small non-profit cooperative with fewer than 10 employees based in the Canton of Zurich.</p> <p>The purpose of EGZ is the regional distribution and use of renewable and sustainable energy sources for the generation and promotion of environmentally friendly heat, electricity, and mobility. EGZ is committed to the rational and efficient use of energy and the reduction of greenhouse gases in the Zimmerberg region. The economic activities of the cooperative are serving the common good. The concerns of environmental, landscape, nature and heritage protection are</p>

	<p>considered within the framework of the cooperative's purpose. To achieve its goals, the EGZ essentially sets itself the following tasks:</p> <ul style="list-style-type: none"> ■ Regional value chain for renewable and sustainable energy products. ■ Provision of services such as consulting, conception, planning and operational optimization of plants and the like. ■ Realization of own renewable energy production plants. ■ Participation in third-party plants as well as financing support for third-party plants. ■ Implementation of innovative mobility concepts. ■ Promotion of resource efficiency. ■ Dealing with technical and energy policy issues and providing communication services. <p>With its services, the cooperative addresses private individuals, organisations, companies, and municipalities.</p>
Relevance of Responsible Research and Innovation to the stakeholder organisation	The RRI concept was not known to the EGZ. However, the company considers many elements of the concept seem to be very relevant to its daily business.
Relevance of RRI keys to the stakeholder organisation	<p>The RRI keys are relevant because the company considers them important for the energy transition and therefore, they are also relevant for the company itself.</p> <p>For example, the company conducted a survey among members of the community on the topic of the energy transition, which is an example of public engagement. The results are then fed back into marketing and product development. For other keys that do not have the same relevance to the energy transition at the local level, the company does not have the resources to deliberately address them, for example so far not much has been done regarding gender equality.</p>
Relevance of AIRR dimensions to the stakeholder organisation	<p>The dimensions are relevant but not coped with consciously.</p> <p>With their products the company reacts to needs, anticipates needs, includes different stakeholders, etc.</p>
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: energy transition	<p>The company is providing products/solutions which promote energy transition on a local level, where it is an important stakeholder.</p> <p>It could contribute to the transformative outlook through its product/solutions which basically all are in a way “best-practices”.</p>
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	<ul style="list-style-type: none"> ■ Stakeholders with high levels of influence on RRI in practice in the community of Thalwil.
How can stakeholder contribute to the adoption of RRI principles and the AIRR	The contribution is twofold: The energy cooperative "Zimmerberg" contributes to the (faster) energy transition and, as an economic actor, can further integrate elements from the RRI concept into the company

dimensions within territorial governance?	and make RRI effective in the region. The company's products are part of the future planning and anticipation of energy supply in the community.
Website of the organisation	https://e-zimmerberg.ch/

Name of stakeholder organisation (and abbreviation): Gas supply Thalwil	
Profile of the organisation	Gas supply Thalwil is an institution/company under public law. It supplies natural gas and biogas via the underground supply network to customers in different municipalities of the Canton of Zurich.
Relevance of Responsible Research and Innovation to the stakeholder organisation	<p>The RRI concept was not known. However, some elements of the concept are considered to be relevant for the company.</p> <p>For example, the topic “net zero emissions by 2050” is a focus of the institution. The society of the municipalities which are provided by gas supply Thalwil can only comply with the 2050 target, if the municipality and its institutions provide the means to achieve this, e.g., with regard to heating solutions.</p>
Relevance of RRI keys to the stakeholder organisation	<p>Some of RRI keys are relevant to the stakeholder organisation:</p> <p>Gender equality: Equality is already practiced within the company/institution.</p> <p>Public engagement: There is a commission structure within the company. Each political area has a commission made up of political partners from the people. This is the higher-level control body, so to speak. Key RRI issues are discussed there in a dialogue. Without it, the company would not be able to exist in public administration.</p> <p>Open access: The company buys in a lot of know-how. It cannot hire many specialists themselves. Accordingly, many studies, expert opinions, etc. are obtained from external sources. Depending on the area, these may or may not be available to the public.</p> <p>Science education: there is an initiative that indirectly requires science education for employees - at least certain elements of education.</p>
Relevance of AIRR dimensions to the stakeholder organisation	Responsiveness: Relevant to specific questions that the company needs to know the answer to in the future. The company then goes to specialists for advice. Specialists and scientists then work out possible solutions and present them to the company, followed by a report. In addition, the evaluation processes in the company are becoming increasingly standardised, which helps the company to establish a high standard and practice quality management.
Importance / role of the stakeholder organisation within the territory in the	The role of stakeholder is very important, because as gas provider the company play a key role within the energy transition process.



