D7.4 Synthesis Report on reflection and learning across Social Labs with regards to RRI

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Contents

1 Executive Summary

This report represents a core document of the NewHoRRIzon project. It compiles the results from all 19 Social Lab (SL) processes and pilot activities and provides an analysis on the reflective observations from the Social Labs. This reflective process that guided the labs and the pilots from the very beginning was carried out by the Social Lab managers, facilitators and WP leaders.

The Social Labs are regarded as "the central spaces for the analysis of existing experiences and the formulation of future reactions and activities to promote the uptake of RRI" (DoA, p. 8). Each Social Lab was running through what Kolb called "experiential learning cycles" (Kolb, 2015) of "concrete experience, reflective observation, abstract conceptualisation, active experimentation" (ibid.). The work in the labs was accordingly organised with the structure of a series of (mostly three) face-to-face lab workshops. After each workshop one learning cycle was reflected and fed back immediately to the Social Labs, starting a new learning cycle. Now, at the very end of the Social Labs, this circular process is captured by a structured analysis and compiled to a synopsis. It allows drawing conclusions on learnings, experiences and insights made during the lifetime of the pilots.

Consequently, this document outlines the framework and its methodology, presenting results and discussing them. At the same time recommendations but also barriers and pitfalls for Social Lab experiments are presented to provide a further understanding of successful Social Lab processes.

Finally, it discusses the potentials Social Labs can have on Lab participants and their environment, given that certain conditions are met which are outlined in this document as well.

2 Introduction

According to the DoA, the scope of D7.4 is: "Based on its qualitative outcomes and all collected data, ZSI will create a synthesis of Social Lab experiences, which will feed into WP9". The main source for the qualitative analysis stems from the joint Social Labs reporting template elaborated by WP7, WP8 and WP9 as will be described later. Although the three work packages shared the reporting template the resulting work package deliverables have different foci. While D8.2 for instance compiles the output of the project, D7.4 provides a comparative description of Social labs with a focus on the work done by Social Lab teams and group dynamics, methods and process as well as the extent to which Social Lab objectives have been reached.

The Social Labs as applied in the NewHoRRIzon project, mainly consisted of three pillars (as Figure 1 below shows): a series of 3 face-to-face workshops; pilot activities, meaning real life experiments, implementing and evaluating ideas to address identified challenges; as well as the building up of communities of practice with the lab teams and their networks and the institutions and contexts in which the pilot activities have been implemented; and of course all publication and dissemination activities which tell about the labs and the pilots. Within a timespan of more than one and a half years these activities took place in all 19 Social labs in parallel and were reported to provide insights in the experiences made. The Social Labs themselves were implemented to address the 19 programme lines of Horizon 2020[1] with the aim to experiment with pilot actions for the promotion and application of RRI in various fields.

[1] ttps://ec.europa.eu/programmes/horizon2020/h2020-sections

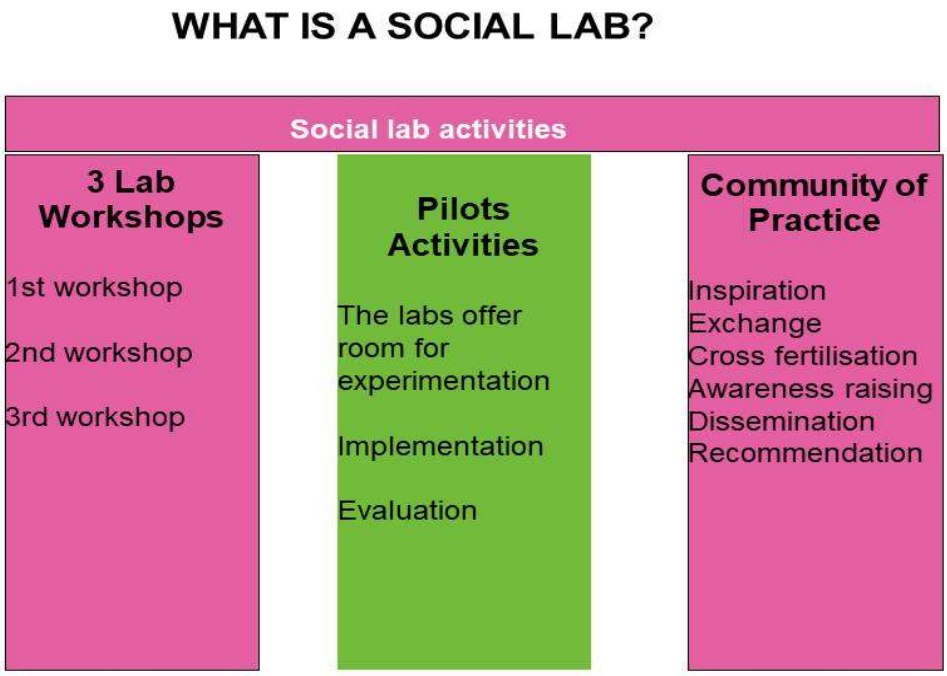

Figure 1: Powerpoint presentation SL 4, WS 1

For each of the three planned Social Lab Workshops a generic design for the agenda of the workshops has been set up amongst the project consortium and shared with the Social Lab Managers and Facilitators. Building on the experiences made in the Social Labs, this section elaborates on the methods used in practice to achieve specific aims, and also condenses common challenges and implemented solutions.

While the concrete development and active experimentation with pilot activities is performed from WP2 to WP5, WP7 is dedicated to their reflective observation (reviewing and monitoring expected impact) as well as its analytical synopsis of lessons learned across Social Labs. Social Lab managers observed and reviewed – in collaboration with WP8 – the performance of the different Social Labs. They reflect upon achieved outcomes of the actions and activities developed with the goal to learn from the experience, to draw conclusions, and to improve the design and implementation of the active experimentation and concrete experience performed in their Social Labs. These insights were fed back, allowing a further learning cycle for the Social Labs. Thus, each Social Lab ran through a series of "experiential learning cycles"(Kolb, 2014; Moon, 2013) dedicated to the development, testing, evaluation and re-design of actions addressing issues that have been identified in diagnosis. The developed pilot actions were assessed and re-designed based on the concrete experimentation and adapted in the next cycle.

The experiential learning was additionally reflected in two cross-sectional workshops in which the leaders of the different WPs as well as all Social Lab managers and teams participated. The gathered data served also for the Cross-Social Lab comparison and gave inputs for different tasks in WP9.

Thus, the scope of this deliverable is structured in the way that it describes the process and the outcomes of the 19 Social Labs from a meta-perspective. It is important for the reader to provide an understanding on how the data were gathered ('Methods' chapter 3).

Consequently, chapter 3 describes (1) the methodological approach of the data collection from Social Lab managers and the documentation of the cross-sectional workshops, (2) the data sources and the (3) analytical lens with the code-tree resulting from a mix of deductive and inductive coding in the qualitative analysis process.

Chapter 4 outlines in detail the results from the analysis which follow the codes identified, i.e. deductive (previously defined) and inductive codes (emerged from the material in the coding process) The key subchapters describe RRI in general with identified barriers and potentials, the Social Labs teams and different roles as well as aspects of group dynamics and fluctuation in the SLs. Another subchapter in this section names all the different methods applied in the Social Labs as means for introducing RRI, for pilot idea development, pilot idea selection, methods for identifying pilot hosts and methods for further development and fine-tuning of the pilot actions. Results in 4.4 relate to the Social Lab process, from the art of setting up the Social Lab and a welcoming atmosphere (Art of hosting), different phases of the Social Lab, cross-sectional exchange, challenges encountered and process reflections. Pilot actions and related issues are described in chapter 4.5.

Chapter 5 summarises the lessons learned and answers questions on impact, reflects the results and discusses the implications on science, society and politics and gives recommendations for implementation of RRI in Social Labs (and beyond).

3 Methodological approach

Chapter 3 describes firstly, the data sources i.e. the Virtual Social Lab, the Social Lab reportings as well as the documentation of the two cross-sectional workshops. Secondly, the analytical lens and the methodological approach with a combination of inductive and deductive qualitative content analysis are detailed in this chapter.

3.1 Data Collection

The data analysed in this report stems from different sources, which are described in more details in the following sections:

1. The virtual social lab
2. Social lab reporting templates: 19 Social Labs filled in the reporting templates after each of the three workshops resulting in 58 documents overall
3. Documentation of two cross-sectional workshops

3.1.1 Virtual Social Lab

In order to facilitate data collection from all 19 Social Labs, ZSI and IHS set up the virtual social lab (VSL, D.7.1) in June 2017. This platform was intended to foster cross-lab exchange of experiences and keep communication accessible and transparent. The initial version of the VSL was conceptualised as a blog. Based on the feedback of project partners it was changed to a forum. The forum was divided in different areas corresponding to the different steps in the project. Project partners were clearly instructed how to use the forum and invited on a regular basis to contribute their experiences on a specific step in the project. Others were invited to reply to these posts to foster the exchange of ideas and commonly reflect on experienced challenges. While it was supposed to be only open to those work packages that organise Social Labs themselves (WP2, 3, 4 & 5) in the beginning, it was opened to all work packages to discuss important issues.

The virtual social lab, however, did not advance as a major communication tool and did not succeed in replacing (mostly individual) e-mail-based discussions as well as regular consortium calls and face-to-face meetings. This might be due to the fact that the project has established several communication channels. Monthly WPL calls as well as regular WP calls have been set up, the virtual space Nextcloud is used to share documents.

3.1.2 Social Lab Reporting Templates

In collaboration with WP8 (Evaluation and overall narratives and storylines) and WP9 (Knowledge diffusion, project communication, and generation of long-term impact), ZSI developed a specific reporting template for each of the three SL workshops, to be completed by the Social Lab management teams before and after each of the three Social Lab workshops, resulting in six slightly adapted reporting templates:

- Moment 1: to be filled before workshop 1
- Moment 2: to be filled after workshop 1
- Moment 3: to be filled before workshop 2
- Moment 4: to be filled after workshop 2

- Moment 5: to be filled before workshop 3
- Moment 6: to be filled after workshop 3

While Moment 1, 3 and 5 to be filled before the workshop were particularly relevant for WP8, moment 2, 4 and 6 to be filled after the workshop comprised each a section relevant for WP7. And were thus fed into the qualitative analysis base (c.f. section 3.2).

The first set of templates was developed for workshop 1 of the social lab and included questions on the organisation of the workshop, its content and the methods used. The Social Lab reporting template was updated for workshop 2 of the social lab. The focus for measuring moment 4 and moment 6 was placed on the pilot actions and their sustainability.

3.1.3 Cross Sectional Workshops

The first cross sectional workshop took place on 24th and 25th October 2018 at Reichenau/Rax and invited all social lab managers and facilitators for a two-day retreat for learning and reflection and elaborating the social lab method and the pilot activities further.

Figure 2 ***Group photo on the 1st Cross sectional workshop (1st CSW)***

The workshop group consisting of all Social Lab managing teams, advisory board members and the project officer, discussed challenges and potential solutions mainly concerning the roles of the lab manager and facilitator, the project outlines provided, the structure of the Social Lab, the Common

Understanding of RRI, as well as group composition and recruitment for the Social Lab teams. Commonly, the workshop group reflected on the learning and exchanged on existing pilot activities, their categorisation and synergies between them. Advisory Board members additionally gave fruitful feedback.

The second cross-sectional workshop was meant to be held as a face-to-face event in March 2020 in Vienna. But due to the upcoming corona crisis and the first signs of an expected general lockdown across Europe, the project management team decided to cancel the event and postpone it to a later date when the situation would have become better again. Unfortunately, because of the ongoing pandemic, in autumn 2020 the travel restrictions still did not allow for a face-to-face meeting. Therefore, the entire event was transformed into a two days online format. (See the detailed documentation of 2nd CSW in the annex).

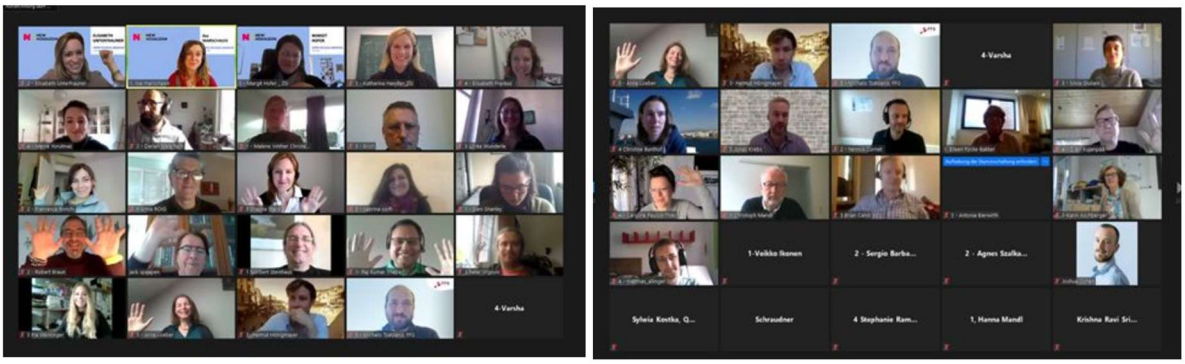

Figure 3: Group photo (day 2) 2nd Cross sectional workshop (2nd CSW)

Compared to the first cross sectional workshop, the second one not only included social lab management teams, but additionally Social Lab participants, oversea partners and observers, which built a large group of 77 participants in total.

In detail, the group composition was as follows:

in terms of role in the project:

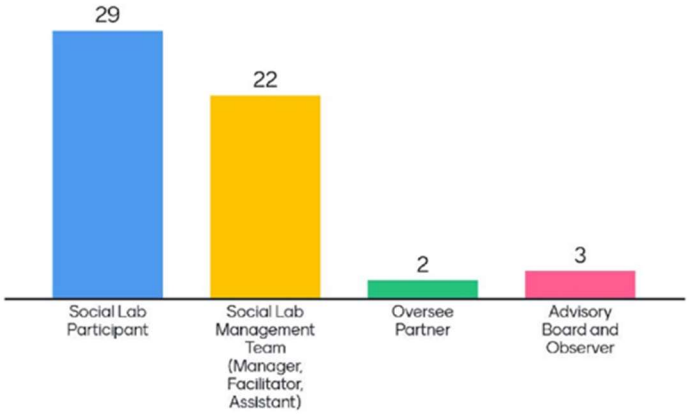

Figure 4: Mentimeter Poll: What is your role in the project?

In terms of stakeholders:

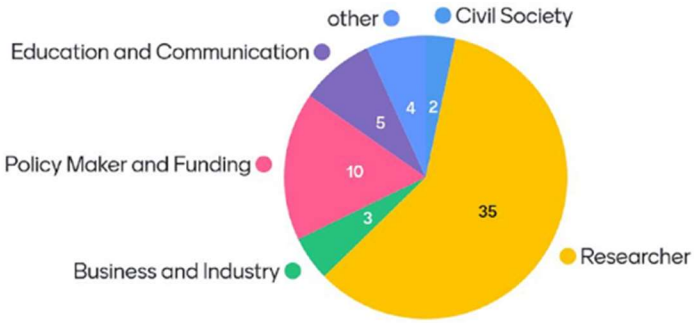

Figure 5: Mentimeter Poll: Which stakeholder group do you represent?

The meeting mainly consisted of 4 live sessions, fostering as much as possible interactivity, providing group works in smaller break out rooms. As it is recommended not to schedule too much time for real time online sessions, we provided much information on slack channels which could be assessed any time, so that it did not take up too much time for long presentations during the live sessions. Furthermore, the documentation of the meeting, miro boards and presentation slides were shared after each live session in order to allow participants to have a look in retrospect or others who had missed the session.

The workshop allowed for presenting an overview of the different labs. Based on this and lots of other information gathered for the workshop and shared via a Slack channel, the group reflected on the pilot actions. Resources shared on Slack channel for instance comprised: Two-pages with the descriptions

of all pilot actions, short videos produced by pilot hosts, and different output materials produced in the pilots. Five parallel groups discussed the activities according to a rough categorisation (case studies, best practice, and institutional change; training; workshops and events; dissemination and awareness raising activities). In these discussions, especially the lab participants could bring in and exchange their firsthand experiences.

On the next day, the group reflected on the Social Lab approach discussed the methods applied in the Social Labs, the sustainability of pilot actions, next steps for still ongoing pilot activities, institutionalisation and the role of hosts as agents of change, as well as RRI in evaluation. All groups compiled and documented what had worked and what did not work during the process, lessons learned and recommendations.

(See the detailed documentation of 2nd CSW in the annex).

In general, the meeting was assessed as fruitful and the exchange between managers and facilitators across Social Labs was regarded as important. An exchange between labs is extremely important, allowing the lab teams to learn from each other and to transfer experiences from lab to lab. Besides the two cross-sectional workshops this cross learning was only possible when lab managers happened to manage more than one lab: "*A privilege of practice testing reserved for SLMs managing two labs*" (SL 8, WS 2). "*The combined workshop of two Social Labs actually added more enthusiasm to learn about the similarities and differences in the pilot actions that the groups are working on"* (SL 2, WS 3).

3.2 Analytical lens

All documents (two cross-sectional documentations, 58 SL reportings from moments 2, 4 and 6) were fed into the qualitative analysis software package MAXqDA.

The collected material was analysed with qualitative analysis methods in an explorative and structuring way combining deductive and inductive coding approaches. After Mayring (Mayring, 2014), in content analysis communication is analysed in a systematic manner, according to defined rules and theory driven with the aim to draw conclusions on the applied questions, which are in our case: the experiential learning cycle, its reflective observation and finally an analytical synopsis.

The coding system to develop allows for a systematic analysis of the data, while the rules for applying the codes have to be fixed in a codebook with the purpose to increase reliability and validity across different researchers working with the same material. While there is a variety of techniques for interpretation available in qualitative research (c.f. Mayring, 2014, p. 63-64), classification and structuration are the most appropriate forms of interpretation for our cases. The aim here is to explore the data material according to the defined rules and categories (codes) and to identify data material to be associated to these categories or codes. In the coding process, the researcher goes through all the material and allocates text passages, the so-called codings, to the specific codes.

For the qualitative analysis we chose a mixed approach of deductive and inductive coding. While deductive coding is based on a codebook with predefined codes, inductive coding allows for the unexpected while going through the material.

The codebook comprised already the main categories of the analysis, i.e. SL teams, pilot actions, methods used in SLs, as well as an additional hierarchical sub-layer. For each of the categories the codebook indicates keywords to look for, the source (e.g. which template and which question in the template are most relevant) and the nature of the qualitative information. The codebook is a helpful guide when going through the material to detect the deductive codings or quotes (i.e. snippets of text that are allocated to the specific code) and enhances the objectivity and reliability of the coding process. Three researchers went through the material and made sure to also include loops for cross-checking to safeguard that all followed the same approach. While going through the material inductive codes arises directly from the material adding more hierarchical layers to the already predefined structure.

The code-tree resulted in three hierarchical layers as can be seen in the following table.

Table 1: Coding tree

List of Codes	Frequency of codings
Total number of codings	**1953**
1 . RRI	**37**
RRI potential	**139**
RRI burden	**131**
2. SL Teams	**7**
Group composition	**6**
Group dynamics	**125**
Fluctuation	**75**
Roles	**3**
Manager	30
Facilitator	30
pilot host/sponsor	14
3. Pilot actions	**6**
Overview	**108**
Changes and challenges	**79**
Goals	**16**
Reached goals	30
Not reached goals	8
Sustainability	**26**

Enablers	58
Barriers	40
Institutional fit	**58**
Lessons learnt	**107**
4. Methods used in Social Lab	**38**
narrative development	**7**
RRI Intro/Input/Reflection	**138**
for identifying pilot hosts	**9**
Locations	**19**
for pilot ideas	**51**
for choosing pilots	**29**
Pilot action development/support after selection	**119**
5. Social Lab approach (process)	**21**
Hosting (art of)	**11**
Cross-sectional exchange and learning	**21**
challenges	**97**
SL in general	**2**
Invitation to participants	91
Intervals between workshops	31
Process reflection	**19**
Reached objectives	93
Not reached objectives	24

4 Results

This section on results has been structured according to the deductive and inductive codes as shown in the coding tree above. After a short overall description of main quantitative figures on the participants, the following sub-sections are dedicated to the results of the qualitative analysis. In Section 4.1 we describe the results on RRI in general (4.1) – the opportunities and barriers for RRI as perceived by Social Lab participants; viewing the Social Labs from the implementation perspective the following sections on the Social Lab team (section 4.2), their different methods (section 4.3), the connected processes (section 4.4), as well as the co-developed pilot actions and activities (section 4.5), are outlined.

With nearly 2000 codes, many results could get extracted from the qualitative analysis of the different data sources. So what are the findings of this extensive work?

Overall, the 19 Social Labs had 314 persisting members, 121 lab participants dropped out at some point during the process. The gender distribution was perfectly balanced with 50% female and 50% male participants. The following figure shows the distribution of participants according to their country of residence.

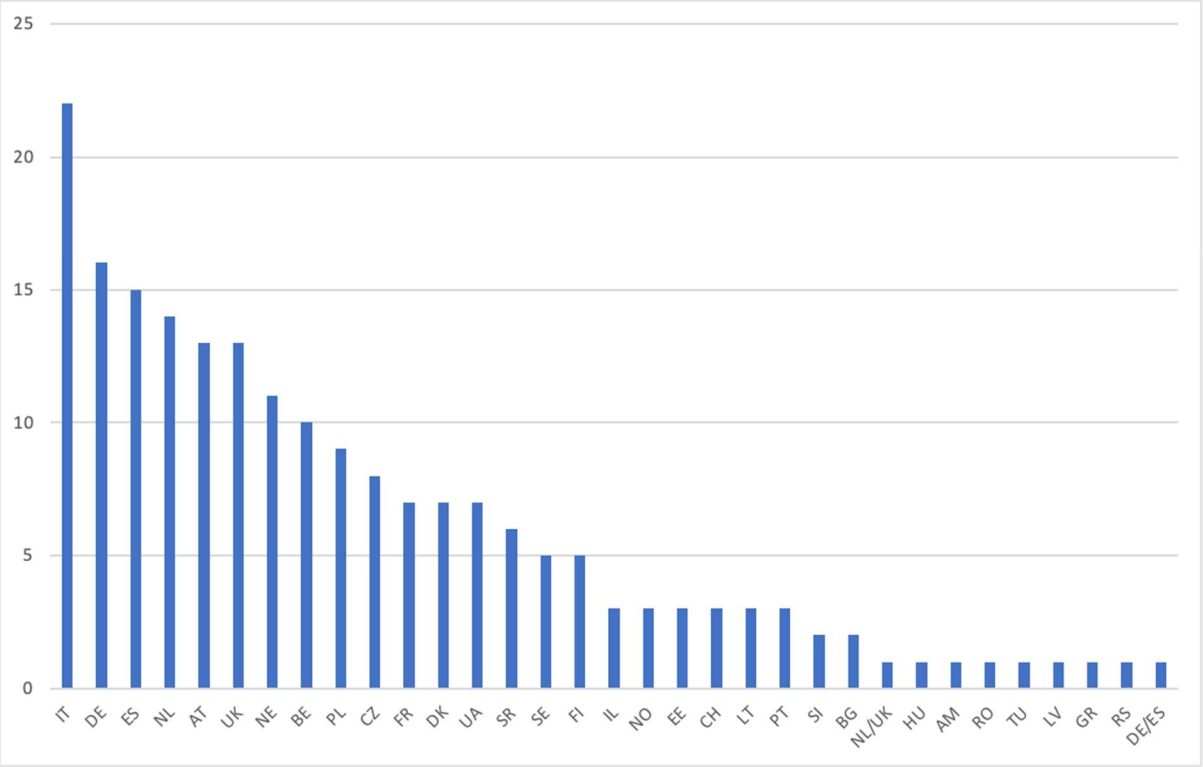

Figure 6: Lab participants according to country of residence

4.1 RRI in general

4.1.1 The identified potentials of RRI

While barriers of RRI implementation were strongly present in all Social Labs, the potentials of RRI were put at the centre of the Social Lab process in order to foster a common sense of agency to attempt creating RRI pilot actions in the first place.

Across several Social Labs, the institutionalisation of RRI was seen as supporting the changing relationship of science and society, modifying each other's roles and tasks (e.g. SL3, WS1; SL4, WS1; SL7, WS1; SL9, WS1; SL17, WS1; SL7, WS2; SL14, WS2). RRI hence, has the potential to create an *"antidote to technocracy and 'expertocracy'"* (SL1, WS1) by questioning the imposed hierarchies between scientific knowledge and other kinds of knowledge and working transdisciplinarily (e.g. SL18, WS1). RRI could facilitate a *"better societal embeddedness of science and research"* (SL4, WS1) in general. This change implies on the one hand that societal stakeholders are no longer passive receivers of scientific results, but actively involved in the research process and putting forward research questions themselves in participative agenda setting processes (e.g. SL9, WS1). On the other hand, this re-definition also changes the role of science in society. RRI was seen as an opportunity for broadening researchers' perspectives, tying elements of *"social responsibility and justice"* to research and *"becoming (again) 'Renaissance' people"* (SL1, WS1).

By including society in research and innovation processes, also the visibility of research in society could rise (e.g. SL1, WS1). By making research and innovation processes more transparent, RRI also has the potential to increase the motivation and recognition of the actors involved (e.g. SL1, WS1; SL4, WS1; SL9, WS1; SL11, WS1) as well as to increase trust in science (e.g. SL13, WS1). For example, in Social Lab 13 on Secure Societies (WS1) *"trust-based relationships with various stakeholders could boost new business opportunities".* Transparency and implementation of open-access research also contributes to new findings and creating a common knowledge base from where to continue with research (e.g. SL4, WS1; SL9, WS1).

