

FoTRRIS

Evaluation Report

Deliverable D3.2

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Abbreviations

CC	competence cell
ER	Evaluation Report
MISC	Mapping Innovation on the Sustainability Curve
PC	project concept
RWD	Reflection Workshop Report
SDGs	Sustainable Development Goals
TE	transition experiment

About the FoTTRIS project

FoTTRIS develops and introduces new governance practices to foster Responsible Research and Innovation (RRI) policies and methods in Research and Innovation (R&I) systems.

FoTTRIS stresses that RRI is a collaborative activity from the very beginning. Therefore, FoTTRIS adds the prefix 'co' to the acronym RRI. Important present-day challenges are of a global nature but manifest themselves in ways that are influenced by local conditions. Thus, FoTTRIS focusses on global challenges, i.e. local or regional manifestations of global challenges, and on local opportunities for solving them.

FoTTRIS performs a transition experiment, i.e. an experiment to support the transformation of present-day research and innovation strategies into co-RRI-strategies. It designs, tests, and validates the organisation, operation, and funding of co-RRI competence cells. A competence cell is conceived as a small organisational unit, which functions as a local one-stop innovation platform that encourages various knowledge actors from science, policy, industry, and civil society to co-design, -perform, and -monitor co-RRI-projects that are attuned to local manifestations of global sustainability challenges.

Since research and innovation systems and practices in EU member states and within different research performing organisations vary, FoTTRIS experiments the implementation of new governance practices in five member states. These five experiments are evaluated as well as validated and constitute the basis for FoTTRIS policy recommendations towards EU and member states policy makers so as to enforce co-RRI into the national and EU R&I systems. Training is dispensed to various stakeholders, so as to form them to establish other co-RRI competence cells.

For more information see <http://www.fotrris-h2020.eu>

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Executive Summary

The project *FoTTRIS – Fostering the Transition towards RRI Systems* developed a *concept of co-Responsible Research and Innovation – co-RRI*, and tested it in practice by means of so called *transition experiments (TEs)*. The implementation of these experiments was initiated and supported by five so called *competence cells (CCs)*, which were set up by the national FoTTRIS teams.

Six such transition experiments were carried out in five countries:

- In Austria, the transition experiment addressed the topic of sustainable food systems in the region of Graz.
- In Belgium, the transition experiment was dedicated to the topic of circular economy by addressing waste from housing construction and electric/electronic devices.
- In Hungary sustainable local economic development for a city district of Budapest was co-designed.
- The Italian transition experiment set up a LivingLab for a transition towards renewable energies in the Madonie Region in Sicily.
- The Spanish FoTTRIS team implemented two transition experiments, one dedicated to the topic of refugees, the other addressed women with disabilities.

These transition experiments were implemented as multi-actor workshops, three to four in each country, where transdisciplinary co-RRI project concepts were co-created. The activities conducted in FoTTRIS did not cover the whole cycle of an R&I project, but they addressed a very important point, namely the initiation and planning phase of an RRI project.

In order to evaluate the appropriateness of the FoTTRIS multi actor experiments for putting co-RRI in practice, various assessment activities were carried out during and after the implementation of the six workshop series. Feedback from TE participants was collected by means of questionnaires after each workshop. The competence cell team including workshop facilitators conducted individual and group reflections after each event as well. Reflections on achievements, the general setting, and the usefulness of the applied methods should help to improve the following workshops. After the workshop series had been completed, the competence cells carried out comprehensive reflection workshops. There they evaluated the transition experiments in regard to their success in developing co-RRI project concepts, how key characteristics of co-RRI could be considered, and their impacts.

This report summarises the results from all these reflection and evaluation tasks, and draws conclusions by means of recommendations based on the FoTTRIS learning experiences. We thereby share the lessons we learnt by going through the transition experiments, which should help others, who plan to initiate co-RRI (like) activities in future.

Part 1

Evaluation of Transition Experiment Workshops

Introduction Part I

The first section of part I in this document briefly describes the five so called ‘transition experiments’ (TEs), which were carried out by means of a series of workshops in Austria, Belgium, Hungary, Italy and Spain.

The second section summarises the results from five reports evaluating the transition experiment workshops (see

). These evaluation reports synthesised the results of two evaluations respectively reflection activities:

- a. Questionnaires: Feedback was collected from participants by means of filling in questionnaires (see template Annex 1: Template feedback questionnaire) at the end of each of the TE workshops. Participants were asked to quantitatively evaluate the workshop in regard to their satisfaction with the overall organisation of the workshop, its didactical settings, its facilitation, and the achievements. In addition, participants had the possibility to give feedback by means of written comments on:
 - what they particularly liked,
 - what they found innovative in terms of content as well as process, and
 - what should be improved in the following workshop(s).

- b. Individual and group evaluation notes from members of the so called ‘competence cells’ (CC), which initiated, designed and facilitated the transition experiments (see also the FoTTRIS reports *D2.5 Activity Model* and *D2.3 Design and mandate of the competence cells*).

Based on guiding questions (see Annex 2: Workshop evaluation questionnaire) workshop facilitators and FoTTRIS team members, who represent the CC, reflected on the success of the workshops after each event. They evaluated the events according to:

- the appropriateness of the general setting,
- the usefulness of applied methods,
- the use of the FoTTRIS web platform,
- achievements, and
- reflected on lessons learnt for improving the following event(s).

Finally, quantitative data about the participants were processed statistically (see chapter 3 Workshop statistics).

1 Workshop settings

In this section, the context of all workshops is briefly described in order to give a rough impression of the workshop settings. A detailed description of all workshops can be found in the FoTTRIS Deliverable *D3.1 Report on co-RRI Project Concepts*.

1.1 Austria

The team from the IFZ (Interdisciplinary Centre for Technology, Work and Culture) chose the topic of sustainable food systems for the workshop series of the transition experiment. The idea behind this choice was to elaborate ideas for projects on the topic of *'Sustainable and social just food supply within the region of Graz'*. These project ideas should be developed with local stakeholders, who have different backgrounds, but are all related to the topic of food from diverse angles. These angles included: production, distribution, consumption or education, such as food activists, CSAs – community supported agricultures, authorities from the city of Graz, advocacy groups like the chamber of agriculture, biological farming or responsible people from e.g. large-scale kitchens and people with an educational focus, farmers. It was intended to include a broad variety of people in the process. Specific expertise on the topic of food was given within the IFZ team, thus it was easy to map important people on a local level in the region of Graz.

Food production and consumption are neither (socially) fair nor sustainable. To open up the process, it was intended to go from a mapping of the system (niches and regime) over a problem definition to formulate precise actions and to define project ideas together with the different actors within the process.

To foster a transformative change within the current food system in terms of sustainability, food sovereignty, and social fairness, it was necessary to work with a broad range of people on actions that are also of their (personal and professional) interest. The concept of a sustainable food system was defined as an interaction between different system components (actors, institutions and sectors).

The Austrian case was special in that that there were four workshops held within the series of the transition experiment. Whilst this was not intended at the outset, it was determined to be a beneficial solution for two reasons. Firstly, the idea emerged between the second and the third workshop (and was affirmed through the process of the third workshop) that another meeting amongst the TE participants would be necessary in order to get a more concrete output, and to explicitly work on a concrete project concept for the future. Secondly, the setting of the validation workshop was not seen as an appropriate setting to invite the TE participants, because it was intended to validate the TE with experts from academia and other stakeholders. Therefore, the CC members decided to ask one of the TE participants if he was willing to work on one of his project ideas in a more concrete way (one of the CC members is and was in closer cooperation with the participant in other projects related to the topic of sustainable food).

The fourth workshop can be seen as a follow-up activity because in that case, a concrete project idea from one of the TE participants was taken up, discussed, and explicitly worked

on. Therefore, the CC members were preparing for the workshop with the person concerned (between workshop 3 and 4) in order to elaborate the idea and take steps for further collaboration with the other participants.

1.1.1 Location

The first and second workshop took place at the premises of the IFZ, where one office room is equipped with a large table that is also used for meetings. There is enough space for 15 people and thus fit the invited group well. It was decided to hold the workshop at this location because it seemed to be a comfortable surrounding for different kind of people/stakeholders than renting some (fancy) facilities and rooms. Moreover, in these premises it was also easier to convey the expertise of the FoTTRIS team members (who are also representing the competence cell) towards the participants.

The premises for the third and fourth workshop were different to the first two because after the initial workshops it became apparent that the maximum number of people that could participate in the IFZ premises was 15. Especially for the implementation of the interactive parts, such as group work, etc., the space was quite tight.

Therefore, a room was rented next to the IFZ office, which offers space for about 25 people. Tables were arranged from the beginning for group work (café setting). The room was adequate for the purpose (right size, everything needed was there), but the atmosphere was not too good (a bit run-down, bad air quality).

For every workshop, a table was prepared for dissemination material from IFZ (from FoTTRIS and other food-related projects done by IFZ), and for things the participants brought along.

1.1.2 Facilitation

The preparation of the content and agenda, in line with the MISC and the given framework for the workshops, was done by the three FoTTRIS IFZ team members (in several meetings, phone calls and emails) who also represented the competence cell.

For the implementation of the workshops, work was distributed amongst the three CC members: team member one overtook the moderation, prepared the programme and took care for administrative issues (e.g. travel-reimbursement, honorariums, list of participants, etc.); team member two was responsible for the inputs related to the content of food and supported the moderation when needed; the third team member took notes, compiled minutes and did photo documentations. Additional organisational support was granted by administrative IFZ staff. The agenda for each of the workshops was elaborated in cooperation of the whole team.

1.1.3 Invitation

For the first workshop, a list of potentially relevant persons was compiled based on a stakeholder map. These persons were contacted by telephone or email (first contact). The invitation task was distributed amongst the team members: in the instances where prior relationships existed, the invitation was extended by the respective team member, where no

relationship existed informal contact, and an invitation extended, thorough telephone calls or email.

For the first workshop, a doodle poll was set up, but due to illness of the whole IFZ team, the first workshop was postponed. A new date was fixed, and people were invited via email.

For the second workshop, all participants from the first workshop were invited to indicate their availability in a doodle poll. People received a reminder email one week prior to the workshop. Those who were invited for workshop one, but not able to take part, received the final date of the poll and invitation for workshop 2.

Again, a doodle poll was set up to find the date of the third workshop, where all participants from the previous workshops were invited as well as those who could not take part so far. Invitees received a reminder email one week prior to the workshop. In addition, further stakeholders, who were identified as relevant persons in the scope of a stakeholder mapping during the second workshop, were also invited (via email or telephone).

For the fourth workshop, only people who had participated in the third workshop, were invited, because the fourth workshop strongly built on the third. The date was fixed within the third workshop, and a reminder was sent out one week before the last workshop took place.

1.1.4 Preparatory Information

The preparatory information for the first workshop was included in the invitation text sent via email. It included information about the overall aim of the workshop series (to elaborate ideas in order to create project concepts and proposals) and the content orientation of the workshops (sustainable food systems). Participants at the first workshop were informed at the end of the workshop as to how the procedure would go on.

For the second workshop, there was no extra preliminary preparatory information because only people, who had already received information earlier in the context of the first workshop invitation, were invited.

Participants in the third workshop, who had not participated in the previous workshops, were separately informed about the general aim of the workshop series and the motivation to invite them for taking part in the process.

General information about the aims of the workshops, the overall process, and some short background information about the FoTRRIS project was given by means of a short introduction to each of the workshops.

1.2 Belgium

'Materials' were the central point of focus of the Belgian transition experiment, which was run by the team of VITO (Flemish Institute for Technological Research). It comprised two different cases: *'Building and demolition waste and building materials'*, and *'Materials composing electric and electronic devices'*.

The first case linked with ongoing initiatives in the City of Antwerp, which represents a test case in Flanders to develop 'circular cities'. This concept was launched in relation to the 'Vision 2050', a long-term strategy for Flanders. In relation to this, a research consortium is currently rolling out a project called 'Metabolism of Antwerp, city of flows'. By means of this project, an answer is sought to the following question: How do flows such as energy, water, waste or materials affect the quality of life of Antwerp's citizens and what kind of spatial relationships exist between these flows, directly as well as indirectly? The underlying idea is that a city can be considered an ecosystem: a complex, vast and interactive metabolism that provides services for, as well as maintains, its inhabitants. In a circular city this metabolism has been made more resilient and sustainable by, amongst others, closing material loops.

The second case dealing with 'materials composing electric and electronic devices' links with the problem that 'residual waste' keeps growing although there is a well-established culture of selective waste collection (paper, organic, electronics, glass, PMD, batteries, etc.) in Flanders. This is also despite the successes of Flemish households in sorting their trash, and depositing it via specialised sites or channels.

Furthermore, there is a strong policy support for the circular economy, as well as a network of 'second-hand shops' in the social economy. Civil society organisations organise Repair Cafés and makerspaces, and promote sustainable production and consumption.

1.2.1 Location

The three workshops took place in one of the meeting rooms of 'Kasteel Den Brandt', Beukenlaan 12, 2020 Antwerpen (Belgium). This location was chosen based on the following criteria:

- **Availability:** Kasteel Den Brandt has several rooms that can be booked for parties, seminars, congresses and other meetings. One of the meeting rooms met the requirements very well.
- **Accessibility:** This property is located within cycling distance of the railway station 'Antwerpen-Berchem', one of the main railway stations in Antwerpen. Close to this station there are several pick-up points for rental bikes. The castle is also close to two of the main highways leading to Antwerpen, namely the E19 and the A12 and has a big parking lot nearby. In addition to this, 'Kasteel Den Brandt' is also within cycling distance of the city centre.
- **Facilities:** The whole equipment, such as a beamer or flip charts, as well as the catering, was available at the chosen location, which made it easier to concentrate on the contents and organisation of the workshops.

- Atmosphere: It was intended to create an atmosphere in which people felt free to think 'out of the box'. Therefore, it was the aim to look out for locations that differed substantially from a normal work setting. Moreover, to have some 'green' in the direct environment was an extra point why this location was chosen. In general, people are believed to feel more comfortable and better when they can see trees and other natural elements through the windows of their work spaces.

1.2.2 Facilitation

The workshops were developed, facilitated and presided over by a team of five people: three VITO researchers and two people from Superbly Human (<http://www.superblyhuman.be>), which is a small organisation specialised on organising dialogues in the context of organisational development or in projects related to spatial planning and urban development.

1.2.3 Invitation

All participants were first contacted by mail, often followed by a short telephone call. After this brief introduction of the FoTTRIS project and the overall outline of the workshops, people were asked if they were interested in a face-to-face meeting. During this meeting the project and its workshops could be explained in more detail and people were given ample opportunity to ask questions. Most of the participants took this opportunity, and met one of the VITO researchers during the month prior to the first workshop. In general, these discussions lasted between one and one and half hours and covered a whole range of subjects related to the fields of, on the one hand, research and innovation and, on the other hand, sustainable waste and materials management. Finally, one week before the first workshop took place, the participants received a reminder listing all relevant practical information.

For the second workshop, the people who had indicated interest to participate were invited via email with a reminder. This email was sent two days before the workshop took place and contained an overview of all necessary practical information, such as the address of 'Kasteel Den Brandt', a small map, information about parking facilities, and the fastest route to cycle from the railway station to the meeting place.

For the third workshop the same procedure as workshop two was followed.

1.2.4 Preparatory Information

For the first two workshops, participants were not asked to prepare anything.

The workshop series consisted of two parallel tracks: one covering sustainable housing and one covering sustainable electric and electronic devices. Because the people working on 'sustainable housing' asked during the second workshop to speed up the process, and to more quickly develop the project concept, while the other group followed the predefined set-up, these two tracks diverged from the second workshop on. As a result, the group working on 'sustainable housing' was asked to thoroughly read a draft project concept that was discussed then during the third workshop. The second group did not receive any homework. This draft project concept was attached to the reminder which was sent two days before the workshop

took place, along with some explanation of how it was intended to use the draft during the workshop itself.

1.3 Hungary

The transition experiment implemented by the team at ESSRG (Environmental Social Science Research Group) Ltd, was dedicated to an exploration into the possibilities for local economy development in close cooperation with Transition Wekerle in Budapest. The aim was to develop a '*Wekerle Local Economic Development Strategy*' based on a 'multi-sectoral', 'multi-actor' dialogue engaging local citizens, business people, and policy representatives. In addition to local expertise, 9 experts of diverse professional backgrounds (ranging from community development through social business to urban planning) were also invited as members of the Hungarian 'competence cell'.

The first workshop explored the current characteristics of local actors, economy and resources, the dynamic between the niche innovations, and the dominant regime. Definition of local economic development was co-produced, barriers to and leverages for niche and regime actors were deliberated upon.

In the second workshop, participants were encouraged to explore and share their visions of the future of Wekerle local economy. Key areas for further debate were identified by the participating experts, including community-based transport, community spaces, local services, stewardship for townscape, and many others.

The final workshop started with a 'fairy tale' of Wekerle by a professional story-teller that aimed for emotional engagement. Following this, space was provided for joint reflection on the process so far. Finally, action planning discussions took place in order to complete the project concept.

In addition to the workshops, the Hungarian team organised extra activities, such as a tour of unused local spaces, a mapping event with the help of a local graffiti artist, and two short courses in social business and crowdfunding.

1.3.1 Location

All three workshops took place at "Wekerle Kultúrház és Könyvtár" (Wekerle Cultural Centre and Library). This venue was suggested by local contacts and is frequently populated by programmes organised for local residents and by local activists (e.g. Transition Wekerle). This is thus a familiar space for all local residents of Wekerle. The choice of location was deliberately put in the hands of local people by the researchers. All three workshops took place on three Saturday afternoons between 14:00-18:00, as suggested by the local contact person. Timing was adapted to the availability of the venue and the local participants. Each workshop was organised so as to provide catering at the very end, in order to continue for a while in a more relaxed way. Each workshop was attended by the local television channel and interviews were conducted with different participants, always including the senior research. Each workshop report was broadcast subsequently on local television (judged to be well-

viewed in the specific district of Budapest, called “Kispest,” where Wekerle neighbourhood is located).

1.3.2 Facilitation

Facilitation was carried out by ESSRG researchers and some members of the competence cell who are experienced in facilitating participatory and deliberative events. The style of facilitation was suggested to, as much as possible, be inclusive and minimally interventionists in order to let participants share their respective views and ideas. Some feedback was later received that not all facilitation was successful in terms of being less interventionist.

1.3.3 Invitation

Invitations were issued through personal emails before the first workshop asking for indications as to which workshops, out of the possible three, that participants will attend. The email was sent by the senior researcher of ESSRG following the advice of the local contact person, the leader of Transition Wekerle. Feedback later was received that the assistance of the local contact person was highly influential in convincing people to join the workshops (some locals were not sure whether the email invitation is a real one, to be taken seriously). Invitations were sent to those local actors whom were selected together by the local contact person and the senior researcher of ESSRG.

For the second and third workshop, no personal invitations were offered but the project Facebook group posted invitations for next workshops and an e-newsletter was received by those who signed up for it at any of the workshops. Word of mouth and in-between project events were expected to be instrumental in recruiting new participants, although it was not evaluated how effective they proved to be. A fairly crude proxy can be how many new participants joined each subsequent workshop: 10 new ones at workshop 2 and 5 new ones at workshop 3.

1.3.4 Preparatory Information

For the first workshop, a personal email was sent with basic information on the project and aims of the workshops (“Local Economic Development Planning Starts Now at Wekerle”) and link to the FoTRRIS project website. Information was kept at the minimum, due to the nature of email communication. Moreover, the local contact person spread the word around about the start of the process. This personal (face-to-face) communicative reinforcement was strongly needed in order to mobilise local actors. A Facebook group was established (“Wekerle helyi gazdaságfejlesztés” = Wekerle Local Economic Development) at the request of local actors.

