RRI First Report

Deliverable 1.5 (v01)
WP1. Management and Coordination

Responsible Partner

CIRCE

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Technical references

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TIGON

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Executive Summary

The present document introduces the approach followed to integrate the Responsible Research and Innovation (RRI) in TIGON as well as the first progress during the first year of operation. In this line, the RRI's 6 policies agendas (a) **Ethics**, b) **Gender Equality**, c) **Governance**, d) **Open Access**, e) **Public Engagement**, and f) **Science Education**) have been taken into consideration.

In this sense, issues such as the Open Access importance have already been deeply taken into account within the deliverable Data Management Plan (D1.3) under the FAIR principles (Findability, Accessibility, Interoperability, and Reuse of digital assets).

As per regard gender issues, RRI brings an overview of the gender structure of the project at the proposal stage, which will be updated taking into account the Gender Issues statistics within the project. It has been noted that the gender gap in TIGON follows a general scenario based on the choice of professional career among gender, for which the project members wish to positively influence.

Aiming to integrate public outreach in the project, a plan for organisation of RRI events is envisaged. Such events will be held along with the project exploitation and dissemination activities and will cover topics and include participants relevant for the state of the project. During the integration of this last one, some activities such as surveys/workshops to assess the participants' knowledge and feedback on the topic, as well as presentations to introduce the different topics from the project are planned.

Other policies not mentioned in this executive summary are part of the general principles included in the MoRRI – Monitoring the Evolution and Benefits of Responsible Research and Innovation, shaping the defined KPIs to be taken into account in the project.

The reader is encouraged to contact coordination@tigon-project.eu to get acknowledge about the evolution of the RRI in particular, and of the project itself, in general.

This document will be updated in August 2023 with the creation of D1.6 RRI Progress Report

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Abreviations and acronyms

CA	Consortium Agreement
D	Deliverable
DoA	Description of Action
EC	European Commission
FP	Framework Programme
GA	Ambiguity, either Grant Agreement or General Assembly
H2020	Horizon 2020 The EU Framework Programme for Research and Innovation
IPR	Intellectual Property Right
KPI	Key Performance Indicator
MA/CP	Mitigation Action / Contingency Plan
PC	Project Coordinator
RRI	Responsible Research and Innovation
SC	Steering Committee
SME	Small and Medium Enterprise
WP	Work package

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1. Introduction and RRI Scope

This document is the first version of the Responsible Research and Innovation report (RRI) prepared under the Project TIGON EC-GA contract no 957769.

This open deliverable, shortened as D1.5 has been developed under the activities of the task 1.4 for "Innovation management and Responsible Research & Innovation".

The intended audience of the present document is each individual participant of the Project Consortium and, being a public deliverable, this one will be accessible from the project's website.

As per the RRI Toolkig (https://rri-tools.eu/about-rri), Responsible Research and Innovation is: a) Involving society in science and innovation 'very upstream' in the processes of R&I to align its outcomes with the values of society, b) A wide umbrella connecting different aspects of the relationship between R&I and society: public engagement, open access, gender equality, science education, ethics, and governance, and c) A cross-cutting issue in Horizon 2020, the EU Programme for Research and Innovation 2014-2020.

The present document introduces the approach followed to integrate the Responsible Research and Innovation (RRI) in TIGON as well as the first progress during the first year of operation. In this line, the RRI's 6 policies agendas (a) **Ethics**, b) **Gender Equality**, c) **Governance**, d) **Open Access**, e) **Public Engagement**, and f) **Science Education**) have been taken into consideration.

In general terms, the role of the coordinator is to provide the consortium with an overview of the innovations planned within the project, so all the partners have a common idea and approach of them. In this sense, information on the project innovation will be provided from different points of view including technical, regulatory, social and organizational. Moreover, the Innovation board will govern through the project execution the innovation management process, working in strict cooperation with the WP Leaders, supporting TIGON partners in every step of the methodology development.

Besides, the Exploitation and Innovation Manager will support the project in adjusting its objectives and requirements, in order to better identify exploitable results, the potential for patents applications and maximize the replication potentials.

During this task, cross cutting issues will be considered to ensure the interoperable, interdisciplinary and international approach of the TIGON project. In this sense, all the partners will be initiated in Responsible Research and Innovation (RRI) practices, ensuring that the project considers important aspects such as public engagement, open access, gender, ethics, education, governance and science education, promoting institutional change among partners to adopt RRI approach.

To ensure that the RRI is being correctly addressed during the whole execution of TIGON, "MoRRI – Monitoring the Evolution and Benefits of Responsible Research and Innovation" indicators will be considered to monitor the project development and reported through progress reports.

The RRI Toolkit, built with and for the Community of Practice, will be used during the project lifetime to apply the best practices on RRI.