context of the chosen policy focus: Energy Transition	
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	<ul style="list-style-type: none"> ■ Stakeholders with high levels of power (2) ■ Stakeholders with high levels of influence on RRI in practice (1)
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	By operating as a company under public law, "Gas Supply Thalwil" is closely linked to the civil society and can contribute considerably to the adoption of various RRI elements, for example through the products portfolio it offers to the citizens.
Website of the organisation	https://www.thalwil.ch/aemter/5754

Name of stakeholder organisation (and abbreviation): Naef energietechnik	
Profile of the organisation	<p>Naef energy management is a planning office for building services that has been in existence since 1995. It is a micro-business, started with one person and now it is the owner and two employees.</p> <p>Naef energy management stands for innovative solutions in the building services sector that reduce energy consumption. Knowing that the building stock is one of the main causes of global warming, Naef considers it a top responsibility to seek sustainable solutions in the long term.</p> <p>As a partner with building owners, architects, specialist planners and tradesmen, Naef seeks a balance between economic and ecological requirements. Energy-efficient new buildings as well as the renovation of old buildings is their main interest.</p>
Relevance of Responsible Research and Innovation to the stakeholder organisation	There is no familiarity with the RRI framework and its keys are not considered as particularly relevant to this business.
Relevance of RRI keys to the stakeholder organisation	The company classifies the RRI keys as an increasing resource for the operational work of the company. In particular, the topic of open access is increasingly being addressed in the company and structures are being developed to deal with it in a standardised manner. Transparent communication is an important part of dealing with company partners and customers, and thus also a part of the company's strategy.
Relevance of AIRR dimensions to the stakeholder organisation	The company develops through anticipation and continuous development of products, through systematic reflexion and quality management to achieve better market readiness and customer satisfaction.
Importance / role of the stakeholder organisation	This stakeholder is very important to the issue of energy transition at the local level. The heating/energy issue is central to the climate change



within the territory in the context of the chosen policy focus: Energy Transition	journey, and ultimately it is the energy planners who play a critical role in deciding/planning/purchasing and installing/adapting the appropriate product for each building.
Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	Please indicate one of the four areas of relevance: Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	This stakeholder is most likely to contribute to responsiveness because its company responds to changing conditions and customer needs and then plans, purchases, and installs adequate solutions locally. The company can also strengthen reflection and anticipation in the community as innovative services in the energy sector are developed and offered locally.
Website of the organisation	naef energietechnik (naef-energie.ch)

Name of stakeholder organisation (and abbreviation): Precision Landing (limited liability company)	
Profile of the organisation	Precision Landing is an SME from Thalwil, a consulting company especially for sustainable solutions and specialised in cooperation with the public sector, with another offshoot in Germany.
Relevance of Responsible Research and Innovation to the stakeholder organisation	Precision landing does not know the concept of RRI but deems many elements relevant for the company, because the company must initiate change processes for their customers and teach them forward-looking leadership. And by acquiring and investing in companies that are moving into precisely this area of innovation.
Relevance of RRI keys to the stakeholder organisation	The company considers all keys to be relevant to its business. Open access is particularly important for customer contact. It is important for the company to be able to access public data for consulting assignments on the one hand and to be able to transparently communicate solutions for issues from the energy sector on the other. Gender plays a major role in that the company tries to hire employees without gender inequalities.
Relevance of AIRR dimensions to the stakeholder organisation	The AIRR dimension are important for stakeholders. In particular, the involvement and testing of specific customer groups is necessary to develop innovative products and solutions for which future models as well as the involvement of different stakeholder groups are crucial.
Importance / role of the stakeholder organisation within the territory in the context of the chosen policy focus: Energy Transition	It is important because the company is involved in sustainable innovation processes and contribute to finding sustainable solutions for different stakeholders (companies, the public sector, etc.).