For the second and third workshops, results and media reports of the first and second workshop were shared through facebook and e-newsletter. After the first workshop, members of the competence cell were self-introduced one by one in the facebook group. Some members of the competence cell were providing analysis of results in short reports via facebook and e-newsletter and in-between the workshop, events were advertised and everything shared through the same channels.

1.4 Italy

The ‘Madonie transition experiment’ in Sicily was implemented by the team of CESIE (European Centre of Studies and Initiatives), and called for a tight cooperation between societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) during the research and innovation process. The aim of the experiment was to introduce the values, needs and expectations of society as the real drivers of the R&I process. Multi-actor and public engagement has been pursued as a key factor in positioning the project, both in educational, business and civil communities thus enabling the access to knowledge and in formal and informal learning processes.

The experiment was driven by the understanding that research and innovation systems, in order to address the big territorial challenges, have to face a transition phase where comprehensive collaborative practices should be introduced. Both social and economic trends need to be considered, during the R&I process, as a guide for the optimization of resources, the orientation of impacts, and the evaluation of outcomes.

In the Madonie transition experiment, a collaborative RRI approach was introduced, particularly in the design and early implementation phase of a Living Lab as catalyser of innovative sustainable processes. In the experiment locations, energy services, technologies were identified through an interaction with local authorities, local companies, professionals, trainers, technology providers. Such an ongoing interaction, if properly managed and supported, can gradually evolve into a structured community, and finally into a fully developed innovation ecosystem where knowledge flows, social needs and solutions, and business opportunities are tightly interconnected, and each of them deeply influences the others. The RRI concept is strongly interconnected with the ‘living lab’ approach. As a matter of fact, the availability of demos within the innovation hub, as a result of the co-RRI process, will make possible to consolidate the collaborative innovation actions, implementing a living lab community.

The added value of the MISC approach is that the system goal was jointly defined by researchers/local development agents, and transition actors. A competence cell including different actors engaged in the energy transition experimental process was set up and drew up the guidelines for a rural Living Lab on sustainable development, together with a network of qualified resources. The sustainability curve was considered with great interest: the cultural change of mind leads to replacing the externalization of functions (administrators vs. citizens, producers vs. consumers, etc.) in the capital economy with the internalization of functions (prosumers) as a key to implement the sustainability curve for energy. Perspectives of informal innovation actors were taken into account. Niche actors have been heard. A systemic, user-driven approach was consolidated and converged in the Living Lab proposal.

The different contributions were complementary and synergistic within an ecosystem of solutions. Actors from the quadruple helix invited in the workshops have presented some pioneering experiences or innovative ideas for energy challenges, on which to build a new energy vision as leverage for change.

1.4.1 Location

The first workshop took place at ARCA University Business Incubator (<http://www.consortioarca.it/index.php/en/aboutus>) in Palermo.

The second and the third workshops were implemented at the EXMA innovation hub, Petralia Sottana, in the Madonie mountains. EXMA innovation hub is a refurbished building that a private company has been authorized to manage on behalf of the local municipality, hosting a creative and generative rural community. It offers opportunities, especially to the resident young people, to create their employment through the entrepreneurial discovery of possible solutions for the community challenges in the prioritized fields of interest. EXMA is the main site of MaLL – Madonie Living Lab, recently acknowledged by ENoLL as a member of the network under the 11th Wave. It should act as catalyser of social innovation processes in the area.

1.4.2 Facilitation

Mr. Fabio Maria Montagnino was assigned to facilitate the three workshops. He was the driving person who suggested to the University of Palermo to create a business incubator dedicated to innovative start-ups. The structure was initiated in 2005 and entrusted to the ARCA Consortium.

He has held the position of Executive Director since 2003 and CEO since 2011. He is currently the coordinator of research, innovation and international cooperation activities. He regularly coordinates training activities as well as mentoring services in the field of business creation and technological transfer.

1.4.3 Invitation

Participants were invited by e-mail and phone 15 days before the workshop and were selected among the participants from the consultation round tables for the co-design of the National Strategy for Inner Areas applied to the Madonie district (in the North of Sicilian Region) as well as a list of the potential stakeholders. The highest number of participants came from the policy making group, due to the fact that the themes of the transition experimental workshops were closely related to the strategic agenda which the public authorities in the area are working on for the next planning period.

For the second workshop, participants were invited by e-mail and phone ten days before the workshop, and were selected from the group who had attended the first workshop plus other local representatives active in the innovation hub start-up. The highest number of participants came from the policy making and business groups.

The third workshop targeted only a restricted number of people, chosen from among the participants in the previous workshops. The people chosen represented the research and technical group working on the design phase of a project (MaLL – Madonie Living Lab) focused on the energy vision of the area and the tools to implement it, as well as one representative from each of the organizations who provided external support to the project idea.

1.4.4 Preparatory Information

Preparatory activities (and all implementation of the Transition experiment) were made by the CESIE staff in cooperation with the Facilitator. The MISC framework was analysed and adopted to the target group, an agenda of the meeting was prepared, reflection methods to evaluate all workshops were selected, an explanatory note about the FoTTRIS and RRI was prepared, a list of participants finalised, and participants were contacted.

All participants filled in a registration form in advance and sent it to the organisers. In the invitation, a short explanatory note on the FOTTRIS project and its goals was included, as well as the RRI approach and the plan of the three and outreach workshops, customized on the theme of energy transition.

Results of the first workshop were evaluated by the working group and summarized, a format of the second workshop was selected based on planned results. A report on the outcomes of the first workshop was been attached to the second invitation. As the second workshop was envisaged on the basis of group-work arrangement, facilitators of the three groups identified to coordinate the discussion in the groups and also provided a short introduction in advance.

Before the third workshop, the invited participants had access to the first draft of the project idea, which was developed in consultation with them and was submitted for acknowledgement under the European Network of Living labs. The stakeholders involved in the project preparation capitalized their own experience in the development and implementation of the strategic agenda for the inner area, as well as previous projects which were been carried out in the area, such as Habitats, financed by CIP ICT-PSP (Social Validation of INSPIRE Annex III Data Structures in EU Habitats). In Habitats, interactive data/metadata modelling in a rural/natural context has been driven by content-providing partners, implementing a user-driven approach to standards adoption processes and performing test organisational/institutional arrangements for service sustainability and business models. Local, sustainable, development priorities, driven from the local stakeholders, are addressing both quality of life and local resources management, recovering tradition and exploiting territorial assets, connections between work and income of local producers, value of eco-systemic services for collective benefit.

1.5 Spain

In Spain the team of UCM (Complutense University of Madrid) performed a two workshop series tackling the following topics: the first one dealt with the topic of *'refugees'*, and the second with *'women with disabilities'*.

The goal of the three workshops on refugees was to collectively design a refugee R&I project, that included both research and innovation actions, with the aim to respond to a potential project call at European level, once new calls for 2018 would be published. This is why the core competence cell from UCM decided to make the workshops international, with the participation of stakeholders and civil society members from France, Bulgaria, Italy, Turkey, Venezuela, Syria, Honduras, Switzerland, Hungary, and Spain. The goal responds to one of the most emergent societal challenges faced by today's society, in a moment when we have the largest number of refugees since World War II, more than 50 million of persons and figures daily increasing. The challenge of migration has become a key issue in European policies, and both pan-European and national authorities have failed to give asylum and guarantee the basic human rights for millions of persons escaping from war and conflict areas, mainly from Syria and South Sudan (May 2017). Research of the main causes, as well as innovative solutions, simulating the effective and positive measures taken by civil society organizations are urgently needed in order to get efficient responses from European and national refugee administrations. The aforementioned migration is a global challenge in the agenda of UNHCR, IMO, and a large number of refugee aid organizations recognise this as well as one of the most urgent societal challenges for European horizon project calls, to be published in brief. RRI is a cross-cutting issue in Horizon 2020, so it perfectly adjusts to finding solutions and designing projects related with the challenge of migration.

The main goal of the second workshop series was to work together with different kind of participants, from different stakeholders, to identify the needs and problems and the opportunities that this group of people has in our society, focusing on different aspects, like mobility, housing, employment, etc. To be female has its challenges, nowadays, and women with disabilities have further challenges to overcome.

The three RRI workshops on women and disability used the quadruple helix approach in order to design the TE participant lists, with the intention of fostering the participation of women with disability, civil society members, and organizations, as well as private companies, as these groups are often ignored when designing projects incubated within the academy.

Gender balance was taken into account and even positive discrimination towards female participation was done. The goal was to design collectively a women and disability project, including both research and innovation actions, so that after the workshop, an application for a future Horizon 2020 project call could be presented. Local solutions for global problems are needed in terms of the woman and disability, as the social realities.

1.5.1 Location

All workshops were performed at a large meeting room in the Facultad de Informática, Universidad Complutense de Madrid, Spain. The chosen room had a large round table, and

four separate tables, so it was possible to perform group dynamics. There was support for multimedia presentation, whiteboard, and material for brainstorming.

1.5.2 Facilitation

The workshops were held in the Faculty of the UCM, because it was recognised that it was as an ideal space to join and discuss the topic with the different stakeholders as the building is well connected with the city centre by public transport, and all the remaining requirements were fulfilled. Members of the UCM-team were the facilitators of the workshops in order to present the project, the topics, the structure of the workshop and some dynamics carried out during the workshop. In the third workshop, a brief summary of the results of the previous workshops was given in the beginning.

1.5.3 Invitation

For the topic of women with disabilities, the UCM team used their networks to invite a group of participants from the different stakeholders. Email was used in order to issue a call for participation and inform people of the event. In the end, an inter-disciplinary and inter-sectorial audience could be reached to get a diversity of perspectives on the women and disability.

Invitations for the refugee workshops were sent out via email, using the professional contact list of the UCM team from previous researches. People from different countries, such as Syria, Honduras, Turkey, France, Spain, Hungary, Italy, Switzerland and Finland, were invited.

1.5.4 Preparatory Information

The UCM team used the FoTTRIS web-platform to assist the coordination of the preparatory information, the invitations, the budget and the contents. The web-platform was also used to control the list of participants and different aspects of logistics (like material) and to organize presentations and dynamics.

2 Evaluation of applied methods

The implementation of the FoTTRIS transitions experiment workshops was based on specific process guidance (see FoTTRIS Deliverable D3.1 Report on co-RRI Project Concepts), which set out a particular course of action that included the following steps:

Preparatory Phase

- Definition of the system goal
- Stakeholder Mapping
 - ✓ Identification of relevant actors and stakeholders
 - ✓ Exploratory interviews might be carried out in addition in order to explore the local landscape of actors, their interest and relationships more in depth
- Invitation of workshop participants or launch of call for participation

Workshop Phase

- Elaboration of a systems map by applying the MISC (Mapping Innovation on a Sustainability Curve)¹ methodology:
 - Drawing a map of the system of the topic at stake (e.g. food system) displaying regime- and niche-actors
 - Identification of possible barriers
 - “Ecosystem of solutions”: drawing on potential leverages
- Visioning
 - Building a joint vision on a desired future
 - Collecting ideas for measures to proceed towards this future
 - Prioritisation of measures (to be further elaborated on)
- Project concept
 - Joint elaboration on a trans-disciplinary project concept

Validation and outreach

- Gathering external perspectives in order to validate the transition experiments

All transition experiments followed this overall process, but the implementation of the activities was carried out in slightly different ways. Detailed documentation on the implementation of each of the transition experiments is included in the FoTTRIS Report on co-RRI Project Concepts (Deliverable D3.1).

2.1 MISC – Mapping Innovation on a Sustainability Curve

The FoTTRIS co-RRI conceptual framework focusses on addressing the grand societal challenges, which goes along with handling wicked problems. Such kinds of problems are related to systemic failures that are embedded in complex societal, political and economic structures, which involve a variety of interests and various actors. As efficient solutions would call for a transformation of our societal system, co-RRI adopts a system approach. Thereby new insights for root causes and lock-ins should be gained in order to explore a variety of new paths for a transformation of the current system.

Therefore, the application of the MISC was a very essential part of the implementation of the FoTTRIS transition experiments. By means of applying this mapping method, which is based on system thinking, we expected to gain new insights about root causes and lock-ins in order to identify new paths to tackle the problems at stake, which would go beyond linear ways of thinking about cause-effect relationships.

However, the operationalisation of this systemic approach was fairly new for partners as well as for workshop participants. Thus FoTTRIS team members and facilitators carried out reflections on its appropriateness for their specific transition experiments, the added value of

¹ Anne Snick (2015): MISC : Mapping Innovations on the Sustainability Curve. A methodological framework to accelerate the transition. Available at: <https://cidd2015.sciencesconf.org/file/144714>

this method, and challenges they faced when applying the MISC. The experiences, which were reported on applying the MISC in the scope of the first workshops, were very diverse, and varied among partners.

Compared to the other TE teams, the Belgian team could build on the most profound expertise in system thinking, thus they obviously could make best use of it. But also the other TE teams assessed the MISC method as useful in several respects.

2.1.1 Added value of the MISC

Functions instead of products

In implementing a MISC, it is crucial to think in terms of functions instead of putting the focus on products. So, it is not about the fact that the research question was formulated in terms of function rather than materials (or ‘material flows’) helped in the Belgian TE to open the discussions dealing with various aspects of the problem at stake, such as cultural, economic, financial, legal, and technical aspects. The Spanish team members had a similar experience, as they put it: *“The statement of project goals is basically specified in terms of persons, not on technology. This opens new perspectives on the solutions, which do not have to be based on technological development, but the interplay of social, psychological, economical, and technological perspectives, and with persons in the center.”* (ES RWD 2017, p. 2)

New insights about root causes and lock-ins

A better understanding of the root causes of the problems to be tackled has been achieved within nearly all TEs. For instance, in the Spanish TE complex geopolitical, economical and historical interrelations for the migration crisis could be identified. For the Italian TE the MISC served as a good starting point to better understand the real lock-ins of the currently prevailing R&I system. The Hungarian team also considered the MISC as useful for gaining new insights particularly in the context of exploring barriers to change and lock-ins, while to a lesser extent it was relevant to explore leverages.

However, due to restrictions in time and resources, root causes and log-ins of the identified problem(s) to be tackled could only be touched on the surface. Thus the outcomes remained somewhat superficial, as concluded by the Spanish, Hungarian and Austrian teams. The development of a more comprehensive understanding of the root causes would have required further research, which was not possible within the scope of the experiment, but still it highlighted the needs for follow-up (research) activities. Even if Whilst the Hungarian team also stated that there was not enough time for in depths discussions, which could have brought about new insights, it was at least new, that people from the respective case study area discussed for the first time in a structured way the barriers to, lock-ins, opportunities and leverages for local economic development in their neighbourhood. This was taken one step further by the CC members, who provided a written analysis of the issues discussed during the workshops.

Positive visions

In Hungary the MISC was also judged *“to be useful in delineating the directions of a positive future, the main components of a joint future”* (HU ER 2017, p. 10). Likewise, the Belgian team particularly highlighted the fact that the research question was formulated as a ‘desired’ (sustainable) situation allowed participants to envision a new ‘state’ of the system and then to redesign it accordingly, rather than ‘solving a problem’ helped to maintain the systemic approach.

Complexity of the system – the big picture

The Belgian team reported, that the MISC was particularly useful to visualise the complexity and dynamics of the systems they explored (‘building and demolition waste and building materials’ and ‘materials composing electric and electronic devices’) *‘in a rather simple way’* (BE RR 2017, p. 14). The systemic approach inherent in the MISC revealed to what degree barriers and leverages are intertwined, which forced people out of their comfort zone of sticking to problem-oriented solutions into thorough discussions about completely new approaches. Moreover, the Belgian team observed that this method raised participant’s curiosity to see the ‘big picture’, and to locate themselves therein, and it helped to collaborate, and break hierarchies. Participants’ feedback on the Flemish TE also suggests satisfaction with the method, e.g. *“new and fresh approach: good balance between content and ‘play’ ... good dynamics”, “an approach that allows more free way of thinking”, “the session was organised in a very logical way”* (BE ER 2017, p. 7-8).

Structure for the process

The Italian and the Spanish teams perceived the MISC framework as a valuable tool for facilitating the TE as a well-structured process.

Visibility of actors

Another particular benefit outlined by the Spanish team related to making the interconnectedness of societal actors, which influence the system, visible. The MISC also helped them to reveal that solutions should be more focussing on resilience than on efficiency. In the Italian TE, the MISC also helped to make niche actors and their (potential) contributions to the system goal more visible.

Variety of solutions

In the Italian TE the MISC established the idea that the need for opening innovation processes to a wider public through participatory processes engaging various actors from the quadruple helix be more explicit. They conclude that this *“has not only fostered territorial governance but stimulated knowledge exchange, rethinking of the concept of citizenship and rekindled micro dynamics of democracy”* (IT RWD 2017, p. 3).

In the Italian TE made the MISC the need for opening innovation processes to a wider public through participatory processes engaging various actors from the quadruple helix more explicit. They conclude that this *“has not only fostered territorial governance but stimulated*

knowledge exchange, rethinking of the concept of citizenship and rekindled micro dynamics of democracy” (IT RWD 2017, p. 3).

For the Austrian TE the MISC did not seem to be that useful as for the others as they state *“In our experiment the MISC did not obviously bring a lot of an added value.”* (AT ER 2017, p.14). However, they still identified an additional value, namely that the transition experiment was based on a scientific concept, “maybe because it was complicated and theoretical and thus in line with the stereotype of scientific approach” (AT ER 2017, p 15). Although the MISC was perceived as a very complex method on the one hand, on the other hand the inherent simplification of assuming a niche-mainstream-dichotomy within the food system raised criticism from the Austrian workshop participants. Finally, the Austrian team skipped the step of discussing lock-ins and feedback-loops by means of the MISC graphics, as the participants were already very aware about the problems. They conclude *“that the MISC would be better suitable for participants, who do not have that much expertise as our participants had. If people do not have a clear view of the system, that helps to visualize and discuss the framing of a certain domain.”* (AT ER 2017, p. 15) The MISC might be more useful, when implemented at a later stage in the experiment, when a detailed research question or hypothesis is being elaborated, so that a recourse to the method might be helpful.

However, still the Austrian team did finally could make use of the MISC by processing the inputs gained in the workshops themselves into a very rich MISC picture. The illustration depicted how the fostering and hindering factors become effective on niches and the mainstream, how governance mechanisms interact with political and legal frameworks, the production of knowledge, norms and value system as well as economic and innovation models, and how these hinder the establishment of niche-innovators.

2.1.2 Challenges of the MISC implementation

Most partners felt challenged by adapting the MISC for their workshops, as none of them had previous experiences with this method, except the Belgian team, which comprised Anne Snick, who had introduced the MISC approach in FoTTRIS.

The preparation and tailored conceptualisation for the workshop purpose and the specific topics to be addressed within the TEs was very time consuming for all CC teams. Moreover, the effort required to make the rationale behind the MISC accessible for participants was considerable for CC members. Even the Belgian team struggled a bit with explaining the MISC: *“The MISC curve needs a clear explanation before people grasp the meaning of it. Recurring questions later on showed that we did not completely manage to do this.”* (BE ER 2017, p. 15) Furthermore, not all participants were very happy with the complex theory, which needed adequate time to explain, as (s)he notes: *“From my point of view, the theoretical introduction at the beginning was too long”* (BE ER 2017, p.9).

The implementation of the MISC and the systemic approach was definitely challenging for non-academic actors, who found it difficult to follow the science dominated language. In order to avoid somewhat abstract discussions, the translation of specific terms used in the context of the MISC was a central issue mentioned by all TE teams. It was considered essential in order to make sure that a language was used, which was accessible for all participants. The main

intention was to avoid an academic framing, which might finally result in *“a feeling of less ownership by the local actors”* (HU ER 2017, p. 10) as the Hungarian team pointed out. The Hungarian team also pointed to the challenge of national language translation: *“One might note the translation concern for researchers, from English to Hungarian, due to the fact that these two languages constitute completely different ways of meaning-making in the world. (There is no one-to-one translation of most of the English terms into Hungarian applied by MISC.)”* (HU ER 2017, p.13)

The Belgian team indicated that they did not have any problems with translating specific scientific terms. They used visual representations to explain complex issues, and they also stated: *“all of our participants were familiar if not with the specific concepts we used, then at least with the ideas or insights behind them”* (BE ER 2017, p.15).