This document will be updated in August 2023 with the creation of D1.6 RRI Progress Report.

2. RRI in TIGON. Progress Results

Aiming to reduce the distance between science and society, latest trends for leading to a European-wide approach in Horizon 2020 resulted in a called Responsible Research and Innovation (RRI) which seeks to bring issues related to research and innovation into the open, to anticipate their consequences, and to involve society in discussing how science and technology can help create the kind of world and society we want for generations to come.

RRI entails engaging all actors (from individual researchers and innovators to institutions and governments) through inclusive, participatory methodologies in all stages of R&I processes and in all levels of R&I governance (from agenda setting, to design, implementation, and evaluation).

> "Research and innovation can only be labelled 'responsible' in case (1) they are aimed at particular outcomes, (2) certain process dimensions are met, and (3) several policy agendas are adopted."
>
> -RRI Tools

2.1. The 6 policies agendas

The EC provided six policies agendas to provide more concrete normative orientations, as shown below. These thematic elements are: a) Ethics, b) Gender Equality, c) Governance, d) Open Access, e) Public Engagement, and f) Science Education.
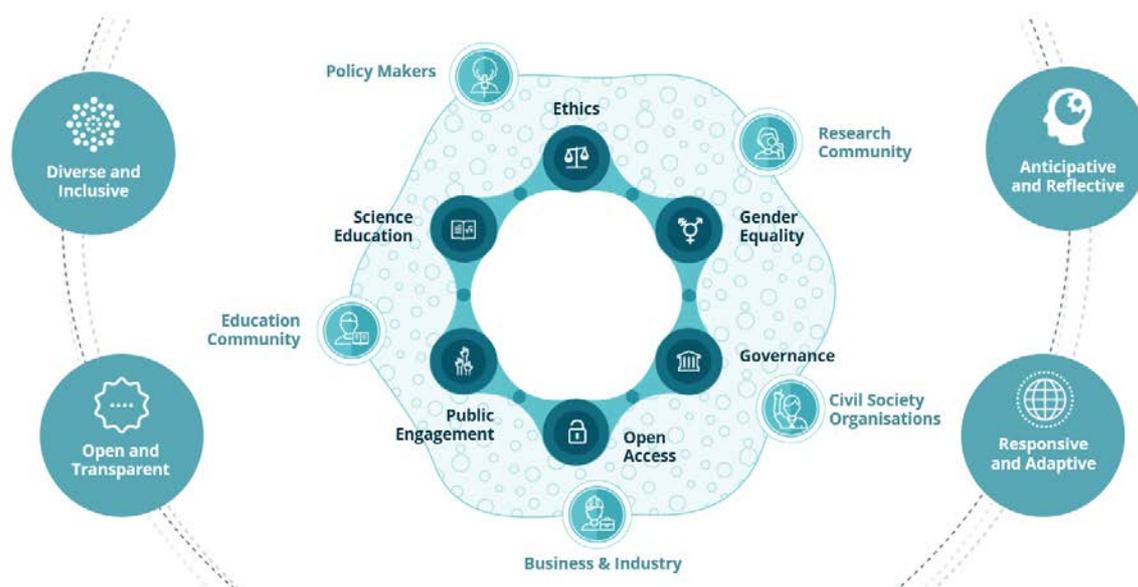

Figure 2.1: A normative framework for RRI: the six policy agendas

TIGON will consider these aspects within the RRI progress, having special focus on those policies where the tematic and idiosincrosy of the project are more relevant.

2.1.1. Ethics:

Research integrity must be guided by standards, guidelines and protocols as well as opened to external scrutiny. The core ethical endeavour is to achieve its integration across the entire research and innovation (R&I) process in all project's phases. Integrating ethics into the project requires continuous orientation, reflection and deliberation on the decisions, actions and values at stake.

Reflection is an important factor when it comes to Ethics, as it comes down to think "doing better" in every aspect of the project, being a phylosofical attitude. Thinking on ethical issues makes aware of opportunities to think about new project and benefits, preventing from failing.

In short, this policy considers Incorporating Research Integrity, by sharing responsibility for the impacts of science and reflecting on people's ideas and concerns about R&I.

2.1.2. Gender Equality

Gender equality is a matter of common concern, being crucial to invest in equal opportunities for men and women in research and innovation (R&I) promotes teams that perform better and attract top-level players. One of the three main objectives of Horizon 2020's gender equality strategy is to foster gender balance in R&I teams, closing the gap in women's participation. Ensuring gender balance in R&I teams is vital to producing high quality outcomes that benefit everybody.