A changed science-society relationship could enable transformations of a variety of research institutions such as universities (e.g. SL9, WS1) and museums (e.g. SL4, WS1). Also, RRI needs to be institutionalised across several levels and also included in the education systems to facilitate this new science-society relationship (e.g. SL1, WS1; SL9, WS1). The way responsible research can look like needs to be defined from a bottom-up and field specific level, configuring RRI as a dynamic and responsive element (e.g. SL4, WS1).

RRI also enables questioning existing hierarchies within research teams (e.g. SL4, WS1) and organisations. By supporting disadvantaged researchers (such as early career researchers, researchers from not financially strong institutions …), RRI can create equal opportunities (e.g. SL1, WS1). RRI was further seen as window of opportunity to create new partnerships and alliances (e.g. SL3, WS1; SL4, WS1; SL7, WS1; SL9, WS1; SL11, WS1; SL10, WS2), whereas trust-based relationships were deemed crucial (e.g. SL5, WS2) to work transdisciplinarily (e.g. SL18, WS1). This was particularly the case for Social Lab 4 (WS1) on Research Infrastructures, including e-Infrastructures, where these new collaborations were seen as a possibility to create public-private partnerships, foster cross-project alliances and exchange of knowledge between different projects. In this regard, RRI was perceived as *"motor for innovation*" (SL4, WS1). This collaboration, however, does not only imply researchers collaborating with other stakeholder groups, but also a strengthened and on-going cooperation with different research disciplines, i.e. interdisciplinarity (e.g. SL1, WS1; SL17, WS2). The benefits for

enhanced inter-disciplinary efforts were particularly emphasised with regard to social sciences and technological research (e.g. SL13, WS1; SL17, WS2).

Across several Social Labs the institutionalisation and implementation of RRI in research and innovation practices was perceived as enrichment for research and innovation processes in general.

The focus shift induced by RRI helps to challenge basic assumptions of researchers and supports breaking narrow-minded perspectives on research and innovation (e.g. SL1, WS1; SL12, WS1; SL10, WS2) and might hence improve the overall research process (e.g. SL18, WS1). Making research and innovation more inclusive and diverse at the level of research teams, and by the inclusion of societal stakeholders, it has the potential to not only increase the scope of research questions investigated (e.g. SL1, WS1; SL7, WS1; SL9, WS1) but to also foster creativity and enthusiasm in the research process (e.g. SL1, WS1; SL14, WS2). By bringing together different specific knowledge areas informed by diverse standpoints and thinking about the ways things can be done differently, RRI has enormous potential to enrich research processes (e.g. SL1, WS1; SL4, WS1; SL7, WS1; SL9, WS1; SL16, WS1).

In this sense, RRI also offers a way to face the need to engage with a heterogeneous 'public' in a different way (e.g. SL1, WS1, SL9, WS1). *"Whom should we get on board?"* was a pressing question posed in Social Lab 9 on Secure, Clean and Efficient Energy (WS2). Social Lab 4 (WS1) for instance identified stakeholder mapping as an important tool to get an idea who to include for specific research. Social Lab 7 (WS2) emphasised the role of network dynamics in this regard, pointing to existing and dynamic power structures amongst societal actors, which need to be considered in the field of research, such as for example doctor-patient-relationships in the field of HEALTH.

Thinking about the context and implications of research and innovation processes and practices research can be better aligned with societal needs and hence produces *"more relevant research"* (SL7, WS1; e.g. SL7, WS1; SL9, WS1; SL13, WS1; SL18, WS1).

By framing research ethically, implications of the research and innovation processes need to be considered upfront (e.g. SL4, WS1; SL7, WS1), which enables research to be responsive, and context specific. Hence RRI has the potential to increase the reliability and validity of research (e.g. SL1, WS1; SL17, WS1; SL18, WS1). The a-priori consideration of implications also bears the opportunity to tie research with its implementation (e.g. SL7, WS1; SL9, WS1) and hence making research results *"more effective"* (SL9, WS1; e.g. SL1, WS1; SL9, WS1) and sustainable (e.g. SL4, WS1; SL9, WS1). An integral implementation of RRI hence also helps to reduce risks such as *"market rejection and early adaptation of laws"* (SL13, WS2). Doing research responsibly also ensures that available resources are used responsibly (e.g. SL7, WS1). This is particularly important when research is financed with public money (e.g. SL4, WS1).

It can even be a *"comparative advantage"* (SL4, WS1) to do RRI, be it with regard to include RRI in proposals and hence being able to respond to calls requiring RRI and getting funded for RRI (e.g. SL4, WS1; SL9, WS1; SL1, WS3), be it with regard to a project's evaluation, where doing RRI can be a *"great way to resolve 'is this a good project'"* (SL4, WS1). For example, the extension of the Proof of Concept (PoC) program to issues of social impact of projects was suggested by participants of the first workshop of Social Lab 1 on the European Research Council. RRI was further deemed a good opportunity to resonate with the Sustainable Development Goals (e.g. SL9, WS1). Doing RRI further provides others with good practice examples and hence potentially helps to create inspirations for others (e.g. SL11, WS1) and to foster institutional support for creating the necessary *"knowledge-infrastructures"* (SL13, WS2)

Consequently, researchers do see the potentials of RRI, specifically to raise the quality of their research. However, several barriers of implementation could be identified as well.

4.1.2 The identified barriers of RRI

Identifying barriers and opportunities of RRI in the respective programme lines was an important part of both the diagnosis prior to the Social Labs as well as the Social Lab workshops. Whilst the first workshop put an explicit emphasis on the identification of barriers to the implementation of RRI, specific challenges were recurrent themes or only came up during later phases of the Social Lab process. Similar barriers to the application and implementation of RRI were identified across all Social Labs.

One of the major barriers identified is the lack of a common understanding of what RRI really is about. Stakeholders from different fields, in and outside of the Social Labs have different ideas of what RRI means (e.g. SL9, WS1; SL18, WS1).

Discussions of RRI also brought up deeply normative questions of the way science is and should be organised. Some Social Lab participants voiced the opinion that science-society relationships did not need to change at all (SL17, WS1). Discussions evolved around the following questions: Is it even legitimate to ask for RRI? (e.g. SL13, WS2) "*Does the public have the capacity and interest to decide on basic research?*" (SL1, WS1) Is the independence of science and research put at risk by allowing for the engagement of other stakeholders in decision making processes (e.g. SL10, WS1; SL12, WS1; SL17, WS1)? These understandings, in turn led to fears that RRI could impose *"some sort of censorship that research topics are preselected according to societal needs"* (SL1, WS1), which could generate "risk aversion" (SL1, WS1) and hence hinder from researching high-risk innovations or systems (SL2, WS1). In this line also the fear was voiced that RRI could distract scientists from the scope of research itself (SL4, WS1), and that it could be claimed and occupied by a single discipline (e.g. SL9, WS1) or could require small scale regulations creating institutional barriers to open science (SL9, WS1).

Different understandings lend themselves to equating RRI with already known and applied concepts of ethics and field specific ideas of responsibility. In some Social Labs RRI was hence not perceived as being too relevant or even compatible with their own disciplines (e.g. SL1, WS1), whereas in the finance and entrepreneurial sector, RRI was equated with Corporate Social Responsibility (CSR), and ethics and responsibility beyond CSR were deemed unnecessary or even incompatible with the field's priorities (e.g. SL7, WS1; SL6, WS2; SL16, WS2).

RRI and science are not happening in a value-free vacuum. Instead, RRI aspires to be implemented in a "*conditioned and corrupted world*" (SL14, WS2), where the definitions and implications of RRI key-dimensions is potentially disputed.

For example, the RRI dimension of open-access seems to be at odds with the realities of many researchers and research institutions. Operating in a competitive environment, sharing results in open access formats is considered problematic (e.g. SL1, WS1; SL9, WS1; SL13, WS1; L14, WS2; SL10, WS3). As SL14 reported from their second workshop *"Scientists are very committed to [openly] share […] their research results, but their careers are conditioned by the publishing industry"* (SL14, WS2). Open-access criteria were further outlined to decrease funding possibilities and to represent a barrier for businesses and industrial players joining the research project in the first place (SL18, WS1).

Also, the way gender equality is currently included in H2020 evaluation criteria, namely the equal representation of men and women in project consortia, the gender equality concept was critiqued as being reduced to a binary understanding of gender (e.g. SL1, WS1). Opening up this narrow and shallow definition of gender equality, however, was also perceived as providing space for popularised right-wing ideas of *"gender ideology"* as participants feared (e.g. SL14, WS2).

In broader terms, the realisation of gender equality in projects was also perceived as *"rather artificial, because institutions and society are not prepared to apply it"* (SL14, WS2). This artificial institutionalisation is also a perceived risk of the holistic RRI concept in general, remaining at the level of reporting, but not leading to *"behavioural change required"* (SL4, WS1; e.g. SL4, WS1; SL7, WS1).

Using the six keys to define RRI was further perceived as inadequate to create a profound and shared understanding of the holistic concept of RRI (e.g. SL2, WS1).

Across many Social Labs implementing RRI was only seen as realisable if additional resources were available. These resources are in part financial, since engaging stakeholders in projects might take more time and efforts (e.g. SL1, WS1; SL4, WS1; SL, 7, WS1; SL9, WS1; SL13, WS1; SL18, WS1; SL1, WS2). In part, doing RRI might also be perceived as something completely new, adding bureaucratic and administrative tasks to a pile of already existing to-dos (e.g. SL1, WS1; SL7, WS1; SL13, WS1), making it difficult to *"encourage researchers to not only do their research because of their own interests but also to think about the societal impact of their work.*" (SL1, WS2). In contrast to business as usual, RRI adds an additional layer of complexity (e.g. SL7, WS1).

Therefore, it is difficult to retrofit RRI to existing projects if not planned and budgeted beforehand (e.g. SL9, WS1, SL18, WS1; SL18, WS2). Also the project planning might need more time when not used to planning with participatory processes yet (e.g. SL4, WS1). When including elements of public engagement like co-design or co-creation in project proposals it is difficult to name clear results, since the outcomes are open and cannot be described yet. This in turn might prevent sponsors from funding this kind of unclear projects in the first place (e.g. SL18, WS1). In this competitive environment, RRI is rendered a question of priority (e.g. SL4, WS1). If RRI is not institutionalised profoundly - which also implies a change of existing power structures - or formally required, it runs the risk of resting on the shoulders of some motivated few, potentially feeling overburdened by the task of changing existing structures by themselves (e.g. SL1, WS1; SL7, WS1).

The impossibility to easily measure and evaluate RRI was further identified as a major barrier towards its institutionalisation across several Social Labs (e.g. SL1, WS1; SL7, WS1; SL13, WS2). Not having a standardised measurement, it was also perceived as difficult by social lab participants to assess the status quo of RRI in their programme line, raising the question *"Why do we need to do more?"* (SL16, WS1). This is even more the case, since RRI is not gratified rewarded in the current academic system which is based on relatively 'hard' indicators such as impact factors of publications rather than 'soft' matter such as RRI (SL1, WS1; SL7, WS1; SL4, WS3). This *"lack of incentivizing structures for engaging with parts of RRI"* (SL3, WS1) were lined out with regard to the training of junior researchers (e.g. SL1, WS2). Further barriers for the implementation of RRI were seen on system levels of how the publishing industry, with peer reviews and related ideas of scientific rigour (e.g. SL1, WS1) work, as well as how research organisations and industries operate (e.g. SL7, WS1). Even in the realm of programme lines focusing on humanities and social sciences, such as SOCIETY (SL12) less than a third of the funded projects were reported to have social or human scientists in their consortium *"shedding a grim light*

on the evaluations and the actual consistency between principles and their implementation" (SL12, WS3).

The institutional framework for research and innovations hence seem to represent a major barrier to RRI.

Especially in the context of Horizon 2020 projects, the Framework Programmes provide for a specific setting of fundability and duration which might not support but rather hinder RRI from being implemented. The project-design logic makes it difficult to strive for long-term change of environmental or societal challenges (SL5, WS2).

The perspective of the SwafS unit, which historically was responsible for stewarding RRI, not being included anymore in the forthcoming Horizon Europe Framework, was perceived as a challenge by facilitators and managers of the Social Labs as well as by the participants to keep the momentum and spirit of RRI (e.g. SL2, WS2; SL4, WS2; SL9, WS2; SL18, WS2). Nevertheless, in some labs, these discussions could be turned around into an opportunity to foster common action in support of RRI beyond a single programme line, whose elements would be relevant outside of the *"social sciences and humanities silo"* (e.g. SL9, SL1; SL11, WS1; SL2, WS2; SL11, WS2).

The structure of specific programme lines, formalised responsibilities and hierarchies might also represent a major barrier for changing the way research is done.

In the context of SL16 such a discussion evolved between EIT HQ and Knowledge and Innovation Communities (KICs) being regulated and audited by EIT HQ, with members of KICs actively raising the concern that *"focusing on RRI is impossible under the given governance structure, that they do not have time and money for it, and that it would never happen if EIT HQ does not improve and is not actively involved"* (SL16, WS1).

At a smaller scale, hierarchies also play out at a project level. The way consortia are organised within H2020 programme lines it is often the case that only one work package is working on RRI, or partners and leaders not being committed to put RRI into practice (e.g. SL11, WS1; SL18, WS1).

There is also a gap between innovation and uptake: Social Lab participants expressed that they would expect other actors such as policy maker to implement the changes, instead of taking the initiative themselves, as was reported for the field of European technology platforms in the 3rd Social Lab Workshop of SL10. At a small scale RRI might be incompatible with an organisation's or sector's mission (e.g. SL7, WS1; SL6, WS2).

The way science-society relations formed and shaped over the last centuries does not only pose a challenge to researchers (e.g. SL1, WS2). In contrast to established cooperation between science and industry, translation processes between science and society are much less established (e.g. SL7, WS1; SL10, WS3). Also society and public stakeholders might yet have to learn how to interact with science at a different level, being aware of research efforts and willing to take the stake and participate in research activities (e.g. SL7, WS1).

Even if researchers are willing to face the challenge of changing business as usual and transforming their research and innovation practices towards RRI, the large challenge of the lack of knowledge and training of doing RRI remains (e.g. SL9, WS1; SL11; WS1; SL18, WS1). In order to foster this exchange of knowledge and training the lack and need of RRI managers was emphasised (e.g. SL1, WS1; SL9,

WS1). However, beyond a single specialist many researchers do not feel capacitated to implement RRI in their work (e.g. SL4, WS1; SL7, WS1; SL18, WS1). The idea that *"scientists should be able to be good at all facets of RRI"* (SL3, WS1) was reported as a major barrier for a broader institutionalisation of RRI.

The need for examples of RRI or specific RRI dimensions in particular fields put in practice was voiced across several Social Labs (e.g. SL9, WS1; SL18, WS1). The Social Lab on ENERGY (SL9, WS1) for example, voided the need to see how inclusive approaches and open access can be operationalised in energy related projects and posed the question *"How to create mind changing impacts?"*.

In addition, RRI was pointed out to be a highly dynamic concept, its implementation might hence need to be flexible and open to constant adjustments (e.g. SL13, WS2). In order to profoundly change the system RRI must not only be imposed from top-down, but also be demanded from bottom up (e.g. SL2, WS1, 2nd CSW). However, leaving RRI to rest on the shoulders of single individuals might easily cause a sense of inability or overburdening, when not supported by their organisation (SL7, WS1). An important related question was the query whom research needs to be responsible to (e.g. SL1, WS1).

As said already, researchers – once they are familiar with the concept of RRI – do see high potential in increasing the quality of their research but they face also barriers. Next to the identified barriers, the role of the social Lab teams played a major role accordingly to the participants. Consequently, the next sections explain the different roles of social lab members.

4.2 Social Lab Teams

For a NewHoRRIzon Social Lab different roles have been assigned which have been communicated to the project consortium, see Figure 7 below.

Figure 7: Roles within a social lab, NH Social Lab Manual: redesigned after Braun et al 2020, p 22.

This structure was very important in setting up the teams and recruiting participants. Also, tasks could be made clear from the very beginning. However, tasks and roles differed between the labs, the roles were applied interchangingly, and new roles and tasks have been created along the way. The following

sections show the meaning of the different roles, challenges and experiences and how these roles were played.

4.2.1 Roles

In general, the analysis showed that all roles within the lab process were challenging. Recurrently, different roles and tasks of the SL manager and SL facilitator have been adopted and applied within the Social Labs. Discussing the thereby made experiences make the differences between these roles more obvious. The manager was rather regarded as having the role of an active change maker, because the facilitator (usually) was less involved in the process, but the two roles could complement each other ("e.g. good and bad cop", 1st CSW).

4.2.1.1 Social lab manager

The SL managers were the backbones of the lab processes. Their importance became even more obvious in cases, when the continuity of the process has been broken: "*Due to staff changes the SL management got stuck, which caused difficult situations*" (SL 7, WS 2). "*This caused little hurdles regarding communication*" (SL 5, WS 1).

The tasks of the managers were manifold and demanding throughout the lab processes. Also, between the lab workshops, the managers and their teams were always required. This was often already envisaged at the beginning of the lab process: "*Our team will encourage active participation in the pilot actions by regularly checking the progress, asking for the support and needs the participants might have*" (SL 5, WS 1); "T*he SL manager will stay in contact with the pilot owner on a frequently base and will ask him/her what he/she needs in order to implement the pilot*" (SL 19, WS 1); "*The Social Lab manager (team) will enable communication between pilot teams and support a continuous process. Moreover, we will provide the teams with information on RRI"* (SL 4, WS 1), and especially noticed afterwards: "*We have been in continuous contact with them via e-mail to hear how things have been going and whether we could assist them in any way, just as we have had a few follow-up Skype-calls throughout the process*" (SL 18, WS 3). Or even more drastic: "*It has been a constant tour de force for the SL team members to adapt, assess and guide participants at distance in these processes. Focusing on particular needs of participants and contributing to them in terms of RRI has been a really fruitful approach but this has required a lot of time not planned into our WP tasks*" (SL 14, WS 3).

The managing teams played an important role in carrying out the pilot activities. Accordingly, many requirements were addressed towards the managers or managing teams. In general, they provided the pilot activity group with information about resources, timelines expectations, as well as background material, especially on best practices. They had to coordinate the continuation of actions and take care that actions were taken within the lab. Sometimes, they had to "*push for action, try to get additional people on board, and link to other SLs*" (SL 15, WS 1). Also, the Social Lab Manager "*continuously advised people to realize their agency and activate their networks and/or institutions*'' (SL 10, WS 2). One main task was to ensure that "*ambitious pilot ideas are feasible but still keep their strong RRI vision*" (SL 18, WS 1). Furthermore, they "*talked to target groups to create shared views on responsibility*" (SL 2, WS 1), or communicate with EC units and other relevant stakeholders.

Another important task was filling in when lab teams could not afford enough time act. For example, in one of the pilot actions "*the group member who was supposed to edit the stories was very busy and*

out of reach, so the SL manager ended up doing the editing" (SL 16, WS 3). Or: "*As a Social Lab management team sometimes you need to take an extra step to keep momentum and cooperation going. For example, with the RRI CAM and RRI Training Pilot Actions we noticed at times a lack of time/energy and involvement respectively. By taking up some of the work ourselves we still made sure to get to concrete results. This was valued by participants*" (SL 3, WS 3).

Moreover, they were also responsible for the budget foreseen for the pilot activities and had to send a "*request to see the available budget*" to their respective work package leader (SL 4, WS 2). Support from SL manager is required "*especially regarding feasibility and financial support as well as special applications (e.g. workshop at the World Resource Forum) or building up networks and contact to RRI-specialists of interest to the working group*" (SL 11, WS 1). And when the teams could not provide sufficient financial support they still "*provided guidance and capacity building*" (SL 14, WS 2).

Last but not least they had to constantly reflect on their own role, fill in reporting templates, compare aims and objectives of the workshops and lab activities with actual results, and also reflect on the lab process in terms of methods, outcomes, group dynamics etc. Especially, in considering RRI as an emerging discipline with a growing community of scholars and practitioners, it should be reflexive regarding its own research practice (cf. Marschalek, 2018). "*Lastly, it is also necessary to pay close attention to our own roles and the effects that emerge from our participation, as stronger engagement on our side might indeed play a key role to prevent participants from falling back into conventional approaches, but might also entail the problem of potentially leading the participants into directions that might not align with our own views*" (SL 10, WS 1).

4.2.1.2 Social lab facilitator

The important role of the facilitator and the importance of good moderation as key components of a successful lab were highlighted several times in all learning cycles. It became clear that it needs good and mindful facilitation of the workshops with diverse and appropriate exercises and methods. In different project reflections (such as CSWs I and II) it was recommended to be adaptive and flexible according to the group and individual needs and to tailor the programme to the different participants. Also, the different levels of knowledge of the lab participants had to be considered. The facilitators were also needed to be familiar with multi-stakeholder learning processes. It was important "*to address different levels of the discussion so that each participant feels confident and motivated to intervene*" (SL 12, WS 1).

Although roles and tasks were blurring at times, in general in contrast to the Social Lab manager the facilitator's main tasks were focussed on the workshops and thereby applied methods. The task was mainly to keep the workshop in focus, the objectives to be reached as well as the methods to be applied to reach this end. The facilitator for instance "*introduced into the workshop agenda*" (SL 1, WS 1) and kept the red thread through the workshop. In the "*role of a moderator, the facilitator guided the group*" (SL 1, WS 1). A "*clear moderation and organisation helped to guide through the days*" (SL 11, WS 1).

Guidance in terms of structure and time keeping was demanded, but also in terms of pursuing the theme of the workshop and group dynamics were recurrent expressed tasks of the Social Lab

facilitators. "*Group moderation was important as some participants tended to digress from the topic a lot*" (SL 9, WS 1). Also, to steer the discussion and balance the contribution of participants the role of the facilitator was important, as for example as "*three persons were rather dominant in discussing, but facilitators could still lead the discussions and enable everybody to talk*" (SL 9, WS 1). "*There has been a remark that the role of the SL facilitator is crucial here, as the facilitator needs to fulfil the role of the listener, as well as the analyser in order to help the emergence of pilot ideas*" (SL 5, WS 1). "*The facilitator had to intervene several times to get the discussion going into a productive direction and help them to move towards convergence and actionable ideas*" (SL 3, WS 3).

But not only in regard to group dynamics and discussions a good facilitation was required, but also in regard to helping shaping the pilot ideas and support and motivate pilot hosts and teams to elaborate and further develop their pilot ideas throughout the lab process was an important task: "*Connecting their pilot-ideas to the social challenge and the visions from the first day and reassuring that these are the primary focus of the discussions*" (SL 10, WS 1). "*As facilitator I pushed them on the end of the first day to take responsibility emotionally for the discussion and participate with full energy and commitment*" (SL 19, WS 1). Compared to usual workshop settings, in a Social Lab the facilitator's role is more "*about starting actions and developing common activities. Therefore, the facilitator was more demanding*" (SL 1, WS 2).

However, special attention should be paid as the interventions by the facilitator may both support and hinder dialogue. There is a delicate balance in workshops between strictness and laissez faire. "*While social lab methodology fosters active engagement of the facilitator, it is yet to be further explored how much involvement makes sense in which setting. We believe that the amount of involvement needs to be adapted to the specific social lab and workshop setting/sample*" (SL 17, WS 1). Such a process takes participants in uncomfortable situations. "*At a certain point there is great uncertainty how to proceed further in terms of content. Participants' previous aspirations and expectations of a workshop have disappeared and nothing seems to make sense any more. At this point people feel uncomfortable and dissatisfied, have a feeling of powerlessness and ask for more guidance and help. This situation also might involve conflict. In this situation the facilitator has to keep on track*" (SL 1, WS 2).

4.2.1.3 Pilot hosts/sponsors/drivers

Pilot hosts or sponsors (as they were named in the outlines of the social lab manual) were challenged to invest much of their time throughout the process. Some received more support by their team members, some not as much as needed. Also, the managing teams could give sometimes more, sometimes less support. Some of the participants also "*complained about the unequal distribution of efforts during the workshop*" (SL 4, WS 3). It became a recurrent question on "*how to distribute the workload of pilot hosts? Also, how to get other team members, especially from other pilots to contribute to the other pilot actions. Mostly, hosts themselves carry out the work*" (SL 15, WS 1). Although the pilot actions were supposed to be team efforts, however, some of the pilot actions were "*organized and attended only by single participants*" (SL 12, WS 3). It thus became clear that "*there lies a certain pressure on the pilot hosts and teams, although all work is voluntary and participants already invest much of their time to attend the workshops*" (SL 4, WS 2). The results were either to try keep the efforts for the hosts lower - "*as we assume that we cannot pay the participants for their working time, we cannot require too much from them*" (SL 15, WS 1), or to try to give them even more support: "*Pilot hosts are agents of change who need as much support as possible to get the message out and to be*

able to have an impact (e.g. on institutional change)" (SL 4, WS 3). So, in some cases the pilot actions were carried out in doing only the most necessary, as these activities should also be "*doable*" within the labs, participants were "*resorting to their 'usual' comfort zones/areas when concretizing the pilots*" (SL 10, WS 1). In many cases, however, pilot hosts accepted their responsible roles and got more engaged than one could have expected. Even more, the "*personal involvement of several Pilot Action protagonists led to a positive and co-creative atmosphere*" (SL 3, WS 2). Many pilot hosts were proudly presenting their pilot activities during the second cross sectional workshop as well. It was also concluded that "*if participants feel ownership in their pilot actions, they might also want to participate in related publications*" (1st CSW).