For some, who did not fully succeed in properly translating the complexity of the theory, the MISC was even perceived as being *“sometimes hindering the process, as the implementation of the theoretical ideas behind were difficult to bring to a point. [...] we adapted the terminologies, but still the method was quite complex and people did not really know how to integrate their knowledge into our framework.”* (AT ER 2017, p. 14)

Another shortcoming of the MISC was identified within the Hungarian TE. They identified that the MISC does not provide guidance on how to handle disagreements and dissent outside of the confines of the experiment. *“Although it is quite clear that when planning for a project concept potential actions and steps are discussed participants are back to the present full of conflicts, controversies, bad experiences, tensions among local groups and individual actors. MISC has no build in capacity to deal with differences in interests and values expressed by participants.”* (HU ER 2017, p. 13)

2.2 Visioning

The second workshops of the transition experiments were dedicated to the elaboration of a joint vision, which, in general, went smoothly for all cases. Furthermore, all TE teams reported that the visioning was easier to implement practically, as compared to the MISC mapping exercise. However, most teams reported that more time would have been necessary to elaborate on it more in detail.

In those cases, where workshop participants had similar viewpoints, it was particularly easy to come up with a shared idea about future developments. For others, there were certain challenges as it was more difficult to understand the existing consensus and dissent components, and to create a joint vision.

Another challenge referred to the tendencies of participants to see instantly barriers and problems, or to evaluate ideas as unrealistic. Thus, facilitation needs to pay specific attention to take care that such assessments do not take place in the visioning phase.

2.2.1 Scenario exercise

The Belgium TE used a scenario exercise to stimulate participants to make the ‘vision’ of the (sustainable) future very concrete and lively (for a detailed description please see the Belgian

Report in Annex 4). They were asked to translate the abstract concepts into a reality that could be shown in a documentary, and to assess the scenarios.

Although it would have been necessary to dedicate more time to it, the method was considered useful to work towards a 'reconfiguration', in which both the current (emergent) possibilities were incrementally reinforced, and the 'utopian' or 'ideal' change was used as the compass to decide on the next step.

2.3 Mapping barriers

This step was only reflected in detail by the Belgian team (BE ER 2017, p. 16/17):

What worked out well:

- This exercise helped the participants to think systemically about the problem and to understand better the complexity of the factors affecting the current situation.
- Defining barriers brought people together, who apparently encountered the same kind of barriers during their professional activities. It created links between the different profiles around the table, and enhanced possible future cooperation.
- The barriers were sorted into nine different categories, and along an axis going from 'case or actor specific' towards 'general'. This made it possible to visualize the main centres of gravity within the displayed field of barriers.
- Giving people elastic strings to connect their organisation, with a maximum of five barriers they experienced to be important, obliged them to prioritize and focus. Visualising these connections also allowed participants to see that different barriers were playing different roles for different organisations and that therefore a set of different solutions were needed to bring everyone on a transition track.
- Using a personal perspective appeared to lead towards a more supported result.

What did not work out very well:

- Some frontrunners had done this kind of exercise several times already and did not see any additional value in completing it again for this series of workshops. Yet, these people appeared to look only at the content of the workshops, not from a process perspective. Moreover, they ignored the fact that during the next exercise they often referred to the barrier diagrams themselves, especially the parts describing case-specific barriers. The facilitating team therefore still considers that, given the final objectives of this series of workshops, it is necessary to also discuss the barriers one can encounter when trying to develop a project. Working with a meta-analysis of former studies, as was suggested by these people, is not sufficient. These kind of analyses cannot provide the necessary case-specific data, nor do they help process-wise. The workshop's participants needed these kinds of exercises in order to understand each other's perspective and position within the whole system under investigation.

- For some participants this exercise was not new. They feared that the whole TE would result once again in enumerating all the things that ‘do not work’ today. For other participants, however, this exercise was an eye opener, because it helped them to better judge the complexity of the problem and the lock-ins that explain why good proposals often do not lead to real change. Managing the difference in speed and expectations of various participants is a point of attention for future TE’s.

2.4 Mapping leverages

This step was only reflected in detail by the Belgian team (BE ER 2017, p. 17/18):

What worked out well:

- The participants were asked to write down on post-its all the leverages they could come up with. After the workshop the competence cell’s members ordered the input (in a circle of which the segments show different types of leverages, e.g. technical versus social), whereas the inside of the circle referred to things that could be achieved in the short run, while the outer part of the circle was for long-term leverages. In the next session this ‘synthesis’ was presented to participants, and it appeared that this was a helpful way of working, both leaving maximum openness at the time of the brainstorm (resilience) and streamlining the results (in circles) afterwards to increase ascendancy. This ‘ascendent’ map (circle) could then be ‘opened up’ again by reflecting on priorities (each participant drawing a line towards the sector that was most relevant to him or her) and visualising that many participants pointed to the same segment (social change).

What did not work out well:

- It was hard to do this exercise in a systematic and ordered way, because the participants triggered each other to come up with new leverages, and some of these leverages were overlapping.

2.5 Evaluating the project proposal

This step was only reflected in detail by the Belgian team (BE ER 2017, p. 18):

What worked out well:

- The evaluation form was based on seven major criteria. People were asked to value the proposal by putting a cross on a line between a minimal value of each of these criteria, and a maximum value. Both of these values were formulated in qualitative terms. Everybody did this in a conscientious way.
- Evaluating the draft proposal was an individual exercise, which gave each of the participants the opportunity to express their thoughts, positive as well as negative, on the presented proposal. The result was an interesting collection of comments that will certainly help to improve the proposal.

- This was a preparatory exercise for the main task that day: formulating alternative project proposals. It helped people to structure their thoughts and to pick out parts that they would like to change.

What did not work out very well:

- The evaluation form was set up in a way that people first had to assess the ‘good’ points in the proposal. Next, they were asked to give elements that could improve it. Only at the end, they could fill in which parts they wanted to delete. So the participants were forced, in a way, to start evaluating the proposal from a positive point of view. However, many people skipped this first step and automatically fell back into an approach focussing on the negative. They indicated which elements they did not like, and formulated alternatives for these elements instead of adding completely new elements.

2.6 Formulating alternative proposals

This step was only reflected in detail by the Belgian team (BE ER 2017, p. 18):

What worked out well:

- Each of the groups (2-3 persons) had to elaborate on the draft proposal that was sent to them prior to the workshop. They were asked to explain to the competence cell’s members how they could improve this proposal by formulating additional parts, research questions, objectives, etc., or by proposing new or alternative methodologies, or new collaborative structures. The results of this exercise were five complementary and interesting proposals to improve the one initially presented to them.

What did not work out very well:

- Although the discussions and the evaluation preceding this exercise were really to the point and resulted in a wealth of detailed information, the output here was again rather abstract and will need some translation before it can be integrated in a real project proposal. People apparently needed more guidance while doing this exercise, especially the ones not familiar with project development.

2.7 Other methods

2.7.1 Actor/stakeholder mapping

The Belgian and Austrian team reported about an additional mapping of further (potentially) relevant actors to be engaged in the transition experiment during one of the workshops. While this resulted in some more important participants in the Austrian TE, the Belgian team concluded *“Looking back at it, the end results of these workshops wouldn’t have been different if this exercise hadn’t been in the program.”* (BE ER 2017, p. 16)

2.7.2 Drink and draw

As a side event to the Hungarian transition experiment, a ‘Drink and Draw’ art-exercise was implemented, and an art-based map of Wekerle neighbourhood drawn. This mapping of existing significant local actors and local resources for local economic development of Wekerle was then used in subsequent workshops to complement and reflect upon.

2.7.3 Story telling

In the Hungarian TE a fairy tale was created about the Wekerle transition experiment by a professional storyteller in the third workshop, which was assessed as great success. *“The fairy tale and the accompanying music have created an atmosphere of comfort and positive emotionality.”* (HU ER 2017, p. 14)

2.7.4 Peer learning evening event

In the first Spanish workshop on refugees a role play was pursued. This helped the participants to imagine themselves in the role of other stakeholders, mainly in the role of refugees. In addition, it was a useful icebreaker for more formal work later. It was useful to open participants’ minds, and to supported to get known to each other, which contributed to a better collaboration among all in in following activities.

2.7.5 Peer learning evening event

The Hungarian team implemented several side events in addition to the TE workshops, which were initiated or requested by local actors and enabled all participants to engage in a dialogue on a substantive issue of mutual interest. One was a meeting with a social entrepreneur, in order to discuss the ups-and-downs of building a social enterprise. This event was assessed as very valuable, and constituted a good example of peer learning. The event was also very influential in terms of bringing local actors with entrepreneurial ideas, in a community spirit, closer to the world of actually operating social businesses.

2.7.6 Creative couples & flipped classroom

The Spanish team used ‘creative couples’ and ‘flipped classroom’ for collaborative work in mixed teams (quadruple helix) in the MISC workshop, which was particularly useful to further develop project ideas.

2.8 FoTTRIS web platform

In order to support the workshop preparation and to foster the interaction and knowledge exchange among workshop participants, between the face-to-face meetings FoTTRIS established a tailored web based platform (see LINK).

The Spanish and Italian teams mainly used the web platform. The Spanish team, which had also designed the platform, made best use of it. They used it to prepare the meetings, coordinate travel arrangements, and for setting up the agendas. During Workshops real-time notes were taken, and after the events they shared workshop results and continued collaborative work on e.g. project concepts.

The Italian team on the other hand deliberately decided to introduce the web platform only at an advanced point of their working process. “[...] as the first two workshops (talking about communication process) were organised for creation of stronger links between participants [...]” (IT ER 2017, p.9). Additionally, the team reported that a majority of the stakeholders already knew each other, and that further support in the processing and distribution of information and results was provided by the facilitator in cooperation with CESIE. Therefore, it was not necessary to rely on the web platform.

The Austrian team concluded that there was no need for the platform for preparation. This was partly because the German version was not fully functional, and the repository function not available during second and third workshops. As the applications that were available at this time were not of interest to their working process, the Austrian team could not integrate the web platform into the first phase of the experiment. Even during the fourth workshop, the platform could not yet be used to its full extent, as the team was not able to implement it as a central tool as there were still minor problems with the web platform just two days prior to the start of the workshop.

The Hungarian and the Belgian teams decided to favour different platforms from the beginning. In Hungary, the local contact person suggested to set up a Facebook group, because local actors frequently use it for their communications and recommended it. She also recommended the use of an e-newsletter as a simple way of communication beyond Facebook. Both communication tools (Facebook and e-newsletter) were assessed as useful to support the co-creative nature of the process. As there were concerns that a third tool for communication might constitute an overload for local actors of the transition experiment, the FoTTRIS online platform was only used by the CC members for internal communication.

The Belgian team used RealtimeBoard² instead of the FoTTRIS platform, because it seemed to be more appropriate for their needs. RealtimeBoard displays content in a well-organized visually attractive way, which made the content more accessible and allowed to break down typical user barriers as given with a folder structure. In addition, RealtimeBoard also allows content to be arranged in a hierarchical as well as an associative way. This made the documentation of the knowledge creation process easier. The Belgian team also liked the feature to make photos, and to upload them in the board to be further processed. Moreover, all sorts of information that has been digitalized can be placed on the board, and (part of) the board can be exported.

Even if not all TE teams made full use of the FoTTRIS web platform, the overall feedback was positive. The web platform has proven to be a valuable tool for the process of cooperation between stakeholders as well as sharing and several participants working on documents at the same time. Concerning the latter, the Austrian team points out that the particular characteristics of the platform, while definitely useful for some applications, might not be useful for every user clientele. *“The main challenge is that the CoP [Community of Practice] we established, comprised mostly people of ‘action’, they are no writers [...], but the pad-*

² For a detailed use of RealtimeBoard in the Belgian TE please see FoTTRIS deliverable D3.1 Report on co-RRRI project concepts.

structure of the platform would be ideal for a group of proposal writers working simultaneously on a text.” (AT ER 2017, p.12)

3 Workshop statistics

The following section provides an overview about which type of actors participated in the six transition experiments, and compares them. The statistical data and analysis per transition experiment can be found in the national Evaluation Reports.

3.1 Gender and actor groups

3.1.1 Invited participants

We explicitly aimed to achieve a balance in participants’ gender as well as in regard to the variety of societal subgroups engaging in the transition experiment. Particularly for those transition experiments, which built on invited participation, gender and actor group balance was considered by those that made the decisions about whom to invite (see figures below). For events that were completely open, the balance could not be controlled.

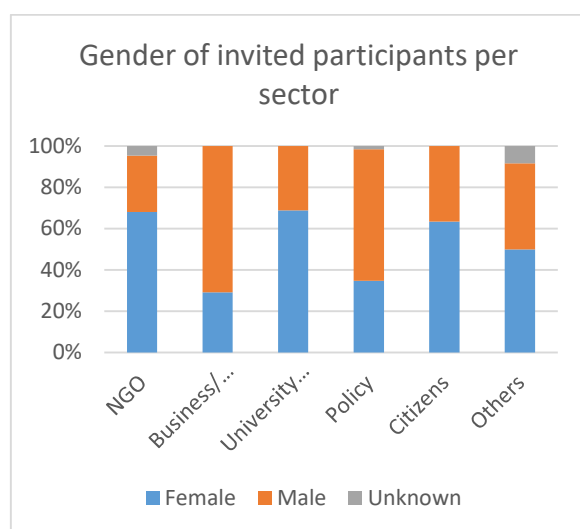


Figure 1. Gender of invited participants per sector, presentation in percentage

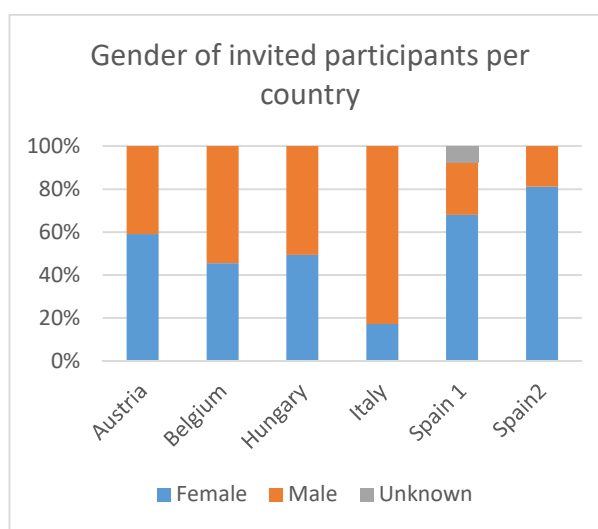


Figure 2. Gender of invited participants per country, presentation in percentage

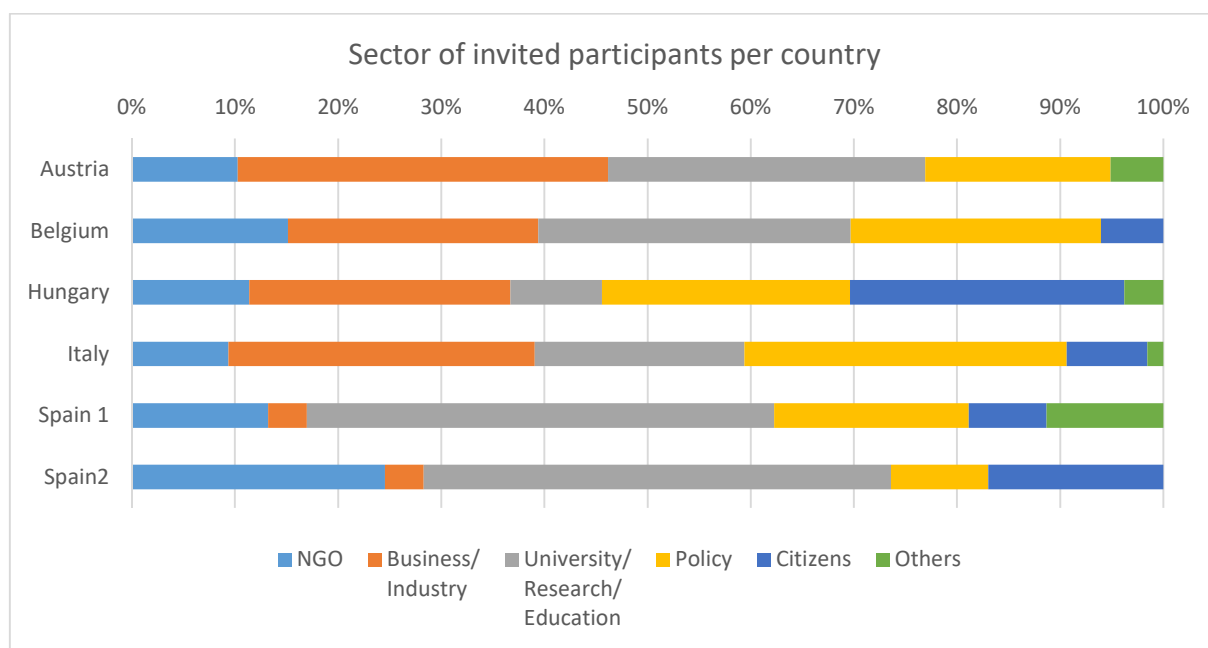


Figure 3. Sector of invited participants per country, presentation in percentage

Sector of invited participants							Total	In %
Gender	NGO	Business/Industry	University Research/Education	Policy	Citizens	Others		
Female	30	19	62	24	26	6	167	52,02
Male	12	46	28	44	15	5	150	46,73
Unknown	2	0	0	1	0	1	4	1,25
Total	44	65	90	69	41	12	321	100,00
In %	13,71	20,25	28,04	21,50	12,77	3,74		

Table 1. Invited participants per gender, absolute numbers and percentages

Sector of invited participants							Total	In %
Country	NGO	Business / Industry	University Research/Education	Policy	Citizens	Others		
Austria	4	14	12	7	0	2	39	12,15
Belgium	5	8	10	8	2	0	33	10,28
Hungary	9	20	7	19	21	3	79	24,61
Italy	6	19	13	20	5	1	64	19,94
Spain 1	7	2	24	10	4	6	53	16,51
Spain2	13	2	24	5	9	0	53	16,51
Total	44	65	90	69	41	12	321	100,00
In %	13,71	20,25	28,04	21,50	12,77	3,74		

Table 2. Sector of invited participants per country, absolute numbers and percentages

3.1.2 Actual participation

The occurring numeric gender and engaged actor groups imbalances (see tables below) might be explained by a certain framing with respect to the topics addressed within the transition experiments. Even if the transition experiments were thought to be widely open to be adapted to participants' interests and needs, a certain kind of framing already took place in announcing the workshops. In order to attract attention, and generate interest for participation, from the outset invitations pointed to certain issues likely to be addressed within the thematic field.

In general, participation largely mirrored the actor constellations of the thematic fields. Gender imbalances in the workshops in Spain and Italy were particularly obvious. In the Spanish transition experiment on refugees, as well as the one dealing with women and disability, about two thirds were female participants. On the other hand, the Italian workshops had more than 80% male participants. The Italian team explained this high degree of gender imbalance by the fact that in Sicily it is mainly men, who are professionally engaged in the field of renewable energies (see also section 4.5.1).