Gender data for the project will be gathered in several occassions, following the different project's reporting periods. For the purpose of this deliverable and aiming to count with a first version of the data, those CVs included in the project proposal are being taken into account leading to the following figures

Women representativity in TIGON is **25%** (after the registered CVs in the proposal). In a project which mainly involves electrical engineers this ratio seems to be low by the own gender choices. (12.4% of bachelor degrees awarded to woman in this field according to IEEE Expectrum[1], 11.1% of all electrical engineers in US are women according to Zippia[2]). It worth to say, that among the 15 TIGON beneficiaries, **9** are those whose ratio of women participation is **equal or higher than 25%,** while **6** are lower including 5 with no female profiles having CVs registered in the proposal.

Encouraging to reduce the gender gap in this field, is the objective of the consortium to bring the awareness of TIGON solutions to the early researchers, as a gender neutral field of activity as well as encouraging to promote via channels like linkedin job offers in the field with a special focus on the women sector.

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[1] The EE Gender Gap Is Widening - https://spectrum.ieee.org/the-ee-gender-gap-is-widening
[2] Zippia. The career expert - https://www.zippia.com/electrical-engineer-jobs/demographics/

2.1.3. Governance

Actions as organizations to foster and mainstream RRI in the organizations itself or among stakeholders. In this sense, it is important to set principles in a board of members. A policy mainly linked to policy makers

2.1.4. Open Access

Researchers have a core interest in publishing articles in academic journals. Articles represent a crucial source of information and data, and they remain a primary route through which research findings are communicated.

For the purpose of this deliverable it worth to mention that the policy of Open Access has been deeply taken into account within the deliverable Data Management Plan (D1.3) resulting in the preparation of several guidelines to ensure the accomplishment of the FAIR Principles (Findability, Accessibility, Interoperability, and Reuse of digital assets). In this sense, the reader is kindly invited to reach the project consortium via coordination@tigon-project.eu to get access to the document. In any case, the number of OA publications will be taken into account as a KPI as well as the importance of providing results to the project via open publishable research.

2.1.5. Public Engagement

To integrate the Public Engagement in RRI related activities, it is important to set up a participatory research agenda including multiple advantages such as identifying stakeholders' unmet needs and what matters to end users, or helping researchers include new perspectives in research, prepare stakeholders for the research process, structure the process for broader collaboration between stakeholder groups, and enable and empower stakeholders to develop their own voice.

2.1.6. Science Education

The integration of Responsible Research and Innovation (RRI) principles in teaching and learning activities supports multidisciplinarity and stronger student engagement as well as student acquisition of critical thinking and collaborative learning skills.

The line between science education and public engagement is actually quite blurry due to the mutual learning processes that take place during public engagement activities, being the main difference the integration in the higher education institution.

2.2. Events and actions

Within TIGON, a plan for integrating the RRI into the project was prepared since the early beginning. This plan considers among other organising various promotional and educational activities taking advantage from the project encounters.

2.2.1. Planning of Events

Besides extraordinary encounters (explained below) that may occur during the development of the project, TIGON Consortia plans to physically meet to discuss and move step forwards within the evolution of the project.

Up to 8 physical events have been organized, 2 among them having celebrated online due to the COVID-19 pandemic. The meetings, specially focused on the monitoring of project progress, achievements review, decision-making and conflict resolution, as well as technical discussion are hosted by local organizations which are part of the project.
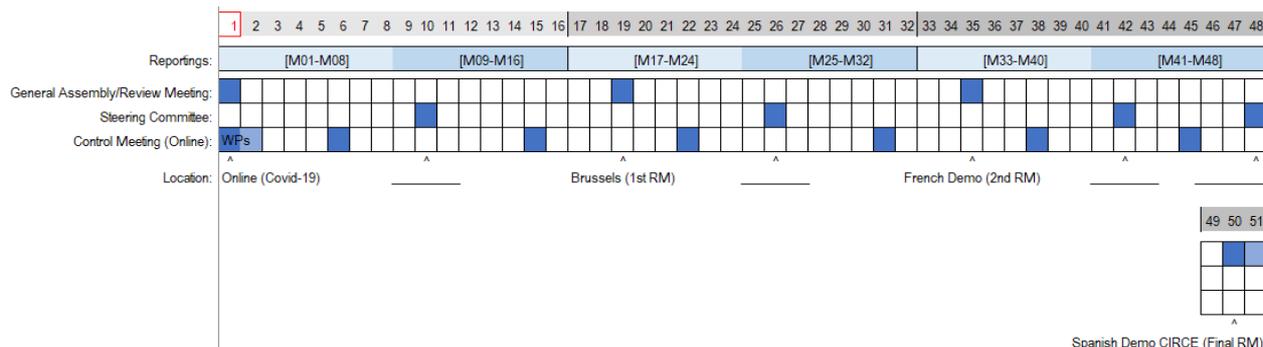

Figure 2.2: TIGON's expected encounters calendar

Physical encounters, in this sense, are an excellent opportunity to carry out side-activities benefiting the project's results, boosting the awareness of those among citizens and interested organization and, closely related to the previous, engage companies and industries for an early adoption of the solutions.