4.2.1.4 Other unforeseen roles

Further roles evolved along the lab processes, so for instance in terms of methods, the figure of a semi-facilitator was adopted who was "*an actor that was perceived as a participant but that had also moderating functions, so to break the usual dichotomy between those in charge and the addressees*" (SL 12, WS 3). Likewise, functions such as co-driver, co-chairs or other lab participants becoming part of the management teams occurred (SL 1, WS 1). There was also the idea of the intellectual tramp, an intellectual wanderer, a specific role, which questions and challenges everything. This should have "r*esulted in a parallel narrative or strengthening the one they are working on*" (SL 10, WS 2).

Many of the social lab managing teams also became the role of supportive and coordinative and reliable partners crucial for the development and implementation of the pilot actions, which means that they took over central tasks within a pilot activity, designing and facilitating workshops and trainings, many writing tasks and also providing certain infrastructural resources (e.g. Lime Survey) (SL 2, 3, 9, WS 3).

Last but not least, all related networks of the lab participants have been of great importance, and communities of practice have been built up. Within this built up communities of practices "ambassadors of RRI" could be recruited, and many more showed interest in the topic and expressed their will to continue to apply the concept.

4.2.2 Group compositions

The composition of the lab teams was an important aspect of the lab process which was highlighted within the social lab manual (Braun et al, 2020, p 33) and discussed throughout the lab processes, including the cross-sectional workshops. First, there was an outline for each social lab on the number of participants which should be achieved. Mostly this number ranged around 15 to 20 persons. Secondly, the lab teams should be balanced, in terms of gender, age, region, profession, institutional background etc. and should also represent all five main stakeholder groups. Obviously, fulfilling this task was rather demanding and not always successful. Recurrently, lab managers were expressing that they would have liked more representation of governance, CSOs and lay people and that they "*had a hard time figuring out how to involve them*" (SL3, WS3). Social lab managing teams "*tried to recruit artists or citizens these types of actors, but they often lack time resources as this is not considered 'worktime' as it is for scientists or policy makers*" (SL 17, WS 2). Clearly, "*some of the interests that were relevant to be considered could not be represented, as those participants were simply missing*" (SL 10, WS 1). The age of participants was not asked nor reported by the social lab managers, however, some stated that imbalances in terms of age have influenced the lab processes, too: "*The group*

dynamic could have benefited from more diversity in terms of age, as having some (but not many) young people seemed to broaden the perspective of the group" (SL 1, WS 3).

However, most of the labs achieved a rather diverse composition of their teams, also in terms of pre-knowledge and attitude on RRI.

At a closer look to the gender composition across the labs, it can be said that the numbers were truly balanced with the exact same number of male and female participants overall. However, in some of the lab groups, such a balance could not be achieved, which at times caused anxieties as well: "*More women participate than men, even though the ENERGY field is rather male dominated. This aspect was questioned by the participants and the gender aspect was repeatedly taken up in discussions*" (SL 9, WS 1).

4.2.3 Group dynamics

The persons participating in a social lab are supposed to be part of a team, as outlined in the social lab manual (Braun et al, 2020, p 10). The lab management teams supported the lab team building process in order to allow for better collaboration, enabling familiarity and trust among participants and the group "*growing as a unit*" (SL 7, WS 2). For some, it even "*felt like a reunion of friends*" (SL 8, WS 2). For example, the Social Management team prepared a CV-folder of all participants. This "*created a feeling of a group and it was supportive to get to know each other faster and in a nice way*" (SL 1, WS 1). The fact that people were meeting for several times and also had interacted in between workshops "*meant that they were fairly familiar with each other and that they could exchange ideas very openly*" (SL 7, WS 3). This atmosphere of trust and familiarity among each other…, in many cases also "*provided the environment for a successful collaboration*" (SL 9, WS 3). However, still this was quite challenging for some of the participants, as "*not every participant wants to be active*" (SL 1, WS 2).

Besides the important role of the facilitators (see chapter 4.2.1.2), group dynamics as usually happening in groups had to be considered, especially with these very heterogeneous groups of people, who hardly had met before. According to the diversity of lab participants, they also came with different sets of interests and values which in consequence also led to challenging dynamics and also 'conflict of interest' which needed to be addressed by the facilitators and managing teams. In general, for the lab managers it was a challenging task to work with the group diversity: "*The main challenge thus was to take everybody with us from the basics to a practically usable result at an immense pace*" (SL 11, WS 1). Therefore, many group forming activities were applied by the managing teams and also the group composition could support the team collaboration, as for example inviting some person who already knew each other: "*A plus of this social lab was that all people knew another person before the meeting, so they felt more at ease and the whole process of getting together was faster*" (SL 12, WS 1). However, a good facilitation and structure of the workshop was needed to address these issues: "*The problem regarding group formation was simply addressed by being flexible during the workshop and allowing the participants to form different groups as they saw fit*" (SL 16, WS 2). "*Lack of expertise on specific themes or perspectives could be detrimental to a collective dialogue. Academics might overshadow other stakeholder groups as they are more used to talking in public, as well as CSOs may be heated in supporting their views as they are often connected to injustices*" (SL 12, WS 1). Also, different experiences of the participants influenced the discussions: "*This generated a bit of inequality between*

participants, especially between those who are comfortable speaking in public and those who are less" (SL 12, WS 1).

Not only differences in personality, but also cultural differences sometimes marked big differences in the group dynamics. One social lab manager noticed for instance that "*one person (Spanish, NCP) felt a strong need to contrast her opinion with the rest of the group, and this gave her confidence to form an opinion, another person (Czech, NCP) got obviously disturbed and annoyed by the group dynamics. The second person had a strong drive to be efficient and to go 'to the core' without "wasting time" for discussions*" (SL 14, WS 2). However, different roles and discussion styles of participants also enriched the discussions: "*The participants included both people actively participating in discussions and people with more analytical and observing approaches*" (SL 13, WS 1).

Also, the integration of new SL members (after WS 1 or WS 2) had to be addressed and was achieved for instance "*through interactive group formats, the reintroduction to RRI and the RRI game in the evening also helped for socialising and integration*" (SL 4, WS 2). Or: "*We had three newcomers. Others had not seen each other for about a year. Therefore, we started with a common lunch and dedicated the first hour of the workshop to see who is here from different perspectives (organisational and stakeholder group affiliation, familiarity with RRI, and on a personal level)*" (SL 4, WS 2).

Still, not all worked out positively and in a few cases, lab managing teams decided not to continue the collaboration, for instance as "*one of the participants intervened with several less constructive remarks, so we decided not to host this participant again for another workshop*" (SL 15, WS 1). Sometimes the problem was solved by itself: "*The dominant voice from the first workshop was not able to attend, so the distribution of speaking time was more equally distributed this time*" (SL 19, WS 2).

Also, there were teams coming from institutions in which there were already conflicts or disagreements ongoing, which was not an easy task for the lab managing teams either, as it was the case for instance in the EIT lab. The team decided that "*RRI should be in focus, not these more political issues*'' (SL 16, WS 1). Also, the lab team composition was specifically meant to counterweight dominant perspectives, as for instance in the JRC lab by "*inviting more persons that work at the interface of JRC and by inviting non-scientists*" (SL 17, WS 1). Also, persons of different hierarchical levels were present at the workshops, which also influenced the discussions as persons in "*hegemonic positions and act accordingly*" (SL 17, WS 1). Not always, the diversity of lab teams resulted in a collaborative atmosphere, but rather showed that participants remained "being deep in their usual roles: JRC rep defending EC policies and actions, NGO participants expressing frustration over lack of cooperation and eye-level discussions" (SL 19, WS 1).

Also, in regard to RRI, some controversies in opinion and attitude became obvious and different attitudes on RRI could lead to "*strong oppositions*" (SL 1, WS 2). The diverse group in terms of practice, stage of career and substantive research interests only "*added to the diversity of viewpoints related to RRI and therefore to the creative tension during the Workshop", but finally also "to new insights resulting from this friction*" (SL 3, WS 1).

Furthermore, different ideas on what they intended to achieve with their Pilot Action led to controversies (SL 3, WS 2). Tensions within the pilot teams could also lead to redesigns of the action or a re-arrangements of pilot teams, in cases when key pilot team members or hosts left because of

disagreements within the group, which caused effects on the further progress of the pilot action: "*The remaining participants in the group continued to work on the PA in a modified version … As SL managers, we are thus a bit concerned that this particular PA will not see any notable progress in the months to come. We can hope that the new design will reengage S. in the project, as it is hard to imagine the implementation of the PA without her expertise and drive*" (SL 18, WS 2).

But in most of the cases the lab participants appreciated the importance of the collaboration as a team, and the "*group energy was very positive and enthusiastic" (SL 2, WS 1). Group dynamics worked well, "the group bonded quickly. It was felt that everyone had something very valuable to contribute and that the mix of the group was very beneficial*" (SL 7, WS 1). It was also "*suggested to continue the work (as a team), supporting each other, also beyond the project*" (SL 4, WS 3). Having controversial discussions in the labs, carried out on eyelevel, was also experienced as "*an enriching activity*" (2nd CSW).

4.2.4 Fluctuation

Overall, about 27% participants across all labs dropped out.

The permanent participation of social lab participants with regard to their recruitment was recurrently reported challenge. On the one hand, participants needed to get sufficient motivation to stay active in the lab, but on the other hand, fresh ideas of newcomers needed to be integrated. Facilitators were challenged to address this issue. An even more pressing issue evolved around "*the question of how to include the opinions of those who were leaving the Social Labs and even further, of those, who are not participating at all*" (1st CSW).

Besides the dropouts, another issue was that some of the participants took part in the workshop only partially. They stayed for only half a day or so, which caused difficulties in terms of group dynamics. One possibility to overcome these partial absences was to retreat the lab teams to more remote places off which they could not leave easily (SL 4, WS 2).

Still, many of the participants could be kept active throughout the process. Although it demanded a lot from the participants, some of them stayed with it from the beginning to the end.

Only a few explicitly expressed that they would terminate their participation, and generally, lab managers did not receive negative feedback as a reason for drop-out, sometimes they "*could only guess the reasons*" (SL 15, WS 2). Here are some of the reasons collected by lab managers why lab participants were no longer able or willing to participate in the lab activities, many of them are related to pilot activities:

- No relation or involvement to a pilot activity
  - For some, it was difficult to get engaged without "*owning*" an issue (2nd CSW). It is assumed that some of the participants who did not have pilot ideas concerning their own organisation in the first social lab dropped out because of this (SL 13, WS 2).
  - One person's own proposed pilot action did not get support from others. The person did not feel connected to any of the other pilots (SL 15, WS 2).
  - Not enough own agency to be part of a pilot action in the sense of not feeling represented by the action (SL 15, WS 2)

  - Not getting the aspired role within the pilot action (SL 9, WS 3)
- Lack of belief in impact of pilot actions: For instance, one participant argued that "the pilot *actions are nice but won't have much of an impact as the ones involved will remain the same*" (SL 19, WS 2)
- Lack of sovereignty on pilot action: One participant refused to participate in further Pilot Action development if she didn't get a form of Intellectual Property Right over the Pilot Action (SL 3, WS 2)
- Some were "*afraid about the anticipated workload*" (SL 1, WS 1)
- Some not feeling comfortable with the social lab approach and the directions the discussion took did not match with their own experience (SL 15, WS 2).
- Lack of practical impact. Some of the participants "*did not feel too comfortable with the discussions in the pilot action that might have been too academic for them. They were looking for a quick practical solution*" (SL 15, WS 3).
- (Especially) CSOs were unable to participate because they lacked staff and time. "*Even when we explained that we would cover their travel costs, two CSO were unable to participate*" (SL 1, WS 1).
- Lack of time
- Lack of interest
- Too little financial support of pilot activities
- Change of institution, job change, maternity leave
- Last minute drop-outs due to illness, childcare obligations or other duties
- Personal reasons (birthday), surgery, accident, other businesses

Furthermore:

- Lack of institutional support for RRI
- Lack of interest in RRI initiatives

Some of the dropouts did not respond at all.

Although some of the designated lab participants were not able to attend the workshop in person due to busy schedules, still they remained a member of the Social Lab or continued their pilot activities. Lab managers asked to keep in mind that not every person not attending a workshop also left the Social Lab, "*which is why it is important to differentiate between the workshop participants and the team members as a whole*" (SL 5, WS 2). Additionally, only in rare cases lab participants explicitly mentioned not wanting to be informed in the future. "*Following this reasoning, our current overall drop-out rate is assessed to be zero*" (SL 10, WS 3).

Many of the dropouts mentioned scheduling Issues. However, some of them sent other representatives from their organisation or forwarded the managing teams to additional people of their networks, which hints to a general interest, but lack of opportunity to participate themselves.

Drop outs often caused further drop outs, especially in relation to the pilot activities. As the drop out of team members also could cause the "*decline of some of the pilot action group participation into single persons*" (SL 8, WS 3), the remaining participants would or could no longer take the burden only

by themselves. Or as experienced in another lab: "*Two of the Pilot Actions died shortly after the second workshop partly due to a lack of time, interest, and commitment to the project as well as internal conflict in one of the groups. This naturally decreased the number of SL participants drastically*" (SL 18, WS 3).

However, also with the sometimes-reduced number of participants the labs could work, or even better, as only the committed ones stayed in the process. Therefore, lab managers stopped further recruiting and worked with the existing team: "*Now for or WS3 we refrain from bringing in too many new participants in the process, rather reduce the number of participants to those very active and committed with their organisation or network in the respective pilot action*" (SL 11, WS 2)

Concluding remarks need to point out the importance of having the different tasks and roles well covered, including aims and targets. Also one should be clear that it takes some time to develop a team and trust. Having the roles well distributed with clear aims identified, help to develop this request.

The following section outlines the different methods that were applied by the Social Lab members.

4.3 Social Lab Set up and Methods

4.3.1 Workshop location

The social lab workshops were mostly organised as physical face to face meetings bringing together different stakeholders at a common place. The environment the workshop takes place is decisive for bringing participants together. In accordance with manifold studies on supporting learning environments (Wellhousen & Crowther, 2004) also Social Labs require these motivating environments allowing discussing and reflecting with each other, to develop ideas, to report on experiences made and to plan new activities. The importance of locations and therein offered space and possibilities was also re-emphasised at the first Cross Sectional Workshop bringing all Social Lab Managers and Facilitators together for a first exchange of ideas in October 2018: *"Choose a good location for doing your social lab, the location might also be lab specific"* (1st CSW).

Especially in the case of the first Social Lab workshop, several labs chose their own organisations to host the workshop (as in the case of SL1, WS1; SL3, WS1; SL4, WS1; SL5, WS1; SL9, WS1). More lab specific locations were chosen for the second and third workshop with the exemption of Social Lab 17 on Joint Research Centers (JRC), which already hosted its first Workshop collaboratively with the JRC at the JRC site in Ispra *"where most participants reside and where [WS1 & 2] were held is the largest JRC site with few thousand staff members, and is thus a beneficial place to host a Social Lab, as many potential participants are on site (also it is a beautiful venue)"* (SL17, WS2)

Many Social Labs reported choosing bright rooms with lot of windows, nice views or appealing furniture and decoration to create a good working atmosphere (e.g. SL3, WS1; SL11, WS1; SL15, WS1; SL4, WS3). Also, a flexible setting with chairs and tables that can be moved to provide space for different workshop methodologies was emphasised as key for choosing workshop rooms (e.g. SL16, WS1; SL18, WS1; SL4, WS2; SL9, WS3). Providing for enough space was key to create an open atmosphere of collaboration (e.g. SL10, WS1), smaller settings instead bore the risk of the participants

feeling too observed – the management and facilitation team of the first workshop of Social Lab 19 hence decided to leave the room while the participants were discussing. While some Social Labs (e.g. SL7, WS1; SL12, WS1; SL13, WS1) preferred having an informal *"living-room feel"* atmosphere (SL7, WS1), others conducted their workshops in more formal settings (e.g. SL1, WS1; SL17, WS1).

Several locations were further chosen due to their proximity to venues visited as part of the Social Lab workshop together (e.g. Hotel in the proximity to the Museum for Dialogue, where they had a guided tour in the dark at the beginning of the first workshop in SL7, WS1; similarly in SL10, WS1). Having the possibility to leave buildings and go outside was equally endorsed in several Social Labs (e.g. SL4, WS1; SL10, WS1; SL9, WS2; SL4, WS3), some Social Labs successfully used the nice environment for not only taking breaks but for actively continuing to work on the Social Lab process by doing walkshops – having guided discussions in groups while walking in parks, in the mountains or along the seaside (see Wickson, Strand, and Kjølberg 2015) (e.g. SL4, WS1; SL9, WS2; SL4, WS3).

4.3.2 Structure of workshops/methodology

In general, the lab workshops were regarded as good formats to help to think out of the box. Mostly, participants liked the workshop formats and the different exercises. The sections below show a closer look at the length and structure of the workshops, methods applied, as well as atmosphere in the labs and the importance of informal encounters.

4.3.2.1 Length and structure of workshops

One issue was the length of the workshops. Most of the Social Labs conducted two-days workshops, however, not all participants were able to take two days for this. Therefore, often the program was reduced: *"We had to shorten the length of the programme to 1.5 day (due to busy schedules of participants from businesses"* (SL5, WS1). Nevertheless, the workshops had a tight schedule and required a minimum of time, which the social lab managers found as well: *"Based on experience, it is not advisable to cut short the time of the full 2 days of SL,* as the density of the programme is already somehow burdening the participants. (SL 5, WS1).

This led to the discussion on how to time the workshop methods appropriately and how much time should be dedicated to which activity. It was noted that *"this is a question of facilitation. A good facilitation is able to manage time well, but also to keep the structure flexible according to the participants' needs. Workshop participants can also be prepared with information material, with agendas and expectations for follow-up workshops, and allow them to comment on these issues in advance*" (1st CSW). Accordingly, each Social Labs handled these issues differently.

4.3.2.2 Methods, techniques applied

Often, participants were confronted with rather unusual workshop techniques. They had to undergo different exercises in rather short periods of time and commit themselves to rather demanding tasks. Social lab managers and facilitators reflected on the methods applied and how they worked. As the experiences have been rather different and sometimes even contrary, these reflections and issues are put together here.

Flexibility versus structure was a recurrent issue: The overall discussion was about the level of standardisation put into the Social Labs, to guarantee some kind of unity while still allowing for

diversity. "*Our facilitating methodology was flexible enough to capture and manage critical moments*" (SL14, WS2). "*In the divergent 'rain of ideas' participants do not see themselves as actors, but this 'freedom' allows them to see many paths and possibilities*" (SL3, WS3). The method mix involved many different formats, such as world café sessions, plenary sessions, fishbowl conversations and talking-stick conversations. The mix of these approaches "*allowed the participants to go in-depth, bring their perspectives back to the whole group of participants and allowed slowing down otherwise quickly progressing discussions in which less proactive participants could otherwise have problems being heard*" (SL 10, WS 2).

It became clear that within a multi-stakeholder process other than in a typical linear development process the lab processes "*had to keep flexibility, facilitators had to react to signals of change from the group and provide time and spaces to respond to these needs*" (SL11, WS2). "*The Social Lab as a place for experimentation versus comparable outlines – how much input needs to be provided for in the Social Labs and how much space should be given to bottom-up ideas*?" (1st CSW). It was also raised which kind of standardised inputs should be applied in the Social Labs?

This question strongly linked to the systematisation of the outputs of the labs. The "*desired outputs need to be relevant and feasible for the Social Labs participants, which is why they need to be involved in these discussions and not hindered in their creativity, aspirations and ownership processes*" (1st CSW).

However, it was regarded as being important, "*to balance input and freedom, this needs to be adjusted to each of the Social Labs and for the specific participants" to allow for instance "visionary participants to be visionary and those who want to be more concrete and specific, are also able to do so*" (1st CSW). "*Out of tension comes creativity*" (SL3, WS3). Participants were asked "*to state their thoughts open, if there are any wishes, as well as what worked well and what did not. This format allowed all participants to express and listen*" (SL 17, WS 1). Mostly this seemed to work well, as in general, participants appreciated the activities of the workshops. Also, the method mix offered, such as "*small group brainstorming followed by presenting the results to the whole group or talking stick enabled them to see the perspective of their counterparts much better than before". "The specific character of the SL given the "multi-stakeholder" topic was appreciated as the RRI principles could be scrutinized from different viewpoints"* (SL6, WS3).

Applied techniques and facilitation should enforce creative processes or support participants and tackle group dynamics. It should "*calm participants down and explain chaos and creativity as part of the process"* (1st CSW). For instance, to offer more networking opportunities, a group "had a very lively speed-dating session" (SL 15, WS 2). Or one group used a 'talking star' - Nobody interrupted others and very quickly everybody got used to wait for their turn" (SL 9, WS 1).

However, participants also felt frustrated at times. Specifically, participants who had less of a connection to participatory methods or the RRI-keys seemed to have a harder time to engage. For them, "*the raised challenges were sometimes not necessarily the remit of the topic and the discussions got off track*" (SL 10, WS 1). Frustration by participants was another mentioned challenge which requires actions by the facilitation team either by digging deeper: "*Participant's frustration needs to be understood, but managers and facilitators must not indulge in this frustration to not block the process. Barriers and critical aspects of SL participants need to be explored to learn on their underlying*

issues" (1st CSW) or by applying workshop techniques which makes them change perspective: *"Encourage participants to change perspectives once they have the feeling to be in a one-way street. Role-plays offer good possibilities for doing so. RRI is not only about learning it is very much about doing. Encourage your participants to do, without being a 10 years RRI expert*" (1st CSW).

The most important ingredients for the Social Lab process were trust building, sensitivity to interest differences, practical examples, mutual learning, evolving and engaging for a smooth development of the process.

4.3.3 Methods for RRI introduction and familiarisation

RRI introduction and familiarisation played a major role in the first workshops of the Social Labs and followed more or less the same structure: *"Starting with an introduction round where everyone got the chance to talk a bit about their expectations of this workshop, their definition of responsibility in research and what is most important for them in their work, the participants went on to define visions, think about the challenges preventing desired futures to become a reality, to then get some input from our side about the challenges we made out during the diagnosis process. The second day revolved around reflecting on the first day and developing the pilot activities"* (SL 10, WS1). After welcome and introduction, the topic of RRI was usually introduced and presented by the SL manager, followed by sessions on defining visions and thinking about challenges, ending with a session on the diagnosis process itself.

A variety of tools and methods has been used (see below), mixing group work, presentations and plenary dialogues and discussions. (e.g. SL 16, WS1; SL18, WS1).

In most Social Labs the first workshop started with a welcoming session, which was dedicated to introducing the programme, scope and participants and focused on sharing experiences and views. *"The objective of the session "sharing experiences and views" were familiarizing and getting used to group; getting to know one another and making visible the personal attitude towards RRI."* (SL1, WS1). For example, participants worked and discussed in groups and presented their results on flipchart in the plenum or exchanged in altering couples. Questions discussed were e.g.:

- In what ways does or could RRI enrich my work? (SL1, WS1)
- In what ways does or could RRI burden my work? (SL1, WS1)
- My thoughts and feelings about participating in this Social Lab (SL17, WS1; SL1, WS1)
- Definition of responsibility (SL17, WS1)
- How do I live responsibility in my work? (SL17, WS1; SL1, WS1)
- My understanding of a Social Lab (SL17, WS1)

Another method used was *"social metric constellation where people had to position themselves based on questions such as years of working experience"* (SL17, WS1). In another Social Lab *"participants were asked to reflect on their own definition of responsibility in research, of the importance of responsibility in their daily work and of expectations regarding the workshop. Each participant presented his/her reflection (post-its) and introduced him/herself."* (SL19, WS1).

After the welcoming session a session on the introduction of RRI followed, where the concept of RRI was presented and introduced in most Social Labs, aiming to get a common understanding on RRI. Following a presentation by the SL managers, several methods were used, e.g. *"participants were*

asked to position themselves in the room according to their pre-knowledge of RRI. The picture showed that most participants felt rather insecure regarding the topic." (SL4, WS1; SL9, WS1). Another method used was *"letting people position themselves in relation to the five keys and then letting them explain how they understand the matter. This was collected on a pin board."* (SL15, WS1)
In other Social Labs, the participants own perceptions of RRI were collected, e.g. an *"own description of responsibility and/or RRI in their own particular field of expertise/work"* (SL5, WS1) was requested from the participants or *"Everybody wrote their own perception of responsibility in research and innovation on post its"* (SL7, WS1), which were collected and clustered on a wall.