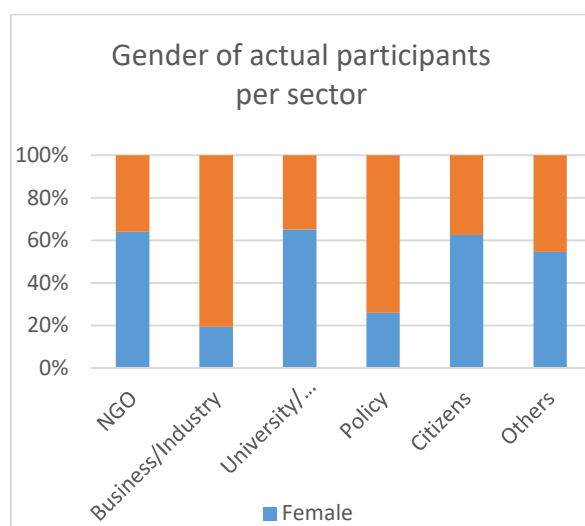


Figure 4. Gender of actual participants per sector, presentation in percentage

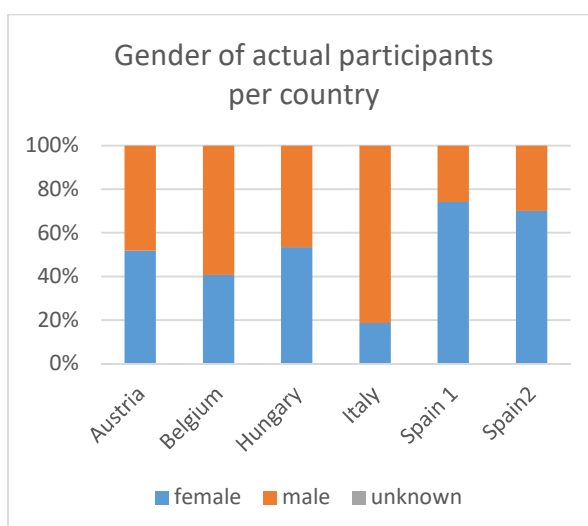


Figure 5. Gender of actual participants per country, presentation in percentage

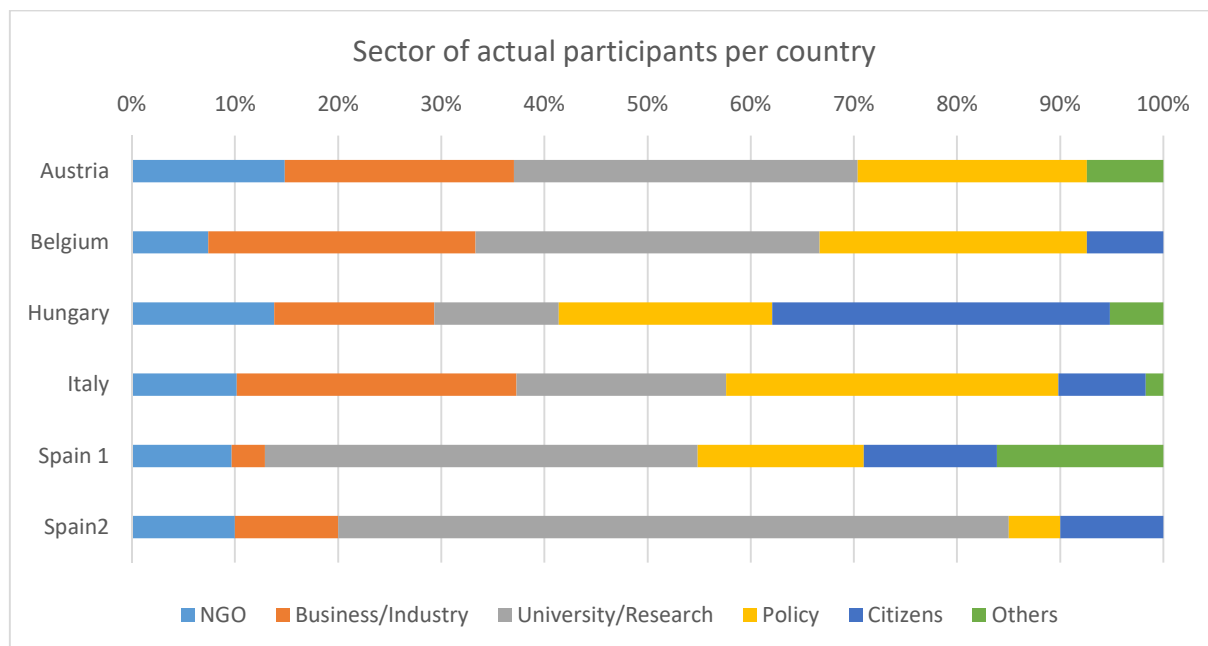


Figure 6. Sector of actual participants per country, presentation in percentage

Sector of invited participants								
Gender	NGO	Business/ Industry	University Research/ Education	Policy	Citizens	Others	Total	In %
Female	16	8	41	13	20	6	104	46,85
Male	9	33	22	37	12	5	118	53,15
Unknown	0	0	0	0	0	0	0	0,00
Total	25	41	63	50	32	11	222	100
In %	11,26	18,47	28,38	22,52	14,41	4,95	100,00	

Table 3. Sector of actual participants per gender, absolute numbers and percentages

Sector of invited participants								
Country	NGO	Business / Industry	Universi ty Researc h/ Educati on	Polic y	Citizen s	Other s	Total	In %
Austria	4	6	9	6	0	2	27	12,16
Belgium	2	7	9	7	2	0	27	12,16
Hungary	8	9	7	12	19	3	58	26,13
Italy	6	16	12	19	5	1	59	26,58

Spain 1	3	1	13	5	4	5	31	13,96
Spain2	2	2	13	1	2	0	20	9,01
Total	25	41	63	50	32	11	222	100,00
In %	11,26	18,47	28,38	22,52	14,41	4,95	100	

Table 4. Sector of actual participants per country, absolute numbers and percentages

3.1.3 Continuity of participation

FoTRRIS conceptualised co-RRI as a long-term process, as it is not a standardised process, but highly context specific. Thus, it needs to be tailored to the topic(s) at stake, the actors engaged, and the wider political and societal context, which was defined for the transition experiments with a focus on regional/local scale. The individual workshops represented certain steps of an ongoing process of co-creation, which built on mutual learning and the establishment of trust. Thus, we analysed the continuity of participation in the transition experiments (see tables below).

The highest continuity was given in the Spanish TE on women and disability, where 70% of the participants attended two or three of the workshops. In Austria and Hungary 66% of participants attended more than one of the workshops. The Austrian TE showed a notably high percentage of people attending all workshops (48% attended all four workshops). This high continuity might be explained by the particular setting, which was largely built on invited participation, and only a few participants joined later in the second and third workshops. In the fourth Austrian workshop, which was carried out in addition, and dedicated to, the planning of further steps going beyond the transition experiment, 100% of those, who had participated in the third, were present.

The comparably high continuity of participation in the Hungarian TE might refer to the engagement of the local activist group

Slightly lower continuity was given in the Belgian and the Spanish TE on refugees, where 63% participated in two or three of the workshops. In the Italian TE only 42% of the participants attended two or three workshops, which might be explained by the specific invitation policy. While the second workshop was opened for additional participants, for the third only a restricted number of selected participants from the first and second workshop were invited.

However, continuity is not necessarily an indicator for the quality of the workshops, as the transition experiments were also designed to be open to further participants joining during the process. For instance, the Hungarian workshops, on the one hand, showed a high degree of continuity, but on the other hand it was also highlighted that they succeeded in engaging additional new participants for the second and third workshop.

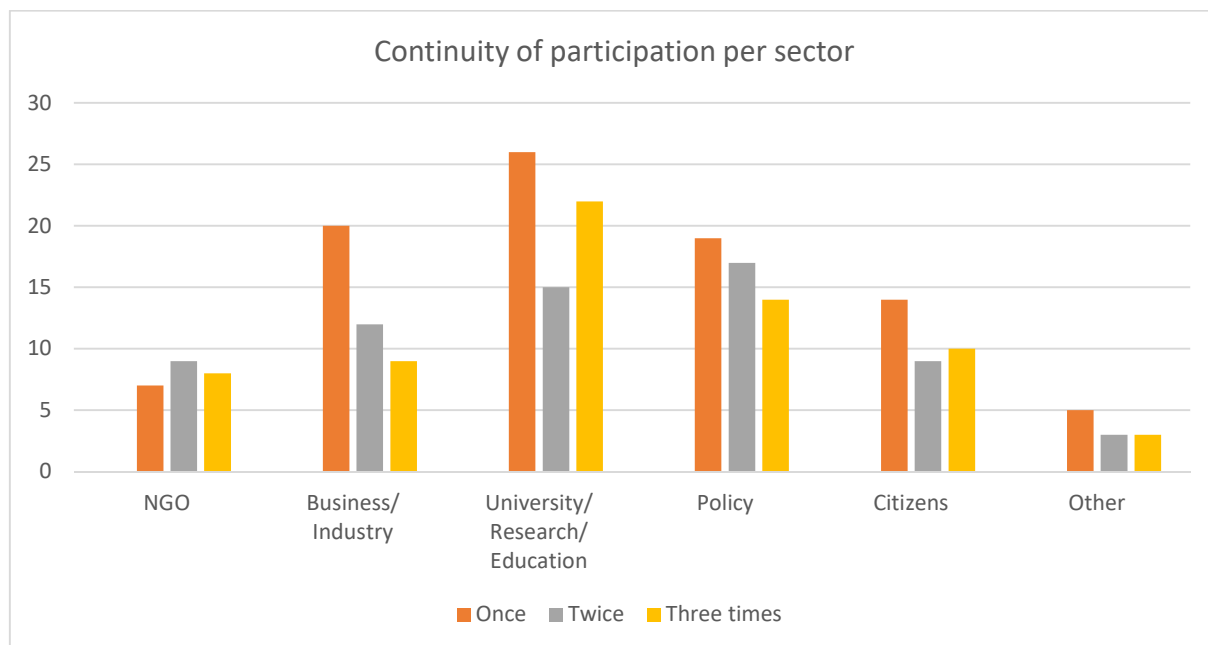


Figure 7. Continuity of participation per sector, absolute numbers; for a better comparison, numbers for three times participation are containing the sum of the Austrian third and fourth workshop as all participants who were taking part in the third workshop also took part in the fourth workshop.

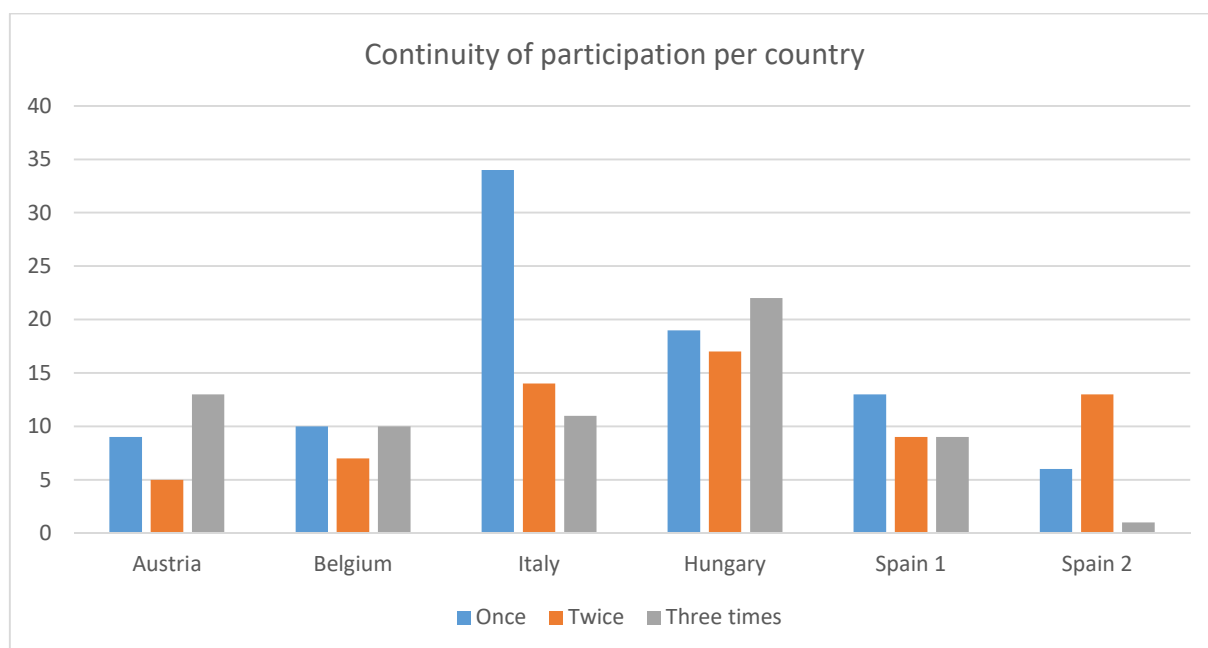


Figure 8. Continuity of participation per country, absolute numbers; for a better comparison, numbers for three times participation are containing the sum of the Austrian third and fourth workshop as all participants who were taking part in the third workshop also took part in the fourth workshop.

Intensity	Sector of participants						Total	In %
	NGO	Business/ Industry	University Research / Education	Policy	Citizens	Others		
Once	7	20	26	19	14	5	91	40,99
Twice	9	12	15	17	9	3	65	29,28
Three times	8	9	22	14	10	3	66	24,77
Total	24	41	63	50	33	11	222	100,00
In %	10,81	18,47	28,38	22,52	14,86	4,95	100,00	

Table 5. Continuity of participation per sector, absolute numbers and percentages; for a better comparison, numbers for three times participation are containing the sum of the Austrian third and fourth workshop as all participants who were taking part in the third workshop also took part in the fourth workshop.

3.2 Statistical analysis of workshop participants' feedback

After each of the workshop participants were asked to fill in a questionnaire (see Annex 1: Template feedback questionnaire) in order to evaluate its quality. By means of ratings from 1-5 (1=excellent – 5= poor) the workshop organisation in general, its format, facilitation, and its achievements were assessed.

Altogether, the quality of the workshops was rated very high for all transition experiments between 1,24 and 1,99 (see Table 6), and there was not much difference between the three workshops (see Table 7). All were considered to be in the range of very good to good.

In addition to this quantitative assessment, workshop participants had the opportunity to leave comments

	Austria	Belgium	Hungary	Italy	Spain 1	Spain 2	Overall Average
Average grade of the organisation of the workshops (invitation, room, facilitation, ...)	1,26	2,22	1,60	1,33	1,27	1,20	1,48
Average grade of the format of the workshops	1,40	2,03	1,73	1,67	1,52	1,25	1,60
Average grade of the moderation of the workshops	1,45	1,71	2,13	1,00	1,41	1,22	1,49
Average grade of the perceived achievements of the workshops	1,71	2,01	2,43	1,33	1,44	1,27	1,70
Overall average	1,45	1,99	1,98	1,33	1,41	1,24	

Table 6. Average rating per question and country for all three workshops, for Austria the average of all four workshops was calculated, lower numbers are presenting a better rating (scale ranging from 1 to 5; starting from 1 for excellent/very good, 5 for poor/very bad).

	Workshop 1	Workshop 2	Workshop 3
Austria	1,60	1,25	1,28
Belgium	1,94	2,05	1,99
Hungary	2,00	1,95	1,98
Italy	1,75	1,00	1,25
Spain 1	1,50	1,50	1,24
Spain 2	1,24	1,24	1,24
Total	1,67	1,50	1,49

Table 7. Average workshop rating for all questions per country and workshop, for a better comparison workshop 4 from Austria is not shown in the table (the average rating for all questions was 1,40 for the fourth workshop). Lower numbers are presenting a better rating (scale ranging from 1 to 5; starting with 1 for excellent/very good, 5 for poor/very bad).

Part 2

Competence Cells members' reflections on the multi-actor experiments

Introduction Part II

The second part of this report synthesises reflections of the members of the competence cells and workshop facilitators. These were documented in Evaluation Reports (see template in Annex 2), with conclusions drawn from five reflection workshops (see workshop guidance in Annex 3), where the CC members discussed the successfulness of the transition experiments for developing co-RRI-project concepts, and how core elements of co-RRI were considered in practical implementation of the TEs. These core elements had been identified as being important aspects for the FoTTRIS project consortium and encompass issues which refer to the co-RRI process as well as to its content. Furthermore, CC teams assessed in which regard the TEs already had, or are expected to have, an impact. Finally, barriers, opportunities and leverages, and lessons learnt from the TEs were discussed.

4 co-RRI core elements in practice

We oriented the FoTTRIS Transition Experiments towards a conceptual framework for co-RRI, which is characterised by:

- taking a systemic approach,
- having sustainability as a normative aim, whereby favouring ecological sustainability and social justice over economic gains,
- building on co-creation by acknowledging different forms of knowing,
- being responsive to the emerging needs of the actors engaged to the process,
- emphasising on transparency by granting access to information about the process as well as the (intermediary) results of ongoing activities,
- taking care about the accessibility of data and other information,
- being inclusive by carefully considering the selection and balance of a broad range of actors with a particular focus on giving also a voice to marginalised and silent social groups,
- being reflexive upon the ethical and political nature of co-RRI.

For more details see the FoTTRIS position paper 'FoTTRIS co-RRI concept: co-created Responsible Research and Innovation'³, which is also included in *D4.3 Policy recommendations for co-RRI*).

4.1 Multi-actor approach, sustainability, co-creation

4.1.1 Multi-actor engagement

The multi-actor approach taken by means of including various actors from the quadruple-helix was highly valued in regard to generating the most interesting insights. The engagement and interaction of various actors/stakeholders, who brought in a variety of complementary and overlapping, but in some cases also opposing perspectives and knowledge, was mentioned as a particularly productive add-on by all CC teams. It helped, as e.g. the Spanish team

³ <http://fotrris-h2020.eu/>

highlighted, to produce a more comprehensive and complex picture of the topics/problems addressed, which also relativized single perspectives. On the other hand, that kind of transdisciplinary approach also generated insights about how different actors' 'realities' might differ.

The Austrian, Italian and Spanish teams reported that they recognised changes in TE participants' (including researchers) mind sets during the TEs -- particularly in relation to the multi-actor approach, citizen engagement and/or transdisciplinary processes. Participants highlighted the value of discussing and sharing knowledge between different actor groups: *"Stakeholder involvement was the key factor for positioning the project in educational, business and civil communities, and in enabling the exchange and access to knowledge and to formal and informal learning processes, and recognition of this knowledge."* (IT RWD 2017, p. 4)

Moreover, the Spanish and the Austrian team members shared interesting insights about researchers' change of mind sets from their own perspectives. Even for those who were very open to innovative research methods, it was sometimes difficult to shift their own bias, accustomed logics of thinking and imaginations about the final users' points of view. As the Spanish team reflects, *"[...] even if we try to avoid it, we have a different vision of the problem that is not the one of final users. We have seen that we are not aware of our own stereotypes"* (ES RWD 2017, p. 2).

4.1.2 Potential contribution to reinforcing sustainability and societies' resilience

Sustainability is one of the basic values to which co-RRI is committed. However, in ranking the different dimensions of sustainability, co-RRI favours social justice and ecological sustainability over economic growth and welfare; economic growth and welfare can only go together with restoring ecological and social health.

All six transition experiments focused on topics, which are linked to the United Nations' Sustainable Development Goals (SDGs)⁴ and are thus of relevance for reinforcing sustainability and societies' resilience, such as resource scarcity, renewable energies, sustainable food systems, disabled women, migrants, and local economic development. Accordingly, the TEs developed project concepts which aim at reinforcing sustainability and societies' resilience.

