FLEXI GRID

Interoperable solutions for implementing holistic **FLEXI**bility

services in the distribution **GRID**

RRI progress report
Deliverable 2.5
WP2

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ABBREVIATONS

PC: Project Coordinator

CA: Consortium Agreement

CC: Communication Committee

DoA: Description of Action

EC: European Commission

GA: General Assembly

IPR: Intellectual Property Right

KPI: Key Performance Indicator

M: Month

PH: Project Handbook

R&D: Research and Development

RRI: Responsible Research and Innovation

SC: Steering Committee

TP: Technical Partner

WP: Work Package

SME: Small and Medium Enterprise

DMP: Data Management Plan

H2020: Horizon 2020

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EXECUTIVE SUMMARY

This document is the deliverable D2.5 of project FLEXIGRID. It presents a report on the progress of integration of responsible research and innovation (RRI) in the project during its first year. In this line, three cross-cutting issues are seen as the most important for the project: gender issues, open access and public outreach.

Regarding gender issues, this document brings an overview of the gender structure of the project. It has been noted that the project's tasks and responsibilities are divided between genders in a balanced way.

Open access in this project is tackled by setting up a community for the project in the Zenodo repository, where open-access publications of the project are being uploaded. Said publications are also submitted to the OpenAIRE community which hosts documents from European Commission-funded projects.

To integrate public outreach in the project, a plan for organisation of RRI events was devised. The events will be held along with the project dissemination activities. They will cover topics and include participants relevant for the state of the project at the time of the event. The events will comprise:

- an initial survey to assess the participants' knowledge and opinions on the topic,
- a presentation to introduce the topic and disseminate the project's findings and
- a workshop to collect feedback from the participants

Finally, this document addresses the risk that COVID-19 presents for the implementation of the plans for RRI integration in FLEXIGRID project. In the case of epidemiological measures being prolonged, online events will be held instead of in-person.

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1   INTRODUCTION

1.1   The FLEXIGRID project

The main goal of FLEXIGRID is to allow the distribution grid to operate in a secure and stable manner when a large share of variable generation electricity sources is connected to low and medium voltage grids. In order to fulfil this goal FLEXIGRID project introduced a three-level approach aiming at flexibility, reliability, and economic efficiency through the development of innovative hardware and software solutions.

These solutions will be demonstrated in four demo-sites across Europe, i.e. Croatia, Greece, Spain, and Italy, ensuring their interoperability through its integration into an open source platform able to harmonize the data flow between FLEXIGRID solutions and the real grid.

1.2   The objective and scope

This deliverable is the first of four periodic reports on responsible research and innovation (RRI) in FLEXIGRID project. This report is the result of task 2.4 of work package 2, which aims at monitoring *integration of the Responsible Research and Innovation approach in FLEXIGRID*. RRI integration in the project is a continuous effort of all partners in the consortium and RRI permeates in some degree through all the project's tasks. However, this deliverable is directly connected to task 2.2 *Definition of stakeholders' common requirements towards a smart citizen-centred energy system*, as well as the project dissemination tasks of the work package 9. Decision was made to integrate RRI into the dissemination activities of the work package 9 and use them not only to spread the information about the project but also to gather feedback from the participants.

The deliverable presents a report on the first twelve months of the project as well as the plans for the remainder of the project's duration. In the first section the topic of RRI is introduced, its implications on FLEXIGRID project are described and a report on the RRI integration during the first year of the project is presented. The second section is focused on the plans for the future of RRI within FLEXIGRID, noting the risks caused by the COVID-19 pandemic.