The introduction on RRI was generally followed by a session on visioning and reflection. Different approaches, methods and guiding questions were used in the 19 Social Labs, e.g.:

- *"For the visioning we used post cards during the working dinner in which they were asked to write down and discuss what their practices/offices would look like in 2027 when, at the end of FP9, RRI would be the leading vision"* (SL3, WS1). In Social Lab 17 *"participants were split in two groups and created visions for science in 2050. They were drawing this vision on a flipchart and thus produced a visualization of their ideas"* (SL17, WS1), which was pinned to the wall.
- Another format used for the visioning process was the walkshop. In Social Lab 4 a section in a restaurant *"was rented as plenary meeting and break out groups were walking through the park"* (SL4, WS1), to firstly search for *"an object describing, representing or expressing the potential of RRI in their work."* (SL4, WS1) to enter the new working format and the visioning process. Then secondly participants formulated "*future sentences for an ideal „RRI world". (…) We were working with small groups (max 4 persons per group) (…). Each group was equipped with templates and long coloured cards. They noted all sentences in the template and afterwards a selection of 3 – 5 was written on the coloured cards. The coloured cards were collected and hang on a cord between trees. After coffee break the same groups chose 3 future sentences they would like to work on in the next task."* (SL4, WS1). Finally, *"The third task based on the „headstand method"* (SL4, WS1). Participants thought about actions to avoid their future sentences and then reformulated these actions in positive and supporting activities, which already could be first ideas for the pilot actions. *"The best ones were chosen and collected on coloured cards, which were presented the next day."* (SL4, WS1).
- Also in the first workshop of Social Lab 9 the walkshop methodology as described above should have been used for the visioning process. But since the weather did not allow, the methodology was adapted to work inside. *"Instead of walking, break out rooms were used to provide space for discussion and reflection. Instead of in the garden, the produced cards (flags) were hanged on ropes."* (SL9, WS1)
- *"For creating the visions, the participants broke into three groups. The members of these groups were assigned specific roles (like a female manager with two children or an elderly farmer living in a rural area), which had to be taken into consideration when developing the visions."* (SL10, WS1). This approach was similar to the one in Social Lab 19, where 2 groups were built for *"creating a better world" out of the view of specific roles"* (SL 19, WS1) using mind mapping. The results were presented and ideas, wishes and possible obstacles to reach this vision were discussed among the participants. *"Similarities between the 2 visions were summarized. Out of this a common social challenge was defined."* (SL 19, WS1)

During the visioning session also attitudes and challenges were encountered and discussed. For example, in Social Lab 1 the question ***"****What is the current reality of RRI in our work environment:*

*reservations, difficulties and barriers?" (*SL1, WS1) was discussed in small groups, presenting the results on flipcharts during a gallery walk. Also in Social Lab 11 pros and cons regarding RRI in the working environment have been mapped in groups, *"by indicating and discussing: Which aspects are already included in my work? How is it enriching? How is it burdensome? (…) Which other aspects could be relevant to my work? What are the benefits? What are the obstacles?"* (SL11, WS1). Similar to these in Social Lab 4 participants were *"asked to think about the relevance of RRI within his/her own working environment for 10 min and to note it down on a personal notebook"* (SL4, WS1). Afterwards they discussed in breakout groups how RRI could enrich and burden their work, which was noted down on coloured cards.
Slightly different attitudes were dealt with e.g. in Social Lab 3, Social Lab 2 and Social Lab 8. In Social Lab 3 a World Café approach was used to reflect on responsibility on individual level, in practices and on institutional level, first in pairs, then in homogenous groups and subsequently in heterogeneous groups. *"Moreover, we asked the heterogeneous groups to come up with an RRI related question for the homogeneous groups and the latter to refine the question. This worked in the sense that they were not asked to provide answers (…) but to get triggered about what questions were still unanswered."* (SL3, WS1). In Social Lab 2 and Social Lab 8 a *"think-pair-share café activity to learn what people thought about responsibility in the context of research and innovation"* (SL2, WS1; SL8, WS1) was implemented. In groups stories about irresponsibility and responsibility were told and discussed and in the plenary notes of participants' reflections and attitudes towards RRI were taken.
Another approach was to discuss *"the specific challenges that might prevent the visions from becoming reality."* (SL10, WS1). Therefore, participants went back into their initial group, thinking *"beyond the assigned roles if anyone might be left out from the vision they created so far."* (SL10, WS1).

The RRI introduction and familiarisation process of the first workshops ended in most Social Labs with a session on the diagnosis process, summarising and discussing the outcomes of day 1.

4.3.4 Methods for Pilot Idea Development

Pilot actions lie at the core of the social lab process. The first workshop of the social lab therefore aimed at their formulation, selection and organisation.

The common Social Lab Manual (D1.2) as well as a project-shared generic design of the first workshop guided the way pilot ideas were generated in and across all 19 Social Labs (SL).

According to the common guidelines, pilot development happened after a general introduction to RRI, and reflective and visionary exercises of RRI in the context of the respective programme line of the lab in the first of the three social lab workshops. The suggested method for doing so was establishing a marketplace of ideas, giving all social lab members the opportunity to share their own ideas first, to then exchange on these ideas with others. Once the marketplace has been filled with ideas, i.e. ideas have been noted down on flipcharts, a gallery walk should enable all market visitors to form an opinion on the pilot ideas while having the possibility of talking to the pilot idea owner.

The way this marketplace was turned alive substantially varied with the 19 Social Labs, however, all Social Labs turned the creation of pilot ideas into a collective process. Thereby, some started with an individual exercise enabling participants to come up with personal ideas first, to then start a group process (e.g. SL1, WS1; SL3, WS1; SL4, WS1; SL9, WS1; SL10, WS1; SL16, WS1). Others directly started

with collaborative idea creation (e.g. SL2, WS1; SL5, WS1; SL7, WS1; SL8, WS1; SL11, WS1; SL12, WS1; SL13, WS1; SL17, WS1; SL18, WS1; SL19, WS1).

The methods used for the formulation of pilot ideas range from individual and collective brainstorming (e.g. SL1; SL2, WS1; SL4, WS1; SL8, WS1; SL9, WS1; SL2, WS2) to speed dating (e.g. SL11, WS1; SL16, WS1; SL18 WS1; SL2, WS2), back-casting (SL3, WS1), and the use of the Disney Method, a creativity technique where participants consequently take over different roles from dreamer to realist and critic to develop ideas (e.g. SL13, WS1). The ideas have been thoroughly collected and reported by the Social Lab managers in the common reporting template for moment II. On the basis of this information, some Social Labs generated many rough pilot ideas (up to 27), while others condensed their idea generation already towards the further development and implementation of the pilot and rather worked with a handful of ideas.

The chronological order of pilot action development in the flow of the workshop agenda following discussions of challenges in and visions for was perceived as a fertile ground for pilot action development by many of the Social Lab teams and useful for *"breaking with contemporary disciplinary and methodological borders, […] enabling emotional involvement and [for] bringing in different practical experiences from diverse backgrounds."* (SL10, WS1). Using the visions as a basis to define necessary actions to reach these visions and turning these actions into pilot ideas, was perceived as a challenging task for the participants, and partly did not work smoothly (e.g. SL3, WS1; SL16, WS1). Some labs also reported that the creative momentum of thinking beyond disciplinary boundaries and out of the box was lost when going to the concrete level of pilot idea development (e.g. SL10, WS1).

Pilot idea development was, however, not only a part of Workshop 1, but in some cases also extended over the period after workshop 1. This on-going pilot idea development was partly due to the pilot selection process not having taken place at the end of workshop 1 for instance because lack of time (e.g. SL14) and partly, due to selected pilot actions not working out (e.g. SL2, SL4, SL9), as will be described in section 4.3.4.

In order to substantially tie pilot ideas to RRI keys, some Social Labs included a mapping of ideas to specific RRI keys, a specific societal challenge, such as in- and exclusion in SL10, or a previously selected and presented project (e.g. SL2, WS1; SL8, WS1; SL1; SL10, WS1; SL5, WS2). An explicit connection of ideas to single RRI keys was perceived as challenging, since all the keys are interconnected and the holistic character of RRI might get lost in the process (e.g. SL10, WS1).

A common challenge most Social Labs found themselves faced with the facilitation of pilot idea development was to introduce pilot actions in a way that provided for an open and creative process of idea generation but also offered sufficient guidance on the scope of the potential pilot action. Social Lab 7 (WS1) successfully worked with this challenge by *"providing as much information as possible, being open about uncertainties, not dwelling on them and instead shaping what a pilot action actually is"*. Social Lab 11 (WS1) used speed interviews as inspiration for *"connecting knowledge"* and further, to not only find out *"what we should do, but what we like to do.*" Other Social Labs (e.g. SL10, WS1; SL16, WS1; SL18, WS1) emphasised this focus on applicability of pilot ideas even more strongly by communicating that *"we do not expect them to revolutionize their organizations, that pilot activities can be baby steps"* (SL16, WS1).

Creating a common understanding of possible outcomes and expectations required enough time and space: *"We needed half a day really to get a common understanding what was the task of the Social Lab and where we wanted to head to*" (SL11, WS1). This common understanding could not be reached in all labs, with pilot action ideas being developed simply as *"part of the game"* (SL19, WS1) lacking a clear idea of personal commitment in order to be elaborated and put in practice. However, personal commitment turned out to be a crucial precondition for the later implementation of the pilot action. Some participants put an effort in moulding their already existing ideas into pilot ideas, being highly committed but also potentially frustrated in case these ideas were not elaborated further (e.g. SL9, WS1). Other pilot ideas turned out to be whole projects, rather than actions implementable in the frame of the Social Lab (eg.SL11, WS1) and had to be downsized afterwards.

The present stakeholders and perspectives at the social lab workshop were decisive for shaping and forming the pilot actions. Several labs (e.g. SL2, WS1; SL19, WS1) reported that it was important to the participants to have enough time to exchange with other participants who possibly were equipped with different experiences, knowledge and expertise to come up with pilot ideas. Overall, the represented stakeholder perspectives in the social lab significantly shaped the developed pilot ideas; a stakeholder group not being represented also implied a lack of corresponding pilot ideas (e.g. SL11, WS1).

Diverging perspectives of RRI challenges in the Social Lab specific programme lines eventually also led to moments of frustration among the participants. Letting this moment pass without intervention *"did increase the emotional commitment of the participants to come up with pilots"* (SL19, WS1). However, also an active intervention by presenting the group with new input from the findings of the diagnosis was found successful to guide the participants from normative discussions to the concrete reality of their work (e.g. SL3, WS1; SL8, WS1).

4.3.5 Methods for Pilot Idea Selection

In most Social Labs, pilot ideas were chosen already in the first workshop but sometimes pilot ideas were dropped in the phase between Workshop 1 and 2 and thus methods for choosing pilot ideas had to be applied also in further workshops but required different procedures.

In the following section, the methods for the pilot selection are presented as applied in the first social lab workshop.

After the pilot ideas had been developed (although the development and the selection were merged in some cases as e.g. in SL17), they were either presented by the participants themselves or by SL managers and facilitators, sometimes with visual representations such as flipcharts.

The Social Labs would then apply typical workshop techniques for selecting pilot ideas, such as „voting by feet" as suggested in the generic design of the workshop (e.g. SL1, SL, 16, SL18; WS1) – i.e. walking to and standing close to the respective flipcharts and voting with sticky dots (e.g. SL2, SL4, SL7, SL17, SL9; WS1). Thus, in most Social Labs the ideas were jointly chosen in a transparent way. In one social lab however, a selection process was not necessary as the participants had developed three pilot ideas to further elaborate forthcoming steps (SL12, WS1). Also, Social lab 13 chose a different approach: The SL management continued bilateral discussions with the most promising pilot idea representatives and

made sure that they would check with their teams whether the pilot could be implemented (SL13, WS1), which resulted also in a selection.

The criteria for the selection process varied a bit between the different Social Labs. While some chose the pilots with the highest impact on research and innovation in the respective field (e.g. SL2, WS1), others asked to vote for those which they personally felt they would like to contribute to (e.g. SL1, WS1), they wanted to host (e.g. SL4, WS1) or which were the most 'doable' ones (e.g. SL19, WS1). In respect to the latter criteria, Social lab 10 asked to choose those which could be *"incorporated into current networks, current practices or being leaned on project ideas that have already been realized"* (SL10, WS1) arguing that small projects might not *"necessarily lead to big change, but small change, which might then open up spaces for bigger changes*". Yet, other Social Labs applied several rounds of voting. Social labs 2 and 8, for instance, already reduced the number of ideas at the end of workshop day 1 by letting participants choose one idea to elaborate further on the following day. Only those ideas with a minimum of one vote were kept. On day 2, they had other three rounds of voting with each three sticky dots per participant: In the first round the participants were instructed to choose pilots potentially making the biggest difference to research and innovation in the field; in the second round they voted for those which seemed most relevant for their own projects or organisations; and in the third and last round, they were asked to choose the ones they were most excited about to be involved. The following discussion on the top votes on multiple criteria resulted in four ideas the group wanted to take forward (SL2, WS1; SL8, WS1).

As the Social Labs were not bound to a predefined number of ideas to be implemented, the resulting number of ideas after the selection process varied from social lab to social lab, from 1 to 6 ideas.

In most cases the selection process was very smooth as clear favourites of the group appeared in the selection process (e.g. SL17, WS1). Even in workshops where the selection seemed quite unbalanced as ideas of only one group were chosen, the participants seemed happy with the results and *"insisted on working on the selected ones rather than reconsidering the choice according to individual preferences"* (SL7, WS1).

In feedback rounds at the end of workshop 1, participants expressed that they had appreciated the selection process, the related discussions and the results (e.g. SL7, WS1).

Although the selection process in general was smooth in the Social Labs, the SL management team observed that some profound ideas were left out, probably due to group dynamics (e.g. SL18, WS1). Also, in some cases, participants felt the selection process was too quick, that *„too early solutions were provided; it would need more time to analyse the approaches we have and that no accurate"* (SL1, WS1). In this rare case the participant did not identify with the selected pilot ideas, which obviously hinders ownership and participation in the forthcoming development and work on the pilots. The selection process was sometimes not easy and required an agile facilitation between steering the group but still letting them decide autonomously, as SL management teams noted (SL16, WS1).

Others reported that the selection process created some frictions in the group. Social lab 3 noticed that participants especially felt frustrated because the selection criteria were not clearly defined: *"Because some participants wanted to have explicit criteria already upfront and probably because of the diversity of viewpoints as related to RRI, the problem of selecting and aggregating based on unclear criteria was aggravated"* (SL3, WS1). Sometimes the selection process would need more time than

allocated (e.g. SL9, WS1), which required a flexible adaptation of the remaining programme. Thus, the selection process was regarded as a key element of the entire workshop which was a condition for moving forward.

In some Social Labs the selection process was not finalised in Workshop 1 but was extended to the second one and sometimes even to the third, especially in respect to forming teams contributing to the pilots (e.g. SL8).

Some of the pilot actions chosen in the first workshop lacked clear commitment by the participants due to lacking time or motivation and thus another selection process had to be applied in the following workshops. In SL16, for instance, participants could *"choose a green card if they wanted to continue working with the pilots, a yellow if they wanted to modify it, or a red if they wanted to leave it altogether. This allowed the participants who did not care much about the pilot idea or lacked motivation to implement it to opt out of the work and instead brainstorm new ideas, which they cared more for"* (SL16, WS2).

Yet, in other Social Labs additional pilot ideas were developed as a result of other on-going pilots even in workshop 3 e.g. in SL 12: *"We have planned at least three more pilot actions to continue discussing the themes raised in pilot 2 and 3"* (SL12, WS3) or sometimes also because of individual activities without concertation with the social lab e.g. in SL 5: *"One of the participants (...) a B-corporation came up with a fresh product of their company, which is a novel innovation in the field of online identity and age verification. This was an unexpected pilot action, which the representatives (...) were more than happy to present during our workshop"* (SL5, WS3).

4.3.6 Methods for Identifying Pilot Hosts

Pilot hosts, or sponsors, as they are also called in the project, are crucial for the implementation of the selected pilot action. According to the Social Lab Manual (D1.2) pilot hosts *"manage the implementation of a specific social experiment (pilot)", "oversee[ing] the development of a 'prototype' intervention, tak[ing] it to the field and implement the experiment in the case (project, call, or program level) and take care of appropriate feedback to the team and the social lab in general."*

Like pilot idea development and selection, choosing at least one pilot host per pilot action was foreseen to happen in the first of the three scheduled Social Lab workshops. The generic design suggested doing so as part of pilot development, once pilot actions have been chosen.

The role of a pilot host might well be demanding, and beyond intellectual commitment to a pilot idea, according to SL19, WS1 it also requires emotional engagement, as well as time resources (SL1, WS1) to put the selected pilot idea in practice.

Providing for enough time to clarify roles, expectations and available resources of potential pilot hosts was key to a successful pilot host selection in some labs (e.g. SL1, WS1; SL15, WS2, SL16, WS1). While teams were formed to work on the pilot action development and the next steps to be implemented, not all Social Labs selected pilot hosts in the first workshop, but left this designation open for later steps (e.g. SL3, WS1; SL5, WS1; SL11, WS1; SL12, WS1; SL16, WS1; SL18, WS1).

Selecting pilot hosts was easy in those cases where the pilot ideas were clear and the commitment was already established in the process of pilot action selection and development (e.g. SL4, WS1; SL9, WS1).

However, not all Social Labs experienced this process smoothly, with some labs reporting moments of frustration and unease once pilot action development came to the step of identifying sponsors behind the pilot actions (e.g. SL1, WS1; SL6, WS1; SL19, WS1).

In order to ease the burden of the host and the selecting process, some Social Labs manager offered all kinds of support, be it to host a pilot action themselves (e.g. SL15, WS1), be it time resources to work on the pilot through the NewHoRRIzon project (e.g. SL19, WS1).

4.3.7 Methods for further pilot development

Most Social Labs managed to finalise the pilot ideation and selection already in the first workshop, so that the focus of the second workshop could be laid on further developments of the pilot activities to improve them collaboratively and to reflect on the progress of the pilot in between the first and the second workshop.

It proved to be important to end workshop 1 already with a concrete plan how to proceed with the pilots, otherwise the time in between workshops was not used to make any progress in the pilots. Thus, participants have to leave the face-to-face workshops with clear next steps in mind (e.g. SL4, WS1).

Support for the pilot developments after the selection comes from different sources as the analysis shows: from the SL management team, from the pilot team (pilot host or sponsor as well as other SL participants), and from external parties who have come on board or provide feedback through the network of the SL managers or the pilot team.

The SL management team and in particular the facilitator supported the pilot development in many ways: in terms of providing incentives for external motivation and of supporting internal motivation with the aim to enhance the commitment of the pilot hosts and their team; in terms of preparing and structuring the face-to-face workshops and steering the group; and in terms of supporting exchange and communication also in between workshops.

In case pilot hosts were intrinsically motivated since they identified very much with the pilot, the pilot became self-sustaining (1st CSW). If this was not the case, the external motivation could be enhanced by contacting pilot hosts and their teams also in between workshops, or even to play an active role in the pilot development and to work together with the team on the pilot throughout the different phases of pilot development and implementation (1st CSW). A joint publication or published pilot stories on the website would also serve as external incentives (1st CSW).

Facilitators with various methodologies (c.f. below) aimed for concretisation of pilot ideas and structuring of the process. Part of the role was also to encourage participants to develop a pilot although they might not yet consider themselves as experts on RRI (1st CSW) as this was one of the worries expressed. Social Labs are very much about doing and experimenting and letting go pilots

which do not work is part of the process. Encouraging participants required the active involvement of facilitators during discussions and group work (e.g. SL1, WS2), to motivate the drivers of the pilots.

Social labs reported that facilitators had to find a balance between top-down, being explicit about aims and definition of RRI, and bottom-up approaches, to further engage participants and to keep them committed to evaluate their pilot ideas on their very visions and challenges (e.g. SL10, WS1).

It was utmost important to reserve sufficient time for working on pilots concretely in Workshop 1 (after pilot selection) and 2. As some labs reported that a full two days could be easily used for this task and would make a big difference compared to only 1.75 days (e.g. SL2, WS1). However, in case not enough time could be allocated, it gave the management team "*a good excuse to follow up soon after the meeting*" (SL2, WS1).

Methods used by the SL management team to support the further development of the pilot comprised the following:

- Reflection exercises: guided by stimulating questions to reflect on the progress of the pilots and to adapt accordingly (2nd CSW), dreaming big - just for a moment (SL11, WS1); reflecting teams (SL18, WS1), thinking and presencing as part of an applied U-Process (presencing: sensing + presence: Presencing is a journey with five movements: We move down one side of the U (connecting us to the world that is outside of our institutional bubble) to the bottom of the U (connecting us to the world that emerges from within) and up the other side of the U (bringing forth the new into the world) (Scharmer, 2018) (SL1, WS2), modified fish-bowl (SL2, WS2), World café sessions (SL10, WS2), SWOT Analysis (SL13, WS2); reflection supported by the NH thinking tool (SL9, WS3).
- Decision making methods e.g. personal decision concerning pilot: continue, modify, or leave it - each on one card to express decision (SL18, WS2) or voting (SL19, WS2)
- Presentations by pilot hosts (most SLs), often based on a structured template or PPT on the progress of the pilot or intermediate results if any. The presentations had two purposes: to inform others about the pilot and to receive feedback but also to increase the sense of ownership (SL3, WS2). In some SLs the participants were encouraged to give their presentations in creative and unconventional formats such as a skit, a poem, a sonnet, a drawing or even a dance (SL8, WS3)
- Group work and concrete action planning (e.g. SL2, WS1), often based on a template to fill in (e.g. on objectives, aspects addressed, policy implications, next steps;) e.g. SL7, WS1 or an impact logic model as in SL11 (WS1); breakdown in steps (e.g. SL16, WS1), the use of "thinking and agreement tool" which was specifically developed by SL assistants and manager (SL16, WS1), roadmap with simple and achievable goals (SL6, WS2)
- Plenary discussion (all SLs): e.g. open dialogue rounds to reflect on specific pilots
- Prototyping: with a variety of materials such as gum, rope, scissors, glue, coloured cards, etc. pilot teams developed a prototype or a sketch of their pilots (SL4, WS1; SL9, WS1; SL11, WS1). Although the managers noted that not all participants made use of the materials, the playful approach to handle serious content was much appreciated.
- Role play: to change perspective once the pilot team had the feeling they were stuck in a one-way street (1st CSW), the intellectual tramp: one participant takes over the role to challenge the dominant/hegemonic narrative (SL19, WS2)
- Feedback: through maximum mix in parallel group discussion, or delegates from one group sent to another group in order to provide feedback to other pilots (e.g. SL4, WS1).

- Walkshops (SL4, WS2; SL9, WS2; SL10, WS3): exchange and discussion while on the move often with a template on a clipboard, a walkshop with posters of already identified challenges gathered by participants in the previous workshop.
- Bilateral conversations (e.g. SL16, WS3) to come to quick decisions.

Stimulating questions to reflect on the pilots comprised the following:

- About motivation for pilot and problem definition e.g. what is the shared intention and aspiration? (SL1, WS1)
- Targeted audience: Who is the audience and what is their interest/benefit (e.g. Sl16, WS2)
- Reality check: e.g. which aspects of the visions and of current reality do we address? (SL1, WS1), how to find ways to integrate the pilots in their daily work (SL4, WS2), what are the goals and are they achievable (SL6, WS2)? Are the responsibilities realistic? (SL16, WS2)
- Need for support: e.g. what support do we need from the SL management (SL1, WS1)? Whom else do we need on board (SL4, WS2)?
- Reflection on RRI: Which RRI keys are already addressed? Which could be enhanced? (SL4, WS2)
- Challenges and coping strategies (e.g. SL2, WS2), what remains unclear? (WS11, WS2)
- Concretisation: what are the next steps? (e.g. SL1, WS1) How is the process structured?
- Exchange: Where are connections to other pilots and potential partners? (SL11, WS2)
- Impact: How can the pilot's impact be observed? What strategic action can help the pilot sort the desired impact? (SL3, WS2). Can the pilot be applied in different surroundings by different actors? (SL13, WS2)
- Sustainability: What strategic action can help 'anchor' the dynamics/ ensure its continuation? Where and how can the pilots be embedded? (SL3, WS2) How can the pilot be exploited? (SL4, WS2)

The SL often applied several rounds of reflection and exercises related to the pilots' development in order to allow for iteration and reiteration. Exercises for reflecting in-groups (pilot teams) and between-groups (different pilots) would allow for fine-tuning and getting feedback by a maximum mix of participants.

Communication in between workshops: It was important to establish means of communication and interaction in between face-to-face workshops, in order to make sure that the pilots progress. The period in between lasted roughly one year and the SL team had to make sure that the time was not wasted in terms of pilot developments. This required the pro-active engagement of the SL management team. They had to define in the course of the workshop how much responsibility the SL team wanted as was able to provide, e.g. SL14, WS1) by asking participants about their needs to be supported in advance. Regular calls, emails, skype calls, virtual meetings, and bilateral conversations were important means to keep the SLs alive and to support the progress of the pilots.

That a pilot team evolved around a pilot was an important resource in the pilot development as tasks could be divided. The facilitator was required to emphasise that it was not the sole responsibility of the pilot host but that clear roles and clear tasks should be defined (who is the owner/driver of the pilot? Who is the co-driver, who is a team member?), which ideally was part of the action planning

(e.g. SL3, WS1). Sometimes also redistribution was necessary in order to avoid overburdening team members.

Some pilots also sought external support by bringing in experts for a specific field, by asking for feedback, for helping to disseminate their pilot action and getting more responses or entries on a website or participants in a training. Sometimes the exchange with external experts resulted in true collaborations (e.g. co-developed training SL3, WS2; initial support for a European wide Manifesto by external in SL3, WS2). Even excursions to other organisations were organised to get inspired (SL15, WS2).

Exchange between pilots to find synergies and avoiding re-inventing the wheel worked to some extent. In the first cross-sectional workshop all running pilots were made visible to the NH participants and a first categorisation of pilots was undertaken in order to detect similarities between pilots. An active exchange between pilot hosts took place only in the second cross-sectional workshop.