The Spanish team linked their contribution to reinforcing sustainability and societies' resilience to their general approach, which centred on human beings. This resulted in a focus on finding solutions oriented towards social sustainability and communities' resilience. As they conclude: *"Putting people at the centre, and as driving forces, strongly contributes to reinforcing sustainability/societies' resilience."* (ES RWD 2017, p. 3-4)

The Belgian case of sustainable housing was explicitly planned to counter the typical focus of projects on affluent clients. Consequently, the developed project took maintaining and strengthening "the social fabric" (BE RWD 2017, p. 2) in the neighbourhood as a precondition

⁴ <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

by means of attuning project plans to the needs and challenges of the community, which is comprised of a large number of socially vulnerable groups.

The Austrian TE dealt with project ideas, which aimed at making the local food system more responsible and socially just. Considerations were directed towards livelihood resilience, in particular food system resilience, and aligned with the concept of food sovereignty and to build capacities in the food system while dealing with future uncertainty. Moreover, the Austrian team considered the engagement of local key actors, who all work in one way or another towards a similar direction as an important step in building up relationships, joining forces and thereby fostering social resilience.

Similarly, the Hungarian team concluded that the process represented a valuable contribution by means of connecting local citizens with each other and with external experts, who hold relevant knowledge and experience in local economic development: *“The process of developing a co-RRR project concept, to some extent, might have contributed to social resilience of Wekerle by extending and strengthening local networks of cooperation”* (HU RWD 2017, p.2).

The Italian TE was able to build on an already ongoing regional development initiative in the Madonie Area, and therefore a strong impact was achieved. Within the so called ‘Madonie Living Lab’, initiatives could be (further) developed, which stimulate transition towards a new territorial model, emphasising socially, environmentally and economically sustainable actions, and the creation of social entrepreneurship. Priorities for sustainable development were settled in the strategic vision of the Madonie Living Lab along quality of life criteria, a responsible use of local resources and territorial assets in order to contribute to value creation in terms of ecology and community benefits. *“The core idea of the PC is a new cooperation for development of a more engaged and active community with pull of specific civic identities, values, knowledge and trust into governance”* (IT RWD 2017, p. 4). Finally, through the exchange of know-how with other local rural communities, mutual empowerment for sustainable actions was initiated through the Italian TE.

Some of the TEs have led already to an implementation of follow-up activities, which might be considered as the starting point for actual reinforcement. For instance, the Hungarian TE elaborated four project proposals to develop social enterprises by local actors. One project has already been granted for funding, and a second has materialized out of further efforts by local actors. These social business initiatives are expected to contribute to the economic independence and social resilience of Wekerle neighbourhood.

In Austria, follow-up activities were initiated in a city district of Graz. In cooperation with the transition town movement, the forum for urban gardening and the local community centre, a one-day workshop was carried out. During this event, community members, policy representatives and participants from the annual convent of the Austrian food sovereignty movement discussed the status quo and future development towards a more sustainable and socially just food system in that area. In order to implement further activities, three project proposals have been submitted for funding.

4.1.3 Co-creation

The FoTTRIS co-RRI concept suggests that co-creation, which acknowledges and integrates various forms of knowledge and expertise, is a key element. Thus, we reflected on how various knowledge sources and expertise were mobilised and considered during the elaboration of the project concepts, and in what respect the project concepts would provide room for knowledge co-creation in their implementation.

The involvement of various actors, and thereby various perspectives, knowledges and expertise, was considered as a precondition to convey co-creation, which was at the core of all activities planned throughout the process. The concept for implementing the TEs was built on collaboration by means of joint definition of the system goal, systems mapping (exploration of problems and root causes), building a joint vision and finally developing trans-disciplinary project concepts. However, in the actual practical implementation, co-creation in the different TEs was emphasized in different stages. This went along with slightly different understandings of what co-creation means. Often it was understood synonymously with ‘collaboration’, which implies ‘working together’, involving, ‘engaging’ ‘knowledge transfer in both directions’, as well as ‘learning’ in a multi-actor activity.

Some national teams (AT, BE, ES) highlighted the importance of co-creation to be organised as a recursive process, while others emphasised the need for a flexible process, which is oriented towards community needs and contributes to capacity building: “[...] *the whole process has been designed to flexibly respond to emerging community needs and enable local actors to self-organise within the co-RRI process on the one hand.*” (HU RWD 2017, p. 4)

In terms of facilitation, all TE facilitators put a great deal of effort into supporting co-creation by granting an open and pleasant working atmosphere intended to encourage all participants to openly speak, actively listen and share ideas and viewpoints: *“The methodology, activities and dynamics of the workshops have promoted the co-working and dialogue of different stakeholders.”* (ES RWD 2017, p. 5)

The Hungarian team took co-creation into account from the onset when fixing the thematic focus by taking up suggestions from the local community, while other teams chose the topic by building on previous research and their own fields of expertise, as for example the Austrian team. Likewise there were also differences in regard to process co-design. The Hungarian and Italian teams engaged actors beyond the project team in designing the process, while the process in other TEs was steered by project team members only, thus the process-ownership stayed largely with FoTTRIS team members (and subcontracted facilitators). In the Hungarian TE, co-creation of the process was realised through an extended Competence Cell, which engaged experts beyond the project team. In Italy, process co-creation was tackled by several meetings during the preparatory phase of the TE.

For each step of the TE, there was only limited time available, usually a one-day workshop, but co-creation, which actually integrates various forms of knowledge and expertise but also interests and power, is a long-term process. As the Austrian team concluded *“Co-creation needs a recursive step-by-step process in an ongoing collaboration and needs more time going beyond the short TE duration”* (AT RWD 2017, p. 2).

Thus, co-creation was most successful in those cases which could build on already ongoing activities, or where groups of actors had been engaged in collaboration processes beforehand. For instance, in Italy, the development of a strategic sustainable development goal, a very detailed vision, and the development of concrete activities of local transition arenas could build on a process which had been started already before the TE's implementation. "Due to the already developed SNAI, the time allocated to this activity in FoTERRIS project was almost sufficient", but it also addresses that "in communities, which do not have such or common vision, changes (development of a PC) require more time." (IT RWD 2017, p. 3)

In contrast, for the Austrian TE experiment people were brought together who had not collaborated with each other, many of whom did not even know each other (personally) beforehand. Although the working atmosphere was very respectful and productive, at certain points in the process border work took place in terms of ownership for certain project concepts. Moreover, when discussions arrived at incompatible standpoints or when minority opinions were voiced, they were not further discussed, but instead omitted for the sake of sustaining a pleasant working atmosphere and building putative consensus. The involvement toward further developing ideas clearly mirrored participants' interests and those, who shared similar mind sets, teamed up. This might be an indicator that the TE did not fully reach the co-creation stage by means of integration of differences, but at least it could be observed that some new ideas from others were taken up and integrated into the project concepts.

The Hungarian case engaged a neighbourhood with a long history of civic activism, where a number of transformative initiatives had already been implemented during the last few years. Consequently, the Hungarian TE could build upon this active citizenship, and took the already ongoing process further by engaging new actors from local businesses, the local government and public institutions. Thereby a more diverse pool of local actors could be created, and the co-RRI process supported knowledge exchange in both directions: from the community to experts and from experts to the local community.

The Belgian team faced a comparably high fluctuation of participants (not in terms of engaged organisations, but regarding individual actors), thus not all the people went together through the TE-process. In order to tackle this discontinuity, which represents a challenge for implementing a co-creation process, a review process was installed, whereby those organisations who could not participate in the elaboration of a project concept could give feedback. This was either done through written comments, or if different persons from one organisation had participated in different workshops, by means of intra-organisational discussions between the workshops. Moreover, in the beginning of the second and third workshop participants could share impressions, remarks or formulate questions in order to connect to what was discussed in the previous workshop(s).

Another successful strategy for co-creation was conveyed in the Spanish TEs by means of taking recursive steps in co-creating the project concept: *"One of the key issues of this methodology is the fact that the PC is not static, but it evolves along time through the co-working of the different stakeholders. In this sense, the PC that results from the workshops series is a starting point, which has to be re-evaluated and re-elaborated."* (ES RWD 2017, p. 4)

Finally, the *willingness* to co-create something is essential. This refers to trustful relationships, but also a *“rewarding research topic”* (ES RWD 2017, p. 5) and confidence in the value of common results. *“Belief and trust in common result was the main pillar for the creation of a working group for TE. It means that all stakeholders involved in this process had a strong motivation to take part in this collaborative activity.”* (IT RWD 2017, p. 7)

4.1.4 Continuity of started activities

As already mentioned above, some of the developed project ideas have already been taken forward, and will (most probably) continue to be further developed and implemented beyond the FoTERRIS project duration. Even if continuity might not be guaranteed for all developed ideas in the short-term, all teams agreed that the implementation of the TEs has set important cornerstones for realising some projects in the long-term. The most important achievement of the FoTERRIS TEs is that networks of diverse local actors, who share the same or at least similar interests, were set up and have started to collaborate. The continuity of these cooperative efforts will be influenced by actors’ commitment and external resources. Actors’ commitment will depend on their expectations and motivation. If they see the benefit of further cooperation with other participants, people will stay in contact and collaborate further. For some, funding might be an essential precondition to do so, while others may simply go on doing what they want to do regardless – maybe within an extended group of actors and new ideas after engaging in the TEs. Again, linking with initiatives, which were already started before the TE, has turned out to be a great advantage for ensuring continuity of started activities.

In order to boost continuity beyond the FoTERRIS project duration, the CCs have taken various support measures. All partners are actively engaged in networking activities, develop project bids and explore together with TE participants further funding opportunities in order to facilitate access to external resources. Moreover, currently plans are elaborated for institutionalising the CCs in order to offer support to further develop co-RRI activities beyond the project duration.

Support measures taken by the Hungarian team are aimed at enabling local actors to self-organise the co-RRI process beyond the FoTERRIS project. As this TE took place within an already very active community, the continuity of started activities is very likely, even if there is no concrete plan yet how to institutionalise the endurance of the local development process. *“Transition Wekerle as a transition arena has its own momentum and ability to engage and collaborate with external actors. The FoTERRIS co-RRI process has probably strengthened this character. Individual competence cell members will most probably continue further collaborating with local actors on specific topics (e.g. local food system development, social business development, etc.).”* (HU RWD 2017, p. 4-5) Some of the ideas elaborated during the TE, such as the social business ideas, were further developed, and they will most probably continue to be planned and implemented. *“This is partly due to external resources which will support them, partly due to commitment of local actors which was strengthened by the co-RRI process.”* (HU RWD 2017, p. 4) However, there is still more work and time to invest in order to gain commitment from a critical number of local actors, and to institutionalise the continuity of a local economic development process.

Within the Austrian TE an additional workshop was implemented, which was dedicated to the further development of the project concepts, an exploration of possible funding sources and to collect participants' commitments to take care of the further development of the ideas. Participants confirmed their interest to carry on the work started in the workshops, and they expressed a wish to organise – beside meetings dedicated to specific project ideas – more informal meetings of the group to keep each other updated and to exchange information about ongoing activities. Concerning the most concrete project concept, several follow-up meetings with some of the TE members took place, and an action research project about sustainable and socially just food supply in two city districts will start as soon as funding is granted. Applications have been submitted to regional as well as European calls.

In Spain, cooperation of TE members in other projects (e.g. RISEWISE – empowering disabled women) has been started, and TE participants have been informed about relevant upcoming H2020 project calls. *“Most of participants in the TE were interested in continuing work. For beneficiaries, it was a way to participate in the decision making related to solutions for their problems. For all the stakeholders, there was an opportunity to look for funding in research calls, mainly European.”* (ES RWD 2017, p.5)

In Italy, a network of local actors was established, and actors engaged continuing cooperation with EU funded projects and through local initiatives. Additional activities are being planned, and the two organisations involved in the Competence Cell (ARCA and CESIE) are exploring potentially relevant funding schemes, involving community representatives in partnerships and further disseminating the results generated in the TE in order to foster their uptake beyond the FoTTRIS project duration.

In Flanders, the TE and its outcomes and further planned activities were presented at various occasions, and the CC members talked about possible future collaborations with interested actors in order to stimulate follow-up activities.

4.2 Responsiveness

4.2.1 Participants' needs

Responsiveness, in terms of reacting during the implementation of the TEs to participants' concerns and needs, is another core characteristic of co-RRI. Thus, CC members reflected on in what respect the TE took that into account and reacted to wishes addressed by participants.

All TEs were oriented towards local communities' needs, which were supposed to be brought in by TE members either before starting the TE and/or throughout the overall process. As already mentioned above, the Hungarian team even defined its overall thematic focus through the needs of local actors, and *“Whatever needs have emerged the FoTTRIS project has reacted favourably and attempted to find the best response together with the participants expressing the specific need.”* (HU RWD 2017, p. 5)

Other TEs predefined the thematic area of the experiments but oriented the specific focus of the project concepts towards participants' needs. In order to do so, TE members were asked

either prior to the first TE event, e. g. in meetings or individual interviews (BE), or in the beginning of the workshop(s) what motivated them to engage in the TE. This was done in order to explore their perspective on the specific topic, but also to get a better idea about their needs.

Not only was the thematic focus of the TEs oriented towards participants' needs, but the process of implementing the TEs was also tailored by means of didactical setting and timing to create convenient working conditions for the TE members. After each of the workshops, TE members were asked to give feedback, and CC members used this feedback in order to determine the necessity of adjusting the process appropriately.

All national teams reported that TE members expressed needs and concerns, and that these were mostly (if possible) considered in elaborating on the project concepts. However, there were also concerns about the *"danger of missing unheard voices or silent local actors"* (HU RWD 2017, p. 5), who had either not been engaged in the TEs, or who did not raise their voices during discussions. This is of particular relevance for those TEs which did not succeed in engaging actors from all groups potentially relevant for the topics at stake. In order to overcome this obstacle, the Hungarian team recommends for instance that *"Special efforts might be needed to go beyond the active citizens of Wekerle and reach out to the less active (but more numerous) part of the local population, especially those ones who are, in one sense or another, marginalized."* (HU RWD 2017, p. 5) Since it is very difficult to set up a process engaging those actors who are usually missed in participatory activities, comprehensive ex ante research would be useful in order to ensure that a broad variety of perspectives in terms of needs and concerns can be considered. *"[...]needs, first of all, should be explored and understood which can constitute a specific research task in itself, preferably carried out together with active local residents at the very beginning of a co-RRI process."* (HU RWD 2017, p.5)

The Austrian team observed situations in the TE where unpopular minority positions were simply ignored by others, and they concluded: *"Facilitation needs to take particular care that minority positions are not 'overheard'. From a group dynamics point of view and for the sake of consensus building, it was difficult for single participants to insist on ideas, which were not shared by others or on potentially conflicting viewpoints."* (AT RWD 2017, p. 4)

4.2.2 Flexibility to react to upcoming needs & concerns during the process

The overall process of developing co-RRI project concepts was designed to react to upcoming needs and concerns and was organised in recursive loops – making sure that the content as well as the process was attuned to TE members' needs and concerns. However, in practice this turned out to be challenging, even for CC teams who were very experienced in facilitating participatory processes: *"We tried to adapt the PC and RRI methodology to the topics and, more specifically, to the participants. Even if we tried to do our best in this process of adaptation, I think that more effort in this aspect should be done in the future."* (ES RWD 2017, p. 5-6)

As a precondition for guaranteeing flexibility in regard to upcoming needs and concerns, openness in regard to the thematic focus of what to elaborate in the project concepts was

granted. Although this openness was valued in terms of keeping space open for participants' inputs, it also caused some confusion as reported by the Austrian team: *"Defining the projects' focus was based on a continuous, open process that was adapted after every step. Although this openness was on one hand very much appreciated, on the other hand it also caused at certain points a bit of confusion, because the TE participants expected the CC members to give more direction when considering which project concepts to elaborate."* (AT RWD 2017, p. 3)

The Hungarian team also faced criticism related to issue that *"The process was open and flexible to emerging suggestions and needs, facilitation followed accordingly (some criticised this feature as 'creating a bit of a chaos')"* (HU RWD 2017, p. 7). Even within the CC group some frustration about the process of flexibility was addressed: *"Some competence cell members judged the process chaotic due to the lack of strong facilitation and too less structuring of the process within a given very limited timeframe. Clearly, some frustration has remained in some participants due to the way [actor] facilitated the whole co-RRI process."* (HU RWD 2017, p. 7)

Finally, as the MISC itself is an iterative process of mapping lock-ins and leverages, and a map of a complex system's dynamics is never exhaustive, in the future the exercise could easily be reiterated with additional participants, or if new issues arise in the project concept implementation.

4.3 Transparency and accessibility of information

Co-RRI processes go along with transparency, which grants access to information about the process as well as the (intermediary) results of ongoing activities, and therefore goes hand in hand with the accessibility of data and other information. On the one hand, this openness will allow stakeholders and other community members to reflect on the outcomes and to form their own opinions about the societal relevance of co-RRI trajectories. On the other hand, transparency and accessibility of data break down barriers and facilitate capacity building among actors engaged to participate in co-RRI processes.

4.3.1 Transparency and accessibility of relevant information

The TEs aimed at transparency concerning the aims of the TE, rules for the implementation, represented interests, as well as in regard to decision-making processes. Against this background, competence cells' reflections also meant asking which information was made accessible, how, when and for whom. Similarly, they reflected on which measures would make the project outcomes accessible for a broad range of societal actors, and how people not attending the TE were informed about what was going on in the TE.

Although all partners paid thorough attention to being fully transparent concerning the aims of the TE, rules for the implementation of the experiment, represented interests, and decision making, transparency was realised differently within the various experiments.

All partners gave background information about the aims of FoTTRIS as a co-RRI activity and described the process as planned briefly to TE participants. Further and more detailed explanations were then given in the beginning of the first workshops. While some partners did so very comprehensively, others were cautious not to overburden TE participants with

technical details about the project and scientific theories, and related their introduction more to the content to be discussed. *“Building on previous experiences, we knew that participants were first of all interested in content related to sustainable food systems, and not that much in the process or research policy. These aspects were explained in detail in a previous exploratory meeting with some of the TE members, who already had a connection to the R&I system. As we did not want to bother the TE members with too much information about the background of RRI or the overall FoTTRIS research, we kept the general information about the project short, giving them FoTTRIS leaflets and referring them to the project webpage.”* (AT RWD 2017, p. 4) Although the overall process plan and aims were briefly explained at the beginning of each of the workshops, retrospectively the Austrian team admitted that there might have been too little communication about the project’s background, or it might not have been communicated clearly enough. They concluded that it is quite tricky to achieve the right balance between ‘relevant’ information to be provided to participants and information overload. The challenge was not about the provision of information per se, but about setting the right priorities when considering the scarcity of time in face-to-face meetings.

In contrast, the Belgian team gave a comprehensive introduction at the beginning of every workshop. Since their TE faced the challenge of always having several new people attending the workshops, they wanted to ensure that everybody would be well-informed. As already mentioned above, during the beginning of every session the processed outputs of the previous workshop were presented and justified (by the members of the CC), and participants were invited to ask questions, comment, correct or improve it. *“This way, the decision making ultimately rested with the group.”* (BE RWD 2017, p. 4) In addition the results of every session were made visible by means of a Realtime Board, where participants could leave comments and consult all documents, which were placed on it. The CC was furthermore very active in contacting and informing various actors from the social innovation community beyond those participating in the TE (e.g. city labs, circular economy, think tanks, etc.).

Similarly, in the Italian TE workshop results were summarised after each WS, and distributed to all participants who had attended the corresponding workshop, but also to those who attended the following workshop. In regard to the elaboration of the final co-RRI project concept, the Madonie Living Lab, the Italian team stated that the related decision making process was highly participatory and transparent. The discussion settings stimulated all interests to be brought to the table, and *“all voices were taken into account”* (IT RWD 2017, p. 8) during the final step of the development of the project concept. Information for a broader audience was made available through an online newspaper during the running of the TE.