Relevance of the stakeholder organisation to the objectives of RRI-LEADERS.	<p>Please indicate one of the four areas of relevance:</p> <ul style="list-style-type: none"> ■ Stakeholders with high levels of influence on RRI in practice
How can stakeholder contribute to the adoption of RRI principles and the AIRR dimensions within territorial governance?	<ul style="list-style-type: none"> ■ Through cooperation with public institutions, as they are specialised in this area ■ Through innovative productions, especially in the dimension “anticipation”
Website of the organisation	https://www.precision-landing.com/



Annex Mapped RRI good practices

Mapped RRI good practices in the Municipality of Thalwil

Good Practice: composite heating system / district heating network Owner of the practice / responsible organisation or institution: Political decision-makers at the municipal level (and later in the process: property owners)	
About the practice (short description)	Local authorities monitor their community's installed heating systems and if it becomes apparent that all heating systems in an area, e.g. in an entire neighbourhood, where systems were built at the same time, will have to be replaced in the foreseeable future due to their lifespan coming to an end, then local authorities develop a concept beforehand (anticipatory). In the case of Thalwil, it was examined whether a heating network could be considered for a whole part of the municipality. When the feasibility was confirmed, the property owners were proactively contacted regarding the replacement of their heating systems. The new and more sustainable heating network was installed by the municipality in cooperation with the property owners.
Policy area of the practice	Energy Transition
Main objective of the practice	To promote energy transition / sustainable development through anticipatory attitude of authorities
Geographical scope of the practice	Local
Stakeholders involved	Local authorities, property owners (external experts)
Relevance to RRI keys (Research ethics, Public engagement, Science education, Gender equality, and Open access)	High relevance to public engagement, science education, open access.
Relevance to AIRR dimensions (Anticipation, Inclusiveness, Reflexivity and Responsiveness)	High relevance to anticipation, as the whole best practice is made possible by the anticipatory attitude of the local authorities. Relevant also for the dimension's reflexivity and responsiveness.
Status of the practice	Running since 2017
Benefits of implementing the RRI practice	To the organisation or to the territory in which the practice was initiated.
Compatibility with the planned transformative outlook	Contribution to energy transition
Further information (link to websites, reports, press coverage)	https://www.thalwil.ch/versorgung/3447



Good Practice: All-Round Carefree Package	
Owner of the practice / responsible organisation or institution: Energie Genossenschaft Zimmerberg (energy association Zimmerberg)	
About the practice (short description)	This practice is a model, a product, something like an all-round carefree package organised, offered in cooperation with municipalities. It unites under one roof all the different partners needed for the realization of a photovoltaic plant. The end customer has only one point of contact, namely the company offering the package, and the entire workflow runs completely online. The same service could also be created for the heating sector in order to replace fossil fuel-based heating solutions. Production takes place in local SMEs boosts regional value creation.
Policy area of the practice	Energy Transition
Main objective of the practice	To offer a product so that customers who want a sustainable energy solution can get it as easily as possible with only one single point of contact. (Ultimate goal: CO ₂ reduction, energy transition)
Geographical scope of the practice	Local (Thalwil and neighbouring municipalities)
Stakeholders involved	Business (local SMEs), municipality (administration), civil society (end customer)
Relevance to RRI keys (Research ethics, Public engagement, Science education, Gender equality, and Open access)	Public engagement In general: no high relevance
Relevance to AIRR dimensions (Anticipation, Inclusiveness, Reflexivity and Responsiveness)	High relevance to AIRR dimensions in relation to the policy area.
Status of the practice	Running since 2020.
Benefits of implementing the RRI practice	Civil society: This product facilitates the instalment of sustainable energy solutions into one's home. Business: Generates value/business. Territory: It advances the energy transition and therefore helps reaching energy transition goals.
Further information (link to websites, reports, press coverage)	https://kraftwerk-zimmerberg.ch/ https://e-zimmerberg.ch/