It can be said that the analysis has shown that a careful planning of the set-up of social Labs is needed. The same holds true for steering the process of idea development, the selection of ideas, the pilot hosts and the pilots themselves. Only if all the parameters are done in an integrated and adapted way that aligns to each other, the social lab will be most successful.

One highly discussed topic in the pilots were the processes of Social Labs. Thus, the following section describes the identified issues around this topic.

4.4 Social Lab Process

While the previous chapter (chapter 4.3) mainly focused on the set up and methods applied in the Social Labs, this chapter is about the overall reflection of the entire social lab process. Social Labs undergo different phases within their lifetime. Also, several aspects ease or hinder these processes (like creating a pleasant atmosphere, communication, …). The following section outlines the different factors and reveals insights to the phases themselves.

4.4.1 Atmosphere/Art of hosting

Much attention was paid to providing a nice and welcoming atmosphere, as participants were spending their free time with the labs and took on a lot during the one and a half years process. In a design workshop, the managing teams and facilitators co-created methods and processes which should be suitable for the lab requirement and many labs applied these methods afterwards and considered aspects of "space and beauty" (Marschalek, 2018, p 211). Lab managing teams highlighted these approaches also in their reports: "*Overall we tried to support an atmosphere where differences were welcome as well as critical perceptions and doubts*" (SL18, WS1). "*It is important to create a respectful and trustful atmosphere in any kind of workshop. Respect in this sense means also to dedicate time to the workshop, to be present and not to be distracted by mobile phone calls, etc. At every workshop we share our workshop etiquette rules. And although sometimes participants cannot stick to the agreed rules at all times, they experience an atmosphere of trust and respect which they can replicate in other environments*" (SL4, WS3).

Additionally, it was found that informal encounters were a key factor for the social lab teams to grow and be able to collaborate. More and more, the labs considered these important aspects, here are a few examples: "*Provide as many breaks as possible to allow informal discussions between the participants. This appeared to be effective to further boost the plenary and group discussions during the programme*" (SL5, WS1). "*Organizing face-to-face meetings like the Social Lab Workshops is crucial to keep momentum. As soon as people got together physically this helped them to do a lot of planning and work"* (SL3, WS3). "*We also invited participants to reflect actively and share ideas during dinner that evening*" (SL8, WS2). "*Moreover, the informal way in which we set-up the first part of the visioning exercise during the working dinner opened up participants*" (SL3, WS1). "The nice surrounding and calm atmosphere at the venue helped participants to relax and really be present during the workshop. As we all stayed in the same hotel and also spent some free time activities together (game, meals, walks, train trip) the group members could meet in different situations and constellations" (SL 4, WS 2). "*After dinner some of the participants went for Ice Skating in front of the Rathaus were more informal conversation was taking place. Coffee breaks were important spaces for recreation, trust-building and interaction amongst the participants but also with the Social Lab team*" (SL 19, WS 2).

4.4.2 Social Lab process in its different phases

4.4.2.1 Invitation to participants

Participants were personally invited to take part in the lab. Contacts were made via various channels and databases (such as CORDIS participant portal), after thorough research in the specific lab theme sector (e.g. renewable energy) in order to bring together different stakeholders and experts of the specific field. The recruitment process was a combination of targeted e-mails to actors based on a selection through stratified random sampling or preliminary network analysis and snowballs to complement the lab teams. In the composition of lab teams different aspects had to be considered as representation of different stakeholder groups, but also gender and geographical distribution of participants. Participants were asked for further contacts and recommendations, for instance participants were encouraged "t*o bring a plus one to boost the number of participants*'' (SL16, WS1). While this was conceived in many cases as a great opportunity for field access, it also implied that there was a "*loss of control about the setting and the sampling of participants*'', (SL17, WS1) as it was for instance the case in the JRC lab, which resulted in a lab team dominated by JRC staff.

Generally, it can be said, that the recruitment process was rather difficult and time intensive across all labs and included many steps and rounds of activities: *"We approached the task of recruitment with a continuous and persistent effort over several weeks and rounds and sending out reminders, finding a balance of how much information and material to provide at the different stages of recruitment, answering individual questions, concerns and requests etc"* (SL18, WS1).

In some labs, recruitment was even more difficult, such as the ERC (European Research Council) lab, to convince people to take part in the rather long and demanding lab process as often phone or Skype calls had to be made to enhance the willingness to participate. Also, additional material was needed to inform about the nature and purpose of the labs, why exactly their participation is recommended and why it might be fruitful to participate. Many could not see any 'value' in participating, or because they did not see themselves up to the task. Using existing personal contacts and asking to disseminate further was key for a successful recruitment.

Time was another important issue. Although teams had sent out save the date announcements, still it turned out how difficult it was for participants to find the time for the two-days workshop and the required activities in between the workshops. Optional participants did not have the time or allowance to travel, or finally, illness or some other duties hindered participants to take part. Even though they admitted their participation, still many cancelled at the end and the lab teams had to find other participants to fill their spots. Some participants sent a substitute.

After workshop 1 further participants had to be recruited to replace dropouts. Obviously, first persons were approached with whom the lab teams had already been in touch for WS 1 but they could not have made it workshop 1. Also, participants were asked for further contacts, either from their own organisation, or networks. Labs tried to keep the team structure and replace participants, for instance: "*We selected new stakeholders in a way that they would represent the same type of position from the same or a similar type of institution"* (SL6, WS2), or they tried to get new participants because of their particular relevance for the selected pilot actions. *"e.g. the president of Eurodoc was invited to gain support for the RRI Manifesto"* (SL3, WS2). Some also tried to recruit underrepresented groups, such as business or civil society organisations. Participants were invited "*in order to get a broader and a more open and diverse perspective to the theme of the Lab*" (SL13, WS3). Although lab teams tried their best to re-recruit after workshop 1 and 2 as well, however, the general numbers of participants declined up to workshop 3.

Furthermore, it was difficult to get representatives from policy and industry. "I*t seemed easier to get people from smaller organizations with critical views to participate than actors from industry or policy. Our assumption is that those actors did not feel like they needed to bring in their views to be heard, as they can rely on other channels to make an impact. Pointing out that we would value their organizations' input for our research project and that this will have impact on EU funding policy also helped out getting people on board (specifically actors from smaller organizations" (SL10, WS1).*

EC representatives were also very difficult to reach, especially not "*through publicly available contact information*" (SL13, WS1).

4.4.2.2 Intervals between workshops

The Social Lab process spanned over a timeframe of 1.5 to 2 years from the first to the third workshop (c.f. Figure 8).

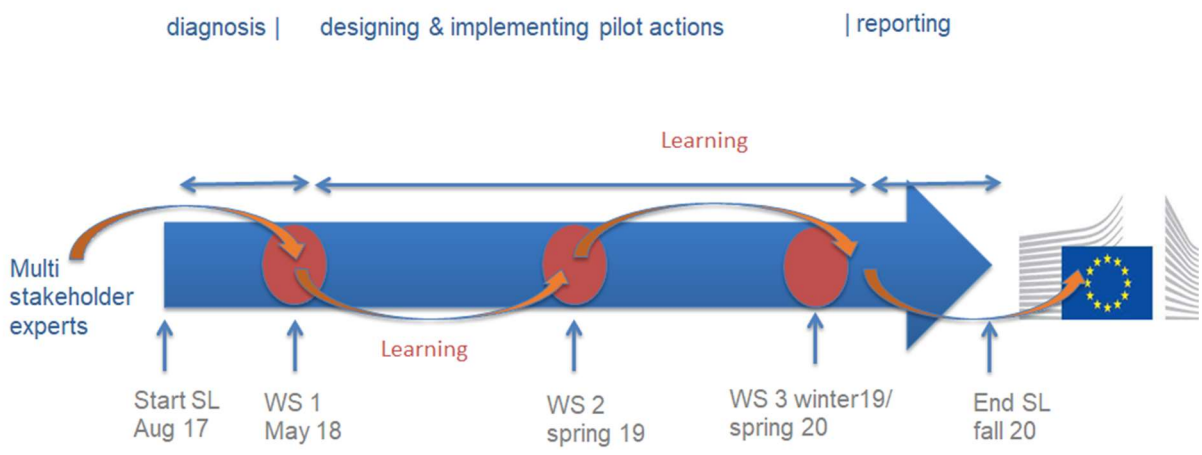

Figure 8: Power Point Presentation by Wunderle, Ulrike, Pilot training on stakeholder engagement, February 14th, 2020

Since participants met only three times in person (in some cases only two times because the last workshop had to be moved to an online setting due to the Corona outbreak), it was important to keep participants engaged and to establish other modes and channels of communication in between workshops.

Crucial for the persistence of the lab process was the phase in between the series of three workshops. In some labs this interval lasted for more than a year, and it was accordingly difficult to stay in contact with the participants and to support the pilot teams in their work. Although often workshop 1 was very successful in setting up the lab teams who expressed commitment to the process and demonstrated to "*keep the spirit*" (SL 11, WS1), back at their own desks it was far more difficult to keep the participants motivated. It became clear that "intense support and presence of the SL manager is/will be needed" (SL 19, WS1). Many labs reported their efforts on staying in contact with the lab team members and *"see whether the pilot idea was still alive"* (SL4, WS2).

The intervals between the workshops differed a lot across all labs. For some, it was important to organise WS 2 soon after WS 1, while for others much time between 1 and 2 was scheduled in order to allow the pilot activities to be implemented in the meantime. How loose or narrow these time frames were perceived also depended on the set objectives and reached goals of the workshops. For example, it turned out that some pilot activities were almost completed at the date of workshop 2, while there were pilot activities still ongoing after WS 3. Often, the time structure of the lab process only evolved throughout the process, which also sometimes led to criticism and raised doubts on the success of the lab. Sometimes, lack of progress between the workshops was criticised and more clarity was asked for, such as *"roadmaps which lead to a very clear set of steps and courses of action"* (SL6, WS2). Obviously, only dedicating the time at the face-to-face workshops was by no means sufficient for progressing the pilot activities, although labs tried to provide their lab teams more time for exchange and collaboration. They organised online meetings or split the workshop into two or more smaller events *"so that participants would have more time to meet face-to-face and to work together"* (SL7, WS2). During the workshops, they helped the pilot teams to define their next steps and organised support for these tasks. Special calls with the pilot teams, telephone conferences and meetings were set "*in order to facilitate the monitoring of the pilots and to discuss pending issues*" (SL14, WS) or just

to discuss contents or interlink the pilot activity with other Social Labs of the project. Mailing lists, collaboration platforms (such as Trello) and social media networks (such as LinkedIn) were set up between the lab teams to be able to stay in contact between the workshops. However, reports show difficulties of the lab teams to stay in contact over such a long period of time and be updated on the status of the pilots. It was a continuous effort which has to be done throughout the process which demanded a lot from the management teams as well: "*It was hard to reach people between the workshops, not much work was being done, and the process of sending countless e-mails, reminders, and doing calls during the 1.5 years was at times tedious and frustrating*" (SL16, WS3). Clearly, although lab management teams underwent many efforts, virtual encounters were of "*scarce success whilst face-to-face meetings were particularly successful reinvigorating enthusiasm about the Social lab activities*" (SL12, WS3).

Some of the pilot activities were dropped because the hosts and teams could not continue the activity or did not find enough time to do so, surprisingly many of the activities were also carried out between the workshops. Not to waste their time, participants either skipped their inputs or tried to make best use of it: "*The participants wanted to get the most out of their time together and therefore kept their focus on the main activity: strengthening their pilots (and for a few of the groups revising them to better suit the available time and resources among the participants)*" (SL18, WS2). Still, much support was needed from the lab management teams, they took over administrative work, were establishing contacts, providing expertise on RRI or directly helped with their own involvement and active participation, such as data collection providing training or moderation tasks. Lab managers also visited pilot hosts and their institutions or personally took part in activities.

4.4.3 Cross-sectional exchange and learning

To support cross-sectional exchange and learning between the Social labs two cross-sectional workshops were organised (c.f. description in section 4.4.3). The first one comprised all Social Labs managers and facilitators, the oversea partners and the members of the advisory board; in the second one additional SL participants, particularly pilot hosts, were invited to exchange their experiences. Not only the two cross-sectional workshops were a valuable source for cross-fertilisation but also the monthly calls organised by each work package leader bringing together several SLs in their WP.

SL participants also expressed recurrently the wish to get an overview of other running pilots and some felt that shared knowledge and cooperation with other labs was missing. Thus, most SL facilitators gave updates during the workshops. Furthermore, the NH homepage was kept up-to-date with a description of all the pilots. An internal shared excel spreadsheet helped the consortium to gain an overview of the status of pilots (e.g. running, aborted, etc).

The scope of the exchange was after all to coordinate and produce synergies between the SLs, in evolving pilots, particularly between pilots with a similar aim. A first categorisation of pilots during the first cross-sectional workshop brought similar pilots together, e.g. RRI training or awareness raising events. Overlaps could thus be detected at an early stage with the idea to feed back the experiences from similar pilots to the different Social Labs.

Another cross-cutting issue was the level of standardisation, how to systematise outcomes and output, how to "*balance compatibility between Social Labs*" (1st CSW). One idea was to apply the SIAMPI[2] categories of Productive Interactions to assess social impact of research projects, research programmes and research funding instruments.

After the first attempt to categorise the pilots during the first cross-sectional workshop, other attempts followed later with slightly different classifications (c.f.4.5.1 overview on pilot actions).

Specific sessions during the first and the second cross-sectional workshop aimed at bringing similar pilots together. During the second CSW, for instance, a session was dedicated to discussing training formats. Although all five training pilots represented focused on different audiences (training for research organisation, NCP training, Teach the teacher, training and learning platform for police as well multiple training events), the exchange brought forward similarities but also interesting differences and formats. Similarly, in the session dedicated to workshops and events on RRI, participants noted that all had started with the same conditions (small teams, limited capacity), but all could be finalised due to a highly motivated team and guidance by the facilitators. Success factors mentioned by the participants in the session among others were involvement of citizens, provision of material before the workshop and diverse teams. Previous exchanges had already led to a combined workshop of two different Social Labs (SL2 and SL8) allowing for using synergies and adapting pilot actions accordingly (2nd CSW). *"We experienced the group dynamics to be enthusiastic in sharing and learning from each other. The combined workshop of two Social Labs actually added more enthusiasm to learn about the similarities and differences in the pilot actions that the groups are working on. Despite no or very little information about the social lab and pilot actions, the new participants were easily adapted and actively participated in the discussion"* (SL8, WS3).

More specific insights gained in these parallel groups are described in the pilot section (see chapter 4.3.3 – 4.3.6, 4.5). The same applies to the SL methodology which was another cross-cutting and reflecting exercise during the CSW 2.

4.4.4 Challenges encountered in the Social Lab process

Obviously, the social lab process encounters also challenges that were mostly captured inductively by SL teams rather than responses to deductive questions. Still in combination with the deductive questions, following 'challenges' were identified: unclear concepts, unclear objectives, time constraints and resources, and challenges related to participants.

4.4.4.1 Unclear concepts and objectives

One of the major challenges described in a few Social Labs was lack of clarity in respect to the Social Lab methodology, its objectives and its process. For the Social Lab management team, the level of standardisation was a remaining issue of discussion. A certain level of standardisation was necessary in order to have comparable processes in all 19 Social Labs. It was however also important to set up each Social Lab as a place for experimentation leaving much room for bottom-up ideas and to react to it in a flexible manner (CSW 1 and 2). While the lab process is conceived as an open process, guiding questions, visions and social challenges should be kept in mind (SL10, WS1). This struggle for balance

[2] http://www.siampi.eu/

between structure and standardisation on the one hand and openness on the other hand, resulted sometimes in clashing working cultures: "*The presentations broke the flow of the workshops: The idea of the workshop to be an exchange of ideas, to get active, to engage and to debate was strongly contrasted by the presentations, where participants were required to be rather passive listeners*" (SL10, WS1). Among some participants the rather open design of the workshops also created moments of frustration and it did not lead to the intended effect of bringing them out of "*their own nuclear bubble*" (SL19, WS1). The Social Lab teams also noted that for some stakeholder groups the open setting was more of a challenge than for other ones. For representatives from businesses and industry for instance, it was very difficult not to think operational all the time and to create room for experimentation. They demanded for a clearer leadership, well-structured workshops, stricter tasks and deadlines (SL16, WS2). In contrast to this open design, a very strict procedure also created moments of frustration among participants as this observation shows: "*The facilitator (...) stuck to the programme developed before the workshop. He did not encourage and support participants when they wanted to divert and discuss workshop objectives. A few participants expressed their dissatisfaction with the facilitation*" (SL1, WS2).

The Social Lab approach was difficult to understand both for the Social Lab management teams as well the participants themselves and struggled with it being too vague (e.g. SL7, WS3). Thus, it comes of no surprise that on participants' side, the method of the Social Lab and its process and objectives were not always clear (e.g. SL1, WS1; SL5, WS1): "*One participant mentioned that it was not clear to him that a Social Lab was a process"* (SL1, WS1). As the process was not clear to all, it also came of a surprise to some that the Lab process would not stop in between workshops but would span over such a long period of time, from the first workshop until the third and sometimes even beyond that (SL7, WS1). As the process was not clear also the scope and breadth of reach of the pilot caused uncertainty and if and how the pilots would be assessed (e.g. SL10, WS1).

However, participants appreciated that they had the chance to participate in "*something innovative and being able to shape it, (...), the chance to meet in person and to discuss ideas, receive feedback and learn from each other*" (SL7, WS3). Some acknowledged that they did not only learn about RRI but also the Social Lab approach (SL19, WS3).

These statements and observations by the Social Lab management team shows that it is very important to well explain the Social Lab method, process and objectives well at the beginning. Another idea suggested by SL8 was to present the project timeline visually in advance, not just verbally, in order to make the process clearer. Also sending out material with a clear explanation of the goals of each of the workshops, the Social Lab process and the NewHoRRIzon project in general, before the workshop takes place as some labs did (e.g. SL2, WS1), may help to prevent lacking clarity and understanding. However, also here a balance has to be found between too much and too little information.

4.4.4.2 Time issues

One recurrent constraint and challenge was 'time' in respect to many different issues: Time and resources constraints on participants' side, time constraint in respect to the workshop duration, the timeframe and the respective deadlines for Social Lab phases, and time in terms of the duration of the overall Social Lab process and the need to commit over such a long period of time and to invest in the pilot activities. Social Lab teams noticed that the timeframe in which everything had to be organised might have led to dropouts of participants (SL3, WS1). A constant participation from WS 1 to WS 3 was

difficult to maintain (c.f. section on dropouts) but also the single workshops were sometimes disturbed by participants having to leave earlier or coming later due to other duties (e.g. SL4, WS1). If pilot hosts and drivers for some reason could not participate in one of the workshops in some cases, the pilot was not well represented and it was difficult to get work done in relation to that pilot during the pilot (e.g. SL8, WS3) and sometimes led to incomplete pilot actions (e.g. SL2, WS3).

Social Lab teams noted that the duration of the workshops themselves was often too short, which created a feeling of having to rush through a dense programme or that the workshop pace was too high, "l*eading to a situation where concrete answers and thoughts could potentially not emerge all too well*" (SL10, WS1). As a minimum duration two days seemed necessary as SL 5 or SL 7 for instance noted (SL5, WS1). Sometimes workshops ended before pilot ideas were fully developed and brought up onto a solid ground (SL10, WS1), which required different supporting structures after the workshop. Participants mentioned further that the diversity of actors involved in and outside the Social Lab (where pilots should be implemented) requires additional time resources as a shared understanding and consensus about objectives are more difficult to get (SL11, WS1).

Furthermore, in case of too ambitious agendas an ad-hoc flexible adjustment by the facilitator is absolutely needed (SL7, WS1). The role of the facilitator (c.f. also chapter on roles 4.2.1) is crucial and demanding in finding a good balance between being able to transport key issues and objectives in a very open process versus strictly sticking to the predefined agenda.

The overall time frame of the Social Lab process and ideally a constant commitment by the lab participants can well be argued for by providing examples as SL 11 proposed (SL11, WS1).

Another hiccup produced the fact that not all Social Labs started their workshops at the same time In the course of the project and thus in some cases needed material was not ready before the actual start of the lab (SL13, WS1). Also the pace of the Social Labs differed. While some still co-developed pilot actions in the last workshop, in most they were already finished. SL 19 reported (SL19, WS3) that participants could not well anticipate what to do in the third workshops, as the pilot action process was already finalised in the previous two workshops.

Some Social Lab workshops were adjusted to the travel schedule of the participants coming from all over Europe and beyond and resulted in shorter workshops such as lunch-to-lunch events to leave a half day for travelling each (e.g. SL15, WS2). Other Social Labs reported that it was impossible to find a suitable date for all which lead to drop-out in some cases (e.g. SL13, WS3; SL6, WS3). Some of the last workshops had to be postponed due to the Corona crisis making it impossible to meet face-to-face. Due to this, Social Labs noted that the initial momentum was lost "*the pandemic gave the effort to keep the dynamic a final blow*" (SL6, WS3).

Among all time constraints the most challenging one was time and resources dedicated to the pilots: *"The biggest issue was the lack of resources from the participants (time, money) to really participate in the pilot activities. Furthermore, participants had the feeling that they would do our (project team) work"* (SL19, WS1). Some participants were not clear before the first workshop that they had to *"do something and were somehow upset about this"* (SL19, WS1). They were happy to be active and contribute during the workshop but they struggled to work beyond that to implement pilots. This can be an indicator, as the social lab team argued, that the pilots were developed too sophisticated or too abstract and not well connected to one's daily business. The willingness to contribute to pilots was,

after all also influenced by their employment status. Scientists working on a project basis and without a regular contract would have had to invest their free time (SL11, WS2). But also, for the ones with contracts it was not always clear whether the pilot actions could be part of their regular work (SL7, WS3).

Hence, as the social lab team suggested, pilot activities need to be very well implemented in daily work in the first step. Once the benefits become more visible, more efforts might be invested (e.g. SL19, WS1). It had to be emphasised that pilot actions can be small and that they should not create an extra burden (SL1, WS2). Thus, Social lab participants have to be informed before the first workshop what is expected and what the goals of the Social Labs are. In the first workshop it is important to spur the intrinsic motivation to contribute to society with their pilot actions (e.g. SL1, WS2).

4.4.4.3 Challenges related to participants

A few of the challenges in this respect have already been described in more detail in previous sections (see 4.4.). However, to describe the most pressing challenges in the Social Lab process, we will also elaborate under this section which kind of challenges evolved in relation to participants- from recruiting participants, to keeping them engaged and the dealing with emotions and group dynamics in the workshops.

The recruitment of some stakeholder groups was in some cases a challenge resulting in less diverse groups as intended. E.g. *"A wider spectrum of participants could (...) have helped keeping things more 'grounded', as diverging interests might find consensus in the lowest common denominator. This might have also helped to better assist the willingness of more influential actors to engage in certain areas"* (SL10, WS1). The recruitment strategy was also not always clear, whether to use a snowball system or an open call for application, especially when new actors needed to be involved (SL1, WS1). In some labs important stakeholders could not be convinced to participate or the lab team did not get a response at all despite several efforts such as representatives of the EC or ERC (e.g. SL12, WS1; SL1, WS2), which resulted in a feeling of limited impact potential. Also getting participants from businesses and industry turned out to be a challenge as they did not feel as connected to the topic (e.g. SL6, WS2) or if they had been successfully invited that it was difficult to align the discussion with the overall business goals and organisational policies (SL5, WS2). Sometimes it was difficult to get people from higher management positions and the Social Lab concept with its bottom-up approach itself serves like a good excuse not to participate and place the responsibility elsewhere, *"mainly because they are too busy to work with RRI and to implement the pilot actions themselves"* (SL16, WS2). However, as lab management teams argued, if commitment to RRI was a requirement from the "top" it would have been easier and more legitimate to allocate time for the tasks.

A challenge that basically all Social Labs were confronted with was the fluctuation of participants and the consequence of that. The result was that new participants had to be brought to the same basis as the other ones that to some extent things had to be repeated and which required creative formats to avoid boredom and frustration among the other participants. Also in the creation and forthcoming of pilots it was especially a problem if the drivers of a pilot were missing in the following workshops.

The fluctuation of participants was surprisingly not perceived as a problem for some social lab teams but instead a healthy turnover that keeps the Social Lab process alive: *"Do people have to be permanent participants? It might also be a good thing if not motivated people leave the SL earlier"* (2nd CSW). And sometimes the involvement of new participants was beneficial for the pilot actions which needed new actors to be involved (SL1, WS1).

The diversity of participants is a clear aim of the Social Lab to bring in different actors with multiple perspectives. Naturally the very diverse group compositions provoked some frictions and not always was it easy to facilitate the Social Lab process with divergent views and opinions. The participants of the Social Labs represented different societal interests as they came from different (research) fields, and stemmed from different actor groups such as research, civil society, industry, policy, funding, etc., and were furthermore diverse in terms of nationality, level of organisational hierarchy, gender and knowledge of and attitudes towards RRI e.g. *"affirmative, critical, ambivalent or possibly also indifferent"* (SL10, WS1). These differences sometimes resulted sometimes in unbalanced group dynamics where, for instance, participants with pre-knowledge of RRI would dominate the group indirectly (e.g. SL18, WS1). It remained a challenge to "exploit" the diversity in harmony (e.g. SL3, WS3). *"It seemed to be hard to get group agreements or even let one another finish their sentences and listen to each other. The facilitator had to intervene several times"* (SL3, WS3).