As the Hungarian team reports, *“transparency was a great concern for the whole co-RRI process.”* (HU RWD 2017, p. 6). Accordingly, they put particular effort into being transparent about what was going on during the Wekerle TE. Beside general information about the FoTTRIS project, aims and the co-RRI process, they set up rules for the interaction of TE members during and in-between workshops and they introduced measures, which were meant to guarantee transparency and accessibility to information beyond the TE group. First, the call for participation was completely open, so anybody interested could join, and media and press were as well always invited. Consequently, local media attended all workshops, interviews with participants (independently from FoTTRIS researcher group) were conducted, and independent reports were broadcasted through the local television channel. An open

facebook group was established in order to allow any local residents or other interested actors to follow the process, ask questions, provide suggestions, etc.. An e-newsletter was launched and disseminated through the facebook group as well as via e-mailing list to those who signed up for it at any of the workshops or side events. Finally, an independent film-making group was hired to record all workshops and prepare a 10-minute film about the co-RRI process. They were explicitly asked to be critical and share their understanding through the film, which is publicly accessible on YouTube (<https://www.youtube.com/watch?v=Gntuhlv77ek>).

The Spanish TEs also worked to establish a great deal of transparency and accessibility of information. Resumes and reports were provided before and during the workshops to all participating organizations, and journalists participated in the workshops and disseminated information through the UCM university press. Information (including videos) was distributed at scientific conferences, by e-mailing and in online social networks, but also within a specific network of organisations working on both topics, migrants and disabled women. Like all the other partners, the Spanish team also ascribes transparency about represented interests and decision-making especially to the thorough and tailored planning of the workshop settings, and the participants' behaviour. *"Though the methodology sets up working groups to address specific tasks, their overall group discusses their results and work on them for the final outcome. In this way, all the stakeholders know and usually support the results. [...] The transparency is guaranteed in the way TEs are planned, the information is transmitted to participants, and, what is more important, to the attitude of all participants."* (ES RWD 2017, p.7)

Transparency and access to information for TE members was certainly very high on the agenda of each team, but sharing information with people and organisations not participating in the TE was deliberately not always that open. For instance the Spanish team addressed privacy issues to be handled carefully: *"Moreover, we facilitated the contact of all the attendants in a contact list, paying special care to the anonymity of refugee people."* (ES RWD 2017, p. 7)

The Austrian team communicated about the TE via various online channels, such as twitter and the IFZ webpage, but only general information. Since the Austrian TE had a very high degree of continuity of participants it was a process of jointly going through a co-creation process. Right at the beginning, the issue of who could use the elaborated project concepts was addressed, and there was agreement that first of all it would be with the TE group. Thus, full transparency and accessibility to content was considered tricky, particularly against the background of a highly competitive R&I landscape, but also in regard to ownership claims from policy actors. The solution to this dilemma was that the TE was opened to more people interested in joining, and through their active contribution to the further elaboration of the project concepts, they gained access to jointly generated concepts.

4.4 Reflexivity and anticipation

Transparency enables another process characteristic of co-RRI, which is reflexivity and anticipation. On the one hand, this refers to revealing (potentially hidden) societal impact that R&I will or might have, and to what kind of future it will contribute, especially its role in reaching the SDGs. On the other hand, it is also about making the specific framing of R&I more

explicit, such as problem definition and underlying assumptions, individual and institutional interests and values, commitments, practices and choices made.

In the concrete context of co-RRI, reflection and anticipation concern an iterative action, during which the participants of a co-RRI process take account of the (intermediary) results relative to the choices that have been made as well as external changes. Related activities should be integrated into the process from its very beginning and create awareness about the fact that making choices with ethical and political implications is inevitable in any R&I activity. Reflexivity and anticipation very much address the normative character of co-RRI processes.

4.4.1 Anticipation of impacts

The MISC process implies reflections on the complex cause-effect relations which should also help to better anticipate potential impacts of the planned co-RRI activities. Moreover, the co-creation process includes permanent feedback from various actors. This allows for an anticipation of potential impacts from various perspectives, which makes it more comprehensive. *“The continuous help and communication, in a collaborative way, among the different stakeholders, could help to reduce the negative impacts.”* (ES RWR 2017, p.9)

The Spanish team also carried out an analysis of the impact of technological solutions for people with special needs by means of scenarios. Although this was not considered a rough evaluation, it was assessed as an appropriate basis for further analysis, and it questioned researchers' assumptions that e.g. technological support would be more welcome than human assistance for people with disabilities.

The Austrian CC introduced an additional step to anticipate if the project concepts would actually be in line with the elaborated vision. Before the project concepts were expanded in more detail, TE participants were asked to revisit the aims of the vision of a sustainable and socially just food system once again. It should be checked if the project idea is actually in line with its normative framework, and how it would help reach the vision.

4.4.2 (inherent) political/societal relevant aspects

Co-RRI puts a particular focus on acknowledging that R&I is contextualised and embedded in specific social, political, and economic contexts, and inherent values and norms. Thus, reflections on (inherent) political and societal relevant aspects are key within a co-RRI process. CC members reflected on how that was considered in the implementation of the TEs as well as in the project concepts developed in this context.

For all topics addressed by the TEs, political and societal aspects were of obvious relevance, and all national teams reported that these aspects had been discussed. The systemic mapping of possible lock-ins and leverages within the MISC made the relevance of political and social (or cultural) aspects even more obvious. Consequently, all developed project concepts included political and social aspects. For instance, in Belgium a majority of the TE participants did not consider technical aspects as most relevant but instead saw social and institutional factors as key: *“As the PC tackles the most relevant issues (with the biggest potential impact), it focuses on (modelling) the societal impact of more sustainable ways of organising access (of all social groups) to the comfort or services of EED and to sustainable houses. This included,*

amongst others, work for the most vulnerable groups (even though there was some discussion as to whether this would lead to ‘inferior’ jobs; a divergence that is perfectly acceptable in a systemic approach).” (BE RWD 2017, p.4)

Due to both topics, which were tackled in the Spanish TEs, which dealt with migrants and disabled women, societal and political relevant aspects were at the core of discussions throughout the whole process: *“During the dynamics in groups, political and societal relevant aspects were identified as barriers and opportunities.” (ES RWD 2017, p. 6)*

While in some cases interests regarding the political and social dimensions of the issues at stake matched within the diverse group of TE members, there were also other cases, which implied controversial positions of actors engaged. In the Italian case for example, the TE served the implementation of a national strategy for rural development, the ‘Strategia Nazionale delle Aree Interne’ (SNAI), which can only be implemented with strong support from local communities. Thus, it was attempted to harmonise and align interests within the project concept of the Madonie Living Lab: *“In the Sicilian case, the Madonie region required a support tool for implementation of the SNAI. Therefore, we created a project, which partly reflects the (partly) political actions planned for this area. [...] TE participants see the Lab as a heart of the know-how / production of best practices, without which the political strategy for regional development cannot function.” (IT RWD 2017, p. 7)* After the development of the Madonie Living Lab concept, TE members agreed that one of the main factors of a successful implementation of this project will be *“to hear the voices of citizens and react to them”*, thus active citizen engagement would need to be promoted throughout the project.

In contrast to the Italian case, the Hungarian team reports about *“significant tensions”* between local citizens and the local government in regard to policy aspects related to the local economic development in Wekerle, which could not be handled during the process. It was further explained that *“there is a love and hate relationship between the parties (citizens of Wekerle and officials of local government)” (HU RWD 2017, p. 6)*. On one hand the local government is proud of the active citizenship and local self-organisation in that city area, because it often assisted local government efforts to be more effective and successful. On the other hand, strong active citizenship linked to intentions of having a separate local government for Wekerle is also perceived as a threat to the political power of actual local government officials. This uneasiness of local government officials may be linked to the development of increasing centralisation of policies within Hungary, which implies a loss of power for the local governments. As explained in the Hungarian report, *“during the last approx. 10 years centralization has accelerated, and recently local governments have lost their authority over local public services of all kinds (incl. schools, waste management, etc.). Local governments currently have no say who leads local public service providers, all are decided by central government related bodies. This has clear implications to any local economic development process as well and the local governments’ capacity to contribute effectively.” (HU RWD 2017, p.6)*

In the Austrian TE, which addressed issues related to sustainable and socially just food systems, the political and societal dimensions were always present. The food sector is highly regulated, but current governance mechanisms, such as centralisation, globalisation, and neoliberal market drivers, are perceived as problematic by challenging sustainable and socially

just (local) food systems. Consequently, one of the project concepts was explicitly directed towards a policy tool, namely the establishment of a so called 'Food Council'. Such councils aim at giving communities more control over the (local) food systems by building connections across stakeholders, and by using a cross-sector approach. Thereby a Food Council represents a highly political as well as societal relevant instrument for local food system governance. Although the idea of a Food Council is basically rooted in the idea of a stronger democratisation of the food system and related (policy) decision making, the topic was not discussed in a strongly integrated manner during the TE. In contrast, there were quite early ownership claims for planning the implementation of this idea from a policy actor, who was favouring a top-down policy approach. For him it was clear that such a project would need to be steered by established policy structures. In general, there are various formats for how Food Councils might be set up, and as is known from good practice examples, an inclusive approach is considered to be essential for a successful implementation. Other TE members, who are food activists, conceptualised such a Food Council as a civic society driven bottom-up activity, and they already had established links to other recently introduced initiatives in Austria. Currently work on that issue is carried out in parallel, and there was no further exchange between the activist and the formal policy community after the last TE workshop.

4.4.3 Power and influence

If co-RRI is actually about making a difference compared to mainstream practices, it is also about challenging prevailing power relations, which implies existing knowledge hierarchies (expert vs. lay knowledge, hard vs. soft sciences) as well as decision-making about research priorities and process ownership.

In regard to the process ownership, the Hungarian co-RRI process experienced a paradox regarding who owns and controls the process. On the one hand local actors expressed their wish to have greater control over the process, but on the other hand they expected researchers and competence cell members to provide more structure to the process. In order to create a joint ownership for the whole process, it would need to be thoroughly discussed beforehand how to distribute responsibility and control for different components of the process.

Another aspect of power relates to the project framework itself: *"The logic of a project, particularly an EU project (with objectives, time schedule, deliverables and reporting, data management requirements, etc.), is not easy to communicate and understand if one is not an experienced project partner."* (HU RWR 2017, p.11) If the frame of the project is not clearly communicated to non-research participants, this may lead to a lack of shared understanding, and "a clear power asymmetry in favour of researchers, on the other hand", as the Hungarian team concludes.

An unequal distribution of resources may also easily result in an asymmetry, which allows those participants who have more resources (e.g. researchers, who are paid for their engagement in co-RRI), to also have more power over the process. For some actors, such as small Civil Society Organisations or professionals who lose gains when engaging in activities such as R&I, it is necessary to get additional resources in order to even take part. As concluded by the Austrian team, the possibility to offer monetary compensation to TE participants was

crucial to enable some people to participate who could not otherwise do so during their paid work time (e.g. farmers).

Since co-RRI also implies a process of negotiating what ‘responsibility’ means in a specific R&I context, it also touches upon the power of defining co-RRI. Thus, giving a voice to marginalised and silent social groups should also be key of co-RRI. Only the Spanish team managed to come up with a somewhat satisfying achievement in terms of directly including marginalised groups, while all the other teams reported about shortcomings in this regard. However, there were at least some attempts to point to their (potential) affectedness and interests by means of raising related topics during discussions or targeted inputs (e.g. introduction to the topic of food justice in the Austrian TE).

4.5 Participation, inclusiveness and equality

4.5.1 Participants, roles and responsibilities

The successful implementation of the TEs as well as the legitimization of resulting outcomes very much depends on the participants engaged: on their expertise, on their ‘relevance’ for the topic on stake and their influence, but also on their commitment to engage with others in a process of sharing, learning and co-creation. Moreover, the involvement of certain actor groups from a strategic point of view could be useful for the further implementation of the developed project concepts, as explicitly addressed by the Austrian and the Spanish team: “[...] high level administration representatives could be valuable to facilitate the enactment of the PC [on refugees]” (ES RWD 2017, p. 10).

The Hungarian TE was particularly open in terms of participation by explicitly focussing on engaging civil society, specifically the local community. The Hungarian team even followed a strategy, where participants, including stakeholders, were explicitly asked to engage as citizens in the TE. The calls for participation for each of the workshops and other events related to the TE were always launched publicly, and invitations were open to anybody who was interested. In addition, selected experts external to the local community were invited. This strategy worked well for local citizens, although it was more of the *“usual suspects who in one way or another are active in the neighbourhood”* (HU RWD 2016, p.8) rather than the *“average local of Wekerle”*, who participated in the TE. Moreover, participants raised the issue of *“missing social groups”*: some societal subgroups, such as the young, elderly, disabled, poor, marginalized (including ethnic minorities), and religious groups were underrepresented or not represented at all. Policy makers and people from the business sector were hardly committed to participate in all events or were even missing. *“Some competence cell members share a view that in order to engage business people a planning process should bring immediate benefits and tangible results.”* (HU RWD 2016, p.9)

While all TE teams reported shortcomings in terms of including vulnerable and marginalised societal groups, the Spanish TEs put particular emphasis on engaging affected parties, namely disabled women and refugees. This is certainly also related to the topics tackled, which suggest obvious ‘target groups’, but on the other hand it also implies certain assumptions about the necessity of engaging those concerned from the very beginning of the process. This

was addressed in the Austrian TE when discussing the possibility of combining sustainable food, which is still mainly connoted with ecological and economic sustainability and often linked to exclusiveness, with social justice. The TE originally planned to engage an expert on food supply for socially disadvantaged people, but she never had time to participate in the workshops, and there were no further efforts to engage either representatives or even citizens. In general, the Austrian TE was strongly characterised by invited participation, which was based on a thorough exploration and mapping of 'relevant' actors defined by the CC members

In contrast, the other TEs focussed more on the engagement of experts and stakeholders, and selected participants. This was the case in Italy, where invited people were selected among the participants from the consultation round tables for the co-design of the National Strategy for Inner Areas applied to the Madonie district, and from the contact databases of two organizations involved in the CC. Consequently, it was mainly stakeholders and experts who participated in the TE related workshops, and citizens and educational groups were less represented compared to actors from business, policy and R&I. The Italian CC explained *"to involve representatives from the citizens and education required more structured and long term citizens' engagement instruments"* (IT RWD 2017, p. 8), but the resulting project, the Madonie Living Lab will be designed to *"involve citizens and educational organizations in implementation of local strategy proactively"* (ibid).

Likewise, the Austrian TE participants were addressed as 'experts', and they were carefully chosen. Decisions about whom to invite were taken by the competence cell and based on knowledge about key actors in the field, additional desk research and a stakeholder mapping. Although a broad variety of actors (food activists, researchers, people from education, policy and administration, business) was represented in the TE's core group, some important actors from the food sector were still missing: e.g. practitioners on a very basis, representatives from the public sector food procurement, 'big mainstream players' (e.g. supermarket chains), minorities and marginalized people, and also the general public was not represented specifically. Some actors were deliberately not invited; others decided not to participate or did even not react to the invitation. This could be due to various reasons: for instance, there was a competitive situation with another local research organization that had set up projects on similar topics just within the same time frame as the Austrian TE was implemented. Thus, some actors did not want to participate in workshops/projects for reasons of competition. For others the 'framing' of the TE might not have been very attractive, and for others the timing of the TE was not the best, as in early spring there is a lot of work to do on farms and people were not able to spend several days attending workshops.

The representation of actor groups in the TEs is depicted in chapter 3.1 Gender and actor groups.

In terms of roles and responsibilities, the process of designing and implementing the TEs was mainly with the competence cell members: they set the agendas, elaborated the didactical settings, and in most cases, they also facilitated the workshops. TE participants did not have much influence on the formal arrangements of the workshops, but they had major roles in developing the project concepts. Each TE granted a lot of room for creative leeway for participants' ideas for the co-RRI project concepts. They provided inputs, communicated back

and forth with their organisations, and they overtook responsibilities for the further implementation of ideas and results from the TEs beyond the project.

4.5.2 Managing diversity

All partners aimed for multi-actor processes, which should engage a high degree of diversity in terms of actors and their expertise and which should grant for equal participation, balance power relations and handle tensions between TE participants in a constructive way. Even if the TEs were considered to be ‘experiments’, they did not take place completely detached from real world conditions, thus the management of diversity and equality represented a challenging task for all teams. The FoTTRIS workshops were generally oriented towards consent, but when the experiments are carried out further to real world implementation, conflicting interests may come forth and will need to be handled.

Efforts started with the invitations. As described above (see 4.5.1), different strategies were conveyed when inviting people to participate in the TEs. In some cases, open invitations were meant to grant access to anybody interested in joining, so there was only little influence on how the TE group would be composed. For other TEs (Austria, Belgium and Italy) a thorough selection of participants was made that aimed at a balanced composition of the core group in terms of gender, institutional background, expertise, but also regarding their anticipated mind sets (as far as this could be assessed ex-ante). With this strategy of invited participation, they intended not only to achieve a balance in terms of ‘types’ of actors covering the quadruple helix, gender, institutional context, education, age, ethnicity or physical diversity, but also in terms of viewpoints and ideologies.

In all TEs proper facilitation, which takes care of giving individuals equal room to raise their voice, and the tailored design of workshop settings, including meeting venues and room arrangements, were considered as very important issues for managing diversity and equality. *“The whole process was designed and facilitated in a way that is open, accessible, and democratic. [...] Objectives were formed together in a participatory way. Facilitation throughout followed an inclusive style [...]”* (HU RWD, p. 10) Successful measures reported by CC members included the use of simple language by adapting complex concepts and technical terminology for the participants and lowering the threshold level of communication by means of small group settings. For instance, in all TEs, break out group discussions made it easier to contribute and interact on different levels, particularly for those participants not used to speak in front of a bigger audience. Such highly interactive small group settings also boosted communication between participants. However, the arrangement of break out groups might need specific attention concerning group composition, and sometimes moderation may be necessary. *“Selecting as best as possible a balanced group of stakeholders, balancing also the work groups, changing the group participants to avoid the formation of unintended alliances that result in bias, and carefully moderating too dominant participants”* (ES RWD 2017, p. 11)

Further positive results were observed by the Belgian team after inviting the participants to take a more personal approach and move beyond their professional identity when presenting themselves. This revealed unexpected similarities between various actors and led to a noticeable blurring of social boundaries.

Another important aspect involves the equitable sharing of knowledge and information. In all TEs particular emphasis was put on informing all participants about the background, aims and activities of the experiment, so that all people engaged – formal experts as well as other participants – could enter the process at the same level of knowledge about the FoTTRIS project.

Finally, all CC teams considered it important to select premises which would create a pleasant working atmosphere. Some partners decided to use meeting venues which are well known by participants due to ongoing collaborative (community) activities: *“The venue chosen was a community cultural place familiar and comfortable to local residents. Spatial arrangement in the rooms was carefully attentive to democratic ideals: sitting around to see each other, moving around to change places, etc.”* (HU RWD 2017, p. 10) More specifically, the Italian TEs were also held at venues the workshop participants were familiar with, such as business incubators and innovation hubs. In Belgium the CC decided for a venue that differed from ‘usual’ work environments, a castle, which offered appropriate meeting rooms and could be reached by various transport facilities. *“We aimed for an atmosphere in which people felt free to think ‘out of the box’. Therefore, we looked for locations that differed substantially from a normal work setting. Moreover, we thought it was important to have some ‘green’ in the direct environment. In general, people are believed to feel more comfortable and better when they can see trees and other natural elements through the windows of their work spaces.”* (BE ER 2017, p. 2) The Austrian and Spanish TEs were held at the CCs’ hosting institutions, a University department and a private research institute. In order to mitigate the ‘academic’ context, meeting rooms were prepared to support an interactive working style by means of seating arrangements (open space style, cabaret style, boardroom style), and a pleasant informal atmosphere (e.g. flowers, snacks and drinks on the tables) was arranged.