2   BASIS FOR THE RRI IN FLEXIGRID

The RRI is a novel approach towards research and innovation promoted by the European Commission (EC) to ensure that the projects it funds are ingrained in society and local communities. The EC provided six thematic elements to focus on, as shown in Figure 1. These thematic elements are gender issues, ethics, open access, public engagement, science education and governance. In FLEXIGRID, the main focus is placed on open access, public engagement and gender components of RRI. We did not plan to explicitly include the rest of the thematic elements in the task activities, but they are incorporated implicitly through the activities of this and other work packages in the project. For example, ethical points of originality and innovation in research are encouraged in the aspect of scientific publications. This, in connection with the open access principle, ensures the replicability of the developed models and results of the project.
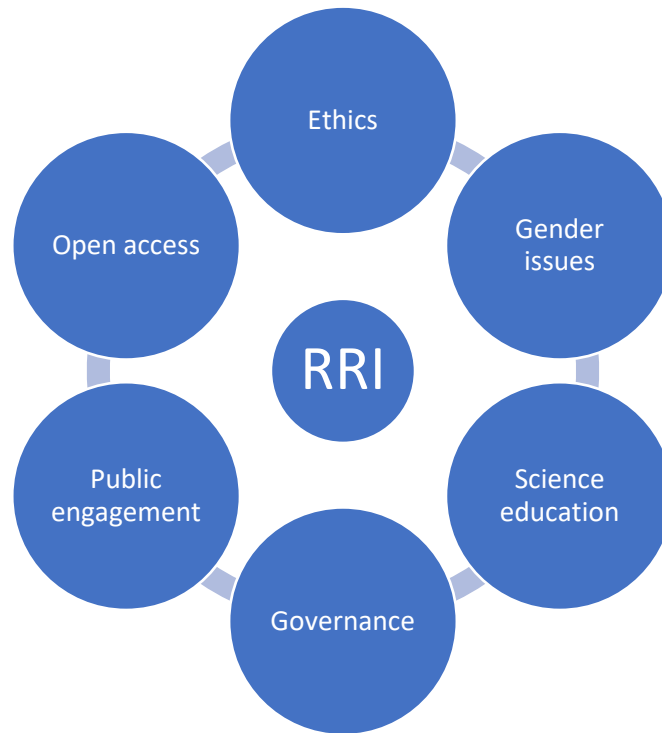
Figure 1 The six thematic elements of RRI

During the first months of the project, a plan for integrating the RRI into the project was prepared. The plan for task 2.4 comprised two types of activities. First type is to focus on integration of open access in the project, while the second one will focus on organising various promotional and educational activities. It has been named the former group *Open access* and the latter *Public outreach*. *Gender equality* is a specific cross-cutting issue because it affects the project from the beginning, so we include it in this report as well.

Table 1 shows the actions of Task 2.4 Integration of the Responsible Research and Innovation approach in FLEXIGRID completed by the month 12 of the project, this deliverable being the last one.

Table 1 Completed actions in task 2.4 of FLEXIGRID project

ACTION	WHO	WHEN
Setting the scope and budget for events	CIRCE, UNIZG-FER	M3
Defining the events (locations, duration, budget, etc.)	All	M6
Preparation and scheduling of events	CIRCE, UNIZG-FER	M11
RRI progress report 1	UNIZG-FER	M12

2.1   Gender equality

As stated in the project proposal, FLEXIGRID partners are committed to foster gender equality and are aware of the Gender Equality in Horizon 2020 guidelines. In this regard, the project tasks and responsibilities are divided among both genders in a balanced and non-discriminatory way.

Table 2 describes the gender structure at different levels within the consortium members during the first twelve months of the project. About 30% of people working on the project during the past year were female, while 70% were male. Furthermore, about 31% of managerial positions

were held by women and the rest by men. For the non-research managerial staff this ratio is 40% female and 60% male.

Table 2 Gender structure at different levels during first twelve months of the project

Partner	Female researchers			Male researchers			Female other than researchers			Male other than researchers			TOTAL
	Junior	Senior	Manager	Junior	Senior	Manager	Junior	Senior	Manager	Junior	Senior	Manager	
CIRCE	0	2	2	2	9	1	0	1	5	0	1	4	27
VIESGO	0	0	0	0	0	0	0	2	2	0	2	3	9
VERD	0	0	0	1	3	2	0	0	1	0	1	2	10
HEP-ODS	0	0	0	0	0	0	2	0	0	5	0	1	8
EDYNA	0	0	0	0	0	0	0	0	0	2	6	1	9
OP&A	0	2	0	0	5	1	0	0	0	0	1	0	9
ZIV	0	5	1	0	5	3	0	0	0	0	0	0	14
SELTA	0	1	0	0	1	1	0	0	0	0	0	0	3
ATOS	0	0	0	0	0	0	1	0	0	1	2	2	6
IOSA	0	0	0	0	0	0	0	0	1	0	2	1	4
HYPERTECH	0	1	0	0	1	1	0	1	0	0	0	0	4
UNICAN	0	2	0	1	3	1	0	1	1	0	0	0	9
UNIZG-FER	3	0	0	1	0	2	0	0	0	0	0	1	7
LINKS	0	0	0	2	2	2	0	1	0	0	0	0	7
CAP	0	0	0	0	0	0	1	2	0	0	1	1	5
TOTAL	3	13	3	7	29	14	3	6	10	8	15	15	126