This was also the case in the pilot development where single participants complained that they did not have a say in the pilot selection, that they were not heard and that the driver of the pilot had already very concrete ideas before the workshop already (SL1, WS2). To stay engaged and to contribute to pilots beyond the workshop duration, i.e. in between was a key problem for many Social Labs (e.g. SL6, WS2).

To steer the group to intentionally benefit from the evolving roles in the group, facilitators applied creative methods such as the Intellectual Tramp where someone whose role is to challenge the dominant/hegemonic narrative in a way that she or he feels free through interventions of her or his design. The idea behind this method was not to necessarily criticise the emerging position but to offer alternative routes of inquiry (SL10, WS2).

Dealing with emotions and group dynamics evolved as subtopic in the coding process. As social lab managers reflected in the first cross-sectional workshop, moments of frustration were reported on different occasions and frustration is always a challenge, but *"considering frustration as part of a creative process is important"* (1st CSW). Chaos and creativity can be used in a productive manner and lead to very concrete and tangible outcomes as the resulting pilot actions show. However, it has to be explained to the participant that these elements are part of the process (1st CSW). Frustration has to be taken seriously but managers and facilitators must not indulge in this frustration in order to avoid blocking the process. Resistance of participants is an important source of information as there is much to learn in finding out where their resistance comes from. It is important to provide the space for critical questions but still avoid getting lost in overwhelming concerns (1st CSW). At moments facilitators were surprised by the hostility and resistance of participants which required clearing up potential misunderstanding in order to move on (e.g. SL16, WS1). To provide an example, in SL 16 the hostility came from a misunderstanding in relation to the size and scope of the pilot action. While participants understood that it was expected from them that they would be revolutionising their organisations in the pilot actions, the facilitator team did expect them to have a clearer idea on the

pilot scope based on the material that they had sent them previously to the first workshop. Also some participants claimed that they would not have any decision power in their organisation.

Not only did the number of participants fluctuate from workshop to workshop but so did also their level of engagement as some labs reported. It was difficult for participants to contribute actively over such a long period of time. How to involve the pilot team reliably and continuously, especially when the participants were situated in different institutions and countries with different circumstances remained a crucial question (SL9, WS3). It was helpful if participants had a feeling of agency and ownership to increase their involvement (SL10, WS2; SL19, WS3). Creating a common vision and uncovering challenges helped to induce agency on different levels. Sharing the belief that it did not have to be decision makers in organisations to induce change, but that everyone was a change maker in their own network by spreading the idea or implementing a pilot supported the feeling of agency very much. It seemed that the pilot work was low on the priority list of participants who were busy with other obligations (e.g. SL3, WS3). In some cases, it was of great help to invite external experts for certain topics to get a new spin for the pilot development and to get ideas how to institutionalise the pilot action (e.g. SL3, WS3).

Although the feeling of agency could be supported in most cases and participants were passionate about the core ideas of the Social lab but it was also observed that the momentum was sometimes lost, their efforts and initiatives stopped before reaching societal change and before institutionalisation (SL5, WS3).

4.4.5 Process reflection

While the previous chapter mainly focused on the set up and methods applied in the Social Labs, this chapter is about the overall reflection of the entire social lab process.

4.4.5.1 The Social lab experiences - Labbing

For many of the lab participants the lab was a common learning experience with personal gains although they have been brought out of their comfort zone at times as well. They could "*appreciate the lab as valuable time they were offered"* (2nd CSW). In general, they increased their knowledge in many ways and encountered different kinds of "*surprise moments"* (2nd CSW). The process of "*thinking together"* was very much appreciated, underpinning that the extra value for participants was bringing together people from different fields and disciplines. The diverse heterogeneous teams and the collaboration among the teams was valued very positively, although bringing together actors from diverse backgrounds also "*complicates the process*" and "*conflicts based on different ideas occur*" (SL3, WS3). Some would say that the "*mix of people present at the workshop was a great experience*" (SL10, WS3). They could recognise the diversity of perspectives, values, and different points of view and appreciate its added value:

"The possibility of interacting with people from other countries and backgrounds with different visions and insights. So, it is a way of interacting with society! I guess that's why they call it a 'Social" Lab'" (SL3, WS3).

The social lab process also revealed to these participants that the invited stakeholders have a lot of mutually useful knowledge to share between each other *"and the social lab opened up this knowledge exchange*" (SL1, WS3). Participants were getting new insights and *"started seeing things from different angles which in turn offered new and enriching perspectives"* (2nd CSW).

In terms of RRI the labs offered much awareness. The labs helped for "*reflections and learnings on (helping) concretising RRI*". The work on the pilots and thus on a specific societal challenge offered a real life embedding and *"anchoring of ideas into what is already there"* which is often missing (SL3, WS3). The fact that social Lab pilot activities are tested in real life environment of the researchers (or in public settings) reflection and insights are fostered. Considerations do not stay on a theoretical level, but get implemented, tested, reflected and evaluated to be again implemented in an adapted and improved way.

"A Social Lab can be a venue to reflect on these questions and challenges with participants to get them to not only try out new ideas through Pilots, but actually think of more institutional and systemic implications" (SL3, WS3).

Dealing with the pilots and changing approaches and designs of the implemented actions also asked for "reorientation" – on how to foster RRI on the micro-level. "*Although combined with doubts and dead ends on the way – can open up new perspectives*" (SL11, WS2). In these learning cycles participants could gain ideas which they could implement practically. *"The creative process of the Social Lab gave me ideas I could implement at home*" (SL3, WS3). However, it became obvious that RRI not just happens *"in people's spare time*", but that "*it needs dedicated resources and efforts*" for that (SL7, WS3). Also, it needs that "*forces are put together*" (SL3, WS3) in dynamic processes which allow mutual learning, such as the iterative process and the team work offered by a Social Lab. Therefore, the labs also created teams to combine forces and bundling cooperation. In many cases, lab participants felt "being part of a team" and one can say that in general, the Social Labs also "*generated community*" (2nd CSW). However, you have to be ready to get involved in the process, which at times could be challenging as well:

"A major learning for me is to trust in the dynamics of the multi-stakeholder process, the expertise and advise coming in from different perspectives at the right time, to stay cool and relaxed and provide together with the facilitator the setting for creativity and reflection" (SL11, WS2)

4.4.5.2 Support

As repeatedly stated, the facilitator played an important role within the lab process, but also continuous support by the Social Lab management teams was crucial. Therefore, it was important to allocate enough time for the social management teams to be involved in pilot activities, as it "*has shown that this is necessary to make progress in the PAs, they do not run themselves*" (SL7, WS3). Furthermore, it needs support for the group to "*regain orientation where the pilot action goes*" (SL1, WS2), not only during lab workshops, but also in the intervals between them. Particularly, these phases between the workshops when lab teams don't meet need support:

"Pilot action sponsors also need to be constantly reminded of their commitment and nudged to make steps in the direction they promised. Project management essentials need to be applied to make sure results are reached" (SL6, WS3).

For the pilot hosts often the pilot activity represented an additional burden, but still "*they appreciated the continuous support they received throughout the lab process"* (2nd CSW).

4.4.5.3 Expectations from the labs and the participants

Within the lab processes it was found that expectations on the labs, pilots and activities were not always clear. On the one hand, the framework of the social lab process and its components did not always seem to be clear. Also, several participants emphasised uncertainties regarding a common goal. *"Where are the Social Labs heading to, where do we want to finish, and how do we get there?"* were recurrent questions which became obvious during the first cross sectional workshop (1st CSW) and showed different and diverse expectations on the Social Labs. Also, the preferences differed and the ideas about what a Social Lab should include. While some for instance preferred *"to run it more like a practical (outcomes-oriented) workshop"*, others expected *"a free-flowing series of conversations and ideas being whirled around"* (SL1, WS2).

Therefore a few recommendations and suggestions were given in order to avoid confusion and diverging ideas right from the start. It was said that "*more information should be shared at the beginning of the workshop*" already (SL1, WS2). Also, for planning of the lab participants, to "*present the NewHoRRIzon project timeline visual in advance (not just verbally), rather than at the end*" (SL2, WS1) is needed. Furthermore, "*the outline could be more detailed in advance that participants get a wider picture of what is needed from their side*" (SL19, WS1). As much is requested from lab participants and pilot hosts in especial, information not only in the beginning, but also at later stages is necessary. It is recommended to dedicate sufficient time to explain "*what exactly a PA involves and touching base about this again regularly*" (SL7, WS3). It needs to be made clear to participants that they have a role in shaping the pilot activity, in making it "work" for them and in their organisational setting, and this has to be communicated. However, one also has to be realistic about what can be achieved within a pilot activity and not ask too from the pilot hosts and teams. Suggestions were made, such as "*splitting this into smaller goals so that even if the most advanced goal cannot be achieved, the PA still has a positive outcome*" (SL7, WS3).

To avoid disappointment or too much demand at later stages of the process, the greatest possible transparency should be sought, "*things have to be communicated as explicitly as possible*". This should also give "*participants the freedom to choose what they are willing to contribute and what not*" (SL4, WS2). Social labs are seen as "*a place to try out an experiment* "(1st CSW), however, people need to "*understand the meaning of each exercise*" (SL1, WS2).

4.4.5.4 *Objectives reached*

Objectives set for the social lab workshops differ on the one side in the number of the workshop (1,2,3), but also in the different foci. However, beside all differences also a range of common criteria could be identified.

A quite big set of objectives reached refers to the group of participants. Already the fact that stakeholders could be motivated to participate was assessed as reached objective by the Social Lab managers (SL1, WS1). Another aim realised was to establish a group and build up a team (SL4, WS1; SL9, WS1; SL11, WS1; SL15, WS1) – following this aim participants have been committed and engaged after the first workshop (SL4, WS1; SL9, WS1; SL15, WS1; SL19, WS1; SL10, WS3). *"Getting people engaged and sometimes even excited about the discussions, visions, challenges and different backgrounds was definitely a main result of the workshop"* (SL10, WS1). The diverse composition of the group was seen as an advantage (SL1, WS1) and different stakeholders, e.g. from natural or social sciences, NGOs, CSOs or businesses, could be connected (SL19, WS1; SL5, WS2).

One aim that was mentioned for the second workshop was the integration of new SL members, which was achieved through interactive group formats. *"The reintroduction to RRI and the RRI game in the evening also helped for socialising and integration*" (SL9, WS2). It was mentioned that participants were very positive and enthusiastic about sharing their experiences. *"Further, new participants added on new insight and their experience that could be beneficial in making pilot action more concrete"* (SL8, WS3).

In this regard another objective was the continuation between the workshops. It was important that the reconnection with the group after the first and after the second workshop succeeded (SL2, WS2; SL8, WS2) and the interest of the participants in the NH project continued (SL7, WS2). *"Despite the fact that participants could not come due to health, business, personal, or other reasons, we managed to bring together either people from their original institutions or people who come from institutions similar to these. During the SL it became clear that participants wish to continue in the activities they had defined before."* (SL6, WS2). It was also reported that "*working within a smaller team has played a major role in the continuity of our group."* (SL7, WS3). For another case it was mentioned *"that participants felt they had not received enough information about the method and about what was expected from them. Having understood this in the end, the social lab manager found it particularly remarkable that nevertheless so many participants kept coming back and continued working with the social lab."* (SL15, WS3)

When it comes to the content-side objectives set by the Social Labs themselves, they often refer to the broad, overarching topic of RRI. In the first workshops objectives reached around the topic of RRI concern learning about RRI (SL2, WS1), exchange of knowledge on RRI (SL3, WS1), developing a common understanding of RRI (SL12, WS1; SL15, WS1) or presenting the idea and benefits of RRI (SL19, WS1). Also, the aim to generate potentials, visions and benefits of RRI could be realised as well as *"meaningful and differentiated exchange about RRI in small group discussions and in plenary dialogues and plenary discussions."* (SL1, WS1)

The objectives of second workshops made it important to get a bit deeper in the subject of RRI. Discussions on the state of the art of RRI concerning specific topics took place (SL3, WS2). For others it was important to deepen the participants' understanding of RRI (SL18, WS2) respectively to offer different understandings of RRI (SL15, WS2) and stimulate deeper reflections on RRI among the

participants (SL18, WS2). Others shared ideas *"about how RRI can be further promoted via the Pilot Actions"* (SL2, WS2) or about *"ways how to enhance and increase the levels of implementation of RRI in multi-stakeholder, cross-disciplinary collaborations"* (SL5, WS2)

In the third workshops, finally, the knowledge of RRI and its dimensions could be deepened (SL14, WS3), it was widely achieved to present and to promote the concept of RRI (SL19, WS3), which lead to the *"Setting up the network of RRI ambassadors and establishing mechanisms of support"* (SL14, WS3) and to *"developing concrete policy recommendations"* (SL10, WS3). In another social lab it was also reached to show *"that RRI exemplifies an approach to the ethical design of different actions and that it shares the common principles entrenched in any ethical approach to societal challenges"* (SL12, WS3).

Regarding methods used in the first workshops it was achieved that guiding questions or visions for the whole process of the social lab have been developed (SL3, WS1), the overall purpose of the Social Labs was explained to participants (SL3, WS1) and participants have been *"empowered to "own" their Social Lab by working with the capacity people bring"* (SL3, WS1). Other objectives reached were the identification of reservations, difficulties and barriers (SL1, WS1) and the development of a common language, focusing von coming from visioning to pilot developing (SL11, WS1). The social lab methodology worked to form a group within two days of work and *"was praised by the participants. Especially the outdoor working was extolled and participants are willing to continue with this approach."* (SL4, WS1)

The methodology implemented in the second workshops revolved e.g. around external input and participants to provide feedback to each other (SL7, WS2), whereas the third workshops focused on the reflection of the Social Lab process and context (SL7, WS3) and the development of narratives, acknowledgement of achievements and celebrative closure of the lab workshop (SL9+4, WS3).

An overall objective reached regarding the methodology was mentioned by the managers of SL12: *"Another objective was to test the experimental methodology of the Social Lab. During the last three years we have encountered several attestations of interest and all the participants have shown enthusiasm about it. Besides, we were asked to apply this methodology in other fields showing the general high consideration of it."* (SL12, WS3)

In general, most of the objectives reached refer to pilot development and pilot activities. At the beginning of the workshop series the creation of ideas and the drafting of pilots was the main focus (SL1, WS1: SL11, WS1). Initial pilot action plans were developed (SL2, WS1; SL8, WS1), concrete pilot ideas were agreed and in detail planned (SL4, WS1; SL9, WS1) and first pilots were defined (SL3, WS1; SL7, WS1; SL15, WS1) and got running (SL3, WS1). In the first workshop also financial resources available for the pilot activities have been explained (SL3, WS1). Lab cohesion was established (SL2, WS1; SL8, WS1) and it was achieved to get people into action on the pilots – *"Here, many participants did not feel in a position to commit, this only worked when they saw they can do the pilot work within the context of a running project"* (SL15, WS1).

The objectives of the second workshop mostly have to do with the further development and implementation of the pilot actions – e.g.

> *"Making progress with the PAs"* (SL7, WS2),

"We succeeded in elaborating the pilot idea, outlining tasks, and distributing responsibilities for these tasks" (SL16, WS2).

"Ensure the pilot is running" (SL17, WS2)

"Work on the pilot actions (SL19, WS2)

Specific pilot action implementation cases were generated (SL2, WS2; SL8, WS2). The proceeding of the pilot actions set up after the first workshops have been assessed and supported (SL11, WS2; SL 17, WS2). An important goal reached was to give –after presentations of the on-going pilots - feedback from the SL-team to all pilots and open up for discussion (SL4, WS2; SL13, WS2; SL15, WS2). This also includes reflection and potential adaptation of some aspects of the pilot action (SL17, WS2; SL19, WS2):

"This goal was reached by providing for enough room and time to exchange on day 2 of the workshop entirely on pilot activities" (SL4, WS2).

"Our decision to allow considerable time for group work on both days was crucial in this regard." (SL 18, WS2)

This also helped to achieve the objective that all SL members have a clear understanding of what happened in and of the challenges of the single pilot activities (SL4, WS2; SL9, WS2; SL17, WS2) and supported the cross-fertilisation between the pilot actions (SL7, WS2). But it also allowed for rescaling overambitious pilot actions (SL18, WS2) and for deciding *"about going on, changing or abandoning"* (SL15, WS2). Furthermore, it supported outlining tasks, assigning responsibilities and developing a timeframe (SL18, WS2). All pilot activities were confident on their next steps (SL4, WS2). Also personnel updates on the pilot teams and getting new social lab members committed to the pilots were named as objectives reached (SL4, WS2; SL9, WS2), which *"was achieved through interactive group formats, the reintroduction to RRI and the RRI game in the evening also helped for socialising and integration"* (SL9, WS2).

The objectives reached in relation to the third workshops mainly concern presentation of results and discussing and evaluating the main results and outcomes. Participants made further progress with their pilot actions and established a timeline for finishing them (SL7, WS3). Participants learned about the status quo and further developments of the pilots, which were discussed and reflected (SL4, WS3; SL9, WS3; SL1, WS3). Outputs and results of the pilot actions were presented, and main findings discussed (SL5, WS3). Pilot actions have been evaluated and lessons learned harvested (SL14, WS3). Social lab managers tried to anchor the pilots in standing practices and institutions (SL3, WS3).

Feedback by participants also refers to objectives reached. Feedback from participants was positive and enthusiastic (SL8, WS1). The workshops were perfectly organised, structured and facilitated (SL4, WS1; SL9, WS1; SL19, WS1). They were perceived as a nice experience (SL4, WS1) and fun (SL7, WS1). Participants liked the diverse group (SL4, WS1) and were happy to have met interesting and stimulating other stakeholders of the field (SL9, WS1). The first workshop created commitment to the Social Lab (SL4, WS1) and established a sense of community (SL7, WS1). Participants had the feeling they learned something and will continue learning in the upcoming workshops (SL4, WS1; SL9, WS1):

"The participants expressed that they were happy to be part of the project where they could experiment with big ideas." (SL18, WS3)

"My first SL changed my mind but my second one has taught me the importance of being reflective" (SL14, WS2)

Overall participants were satisfied and their expectations were generally met (SL19, WS1).

A general objective, important for all areas mentioned before, was learning. According to the social lab managers the social lab *"was able to provide learning for participants and organisers"* (SL7, WS1). Learning from each other was an important goal achieved (SL4, WS2; SL9, WS2). It provided the opportunity to exchange knowledge, raise awareness on and learn more on RRI (SL8, WS1; SL6, WS3):

"It brought together stakeholders who learned together that RRI is not yet another set of requirements or bureaucratic regulations but a set of principles that might point to problems to be solved and opportunities to bring new solutions and build businesses around them" (SL6, WS3).

The participant's knowledge about RRI has grown in the process. It is clear that their insights in RRI and responsibility in general and reflections about this is stronger now compared to the beginning of the first workshop. (SL18, WS3; SL12, WS3)

Furthermore, participants learned about the methodology of Social Labs, about empowering and about different formats to discuss things – "*method matters a lot!*" (SL8, WS3).

4.4.5.5 Objectives not reached

Similar to objectives reached also objectives not reached can be distinguished in different categories.

Focusing on participants objectives not reached concern more or less three areas: First, *"the number of participants did not entirely match the original target of 20"* (SL1, WS1). Second, it was not successful to get participants from all stakeholder groups concerned (SL1, WS1). Third, it was sometimes a problem to keep participants interested, engaged (SL3, WS1) and feeling an important part of the group. Some people with less background knowledge on RRI *"could have felt left out and not feeling as being an integral part of the group"* (SL10, WS1).

When it comes to the topic of RRI the common understanding of RRI was not reached in some cases (SL3, WS1; SL4, WS1; SL4, WS3). In one case *"this was done on purpose, to keep their interest in the rest of the process"* (SL3, WS1). But also, some participants were *"feeling a loss of structure, unsure how what they are doing will measure up to the idea of RRI"* (SL10, WS1).

Focusing on methods in some cases the concept of Social Labs as such was not clear for the participants (SL1, WS1; SL7, WS3). *"It is unclear if all participants understand that the SL aims at supporting them in "improving"/enriching their (research) work"* (SL19, WS1). To reach this objective *"more input on theory and context of RRI, more information material in advance, individual preparation of the tasks before entering the group process, more clarity about the task of developing a pilot and the Social Lab process, more time and structure during the workshop"* (SL1, WS1) as well as *"more information and guidance, both at the beginning of the Social Lab and throughout"* (SL7, WS3) would have been needed.

Also having more structure in the workshop and giving more inputs "*in terms of how to engage with society"* (SL10, WS1) would have been helpful for the participants. Another objective not reached was the support of the narrative methodology (SL4, WS3; SL9, WS3) since "the further process of revision and narrative development with possibilities for contributions of lab participants are not clear" (SL9, WS3).

Furthermore, the objective of having a clear pilot process, understood by all participants was not reached sufficiently in all cases. For example, it was not clear what the expectations for the pilots have been, which *"was stated to be a 'frustrating' experience"* (SL10, WS1). Participants would have appreciated more support from the SL team and guidance regarding *"the purpose and value of the PAs and how their results will be used"* (SL7, WS3). In one case also the *"insecurity about available resources hampered the creation of two teams that could start to work immediately"* (SL1, WS 1).

As in every project, also social labs run different phases. Between the integration into a social lab and the final reach of an objective there are many stages of learning and reflection that also needs support since obviously participants face challenges. Especially this new way of learning by experimenting and reflecting during the lifetime of the social lab needs a new understanding that should be carefully supported in order to avoid drop-outs. The objectives that could be reached are manifold. However, the results of the different social labs are captured in the pilot actions and are described in the following section.

4.5 Pilot actions

4.5.1 Overview

In total, the lab teams carried out 68 pilot actions. They addressed all policy dimensions of the RRI concept and were based on problems identified by the lab teams and experimental solutions towards addressing these problems. Concerning formats of the pilot activity, they included: Workshops, Trainings, Discussions, Case Studies, Dissemination activities, and events. See Figure 9 below of the first categorisation of pilot activities (as carried out in the first cross sections workshop - left column) and adapted tags in the course of the project by WP 8 and WP 9 (see further upcoming deliverables there). Narratives on each of the pilot actions will be part of D8.3.

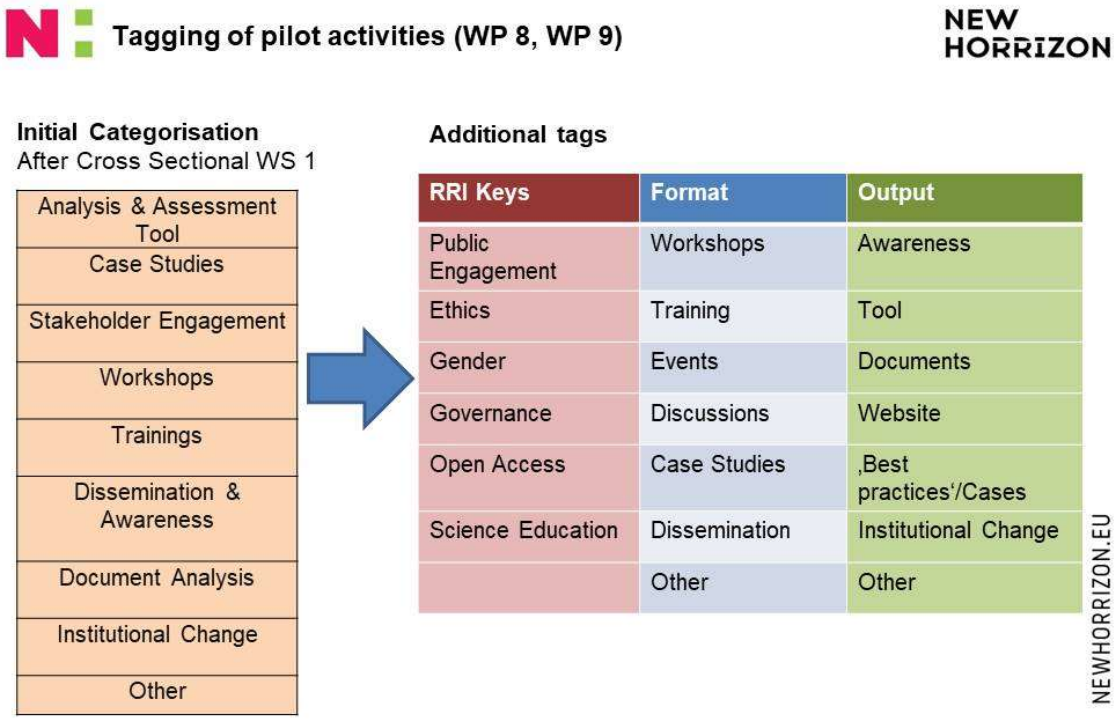

Figure 9: Power point presentation WP 7: Marschalek, ilse et al, Consortium meeting, June 2020

Regarding the output of the pilot activities: They produced different kinds of tools, documents, websites and best practice examples, many of which contributed to awareness raising and institutional change.

Here are some exemplary pilot actions:

Renewable Energy Knowhere: This pilot action created a one-stop-shop knowledge base for sustainable energy use for multiple stakeholders. A common spreadsheet covering multiple renewable energy topics has been set up covering the work from all countries of the Social Lab participants. The pilot action thereby generated an initial knowledge base which was then transformed into a webpage. The aim is for information about sustainable energy to be openly accessible, extendable and hence sustained beyond the project's lifetime.