5 Challenges, barriers, opportunities and leverages

5.1 Challenges and barriers

CC members identified several barriers and challenges they felt confronted with during the implementation of the transition experiments. They rated to what extent these barriers were relevant on a scale from 1-5 (1 = low relevance, 5 = very relevant), and reflected on how they handled them. The issues set forth hereunder comprise those barriers and challenges, which have been assessed by CC members as most relevant (rate 3-5).

5.1.1 Time

The need for more time compared to more conventional R&I was an issue in all transition experiments. This is relevant for the preparation of co-RRI as well as for its implementation. Particularly, a thorough implementation of the MISC requires enough time, and it would have been advantageous to discuss and elaborate on issues more than was possible within the given timeframe.

The identification, mapping and selection of relevant participants, contacting them, exploring their interests, needs and expectations, their availability and to conceptualise and plan the process accordingly was very time-consuming and needed a planning horizon of several months. In order to develop a better series of workshops, even more time is needed. *“Now we feel that more time would have been welcome to prepare, run and process the case and the workshops. Especially because we missed the ability to contact and invite people to participate at a time when their agendas were still relatively free. We tried to overcome this problem by allowing participants to attend only some of the workshops or to send a colleague replacing them.”* (BE RWD 2017, p. 6)

Some workshops were considered to be too long, and participants became tired. Thus, it is not only about extending workshop durations, but about carefully considering the right amount of time for each activity. Simultaneously, it should be ensured that time extensions do not expect too much of the participants, e.g. due to long workshop durations or too tight schedules.

The timing in terms of when workshops were scheduled was another important issue. For some groups, as for the participants in the Hungarian TE, weekends seemed most convenient. For professional groups, such as farmers, the right timing often needed to be linked to specific seasons.

At least partly, all TEs could – build on previous activities and/or already established contacts, which made the preparatory phase more efficient.

In regard to the implementation of co-RRI, the co-creation within a recursive step-by-step process, which builds on trust and establishing familiarity with each other's working cultures, also needs considerable time. Successful co-creative work demands long-term interaction, as proven by the fact that those TEs which could build on previous joint activities proceeded

faster compared to those where new groups and networks needed to be established. Moreover, Co-RRRI is intended for analysis of societal problems and finding solutions with a systemic perspective, which implies long-term processes: *“Co-RRRI is slow science in so far as it works towards a reconfiguration of systems and behaviour patterns and not towards short term (incremental) solutions within the current system. It requires an investment of time and energy in a long-term process of which the outcomes are uncertain. Many organisations, funders and policy makers prefer research on a given topic with a predefined result and short term profit.”* (BE RWD, p. 6)

As the TEs were implemented in the context of a project, the continuity of cooperation and further development of started activities beyond the project duration will rely on additional resources. For some TEs, resources for continuing with collaborative work were available from the beginning, or they were already successful in gaining additional resources for cooperative activities. Other TE participants continue their cooperation by applying for funding and/or staying in contact for the exchange of information

5.1.2 Missing actors

Even though the transition experiments attracted a good variety of actors/stakeholders, each was still lacking certain groups or had shortcomings in gender balance. The Italian team stated that citizens and educational groups were underrepresented *“due to the fact that the discussed topic had a strong political aspect and to involve representatives from the citizens and education required more structured and long term citizen engagement mechanisms.”* (IT RWD, p. 8) Moreover, there was an underrepresentation of female participants in the Italian TE (see statistics in chapter 3.1), which was explained by gender imbalance in policy and the business sector as well as in the research environment in the disciplinary field concerned. *“This is also related to the choice of a rural inner area, where the gender gap in Sicily can still be found.”* (IT RWD, p. 9)

For the Spanish TE dealing with the refugee crisis, it was particularly difficult to attract representatives from the business sector, as there seems to be “little commitment” (ES RWD, p. 12) to engage in tackling this challenge. As already addressed above (see 4.5.1), the Hungarian team faced difficulties engaging business people throughout the process, maybe due to uncertainty about the results and benefits of the experiment for them, as speculated by some CC members. Similarly, this was the case for representatives from policy. In general, the Hungarian team reported an underrepresentation of “average” citizens as well as of minorities and marginalised groups. This was also the case for the TEs in Italy, Belgium and Austria (see statistics in chapter 3.1). The Belgian team in particular highlighted difficulties when engaging organisations working with vulnerable groups, if no proper compensation could be offered: *“[...] they are asked very often to give input in research projects but [...] are not paid or rewarded for their participation.”* (BE RWR 2017, p.5)

CC members had put considerable efforts into analysing the relevance of actors in the thematic fields addressed, mapping relevant actors, mobilising their

networks, and personally addressing participants to be engaged in the TEs. In order to reach more 'distant' groups, some teams were very active in launching tailored information to raise awareness for the topics at stake. In order to build capacity for the participation in the FoTTRIS co-RRI activities, detailed information about the concept of RRI, the systemic approach, and related processes were provided.

Finally appropriate compensation is essential to make participation even possible.

Roles & responsibilities

While the roles and responsibilities of the CC members were clear for project team members, the Hungarian team, which had approached several "external experts" to join the CC, reported uncertainty from those CC members in regard to their (expected) contributions, and about the proper composition and size of a CC in order to fulfil its tasks adequately. They concluded in their reflection workshop: *"[...] who should populate a competence cell? If a competence cell is supposed to be transdisciplinary in a co-RRI process then their members should reflect this aim by being diverse in terms of representing different knowledge systems. However, how many members should a competence cell have? Are nine members too many? Does this depend on the topic and/or context? Is it possible to invite more members during the process according to emerging needs? The Hungarian case has revealed two lessons at least. One cannot assume that competence cell members, however carefully selected they are, will be actively searching for ways to contribute. First, from the very beginning ways and tools should be in place that assist their engagement throughout. Paid compensation is not enough, and psychological agreement on roles and responsibilities should be a starting point with points of reflection upon progress built into the process. The other lesson is a communication one. Communication among competence cell members should be designed carefully from the very beginning. Expected ways and frequency of communication should be part of the initial agreement and built-in reflections."* (HU RWD, p. 9)

More generally, the Hungarian team brought up considerations about who would be the researchers in a co-RRI process and trainings for capacity building: *"There is a complexity of concerns emerging with regard to roles (mandates) and responsibilities of various actors taking part in the co-RRI process. First, who are the researchers? Should all participants be treated and understood themselves as researchers, or should a difference be maintained between the professional researchers and other type of knowledge-holders? In a co-RRI process it cannot only be assumed that everyone will become a co-researcher by the very nature of the process. Training components should be built in that develop, share, or transfer skills to carry out different research tasks."* (HU RWD, p.9)

In line with this, the Austrian team also reported uncertainty on the part of TE participants about what would be expected from them. While the CC team had expected that their main motivation to participate would have been the wish for developing projects, towards the end of the TE it turned out that several of the participants considered their roles as being experts who would contribute with their specific knowledge to the elaboration of (research) projects, which would then be taken up by the researchers, further developed and implemented. On

the other hand, there were immediate claims of ownership, e.g. from policy actors who wanted to set up a food council, which they had conceptualised as a policy measure and not primarily an issue of research. Based on this experience, the Austrian team concluded that most participants' common understanding about roles and responsibilities of different societal actors persisted.

All CC teams were collecting feedback after each of the workshops from participants in order to figure out potential shortcomings and improvements for the subsequent workshops. This feedback mechanism was also able to highlight challenges in regard to roles and responsibilities of CC members as well as TE participants. However, since the questionnaire did not explicitly ask for issues related to roles and responsibilities, related feedback was reported only occasionally.

Transparency on aims and expectations as well as agreements on roles and responsibilities should be a starting point for the cooperative efforts. Moreover, the overall process should be guided by built-in regular communication and reflections about the appropriateness of roles and responsibilities, which might also change throughout the process.

5.1.3 Complex theoretical framework

Four of the five CC teams mentioned the challenge of translating the MISC, which was perceived to be abstract, dominated by complex scientific language, and therefore difficult to grasp by non-experts. Workshop participants and even some CC members found it challenging to fully comprehend the theoretical framework, which caused uncertainty and confusion. CC teams also reported about difficulties in communicating about (co-)RRI and its meaning.

CC members devoted considerable time and efforts into translating concepts and underlying theories in order to make the MISC more accessible and easier to understand for TE participants. Illustrative examples relevant to the topics at stake and co-creative re-interpretations of the MISC and (co-)RRI were considered particularly helpful in giving meaning to these abstract concepts for both the CC members as well as for workshop participants.

For detailed reflections of CC members on challenges related to the MISC see also chapter 2.1.

5.1.4 Competition, individual interests, power relations and group dynamics

While the Spanish and Italian teams reported mainly harmonious group dynamics, the three other teams encountered various issues concerning social processes during the implementation of their TEs.

One particular problem was that participants were holding on to their own agendas. In the Austrian TE, this caused shortcomings in real assimilation of other views and ideas. The impact on the working process of the Hungarian team was even more palpable with certain actors being reluctant to present their business ideas. In addition to this, the team noticed tensions among the various participating groups and individual actors throughout the process, all in all giving the impression that there might have been “[...] previous negative experience and lack of trust towards each other in the community [...]” (HU RWR 2017, p.8).

These examples show the profound need to anticipate possible existing social structures and their impact on group dynamics, hierarchies and consequently the working process, as well as the need to develop strategies to deal with this in a constructive way or even prevent negative developments.

Possible solutions to problems concerning social processes are reported for the Belgian and Italian TEs. In the Belgian case, active group dynamic management was the key to channelling the negative input of one particular actor into a more constructive form of participation. The Belgian team also found the MISC to be a useful tool for softening hierarchies between organisations represented in the TE.

The Italian team focussed on strategies to balance power relations from the beginning by setting general conditions for the whole working process ensuring that all actors could partake on an equal footing.

Apart from social processes among the participants, the Hungarian team drew attention to another important aspect, the emotional involvement of the team members. They report that a senior researcher explicitly and in a very emotional way expressed his concerns regarding hesitancy of the local actors. For this particular statement the researcher was heavily criticized by some CC members, and in turn led the Hungarian team to question the handling of emotions in regard to co-RRI. “To what extent are emotions allowed to be expressed by researchers, and what ways are the most constructive for expressing and handling emotions in a co-creation process by participants?” (HU RWR 2017, p.8)

If anything, this specific experience demonstrates that not only should participants be considered when discussing group dynamics and social structures, but emotionality should be considered as well. Team members, who are after all heavily involved in the working process and thus with the actors, have to be taken into account as well.

The Austrian team experienced considerable competition within the local research, which made strategic considerations about whom (not) to invite to the TE necessary. In this context, it was also important to convey clear and thoughtful communication within the TE group that the process would not be fully open to further participants. This touches upon the demand for openness within co-RRI as it appears to have its limits. While for some co-RRI activities it is essential to implement a fully open and inclusive form of actor engagement, in other cases there might be good reasons to rely upon invited participation. This also applies for highly contested fields, where it is difficult to reconcile diverging interests.

5.1.5 Consensus orientation

On one hand, participants were intentionally chosen to ensure that positions would not be too conflicting in order to allow for constructive discussions. On the other hand, the invitation of like-minded people and the implicit quest for harmony ran the risk of getting stuck in similar ways of thinking, and not questioning others' positions enough.

As the Austrian team concluded, *"Although the group was diverse in terms of actors, people were oriented towards building consensus, and tried to focus on shared interests and viewpoints. On one hand, this was not very advantageous in terms of fundamentally questioning prevalent basic principles or assumptions. On the other hand, we wanted the experiment to work smoothly, thus we had deliberately decided to go for similarly-minded participants. However, there was some potential for more rigorous new approaches (e.g. agricultural funding based on labour, not production or land, commons, sharing economies), but those ideas were not carried on. [...] It might have been interesting to have people in the group, who would have taken the role of the devil's advocate by introducing provocative positions."* (AT RWR, p. 7) They further reported that there was a general tendency to tackle issues by elaborating on ideas, which would imply taking the paths of least resistance. This represented a big challenge for the systemic approach we were aiming at.

Although CC members tried to point at root causes and controversial aspects at several times, the Austrian group tended to stick to the indisputable and comparably easy to implement ideas.

5.1.6 No funding for follow-up activities

If the jointly elaborated project concept cannot be implemented, most likely due to a lack of funding, other activities, even if only small ones, should be carried out to keep the initial cooperation alive. Otherwise there is certain risk that actors would – even after a very productive workshop series – go back to business as usual. To capture the momentum, it sometimes is even enough to arrange short informal meetings, as suggested in the Austrian TE. Many activities are not "world changing," but small activities. Even if these are not on a national or European level, it is necessary to start some action and give participants the feeling that something is happening, that we are taking action and not just talking. Thus, it would have been good to immediately identify 2-3 quick(er) activities and start with those (highly transparent and active) right away and plan other activities (maybe EC funding H2020) for the long term.

5.2 Opportunities & leverages

5.2.1 Availability of resources

The availability of financial resources for personnel and other costs by means of tailored funding in the scope of the Horizon 2020 project was experienced by all teams as a main enabler of the TE implementation. A particular advantage was that the funding also implied appropriate compensation for TE participants. For some participants this was a basic

precondition for them to be able to engage in the co-RRI experiment, for others it enhanced their commitment to invest a considerable amount of time by joining throughout the whole TE process.

5.2.2 Competence cell's competencies and diverse pool of expertise

All teams highlighted the importance of the CC's competencies and expertise for the successful implementation of co-RRI. Accordingly, it is crucial that CC members hold a certain expertise in designing and implementing multi-actor processes, which include process competencies, translation and social media skills. Moreover, it was useful when they had knowledge of the thematic field in terms of actor landscape as well as content expertise. The Hungarian CC team, for instance, broadened their pool of expertise by involving 'external' experts in addition to people from the FoTERRIS project team.

This allows for a professional implementation of co-RRI activities, which is even more important as co-RRI processes are highly experimental due to their context specificity. The Austrian CC for instance concluded "participants' feedback confirmed that our workshops were perceived very professionally. This was important for taking the experiment seriously. The TE showed that we are already well-equipped for facilitating further co-RRI activities as a competence cell at IFZ" (AT RWR 2017, p. 9).

5.2.3 Personal relationships, community building and networks of relevant actors

Personal relationships were of great help. The Austrian team reported that, the engagement of persons, with whom already a contact was established, was much easier than to approach people, who neither knew the CC members nor the IFZ. Moreover, the co-operation of participants who already knew and trusted each other was more efficient. Similar experiences were reported for the Spanish TE, where most participants already knew some of the other participants, allowing for a quick and easy set-up of a working community for the workshops. Also, the quick agreement on a shared goal for the collaboration was ascribed to the fact that the TE group members were already familiar with each other. However, this could also be detrimental, as pointed out by the Hungarian team. Tensions established between persons in previous contacts could also hinder the co-creation process.

As the Spanish team pointed out, for groups of actors who did not know each other before entering the TE, collaborative work practices in the beginning were useful to foster productive interactions: "Participants quickly feel part of a community, thanks to the activity for their introduction to the rest of the participants, and through group activities" (ES RWR 2017, p. 12).

For the Hungarian TE it was advantageous that a culture of active citizenship was already established in the case study area. There, a group of local citizens frequently practices participation, as they are active in local public issues. In order to give more room for local self-organisation, a dialogue-based, flexible process was designed from the very beginning. Moreover, the Transition Wekerle movement is well-known and has a good national network, which offered good opportunities for dissemination through local actors, and for invitation of representatives from other transition initiatives to the outreach/validation workshop.

Linking with already well-established groups and networks was also an advantage for the Italian TE. Access was granted to a data base from which the CC members could select contacts of people who were already engaged in previous energy transition related activities. Thereby they managed to engage highly committed participants in their TE. Similar to the Hungarian case, the close cooperation with local key actors was not only useful to identify relevant TE participants, but also to address them.

In the scope of the Spanish TE, a very active network dedicated to the topic of women & disabilities was set up, which members from the CC also engaged. Through this successful community building, the cooperation will go on beyond the FoTTRIS project for the implementation of follow-up activities.

5.2.4 Web-based platforms

The FoTTRIS web platform, but also other online tools, such as Realtime Board or facebook were supportive in various activities, such as for organising the process, for co-creative activities, to communicate, to share information and to coordinate follow-up activities. *“The platform help us as a Competence Cell to be coordinated. The implication of the majority of attendants made them to participate in the following workshops and to be interesting in take part in future projects. We used the FotRRIS Platform for the process of preparation, reflection and sharing of results. In the case of the Refugees TE, we will contact again with the resultant network to apply for a new H2020 with the topic of forced migration and to collaborate in other activities of innovation and social awareness.”* (ES RW The FoTTRIS web platform, but also other online tools, such as Realtime Board or facebook, were supportive in various activities, such as for organising the process, for co-creative activities, to communicate, to share information and to coordinate follow-up activities. *“The platform helped us as a Competence Cell to be coordinated. The implication of the majority of attendants made them to participate in the following workshops and to be interesting in take part in future projects. We used the FotRRIS Platform for the process of preparation, reflection and sharing of results. In the case of the Refugees TE, we will contact them again with the resultant network to apply for a new H2020 with the topic of forced migration and to collaborate in other activities of innovation and social awareness.”* (ES RWR 2017, p.13)R 2017, p.13)

5.2.5 Shared interests

Shared interests within the TE group did not only make the co-creation process easier, but it also supported the building of networks. Moreover, it enhanced participants' commitments to collaboration for future joint activities, e.g. applications for project calls. As pointed out by the Spanish team, shared interests also motivated an integration of a number of diverse ideas. They combined long-standing experiences from established actors with fresh ideas from refugees and students, and important and striking insights from disabled women in very innovative project proposals.

In Italy, the concept of RRI was presented as emphasising the co-creation of local solutions based on the engagement of local actors, while monetary interests would not be of relevance. This framing obviously triggered the TE participants to be committed to community well-being. As the CC members reported, *“From the first days of the TE, participants were motivated to think about benefits for local community if the innovative management model*

for the area were implemented, and to contribute their knowledge and experiences.” (IT RWR 2017, p. 10)

5.2.6 Word-of-mouth communication

The Belgian TE made valuable use of a highly efficient word-of-mouth communication culture within the ‘sustainability community’. News of the TE and the MISC framework spread very quickly within the community, and the competence cell soon received requests for initiating transition experiments in new domains (water).

5.2.7 Support from policy

A very important leverage was seen in getting support from policy. Issues, which are at the point of time high on the political agenda, attract attention by policy actors. This makes it easier to engage them in transition experiments. This is even more relevant when decisions or actions are planned to be taken in the near future. As e.g. reported by the Italian CC team, their transition experiment could be linked to the drafting process of the ‘National Strategy of Inner Areas’. This secured strong support from the local policy group (due to SNAI) to promote the energy transition in the local area. The Italian team used this window of opportunity to establish a close and active collaboration between the local policy group, the TE facilitator and the CC. This furthermore pushed the successful realisation of the ‘Madonie Living Lab’ in a short period of time due to open EU funding calls.

Similarly, the Hungarian transition experiment fit well into an ongoing planning process of the local government. In order to highlight this connectivity, local government experts were invited to all TE events.