The preliminary agenda of these events includes, besides the technical and administrative related topics, other side activities based on dissemination and exploitation, aiming to not only widespread the awareness of the project but to tie lies among the project partners and the industries themselves. In this sense, the coordinator, CIRCE, has already a wide experience organizing meetings side events to promote projects activities. The reader may see figure beside an example of another coordinated project, H2020 polynSPIRE.

Figure 2.3: Side networking event in polynSPIRE

Last but not the least, is the role of CIRCE to provide the consortium with an overview of the innovations planned within the project, so all the partners have a common idea and approach of them. In this sense, information on the project innovation will be provided from different points of view including technical, regulatory, social and organizational. Moreover, the Innovation board will govern through the project execution the innovation management process, working in strict cooperation with the WP Leaders.

Other type of events include but are not limited to: congresses, exhibition fairs or on-site demonstrations to be carried out in France and Spain (and potentially replicated in Finland and Bulgaria)

2.2.2. Actions being/to be taken

Each presentation shall be accompanied by a couple of slides higlighting the importante of the RRI concept and phylosophy in all 6 principles, linking them to some of the most successful case studies from the RRI Toolbox.

Among the activities to be performed within TIGON in such events, it is foreseeign to get feedback from consumers who could benefit from the project's results. In this sense, TIGON partners are encouraged to use the events to collect useful inputs from the guest/visitors/general public on the task/s of the Project they are responsible for. The selected group of stakeholders should be relevant for the current phase of the project and the tasks for which the partners hosting the event are responsible.

The relevant stakeholders shall be selected from one or more of the categories identified in public deliverable D8.2 Business Model Development (first report), linked to the project's Key Exploitable Results:

- DSOs, TSOs, energy communities and cooperatives
- Scientific community
- RES generators and technology providers
- Potential end-users
- Consumers (households, businesses, industry)
- Local/regional/national authorities and other public bodies
- EU policy makers
- Standardisation/regulation bodies
- General public
- Consumers
- Journalists and the media
- EU citizen and consumer organisations

2.2.3. Reporting and wrap up of results

Together with the project minutes, a short and well documented (graphically and in figures) wrap up of the event will be generated for data gathering and dissemination purposes. In this sense, brief analysis will be performed to present the key results and conclusions of the survey and the workshop.

In this sense, to ensure that the RRI is being correctly addressed during the whole execution of TIGON, "MoRRI – Monitoring the Evolution and Benefits of Responsible Research and Innovation" indicators (next chapter) will be considered to monitor the project development and reported through progress reports.

3. RRI Indicators in TIGON

In the table below, besides the explanation of each one of them, a figure for the first year of project is being represented. To be noted that the first year has been deeply impacted by the COVID-19 pandemic, hence the activites limited likewise. After the experience of the first carried out events to be occured, the list may be adapted or expanded.

It worth to mention that some of the listed KPIs have been inspired by H2020 Prisma Project (GA no: 710059) coordinated by TUDelft in which a practical guideline has been developed to contribute to a new standard for companies aiming at developing a strategy for Responsible Research and Innovation (RRI).

Table 3.1: TIGON's Responsible Research and Innovation preliminary KPIs

Policy	KPI	Indicators			
		2020-2021	2021-2022 (objective)	2022-2023 (objective)	2023-2024 (objective)
Ethics	Number of internal sessions celebrated having ensured the awareness of the integration of ethical values within the TIGON's Innovation	0	2	2	3
	Number of assessments performed from external actors aiming to provide further approaches to the project	1	2	2	2
Gender Equality	Percentage of Women involved in the Research activities of the project	N/D	N/D	N/D	N/D
	Percentage of Women involved in the project	25%	+25%	+25%	30%
Governance	Number of internal sessions having the Board Responsibles performed leading actions	2	3	3	3
Open Access	Number of open access publications	1	2	2	3
Public Engegement	Number of Stakeholders engagement initiatives organized in the project	0	1	1	2
Science Education	Number of higher education institutions having reached TIGON to learn more about the project / integrate results within the research	0	2	2	2
	Number of higher researchers/students having joined TIGON onsite activities	0	20	50	50

4. Next Steps and Conclusions

The RRI Toolkit, built with and for the Community of Practice, will be used during the project lifetime to apply the best practices on RRI.

This document will be updated in August 2023 with the creation of D1.6 RRI Progress Report.

Bibliography / References

Project H2020 Prisma

RRI Toolkit