Further examples:

- 1 Q-Rebels - Leadership training on non-authoritarian leadership styles for FET coordinators.
- Knowledge Kiosk - A mode of interaction between researchers and members of the public to actually engage in a dialogue
- RRI Manifesto - Help integrate RRI into actual research practice by focusing on "human centred designs" of RRI
- Museum Lab – Creating new alliances between science and society

- Patient involvement in service design - facilitating mutual learning within two very different contexts by applying elements of the innovative model of patient/citizen involvement in service design
- RRI impact through Participation - Best practices examples compilation
- Research goes to Street – Multistakeholder walkshops
- Responsible AI framework – evaluation criteria for proposers

…and many more. (Check the project website for further information on the pilot actions https://newhorrizon.eu/social-labs/ Two-pagers on all pilot actions will also be part of the RRI Experience also accessible via the project homepage)

4.5.2 Impact and sustainability of pilot actions

While the qualitative analysis reveals already fundamental enablers and barriers to sustain the pilot over the lifetime of the Social Lab, a more comprehensive analysis of impact and institutional components will be given in D8.2.

Important was the embedding of the pilot activities. "Anchoring refers to the process of actively embedding concrete results and other outputs of ambitious change projects in incumbent institutions, and of actively linking relevant actors and networks to ensure dedicated protracted interaction to help the results and institutional 'novelties' progress into becoming a 'given' in standing practices" (Loeber and Cohen, 2008, p.8).

Some of the pilots had a direct output and outcome, others' impact unfolds over time with a ripple effect on directly and indirectly reached stakeholders and institutions which serve as multipliers for RRI in different fields.

A general question in respect to the impact and sustainability of the pilot activities, which however applies to the RRI discourse overall, is the lack of clear and easy to operationalise indicators. How to measure whether the intended impact of the pilot has been reached? How to evaluate that indeed it can be considered a success? Also, the question is whether it is more about the process than the outcomes of the pilot actions (c.f. process requirements, Wickson and Carew, 2014).

Again, the steering of the SL facilitators was required to *"help the group navigate in the direction of addressing aspects of RRI in a manner which can become meaningful beyond the pilot activity"* (SL15, WS2).

As the analysis shows the type of impact vary from pilot to pilot and affects individuals, institutions or have an even wider impact.

Direct impact on the participants themselves has been generated through their participation in the Social Labs and their active contribution to the pilot actions: *"The greatest transformative effect was probably on the SL participants themselves because the SL gave them the opportunity to dedicate time to learn about and engage with RRI"* (SL7, WS3). The personal involvement and effect of their participation may lead to further ripple effects in their networks (e.g. SL16, WS3).

Through the pilots, further stakeholders and institutions have been reached and have eventually led to transformative practice.

By addressing the "right ones", meaning the ones who have the power to decide and to change the system, pilot activities have contributed to incorporating RRI in different realms.

The EU level was the scope of reach of several pilots: A SL3 pilot for instance (SL3, WS3) provided the EC Unit for MSCA with concrete policy recommendations. The online recording of a Stakeholder conference where the policy brief was presented has more than 2,100 views and 900 downloads. Also SL 14 observed a positive impact on the NCP network and their respective countries (SL14, WS3) as well as SL9 with their NCP training (SL9, WS3). Especially the NCP participants serve as multipliers in their fields as they bring their RRI knowledge back to their respective countries: *"The NCP training has the clear potential to disseminate RR in the energy programme line by making RRI part of the NCP's consultations"* (SL9, WS3).

RRI in organisations was the scope of other pilots with the aim to become a sustained practice also after the end of the pilot. In SL7 a pilot action has informed clinicians in Athens about RRI and *"sowed a seed to get patients involved more in the future for everyone's benefit"* (SL7, WS3). Established collaborations should be sustained like in this case, where teams in Stockholm and in Athens collaborated with the aim to involve patients in clinical service design (SL7, WS3). Some noted already an impact in transforming standing practices (e.g. University in SL14, WS3; RRI knowledge spread to students in SL18, WS3) and uptake on institutional level with further actions to spread the word on RRI (as in SL18 where a pilot product would be brought to Roskilde festival).

Some pilot outputs and products are accessible even after the end of NH and can be adapted to other contexts. SL18 for instance had the idea to develop RRI Tips & Tricks cards to "*spur conversation about RRI with stakeholders e.g. at public engagement events or meetings with project partners"* (SL18, WS3). The Renewable Energy Knowhere pilot in SL9 is yet another example for a concrete output to sustain the NH project: it developed an online repository and one stop-shop for renewable energy which was designed for longevity but the question how to fund the portal after the end of the project was yet not clear (SL9, WS3). Furthermore, the compilation of narratives based on each of the pilot actions as well as the MOOC and the virtual exhibition all contribute to the legacy of the project.

Some pilots did not end as they found additional sources of funding, e.g. through another EU project dedicated to RRI (SL14, WS3). Others had the clear ambition to continue their work but they were still in need of further resources (SL14, WS3). Collaborations in the future and replications of pilots in broader contexts to make these also more reliable and generalisable was yet another plan to sustain the actions (SL8, WS3).

4.5.2.1 Enablers for sustainability

Options for sustaining the pilot actions were a specific focus in the second cross-sectional workshop where a session was dedicated to the topic and also in the reporting templates comprised a question regarding the sustainability of the pilots.

The opportunities for sustainability can be categorised as follows:

- Policy makers: address policy makers and make them aware of the opportunity that they have in public engagement events and what they miss out (to find out what they can do for their voters in case they are politicians and to find solutions for practical problems in case they are policy makers); reach to policy maker through policy briefs, (2nd CSW),
- Funding: apply for EU funding through further projects, e.g. COST actions, but also crowdfunding campaigns (2nd CSW). In one case the pilot actions already led to changes in the system of funding of applied research on a national level in the Czech Republic (SL6, WS2).
- Institutional embeddedness: aim for institutionalisation by seeking assignment from higher up with well prepared and convincing arguments (2nd CSW); install change agents in organisations in the long term. For institutionalisation the examination of change processes is needed. Not only the support of superiors is required but also financial support for necessary measures and to build on what already exists: *"it is advisable to scan companies for existing RRI approaches and build on the findings instead of building from scratch"* (2nd CSW). In the future, RRI must be understood as an integral part of work and implemented in daily operations.
- Change agents: are often niche actors who are moving ideas, they do not necessarily have much power but they have an impact on processes. However, in order to do that, change agents need additional time to invest in disseminating RRI and they have to build on a fertile ground with openness for new approaches
- Output of pilots: make the output accessible and sustainable and contribute to the process of narrative construction and dissemination, spreading the word in RRI by using the resources developed (2nd CSW)
- Networking and dissemination: stay in touch with SL participants, bring the pilot results to their communities, write a paper on RRI and their respective field to disseminate to the scientific community (2nd CSW)

That *"change takes time"* was recurrently mentioned by participants in the 2nd CSW. Also, in the face of challenges the temptation to fall back onto old setups is big.

The individual will to continue the pilots was very prominent among the SL participants. In any case, SL participants wanted to keep spreading the word in many different ways, by telling and writing about it: *"highlight the significance of such practices for societal transition for inclusive and sustainable impact of Research and innovation"* as well as *"relating to the failure of conventional Research and innovation processes in addressing the societal and environmental issues"*, continue working in RRI related projects and join forces with important stakeholders (2nd CSW).

Intrinsic motivation was mentioned already as a contributing factor for the progress of the pilot and this is the case also with the sustainability of the pilots. The more SL participants were directly related

to the pilot in their daily work or personally eager to pursue the pilot even in their free time, the higher the likeliness to continue in one way or the other with the pilot even after the end of the social lab (e.g. SL1, WS2; SL4, WS2). Next to the enablers for sustainability, also barriers for sustainability were identified.

4.5.2.2 Barriers for sustainability

In some cases, there was no clear commitment from the participants nor ideas how to continue the pilots after the SLs ended, while others planned to continue but faced different challenges. In some cases, ideas on how to continue the pilots were there but participants did not come to an agreement (e.g. SL16, WS3).

The pilots were too small scale and did not have enough back-up from those, who define research agendas and funding policies as noted in different SLs (e.g.SL10, WS2). Long-term changes would be difficult to expect given the size of the pilots as participants in the cross-sectional workshop argued (2nd CSW). In order to make change happen, the emotional state and the "deeper needs" of people "out there" need to be considered; "*otherwise there's the risk of losing the connection to the "common" people*" (SL19, WS3) and imposing our (intellectual) beliefs.

Another barrier for sustainability is the lack of resources. Especially those pilots where the integration in the daily work of participants was not possible and struggled already with the workload appearing less likely to be continued or to work on follow-ups after the end of the SLs (e.g. SL13, WS2). However, if the opposite was the case, when pilots were integrated in the daily business such as ongoing projects the question on whether this would result in truly changed practices or whether RRI would remain an added value during the project's lifetime remained a critical issue (e.g. SL18, WS2).

In general, SL participants did not necessarily perceive themselves as change agents. Thus, social lab teams tried to take up the *"participants enthusiasm and further guide and encourage them towards seeing themselves as change agents"* (SL19, WS2).

The Corona outbreak furthermore challenged the sustainability of some of the pilots as they could not simply be continued due to the national restrictions in travelling and face-to-face meetings (e.g. SL14, WS3).

Reaching out to the policy level was regarded as one of the must dos in order to lobby for RRI and to concretely mobilise resources for the implementation in practice. However, political regimes change about every four years with elections makes this cooperation a challenge (SL13, WS3).

Institutionalising RRI is not enough as this results in institutional slips, rather there is the need to advance to interinstitutional service processes, where several institutions share a RRI support service as argued by SL 13 (WS3).

"Change takes time", as was already mentioned previously. One of the lessons learnt of SL19 in this respect was to plan such transformative processes over a longer period of time with the possibility to come back to participants after one or two years after the end of the SLs (SL19, W3).

4.5.3 Institutional fit

The "institutional fit" as a code has two meanings: firstly, in the sense that the pilot activities could be well integrated in the daily work of the participants in their home institutions, which refers to the operational capacity of the pilot hosts and their team, and secondly, in the sense of impacting the home institution.

Ideally the institutional fit is already reflected in the design of the pilot actions, the piloting process is well adapted to the institutional context and are easily transferable to the practical level. Thus, in co-designing the pilot activities the SL facilitators would support the reflection of institutional, disciplinary background and their feasibility (e.g. SL12, WS2) and to find allies in their efforts (Sl14, WS3).

For the operational capacity it was utmost important that the tasks associated with the pilot action could be done during the regular working hours as *"participants' institutional context provides little space for unpaid extra-curricular activities"* (SL7, WS2) and only a few participants were eager to spend their free time on the pilot development (as in the case of a NGO representative in SL9). SL teams recognised a correlation between the institutional fit and the successful implementation of the pilots (SL19, WS3) leading to the abortion of pilot in case of lacking institutional fit.

The institutional fit also triggers the motivation of the participants as SL15 noted: *"the more tailored the pilot is to their work, the more benefit they see, and the more engaged they are. However, the more transferable, generic or public the outputs become, the harder it is to keep people engaged"* (SL15, WS2).

Most participants noted an interest in and openness towards RRI present in their institutional contexts (e.g. SL7, WS2), even if the openness towards some specific RRI keys was more pronounced in some cases, notably those which already had a "history" in the organisation such as gender and ethics. Often participants representing these institutions already practiced the facto RRI even if they did not use the term (SL11, WS3).

In some cases, incongruence with the home institution caused frictions. If the ideas and single steps of the pilot activities were not well connected to their daily work, the pilots were difficult to handle by the participants. This became apparent when participants got frustrated when it came to the question of (shared) responsibility and implementation during the workshop and when they shared their concern that the pilot would result in *"huge amount of extra work additional to their daily business"* (SL19, WS2). The incongruence seemed particularly pronounced in some countries: *"the Widening countries are left behind in many aspects and the RRI concept is still too 'romantic' in order to be easily adapted to the institutional context"* (SL14, WS2). This is also the case in relation to the type of institution. As noted especially from the perspective of large industries this was a challenge (SL5, WS3).

Some participants experienced negative reactions by the home institutions (e.g. SL3, WS3). In other organisations it was not well aligned due to the different styles of working, e.g. bureaucratic and goal (KPI) oriented and in busy business-cycles (SL16, WS3).

The strategies to increase the institutional fit varied from participant to participant:

Some participants switched pilot activities to ensure that their input required was better related to their regular work (e.g. SL7, WS1). Others checked back with their institutions and made sure that their needs were better reflected in the pilot. Still others found concrete ways to involve more

representatives from the organisation (e.g. SL3, WS2). It was important to find an entrance point at their institution to have the full support. For instance, a participant in SL4 reported that she had especially well prepared the first (of a series of RRI workshops) at her university and had taken colleagues on board since "*If they can't be won, they are lost forever*" (SL4, WS2).

In respect to the second aspect of institutional fit (c.f. also section on sustainability of pilots), impact on their home institutions and the transformative power of the pilot actions were noted as participants acted as multipliers and change agents spreading the idea of RRI within and beyond their organisations, in their networks (2nd CSW). A critical question is how long this 'feeling of agency' can last (SL10, WS2). The pilots were also regarded as too small-scale and just as an add-on in many institutional contexts which would not pose a threat to the institution (e.g. SL2, WS1). The small size nevertheless has advantages as it allowed for experimentation, which in case it worked could be used as an evidence and convincing argument for a broader institutional uptake. The activity is considered as an "embryo" for further activities as it may stimulate future projects (SL9, WS2). Bottom-up initiatives have to find the way to the people who decide (idem) and this takes time (SL11, WS3). For the long-term institutional support is needed. Even if institutional change was not fully the scope in many pilot actions, it provided a strong sense "*of convincing the undecided and make the argument for RRI*" (SL11, WS2).

Within these 68 pilot actions that addressed all policy dimensions of the RRI concept many different formats could be observed, depending on the preferred setting, the topic addressed and the environment where the pilots were implemented. Most interesting is of course the question if social labs can be implemented in a sustainable way and if the pilots will last beyond a launched project. Obviously, some factors ease sustainability of activities, like change agents or networks, while others are rather hindering them (e.g. lack of resources or too small scaling of activity).

The following section outlines conclusion on the most important lessons learned and essential recommendations. It also gives an estimation on the potential of social labs as means to transform science towards a more responsible research.

5 Conclusions

In conclusion, D7.4 provides the reader with an empirically informed, systematic understanding of what organising and 'running' a Social lab (on RRI) entails.

5.1 Lessons learned

Given the results that were captured by an extensive analysis and insights outlined, it's beneficial to summarise the lessons learned and the most important aspects when performing a Social Lab. Especially the cross-fertilisation workshops contributed to summarise these lessons learned. The discussions and exchange during the cross-fertilisation workshops allowed adaptation of activities and the start of a new learning cycle.

The overall picture of **implementing RRI** in research and society is diffuse with several barriers but also high potential. For instance, a major barrier is the lack of a common understanding of what RRI really is about, although some aspects like ethics or gender were already common sense. Stakeholders have different values for the RRI aspects (e.g. open-access seen as add-on, whilst ethics plays an important role). On the one hand, researchers as well as other societal actors don't see the need for change and argue that the implementation of RRI possibly requires additional (financial) resources, which are planned and budgeted already beforehand. In addition, the impossibility to easily measure and evaluate RRI was further identified as a major barrier as well as the lack of an institutional framework for research and innovation that supports RRI, especially in training of doing RRI.

It needs to be shown that there are potential undesirable effects resulting from research and innovation in order to promote RRI. This can help as an argument to involve different stakeholder groups, who are not interested in taking part in the first place. Also, focusing on best practices and bringing in practical examples of RRI that can inspire different lab participants is helpful. Furthermore, explaining RRI at any time during the SL process is required, not only to update newcomers but also to remind the participants of the purpose and shared value of the labs.

On the other hand, there is an overall agreement that RRI has high potential in changing the research landscape and enriching research and innovation processes in general. RRI could increase the visibility of research in society and the motivation and recognition of the actors involved. RRI also enables questioning existing hierarchies within research teams and organisations and can act as a window of opportunity to create new partnerships and alliances as well as interdisciplinarity. RRI can function as a mechanism that challenges assumptions of researchers, can break narrow-minded perspectives on research and innovation and can increase the scope of research questions investigated. By doing so, it has the potential to foster creativity and enthusiasm in the research process. It could make research more effective and sustainable and an integral implementation of RRI also helps to reduce risks.

In regard to the **Social Lab teams**, we conclude that a continuation of staff in their different roles is important since it ensures a smooth process. As in many other processes, communication plays an essential role. Expectations of the teams and the tasks have to be transparent and clearly communicated. Although the different roles in the lab process have to be pre-fixed, unforeseen roles may evolve.

Within the **Social Lab workshops**, typical group dynamics and unbalances emerged. Some participants tended to speak too much or to prevail on other participants' views. In order to contrast this, the workshops were designed to address different topics requiring specific interaction expertise. In this way each participant could feel comfortable to express his or her own view about a topic as an expert. A diversity of expertise proved to be useful in this respect. Furthermore, professional facilitation skills as well as adequate workshop techniques following art of hosting principles (Büro für Zukunftsfragen, 2012) are crucial. Practical guidelines concerning group management and workshop methods and how to best steer the lab processes have to be given beforehand.

Motivating environments not only help attract participants to take part in the workshop, but also have a possible influence on the workshop itself and its outcomes. This includes the location of the workshops, the interior design and furnishing, as well as the provided atmosphere.

The engagement in the labs is closely related to the participation in **pilot activities**. Therefore, both, the lab management team as well as the lab participants have to be updated on pilot activities on a regular basis, and feedback has to be collected besides the lab workshops in order to make full benefit of the lab participants and their expertise and to keep everyone informed and committed to the ongoing activities.

The **pilot idea development** requires an open, creative visioning process, which should not be narrowed down to concrete actions too early. However, this process needs good guidance, giving sufficient information on what is required and doable by a pilot action, for instance providing selection criteria. Additionally, it needs tailored facilitation in order to incorporate all collected ideas, planning the implementation as well as next steps and finally to come to decisions, which are widely accepted by the team and are still allowing for emotional co-ownership for the specific pilot action.

Pilot hosts are the key persons crucial for the implementation of pilot actions. However, their role is very demanding and also requires emotional engagement. Therefore, the process of identifying pilot hosts should go hand in hand with the pilot idea selection and not left for afterwards. Each collected idea should have a person feeling capable of hosting the activity.

Pilot teams are just as important. They should get constant support by the managing team. To further develop pilot ideas and actions, reflection rounds have to be applied during the lab workshops. But also the communication with the pilot teams between the workshops supports the progress of the pilots, the remaining team members of the lab have to be updated on the different pilot activities throughout the process.

Also, the communication between the labs and information on the processes has to be made available. The two cross-sectional workshops helped to support **cross-sectional exchange and learning** between the Social Labs. Additionally, regular calls organised by each work package leader bringing together several SLs in their WPs supported this mutual exchange. Furthermore, information provided on the project homepage with descriptions of all the pilots were good tools to support this exchange. The categorisation of pilots and exchange led in some cases to true cooperation between different SLs.

The **pilot actions** are at the heart of each Social Lab process and require utmost attention and support, as they are real life actions with direct effects and unique showcases for RRI in practice. Most importantly, pilot actions need to be linked to the interests, daily work and/or ecosystem of the lab participants, because even if they might not be attending follow-up workshops, they could keep on

working on the pilot implementation. It was shown that the more SL participants were directly related to the pilot in their daily work or personally eager to pursue the pilot, the higher was the likeliness to continue with the pilot even after the end of the Social Lab. However, these actions are often challenging and demanding tasks and a lack of time and energy and involvement respectively has to be respected. The SL management could step in by taking up some of the work by themselves to relieve the hosts. Alternatively, pushing people against their will is of no use and of course, lab participants are enabled to leave the SL, as newcomers bring new dynamics into the lab and thus new roles into the pilots.

While some of the pilots had a direct **output and outcome**, others' impact unfolds over time with a ripple effect on directly and indirectly reached stakeholders and institutions which serve as multipliers for RRI in different fields. A general question in respect to the impact and sustainability of the pilot activities, which however applies to the RRI discourse overall, is the lack of clear and easy to operationalise indicators.

In terms of **sustainability**, the opportunities for continuing the pilot work are the following: cooperation with policy makers; search for funding; aim for institutional embeddedness; encouragement of change actors; outputs of pilots as tangible and accessible products; established networks and dissemination channels. A follow-up of the pilots after one or two years would be interesting to understand the real sustainability over time.

Ideally the **institutional fit** is already reflected in the design of the pilot actions; the piloting process is well adapted to the institutional context and outputs are easily transferable to the practical level. For the operational capacity it is utmost important that the tasks associated with the pilot action can be done during the regular working hours. SL teams recognised a correlation between the institutional fit and the successful implementation of the pilots. The incongruence with the home institution seemed particularly pronounced in some countries and specific types of organisations such as big industries.

5.2 Recommendations, potentials and chances of Social Labs

This report summarises the experiences from two years of Social Lab processes, which were carried out in accordance with the 19 programme lines of the EU research framework Horizon 2020. In this analysis we have brought together what the people involved have reported and reflected on in their various roles and put an analytical lens on it. The focus in this final chapter is recommendations, how things could have been improved and what similar processes in the future should consider. We also put emphasis on opportunities of the Social Lab process and gather requirements which need to be addressed in order to unfold its potentials.

Our research has confirmed that the Social Lab approach is indeed a process-oriented approach which offers a very flexible and responsive structure, involving heterogeneous teams and addressing complex issues. However, clear outlines and sufficient explanation on its purpose and expected outcomes are needed upfront. Often, lab management teams as well as lab participants only discovered the goals of the SL later in the course of the lab, and sometimes were taken by surprise. Although co-creation and

flexibility should be guiding principles within the workshop, a clear structure which has to be transparent and clearly communicated to all parties involved is still needed.

Accordingly, the different roles necessary within the labs need to be identified and explained. Who is responsible for which tasks has to be made clear from the very beginning. The more roles and tasks are clear, the easier they can be taken on and be dressed by the persons. Although the continuity of these persons is desirable, defined roles still offer orientation and reference points, even if the persons change over the period of time. Roles have to be named and explained. Therefore, a clear and self-explanatory name could be helpful. In the course of the project new names were created to better explain the tasks and purpose, so for instance “hosts” or “drivers” and “protagonists” replaced the pilot “sponsors”, as they had been named initially.

As the labs are structured along a series of face-to-face group workshops, the role of the workshop facilitator is particularly important. It needs competent staff with professional moderation skills, capable of designing the workshops in detail and offering adequate techniques, especially suitable for the co-creative and solution-oriented processes, as well as for guiding the group through the sometimes challenging journey of a social lab workshop.

The workshops of the labs have to fulfil a range of important aims in order to initiate the lab process, form a lab team, create and select ideas for appropriate pilot actions and carry out the implementation and reflection process. As there are only three workshops and the durations of the workshops are also limited, the intervals between the workshops have to be used to keep the process alive. Lab managers and teams have to be aware of these needs and adequate means of communication have to be established. At times, especially the pilot hosts had the impression of being alone. And as the pilot activities are also time and resource demanding, not all pilots were able to survive such phases. Also, the intervals between the workshops have been rather long (up to one year) which made a continuous commitment very difficult and asked for even more communication and support in between. To shorten the pilot phase or conduct more but shorter workshops within the labs could be helpful.

To come up with good ideas for pilot actions which are doable within the project lifetime is a challenging task which needs special attention. Moreover, how these ideas are developed and how the selection process takes place is decisive for the further progress of the pilot activity. In cases, when ideas were not appropriate, or doable, or out of scope etc., they were not pursued further. Furthermore, it needs a true interest of the lab team and a belief that the idea is doable and relevant. The lab teams collected many ideas, often in the style of brainstorming. Clearly, most of them had to be declined afterwards. Only those ideas which is preferred by at least a few persons will find hosts and teams would get formed. Therefore, also the role of the pilot host is of great importance. Ideas which did not have someone who was also willing to adopt it, did not survive either. Within the selection process of the pilot action also the host and supporting teams need to be assigned already.

Subsequently, pilot hosts are key for the implementation of the pilot action which requires much support by the SL management team as well as by the other lab participants. Pilot hosts have to rely on the backing of the SL which finally allows them to act as agents of change, to help them to reflect on the activity and to get further inputs for improvements. Additionally, those activities which could be interlinked with the own ecosystem and daily work life of the hosts could be integrated and pursued

easier, even when they did not receive enough support. Additionally, the integration into their own work made participants understand their own benefit, thus boosted motivation.

The lab management teams are demanded to provide and enable the required support. They could not only offer help themselves if resources allowed, but also activate the other lab teams and their resources and networks. They could update the lab participants on the lab activities, also after and in between the workshops to enable them to keep track on the progress, to consult them for further input and their expertise and thus keep them interested in the SL as such.

Therefore, it is crucial to make the lab group a real team and allow for the required forming and trust building process. In those labs where bonding activities have been successfully implemented and created real team members a higher feeling of mutual responsibility was observed. These lab members were less likely tempted to leave the activity or the entire lab process. Lab participants acted as team members who could share tasks, help each other across pilots and thus learn from each other. Consequently, we can emphasise the importance of a trustful atmosphere created at the lab workshops to support this team building, also beyond the lab.

A trustful environment is a fertile ground for establishing a community of practice, with SL participants as the core group, representing the first ones who have already experienced a lab process and perhaps also implemented pilot activities. Lab participants who feel committed to their lab and the project will act as ambassadors further on and spread the word on their experience. Supporting activities and programmes, such as the RRI ambassador programme or for instance a European map on lab participants or similar could make lab participants and their institutions as testimonials visible.