In Austria the idea of establishing a ‘food policy council’ was very new to the policy representative from the municipality of Graz. As he was interested to learn more about the concept, the CC team provided him with information material, including good practice examples from other European cities. This all motivated him to introduce the concept to the mayor of Graz. Against this background, the CC reflects on the value of a window of opportunity to put topics on the political agenda: “If one is just working at the right time on the right topic (“window of opportunity”), it would not be necessary to invite a lot of people or initiate a big process; then talking with the one right person would be sufficient.” (AT RWR 2017, p 6)

Finally, the SDGs were considered to represent a strong leverage, as they generally count on broad political support. The Belgium team used this leverage “by framing co-RRR as a way to bridge the gap between the SDGs and the incumbent R&I system” (BE RWR 2017, p. 6)

5.2.8 Attention to the topic at stake

It is easier to attract attention for topics which are permanently present in the public discussion. For instance, the Belgium TE benefitted from the fact that concepts such as ‘circular economy’ and ‘sustainable waste and material management’ are well established in Flanders. As these topics currently receive a lot of public attention, it was quite easy to attract participants interested in the TE. “We used this opportunity by contacting the organisations

and public services that are involved in these developments. This means that there are many actors who ‘believe’ in a circular economy, but also know how far we still are from a more circular use of resources. This frustration motivated them to participate.” (BE RWR, p. 6)

6 Conclusions: lessons learnt and recommendations

This final chapter summarises the added value of the FoTTRIS approach, but also the weaknesses we identified. Finally, we conclude with recommendations directed to colleagues interested in following a similar approach. Recommendations directed to the realm of policy are compiled in a separate document, the FoTTRIS Deliverable *D4.3 Policy recommendations for co-RRl*.

6.1 The FoTTRIS co-RRl approach

To summarise, the approach for co-RRl – *co-created Responsible Research and Innovation*, as conceptualised within FoTTRIS, advocates for a joint responsibility in creating knowledge and taking actions for solving grand societal challenges, while respecting planetary boundaries. Ecological sustainability, social inclusion, and the acknowledgement of different forms of knowing represent the basic values co-RRl is committed to.

Co-RRl builds on the engagement of diverse types of stakeholders and citizens. It invites the R&I community and knowledge holders from other realms of society to engage in a process of knowledge co-creation in order to jointly address the local manifestations of grand societal challenges (*glocal* approach). All actors engaged hold relevant knowledge and bring in diverse perspectives about the problems at stake as well as possible ways to address them.

Co-RRl is always context specific. It goes along with new constellations of stakeholders, and varying roles for the actors involved, which go beyond conventional roles. It also differs regarding its reflexive potential from usual R&I practices. Co-RRl does not only imply discussions about the societal challenge to be tackled, but it also entails reflections about the envisaged contributions of R&I in addressing also hidden societal relevant issues. Moreover, co-RRl acknowledges the embeddedness of R&I into specific social, political, and economic contexts, and inherent values and norms.

Against this background, the practical implementation of co-RRl builds on processes, which go beyond usual R&I practices. Even if each co-RRl activity needs to be seen as a unique social experiment, it should be oriented towards the key characteristics of

- co-creation,
- inclusiveness,
- transparency,
- responsiveness,
- reflexivity, and
- process flexibility.

6.1.1 Added value of the FoTTRIS co-RRI approach

After putting the concept of co-RRI into practice through the implementation of transition experiments, FoTTRIS team members reflected on the added value of the co-RRI approach. They identified a multiplicity of gains from the transition experiments, which can be summarised as following:

The FoTTRIS approach

- provided evidence for the feasibility of the co-RRI idea
- gave structure to the elaboration of transdisciplinary project concepts
- gave room to experiment with various methods
- offered room for critical reflection on a variety of possible ways to tackle societal challenges and the role of R&I in that
- brought together a diverse pool of (local) actors, who had not worked together before, and initiated the building of multi-actor-communities (of Practice) and networks
- reconfigured relationships between different groups of stakeholders and enabled new actor constellations
- integrated a diverse pool of expertise in joint project concepts
- empowered informal knowledge actors to bring in their viewpoints and ideas
- challenged prevailing assumptions on root causes of societal challenges and (potential) ways how to address them
- enriched the perspective of TE participants, including the FoTTRIS team members

“Building a community of practice and creating a strong network of stakeholders is the biggest and most obvious added value”

“It helped to recognize each other’s role and importance of the contribution [...] in a specific topic [...] so complex, their multidisciplinary [meaning transdisciplinary] approach is necessary.”

“The setting of an experiments lets the outcome(s) open and leaves space for failure: in a normal, project orientated setting there is always the pressure to end in success”

“We have learnt the real meaning of RRI: researchers have to be aware of the reality of the groups that are involved.”

6.2 Lessons learned and recommendations

Although the overall assessment was that the FoTTRIS transition experiments were very successful, its implementation was not always an easy task. Certainly this experience involved a lot of learning for all actors engaged, and for competence cell members in particular. Although any co-RRI activity is context and content specific, thus unique, we would like to share in this final chapter what we learned by means of recommendations for peers, who plan to set up and facilitate co-RRI (like) experiments.

Competence cell members' skills and expertise:

The success of a co-RRI experiment heavily depends on the skills, competencies and expertise of the competence cell in regard to process competencies as well as concerning knowledge about the thematic field. Engage further people, who can bring in additional expertise in case necessary. Such an extension of the competence cell can even bring additional benefits, such as better access to the thematic field and related key actors.

Take enough time for the preparation:

The more familiar you are with the thematic field and the actor landscape, including their relationships, the better you can anticipate participants' needs and potential problems. Stakeholder mapping, eventually in co-operation with key actors from the field, is a useful tool to get a good overview of relevant actors. Exploratory interviews are useful to get an even more comprehensive picture. Note that the process will depend on the actors engaged, thus consider carefully the invitation policy (open vs. invited participation).

Take care of gender balance and diverse actor representation:

Figure out how the relevant actors could be specifically attracted, and consider that some actors only have the possibility to participate if monetary compensation will be offered. However, a great variety of actors does not necessarily also guarantee that all voices are heard, which needs to be considered when inviting participants as well as for the workshop facilitation.

Chose an appropriate location:

Be aware that rooms and settings may create hierarchies or uncomfortableness in terms of feeling out of one's element. Thus it is essential to choose adequate facilities that fit for a variety of people. This lowers the inhibition level for participating. Consider how the place can be reached, and take efforts to prepare a pleasant working atmosphere including space for informal discussion. If you decide for rooms in a formal R&I institution, unusual arrangements (e.g. cabaret setting, flowers on the table, snacks and drinks in the room) can help to make the atmosphere less formal. Drinks and good food, may also represent a kind of reward for participants' contributions.

Plan enough time for the co-RRI implementation

In general, the implementation of co-RRI activities need more time and needs to be adjusted to engaged actors' availability. Thus it is important to not only plan more time for the process itself, but also in regard to an extended overall time frame.

Use appropriate (ICT) tools:

ICT facilities can be very useful for interaction between and during face-to-face meetings, for documentation, information exchange and to support co-creative activities. Make sure to choose the most appropriate tools considering the purpose of use and participants' skills.

Set up a flexible step-by-step process:

Be aware that co-RRI processes should be able to react to upcoming needs, and that it might be necessary to change the course of planned activities. Therefore, it is crucial to keep a flexible process design, and to be mindful of the given scope of action for the competence cell as well as for other engaged actors. Follow an iterative step-by-step approach for designing each event based on learning lessons from previous ones.

Although process flexibility is crucial, it is still important to set roles and responsibilities, and to formulate expectations in agreement by all actors involved from the beginning.

Keep complexity of methods low:

Either methods of little complexity should be used, or you need to ensure that everybody knows exactly what to do, before the activities start.

Theoretical background might be relevant for researchers and those realizing the workshop (facilitators), but participants should not be distracted with theoretical models unless they can be explained in an understandable way. Thus keep the theoretical content within the workshops simple, and focus on practice-related issues. Visualisations are often helpful to grasp complexity.

Ensure proper translation:

Linguistic challenges as well as making complex topics accessible for all participants turned out to be a challenge in one way or another for all transition experiments, specific attention need to be drawn on proper translation. This considers technical language as well as for general language skills. Particularly for multicultural participant groups, support from professional translators might be essential to ensure that everybody could easily articulate in her/his mother tongue.

Use different settings:

Use settings in smaller groups and not just plenary discussions, and use different methods/formats. This helps to keep people actively involved in the discussions and to give everybody a voice and a chance to bring in her/his expertise. Depending on the particular

actor constellations, it is sometimes necessary to also moderate small group activities to balance dominance.

Allow for dissent:

Encourage participants to also stick to non-mainstream positions, and ensure that also minority positions are recognised. As it is very likely that in multi-actor-groups a variety of even diverging or conflicting viewpoints exist, it is important to make them visible in order to handle them in a constructive way.

Finally, FoTTRIS recommends to ALL actors engaging in co-RRI:

- be open, tolerant, constructive, and patient
co-RRI is a learning opportunity for yourself!
- be ready to go beyond usual ways of doing research
what research is, will be redefined in co-RRI!

Annex 1: Template feedback questionnaire

Part 2: Feedback-instrument for participants of FoTTRIS workshops

We ask you to please give us feedback on today's workshop by answering a few question on a scale from 1 to 5; 1 means excellent/very good, 5 poor/very bad.

The organisation of the workshop (invitation, room, facilitation, ...) was

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

The format of today's workshop suited me

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

The moderation of today's workshop was

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

I think the achievements of today's workshop are

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Do you want to give us additional feedback on today's workshop?

THANK YOU!

Annex 2: Workshop evaluation questionnaire

Reflections of facilitators of FoTTRIS workshops

General reflections

Each present FoTTRIS team member and/or additional workshop moderator (facilitators) reflected on each workshop right after the event. In the following the different perspectives and reflections are comprised per method used in the respective workshop.

Lessons learned

(Did the workshops work out like planned? Please describe what worked well and what needed/would need adjusting. What would/will you change for the next workshop series?)

Assessing the achievements

(How do you assess the achievements of the workshop? Please describe the goals of the workshop, and how they could be reached.)

Assessing the FoTTRIS web platform

(How did you use the FoTTRIS web based platform? What would help to make better use of it?)

Specific reflections about the MISC and other used methods

Appropriateness

[Was the workshop format appropriate for the topic and the respective aim of the workshop?]

Implementation: added value(s) & challenges

Systemic approach – MISC

(What was the added value of the MISC? Did the MISC deliver new insights on the topic at stake? Did the MISC help to make several paths / leverages for change visible? Did the MISC help to identify lock-ins?)

What was challenging in regard to applying the MISC?
(Explaining the rationale behind (systems thinking) ; Translating the scientific termini properly (please also consider other “language” related aspects in your reflections – as discussed in the SB meeting 31/01/2017) ; Complexity of the implementation process)

Visioning

Other used methods

Annex 3: Reflection Workshop Guidance



IFZ Reflection Workshop Documentation

Report structure

Introduction

Please describe briefly how the reflection was implemented. In case you did not follow the guidance, please add a brief statement why you could/did not do so.

1. Relevance of Co-RRI elements in practice

Description of those Co-RRI elements, which were most relevant for the implementation of your Transition Experiment.

Why did you put particular emphasis on these specific elements?

1.1. Systemic approach, sustainability, co-creation

Description (based on your answers to the Questionnaire for Reflection Workshop part 1) of the following aspects:

- **new insights/ paths for change/lock-ins/root causes of the identified problem(s) to be tackled**
(What kind of new insights/ paths did the TE deliver for change/lock-ins/root causes of the identified problem(s) to be tackled? In which regard does the PC actually address the root causes of the topic(s) addressed?)
- **Potential contribution to reinforcing sustainability/societies' resilience**
(In what respect will the planned project reinforce sustainability/societies' resilience?)
- **Co-creation**
(How were various knowledges/expertise/resources mobilised for the elaboration of the PC? In what respect does the PC provide room for further knowledge co-creation?)
- **Continuity of started activities**
(Which strategies did you and other actors (e.g. TE participants) develop to support the continuity of the transition arena and/or Competence Cell?)

1.2. Responsiveness

Description (based on your answers to the Questionnaire for Reflection Workshop part 1) of the following aspects:

- **Participants' needs**
(In what respect did the TE consider/react to participants' needs and/or concerns?)
- **Flexibility to react to upcoming needs & concerns during the process**
(How can the PC be adjusted according to needs and/or concerns addressed by those, who are supposed to participate in the project implementation?)
- **(inherent) political/societal relevant aspects**
(How did reflections on (inherent) political/societal relevant aspects take place during the TE? Which (inherent) political/societal relevant aspects are tackled in the PC?)

1.3. Transparency and accessibility of information

Description (based on your answers to the Questionnaire for Reflection Workshop part 1) of the following aspects:

- **Transparency**
(How did you guarantee for transparency concerning the aims of the TE, rules for the implementation, represented interests, decision making?)
- **Accessibility of relevant information**
(How and which information did you make accessible for TE participants? Which measures are planned that will make the project outcomes accessible for a broad range of societal actors? How did you inform the public/specific societal groups about what was going on in the TE?)

1.4. Reflexivity and anticipation

- **Reflexivity**
(Did the group reflect on potential impacts of ...?)
- **Anticipation**
- Does the CORRI-PC include tasks dedicated to the anticipation of potential impacts?

1.5. Participation, inclusiveness and equality

Description (based on your answers to the Questionnaire for Reflection Workshop part 1) of the following aspects:

- **Participants**
(How did you succeed to include the most relevant actors as participants? Which important actors were not participating in the TE? Why do you think they were missing?)
- **Roles and responsibilities**
(What was the role/mandate of the TE participants?)
- **Managing diversity and equality**
(Which measures did you implement to balance power relations and/or tensions between TE participants? Which equality measures are considered in the PC?)

2. (Systemic) Barriers, opportunities and leverages

Summary to be filled in tables (based on your answers to the Questionnaire for Reflection Workshop part 1):

2.1. (Systemic) Barriers

(What kind of (systemic) barriers were you confronted with during the implementation of your transition experiment? To what extent were these barriers relevant? (relative relevance) How did you tackle/overcome the (most relevant) barriers mentioned above?)

Description of barrier	Relative relevance:	Strategies to handle

Relative relevance: 1 (little relevance) – 5 (very relevant)

2.2. Opportunities & leverages

(Which opportunities and leverages were supportive for the implementation of the TE? (circumstances, institutions, actors) ☐ Which strategies did you develop in order to make good use of these opportunities and leverages?)

Opportunity / leverage	Relative relevance: 1 (very low) – 5 (very relevant)	Strategies to handle

3. Impact assessment

Description of the following aspects based on the impact spider diagram elaboration (Reflection Workshop part 2) and related discussions (please also provide a picture of your spider diagram, which indicates to which extent you have reached your goals). Since it is quite likely that impact actually might manifest only at a later point in time, please also address impacts, which may potentially result from the Transition experiment.

3.1. Changes in the local/national/(EU-level) R&I system

Please describe:

- the goals you have defined in order to achieve an impact (e.g. enhancing Co-RRIness of other planned/ongoing R&I activities/projects)
- in which regard and how did you already achieve an impact (e.g. pointing to the relevance of social justice => social justice will be considered in further steps of the planned/ongoing R&I activities/projects)

Description of goal	In which regard reached?	How did you achieve the impact?	Remarks

3.2. Impact in regard to the topic(s) at stake

Please describe:

- the goals you have defined in order to achieve an impact (e.g. setting up a Food City Council in Graz)
- in which regard and how did you already achieve an impact (e.g. initiation of first activities by pointing to good practice examples, by linking people, who are interested on bringing the issue forward, by having a key person from the City council on board, by networking with people, who are planning similar activities in two other Austrian Cities)

Description of goal	In which regard reached?	How did you achieve the impact?	Remarks

4. Lessons learnt & recommendations

Description (based on your answers to the Questionnaire for Reflection Workshop part 3) of the following aspects:

4.1. Added value of the FoTTRIS approach

(What was the added value of the Transition Experiment(s)?)

4.2. Weaknesses of the FoTTRIS approach/TE design

(What would we do differently the next time?)

4.3. Recommendations

(What can we recommend to others, who would like to implement similar Co-RRRI activities? Any recommendations to other actors?)

Please compile a list of recommendations, and indicate, if relevant, to whom they are directed:

Recommendation	addressee
A	general
B	R&I funders
...	...

Annex 4. Template evaluation report

Partner template for task T3.3 – Part1



Evaluation of multi-actor experiments

Authors:

Institution:

Country:

Date:

Template by Anita Thaler & Sandra Karner, IFZ

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Partner template for task T3.3 – Part1

1 Workshop settings

In this section, the context of all workshops will be described. This aims at situating the knowledge with the thematic as well as local context, and at transparency, so that interested readers can reproduce the workshop settings.

1.1 Workshop 1

1.1.1 Location

1.1.2 Facilitation

1.1.3 Invitation

1.1.4 Preparatory information

1.2 Workshop 2

1.2.1 Location

1.2.2 Facilitation

1.2.3 Invitation

1.2.4 Preparatory information

1.3 Workshop 3

1.3.1 Location

1.3.2 Facilitation

1.3.3 Invitation

1.3.4 Preparatory information

Partner template for task T3.3 – Part1


2 Gender and diversity of participants

The numbers in this section represent cumulated data for all three workshops.

Sector of participants							Total	In %
Gender	NGO	Business/ Industry	University/ Research	Policy	Citizens	...		
Female								
Male								
Unknown								
Other:								
Total								100%
In %							100%	100 %

Table: Number and percentages of invited participants for each category regarding gender

Sector of participants							Total	In %
Gender	NGO	Business/ Industry	University/ Research	Policy	Citizens	...		
Female								
Male								
Unknown								
Other:								
Total								100%
In %							100%	100 %

Table: Numbers and percentages of actual present participants for each category regarding gender

Partner template for task T3.3 – Part1



3 Statistical analysis of participants' feedback

All participants were asked to fill out a feedback instrument concerning the methods and general evaluation of the workshop, right after the respective event. The feedback scale from ranged from 1 to 5; 1 meaning excellent/very good to 5 poor/very bad. In the following each workshop will be portrayed with accumulated statistical data (average feedback per workshop).

3.1 Workshop 1

Average grade of the organisation of the workshop (invitation, room, facilitation, ...):	
Average grade of the format of the workshop:	
Average grade of the moderation of the workshop:	
Average grade of the perceived achievements of the workshop:	

Additionally, the participants had the possibility for verbal feedback on the workshop, here they stated:

3.2 Workshop 2

Average grade of the organisation of the workshop (invitation, room, facilitation, ...):	
Average grade of the format of the workshop:	
Average grade of the moderation of the workshop:	
Average grade of the perceived achievements of the workshop:	

Additionally, the participants had the possibility for verbal feedback on the workshop, here they stated:

3.3 Workshop 3

Average grade of the organisation of the workshop (invitation, room, facilitation, ...):	
Average grade of the format of the workshop:	
Average grade of the moderation of the workshop:	
Average grade of the perceived achievements of the workshop:	

Additionally, the participants had the possibility for verbal feedback on the workshop, here they stated:

Partner template for task T3.3 – Part1



4 Reflections of facilitators of FoTTRIS workshops

4.1 General reflections

Each present FoTTRIS team member and/or additional workshop moderator (facilitators) reflected on each workshop right after the event. In the following the different perspectives and reflections are comprised per method used in the respective workshop.

4.1.1 Lessons learned

(Did the workshops work out like planned? Please describe what worked well and what needed/would need adjusting. What would/will you change for the next workshop series?)

4.1.2 Assessing the achievements

(How do you assess the achievements of the workshop? Please describe the goals of the workshop, and how they could be reached.)

4.1.3 Assessing the FoTTRIS web platform

(How did you use the FoTTRIS web based platform? What would help to make better use of it?)

4.2 Specific reflections about the MISC and other used methods

4.2.1 Appropriateness

[Was the workshop format appropriate for the topic and the respective aim of the workshop?]

4.2.2 Implementation: added value(s) & challenges

4.2.2.1 Systemic approach - MISC

(What was the added value of the MISC? Did the MISC deliver new insights on the topic at stake? Did the MISC help to make several paths / leverages for change visible? Did the MISC help to identify lock-ins?)

What was challenging in regard to applying the MISC?

(Explaining the rationale behind (systems thinking) ; Translating the scientific termini properly (please also consider other “language” related aspects in your reflections – as discussed in the SB meeting 31/01/2017) ; Complexity of the implementation process)

4.2.2.2 Visioning

4.2.2.3 Other used methods