Good Practice: “Energy City” label Owner of the practice / responsible organisation or institution: (non-profit) association “Energienstadt” (Energy City)	
About the practice (short description)	The Energy City label is a certificate of achievement for municipalities that develop and implement a sustainable municipal energy policy. Energy cities promote renewable energies and, environmentally compatible mobility and focus on the efficient use of resources.
Policy area of the practice	Energy Transition
Main objective of the practice	<ul style="list-style-type: none"> ■ Continuous energy policy assessment - as a working, management and controlling tool - with publicity effect for the city. ■ Addressing existing concerns, related to initiatives in the area of sustainable development. ■ Implementation of the goals of the national energy plan, Energy Strategy 2050, as well as cantonal energy strategies at the municipal level as part of a sustainable, long-term process. ■ Guidance for municipalities that want to embark on the path to a low energy-consuming society and initiate corresponding measures.
Geographical scope of the practice	Certificate is awarded at the community level. Available all over Europe with the “European Energy Award”. While in Switzerland it is mostly at communal level, the European certificate seems to be available at national / regional level as well.
Stakeholders involved	Municipality, National EEA Commission, Association European Energy Award AISBL, one national and one international auditor.
Relevance to RRI keys (Research ethics, Public engagement, Science education, Gender equality, and Open access)	Relevant to RRI keys are public engagement, science education and open access.
Relevance to AIRR dimensions (Anticipation, Inclusiveness, Reflexivity and Responsiveness)	Relevance to the AIRR dimensions is high. Many RRI-elements are involved in the Energy City Label. The whole process is looked at including i) what resources are available, ii) where do we want to go, iii) what is the way to go there, iv) set a path, v) review and vi) reflex achievements, vii) adjust path, viii) improve further, etc.
Status of the practice	Implemented in Thalwil since 2010. The municipality is aiming for the “gold label” now, the highest possible achievement.
Benefits of implementing the RRI practice	In the Swiss context benefits include: Energy politics: High political acceptance, recognition on national and

	<p>federal level, integration into higher-level energy politics</p> <p>Targeted energy and climate policy: Creates overall view of the topic energy and climate on community level. Creates awareness of possibilities and potentials. Brings continuity (beyond “waves” of four-year political legislature periods and personnel changes). It is a simple management and controlling instrument for an effect-oriented administration management. It coordinates different departments concerned and allows for targeted management and goal-oriented controlling.</p> <p>Strengthens the autonomy of the municipality.</p> <p>Improved services and communication: Energy Cities and the municipal companies align their services to meet the needs of the population, the associations and the local businesses.</p> <p>Preservation of jobs: As an environment for promising technologies ("cleantech"), an energy city promotes the competitiveness of the city and the region.</p> <p>Increasing regional value creation: Many countries, e.g., Switzerland, send billions abroad each year for fossil and nuclear energy. When focusing on energy efficiency and renewable energies, part of the money can be kept in the country and used for regional suppliers.</p>
Further information (link to websites, reports, press coverage)	<p>https://www.european-energy-award.org/welcome-to-the-european-energy-award (Europe)</p> <p>https://www.local-energy.swiss/neustart-energiestadt.html#/ (Switzerland)</p>