The full implementation of the eight FLEXIGRID use cases is aimed at covering the need of the whole population, regardless of sex, gender or age. Therefore, the project's outputs do not affect directly women or men and there is no gender dimension in the technical tasks to be carried out. Thus, the activities that will be developed in the project do not require sex or gender analysis.

2.2   Open access

In FLEXIGRID we promote open access publishing and aim to make as many of our deliverables and other outputs available to a wide audience. For this reason, besides publishing the outputs

on the project's website, we have decided to set up a Zenodo[1] community for FLEXIGRID project, where we can upload the public deliverables, research outputs and open-access data. This will enable easier tracking and reporting on the project's open-access outputs. The repository can be reached through the following link: https://zenodo.org/communities/flexigrid/

Besides the FLEXIGRID community, the uploads are submitted to the European Commission Funded Research (OpenAIRE), a Zenodo community that hosts research from projects fully or partially funded by the European Commission under Framework Programme 7 or Horizon 2020.

2.3   Public outreach

To engage the public in the decision-making process of FLEXIGRID project, two actions were developed. The first one, Stakeholders' common requirements questionnaire, as a part of task 2.2. The second is planned in conjunction with work package 9, with an aim to transform the one-way communication that is the dissemination of the project into a two-way communication so to not only share the information about FLEXIGRID project, but also to collect useful feedback from the public.

The Stakeholders' common requirements questionnaire was one of the actions from task 2.2 and it was reported in the deliverable 2.3 *Stakeholders common requirements report.* It was conducted in all the FLEXIGRID demo-site countries: Croatia, Italy, Greece and Spain. The goal of the questionnaire was to improve our understanding of the state of mind of different potential flexibility service providers and users in each of the countries. In short, the results show that in all countries regulatory framework is considered to be the largest obstacle to the development of new solutions. More detailed report on the questionnaire is given in the deliverable 2.3 of FLEXIGRID project.

The decision was made to integrate public outreach activities into the dissemination events of work package 9 and to include them in the agenda of each Steering Committee meeting. The events will consist of presentation of the project and a workshop during which the stakeholders' feedback will be collected. Responsible for organisation of each event will be the partners from the country where the event will be hosted. The organisers will gather a group of stakeholders to participate in the event, prepare a presentation and a workshop and fill a report after the event. To prepare the workshop tools collected through RRI Tools project such as the ActionCatalogue (*ActionCatalogue - methods*, 2015) will be used.

Planning of the events
Three main components of the events are the participants, the topic and the workshop format. First, the topic and the participants are selected and based on the topic and the participants, the workshop format is chosen to ensure maximum applicability of its results.

Process of participant selection is done by the partner hosting the event. These events will be aimed at getting feedback from consumers who could benefit from our findings such as craftspeople, small business owners, building operators and similar. The partners are encouraged to use this event to collect useful inputs from the public on a task of the FLEXIGRID 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

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[1] Zenodo is a repository hosted by CERN where all research outputs can be uploaded and become citable. The documents uploaded to Zenodo can be organised into curated communities, such as European Commission Funded Research (OpenAIRE), a community for uploads funded by the EC through FP7 or H2020 programmes (*About RRI - RRI Tools*).

responsible. The relevant stakeholders shall be selected from one or more of the following categories:

- Consumers (residential, commercial or industrial separately)
- Associations (professional and citizen's, as well as energy co-ops)
- Equipment producers and vendors
- Research institutions
- Energy sector representatives
- Public bodies (market operators, regulatory bodies, funding agencies, etc.)
- Local authorities and policy makers

The same categories were used in the Stakeholder Mapping document for T2.2. The consortium will strive to cover all stakeholder groups during the course of the project.

The topic of the event is chosen in the same way as the participants. Event hosts shall decide the topic based on their organisation's role in FLEXIGRID project, aiming to collect as much useful feedback from the participants as possible.

The last step is preparation of the events. After the first decisions are made, the format of the workshop shall be decided. Optimal format will be decided by considering the participants and the topic, as well as the organisers and the venue. RRI events organised within FLEXIGRID will comprise the following three activities, spanning up to two hours in total:

- Survey
- Presentation
- Workshop

Figure 2 presents the general structure of the events.

Figure 2 Structure of the events

Survey

First, a survey is conducted to determine the participants' knowledge and opinions about the topic. The surveys will be short and ask only basic questions, taking up to 10 minutes of time. The results will be used to describe the group in the report and will make the results and conclusions reached at different events comparable. It will also be possible to use this survey to collect the stakeholders' feedback on specific topic prior to the event.

At the end of every event, a quality survey will be conducted through which the participants' satisfaction with the event will be assessed. The results of this survey will be also be included in the report.

Presentation

After the survey is collected, the organiser will hold a presentation to introduce the topic of the event. Besides preparing the participants for the workshop, the presentation will disseminate information about the project and fill the participants' knowledge gaps. The organiser of the

event will prepare the presentation, considering the participants' knowledge about the topic. The presentation will take up to 30 minutes.

Workshop

The last activity in the event will be a workshop. The workshop will take up to one hour. The main purpose of the workshop is to implement RRI into the event by collecting the stakeholders' feedback and reaching out to the public. Structure of the workshop will be chosen depending on the group of participants, using tools collected through the RRI Tools project such as the ActionCatalogue.

Reporting

After the event, the organisers will prepare a report in which they will present the key results and conclusions of the survey and the workshop. The report will be submitted in a form of a spreadsheet and will be included in the RRI progress reports.

3 PLANS FOR THE NEXT PERIOD

After all the planning activities are finished during the first year of the project, it remains to organise the events and report on the results. The events listed in Table 2 will be structured as presented in the previous chapter. Table 2 shows actions in task 2.4 *Integration of the Responsible Research and Innovation approach in FLEXIGRID* planned for the rest of duration of the project.

Table 3 Planned actions in task 2.4 of FLEXIGRID project

ACTION	WHO	WHEN
First round of RRI events	TBD	M19
RRI progress report 2	UNIZG-FER	M24
Second round of RRI events	TBD	M31
RRI progress report 3	UNIZG-FER	M36
Third round of RRI events	TBD	M43
RRI progress report 4	UNIZG-FER	M48

3.1 The risk of COVID-19

FLEXIGRID RRI events are planned to be held during the project's in-person Steering Committee meetings. In fact, the first RRI event was planned to be held during the Steering Committee meeting in April 2020 but was cancelled on account of the COVID-19 pandemic. COVID-19 is a health crisis gripping the whole world. While it is successfully tackled by some countries, various restrictions on large gatherings are still in power in some European states and the non-necessary travel is discouraged. Therefore, we decided to postpone the in-person events until it is again safe to travel and hold larger gatherings.

However, the risk of COVID-19 pandemic continuing into the year 2021 is not negligible. For this reason, if the in-person events are still impossible to hold in M19 of the project, the first round of events will be held online.

3.2 Open access

During the following year we will continue promoting open access-publishing and uploading the project's outputs to the Zenodo repository. We will also specify which of the project's outputs will be open access and what data will be shared with the scientific community through Zenodo. This will be reported in the deliverable D1.3 *Data Management plan*.

4 REFERENCES

About RRI - RRI Tools (no date). Available at: https://www.rri-tools.eu/about-rri (Accessed: 2 September 2020).

ActionCatalogue - methods (no date). Available at: http://actioncatalogue.eu/search (Accessed: 3 September 2020).