SLs are organised in a cyclic way of implementation and evaluation. Thus, learning was one of the main goals of the lab process. SL participants and management teams not only talked about personal gains and learnings but also about institutional learning and change. Many products and concrete outputs of the lab processes certify these outcomes on many levels. A good documentation of these learnings and outcomes is important, within the project for exchange to identify synergies and enhance collaboration, but also externally for an increased visibility on the European level. There is a need for this exchange and a European platform or a metalab on specific topics for a successful RRI implementation would be a true asset for RRI implementation processes driven by the Social Lab methodology.

Summarising the insights that were gained, it can be confirmed that Social Labs as a method to implement RRI on a sustainable level works, if some basic principles are taken seriously, roles and goals clarified, and some pitfalls avoided. They have indeed high potential as means to transform science towards a more responsible and, at the end, better research.

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7 Annex

First Cross Sectional Workshop
24th – 25th October 2018

Venue: Flackl-WirtHinterleiten 12 2651 Reichenau / Rax, Lower Austria

NEW HORRIZON

Agenda

Wednesday, 24th October

Time	Activity
09:00	Departure from IHS Vienna by bus
11:00 – 11:30	Welcome and introduction
11:30 – 12:00	Discussion of Challenges
12:00 – 13:00	Lunch break
13:00– 14:00	Finding Solutions Part 1
14:00– 15:00	Group Work and integrated Coffee Break
15:15 – 16:00	Finding Solutions Part 2
16:00 – 16:45	Group Work
16:45 – 17:45	Presentations of Results
17:45 – 18:10	Closing
19:00	Dinner

Thursday, 25th October

Time	Activity
09:00 – 09:30	Wrap-up of lessons learned and reflection round
09:30 – 10:00	Reflection Round
10:00 – 10:25	Pilot Visualisation
10:25 – 10:30	Coffee Break
10:30 – 11:30	Open Space
11:30 – 13:00	Presentation and Discussion
13:00 – 14:00	Lunch
13:55 – 14:40	Externals' Reflection
14:40 – 15:10	Feedback and Closing
15:30	Departure to Vienna by bus

Participants

Representing	Participants
SL #1	Erich Griessler, Christoph Mandl
SL #2 & SL #8	Michael Bernstein
SL #3	Anne Loeber, (Joshua Cohen)
SL #4 & SL #9	ilse Marschalek, Maria Schrammel
SL #5	Peter Novitzky
SL #6	Zbyněk Machát
SL #7	Philine Warnke
SL #10 & SL#17 & SL #19	Robert Braun, Elisabeth Frankus
SL #11	Ulrike Wunderle, Caroline Paulick-Thiel
SL #12	Robert Gianni
SL #13	Mika Nieminen
SL #14	Antonia Bierwirth, Raúl Tabarés Gutiérrez, Markus Hauser
SL #15	Stephanie Daimer, (Philine Warnke)
SL #16	Malene Christensen, Hanna Mandl
SL #18	Maria Lehmann Nielsen, (Christoph Mandl)
Oversea Partners	Juan Guillermo Pérez, Varsha Persaud, Ravi Srinivas
Advisory Board	Jack Spaapen
Project Officer	Antonio Scarafino
WP6	Tung Tung Chan
WP7 (moderators)	Elisabeth Unterfrauner, Lisa Marie Seebacher
WP8	Joshua Cohen
Total number of participants	31

NEW HORRIZON

INDEX

Wednesday, 24th October

CHALLENGES AND POTENTIAL SOLUTIONS

Based on the qualitative analysis of the repots filled in by the different Social Lab managers, we have distilled five clusters of challenges (which can be found in the Annex). In discussing these clusters in mixed groups participants were asked to add additional challenges they have experienced and then work out solutions in pairs (lighter coloured cards). The following section shows an overview of the discussed challenges and solutions per cluster. The summarised statements represent individual and group opinions and are not necessarily confirmed solutions.

Role of Manager and Facilitator

1: Role of Manager and Facilitator - Challenges

How to make sure that everyone gets heard?

Everybody must feel represented and be empowered to talk or not necessarily to talk in case they are already heard.

How to support the emergence of pilot ideas as social lab manager?

By the means of providing rooms and facilities, support pilots with internal expertise, and empower the pilot team through ideas and input, help them or nudge them to extend their actions beyond the lifetime of the NewHoRRIzon project

Is there a room for alternative narratives to evolve?

The idea of the intellectual tramp – the intellectual wonderer, it is a specific role, which we would like to be introduced in the SL. This role questions and challenges everything – it might result in a parallel narrative or strengthening the one they are working on.

How to avoid biasing group opinions and results?

Avoidance of biasing group opinions is important but reflecting on potentially biasing is equally important.

How to convince people that they have agency?

Use the workshop to give an 'I can' moment. There are several tools for reaching this moment. One was the tool of presenting a vision and of asking the workshop participants how to stop this vision from happening. If you can stop the vision and make something not happen, you might as well make something happen.

How to motivate participants towards commitment and engagement?

Offering benefits, show how it relates to their own practice.

How to change the mind-set of people?

Aim at evolution instead of revolution. Important ingredients are trust building, sensitivity to interest differences, practical examples, mutual learning, evolving and engaging.

Is there a difference between how the manager and the facilitator are involved?

The manager can have the role of an active change maker; the facilitator is less involved in the process. The two roles can complement each other (e.g. good and bad cop).

2: Role of Manager and Facilitator - Challenges & Solutions

Project Outlines

The overall group discussion was about the level of standardisation put into the social labs, to guarantee some kind of unity while still allowing for diversity.

3: Project Oulines - Challenges

<u>Who is the author to the output of social labs – is this SL managers, SL facilitators, WP leaders, or particularly SL participants?</u>

The role of the SL manager – some are more active in producing pilot actions. If participants feel ownership in their pilot actions, they might also want to participate in related publications. Therewith come issues of anonymity – we need to bring these issues of authorship also to the project consortium, no specific answer has been found yet.

<u>How to coordinate and produce synergies between SLs?</u>

This issue particularly comes up with regard to RRI training, which evolved as pilot action in various different SLs. Working together and combining efforts and resources is key. There are lots of RRI training materials available[1]. We need to find target audiences, take stock of what is available to those who want to work with it. A specific open space setting further elaborates on this issue.

<u>What kind of standardised inputs do we want to go into the social labs?</u>

This question strongly links to the systematisation of the outputs of the SLs. Our desired outputs need to be relevant and feasible for the social labs participants, which is why they need to be involved in these discussions and not hindered in their creativity, aspirations and ownership processes.

<u>What are expected activities to happen within the social labs?</u>

From being involved in a pilot, people bring increased RRI knowledge and understanding and an increased agency how to integrate these into their professional practice. This in-

[1] In this regard, New HoRRIzon's D1.3 and RRI Tools were mentioned.

clusion needs to happen in an RRI manner, not in a top-down way. They might become RRI ambassadors.

<u>What to systematise in terms of outcomes and outputs of SLs?</u>

This is the underlying question of evaluation. An idea for a systematisation was to use the underlying typology used in the 'SIAMPI'-project. The idea behind this project is that people you want to have an impact on are included in impact assessments. This exceeds the scope of NH. Nevertheless pilot actions can relate and be related to the typologies used in SIAMPI which are going to be discussed with the SL participants themselves. Their reasons for doing their pilots, i.e. their theories of change are used to systematise the output and to find a unifying structure for the diversity of the social labs.

4: Project Oulines - Challenges & Solutions

Structure of the Social Lab

5: Structure of the Social Lab - Challenges

How to balance comparability across social labs?

This question relates very much to those discussed in 'Project Outlines'. Being very clear about the common goal and the direction we want to go to is key. If our goal is to make recommendations about how to integrate RRI in future projects, what kind of information needs to be gathered?

How to balance input and freedom? How can we have a method that allows for 'wild ideas' and freedom for how pilot actions develop?

This needs to be adjusted to each of the SLs and the specific participants. E.g. visionary participants can be visionary, if they want to be concrete and specific, then this is the way to go. SLs are labs after all, places for doing experiments and trying out different things. Not every step needs to be a success, but it is also about learning from different kinds of experiences.

How to time the workshop methods appropriately? How much time to devote in the workshops to develop pilot activities? How to create an adequate time structure in the workshops?

This is a question of facilitation. A good facilitation is able to manage time well, but also to keep the structure flexible according to the participants' needs. Workshop participants can also be prepared with information material, with agendas and expectations for follow-up workshops, and allow them to comment on these issues in advance.

Accepting frustration is a challenge, but considering frustration as part of a creative process is important. Workshops need to be used for the SL participants to work together on making their pilots more concrete for them to work on after the workshop.

How to allow and use chaos and creativity in a productive manner?

Calm participants down and explain chaos and creativity as part of process. Managers and facilitators need to discuss their roles prior to the workshop and discuss who is going to be the 'good cop', the understanding one that encompasses anything and who the 'bad cop', who challenges evolving ideas, and conquering the idea of seemingly unsolvable issues, since once the challenge is identifiable, also a way forward might be found.

Participant's frustration needs to be understood, but managers and facilitators must not indulge in this frustration to not block the process. Barriers and critical aspects of SL participants need to be explored to learn on their underlying issues and to see how they might be overcome.

Encourage participants to change perspectives once they have they feeling to be in a one-way street. Role-plays offer good possibilities for doing so. RRI is not only about learning it is very much about doing. Encourage your participants to do, without being a 10 years RRI expert.

6: Structure of the Social Lab - Challenges & Solutions

How to ensure permanent participation of participants?

Do people have to be permanent participants? It might also be a good thing if not motivated people leave the SL earlier. Further, whenever resistance of participants arises

there is a lot of learning in it, to find out about their concerns and is it anything we can help solve. It is important to provide space for critical questions about the process or RRI in the workshop. The criticism yields very important feedbacks for us and the commission about RRI and how to advocate on its behalf.

Common Understanding of RRI

7: Common Understanding of RRI - Challenges

Is there a need for a common understanding of RRI?

The common understanding of RRI is very much related to the question whether we need a holistic definition of RRI or do we need knowledge about all the different keys and to the question of different relevance and applicability of RRI. RRI as such is an

evolving concept, at many different places, which is why there is also no point in closing it up to one unified concept.

Further, RRI might be understood at three different levels: The level of 'mind' wants to have common RRI definition. The level of 'heart' wants to create an emotional attachment towards RRI. The level of 'will' lastly implies a longing for the implementation of RRI. Don't think about the exact definition, but make an experience.

Citing Antoine de Saint-Exupéry, "If you want to build a ship, don't drum up people to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea", RRI could either be regarded as the ship, or the sea we are longing for.

We need to open up the RRI framework to social responsibility and enable people to connect personally and to build up a personal emotional connection in order to mobilise their aspirations to make a difference in the world. There is no need to have an exact knowledge or a shared definition; however, there is a need to have more knowledge about and across the RRI keys. This is the field of tension the SLs are happening in.

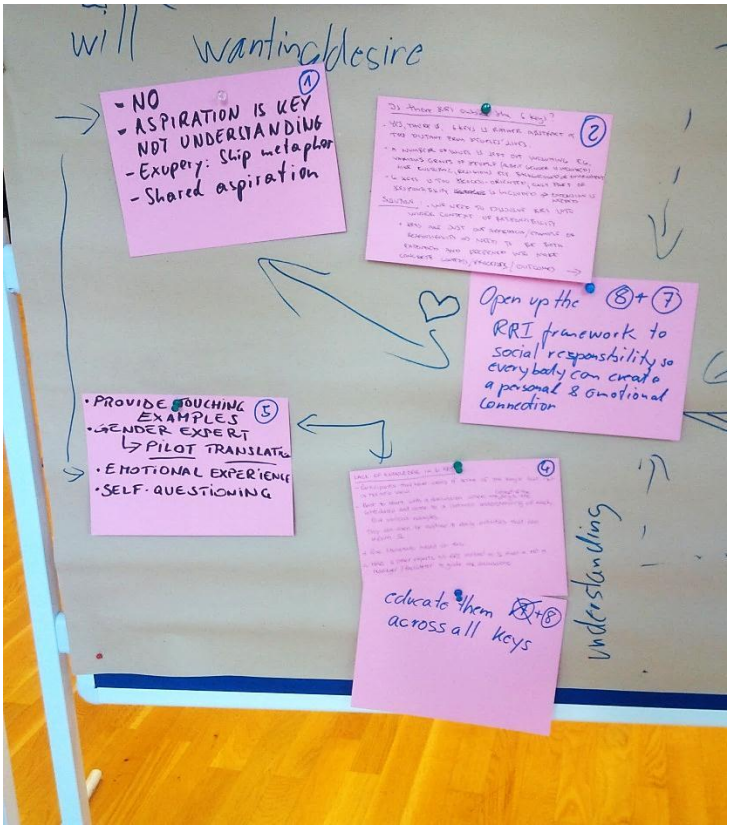
<u>How to deal with the danger of losing keys, such as Gender or Open Access?</u>

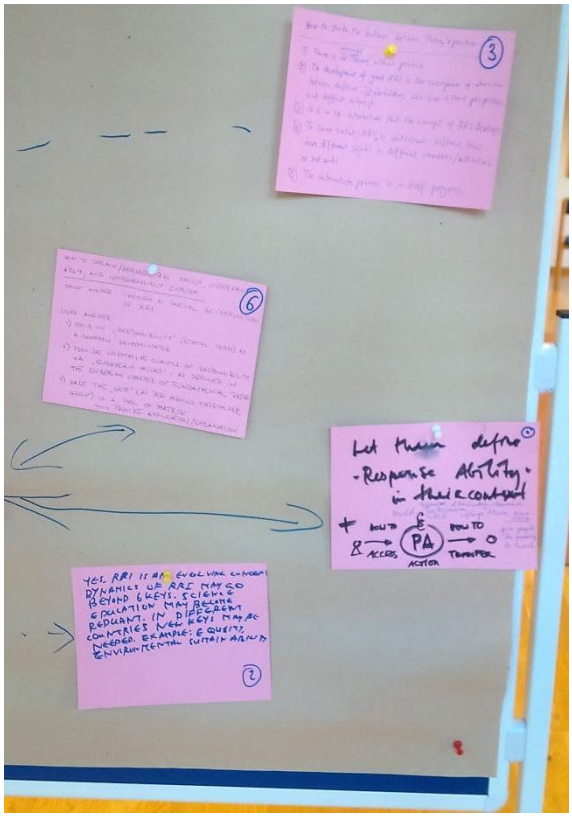
People working with their own understandings might not include all dimensions, which is why it is important that they are nudged in, and training about all the keys is offered in the SLs.

<u>How to balance theory and practice?</u>

Within the workshop there needs to be a balance between how much input is offered and how much room is given to the participants' own understanding. After all, the process of working together is a theory, which is why this distinction must not be made.

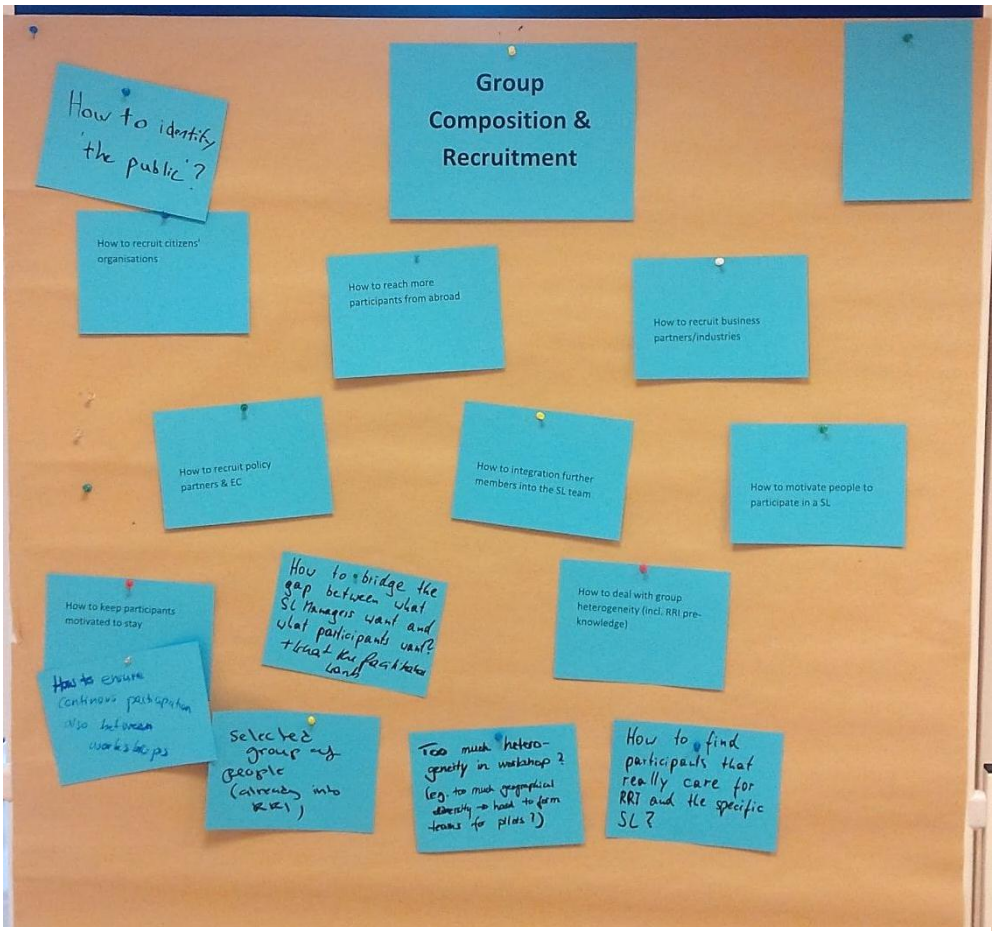
8: Common Understanding of RRI - Challenges & Solutions 1





9: Common Understanding of RRI - Challenges & Solutions 2

Group Composition and Recruitment



10: Group Composition and Recruitment - Challenges

Requirements for Recruitment

Chose a good location for doing your social lab, the location might also be lab specific.

Introduce Citizen Science Organisations into the pilots. Try to introduce lobby groups into the activities and to connect with research processes.

Involvement of citizens in established research processes is key to promote new approaches and RRI.

Show that there are undesirable effects of irresponsible research and innovation to promote RRI. This can help you to involve different stakeholder groups, who are not interested in taking part in the first place.

Develop a multilevel process in the requirements of the participants, because the participants will have a different RRI understanding. The selection of participants in the first place is decisive for the kind of pilot actions that are developed. The idea is to work on the shared understanding of RRI to develop pilot actions based on these different understandings.

Composition of the Group

Try to make pilot actions relevant for participants' organisations. Promote incentives to help people getting involved. Most importantly, pilot actions need to be linked to the ecosystem of the SL participants, who might not be attending follow up workshops, but nevertheless keep on working on the pilots.

Not pushing people against their will, they are enabled to leave the SL, leavers and newcomers bring new dynamics into the lab and new roles into the pilots.

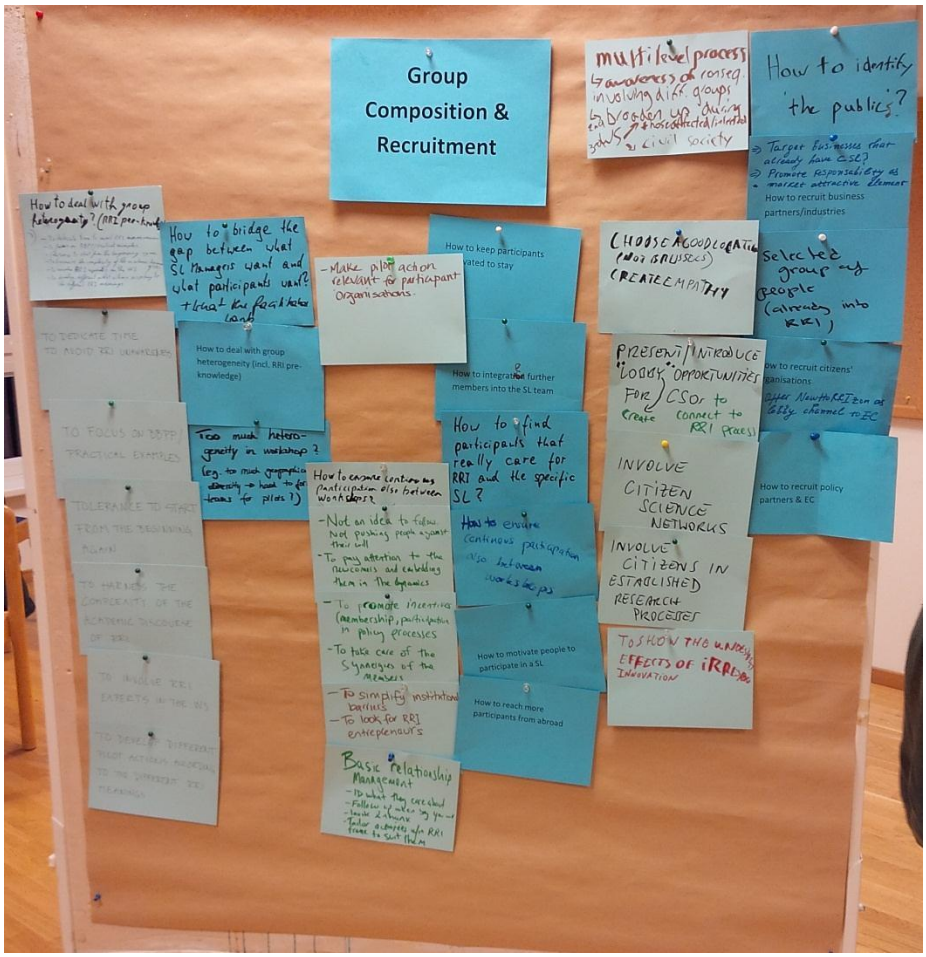
Take care of the synergies of the members. Small groups need to have different spaces within the larger group of the SL and can use synergies with other small groups in the same SL.

Look for RRI entrepreneurs! This is also related to leadership within the pilots. Are we looking for RRI entrepreneurs who want to make substantial change in their organisation, or are we interested in people who are interested, but won't make a substantial change in their organisation.

Dynamics of the Group

SL managers and participants might have different interests. Try to focus on best practices and bring in practical examples of RRI that can inspire different lab participants. Be ready for explaining RRI anytime during the SL, newcomers will have this need and as a SL manager and facilitator you will have to start again. Pay attention to the complexity of the academic discourse on RRI. Involve RRI experts in the workshop, since they can

bring in fresh air. Provide practical lessons about RRI. Do different RRI pilots according to different meanings of RRI. The six keys can be the medium to provoke change at different levels.



11: Group Composition and Recruitment - Challenges & Solutions

Thursday, 25th October

REFLECTION ROUND – MAIN INSIGHTS

In order to get first impressions of workshop participants, we asked them in the morning of day two to share their main insights they had gained so far:

- Chaos is human and we have to deal with it.
- It is good to get as many different perspectives and experiences as possible, and exchange in depth, so I learned a lot, but I still have open questions.
- Find a way to coordinate the diverse processes, but still allow diversity and chaos.
- I got more insight on the roles of Social lab managers and facilitators
- Good discussion on the different understanding of RRI with many similarities. Have to find a way of touching aspirations of the people and having an understanding of the keys.
- I was surprised by the variety of use, and questions, and experiences, solutions, at that stage of the process, I would have thought that there was more consensus, and I wonder how you are going to solve it.
- I like that there is not yet consensus, I see however insecure we still are, we are getting there.
- Interesting what have emerged out of the social labs.
- Lack of theoretical and analytical framework to structure everybody's thinking, that we are all discussing the same. It needs a more intellectual approach.
- I liked to share experiences, but more in in depth and exchange more on pilot activities.
- The exchange was great and I got some good ideas and I like to be even more specific. We have good principles (like: welcome chaos), but HOW do we do this?
- Very good exchange, still surprised by the number of issues and things that have to be clarified. Now try to put together forces to synchronise and align similar initiatives (eg Michael's initiative on trainings). Good to have a selection or priorisation of what is really important and should be tackled and how to proceed.
- Good exchange between social labs, still we need to push further practical guidelines, to support and coach the pilots.
- Very helpful exchange what we've collected, what is still missing is a theoretical framework on how to analyse pilot actions. SIANPI was mentioned, and it would be good that people could elaborate from their perspective on it.

- I thought we are on a dead end with our social lab, but now I think we are not.
- The important thing is now how to bring the issues into the project, as responsibility of a coordinator I will look after it and put it also in the social lab manual. This is not a research project, but a CSA and we can have as much as possible clarity on what we are doing, but the social labs will differ, and we won't and can't give you direct guidelines for each and every situation. Furthermore, it is a huge consortium and we should trust the distribution of labour (like evaluation outlines, which everybody should follow). We are not on a dead end, but very productive, It was clear that there are many many challenges, otherwise RRI would have been implemented 200 years ago.
- Where are we heading, perhaps the vision we created at the beginning might shift a little bit, we should think of how could we contribute to policy making and embed certain activities. On the macro level we want to influence on the micro level we want to build competencies – and with pilot activities we want to pull this together and assess its impact.
- I appreciated the one to one exchanges, to really speak with other people and hear about their experiences and that makes me really optimistic that we are capable of putting things together. Indeed there are possibilities from the perspective of evaluation.
- I don't have a key insight, and I am still on a confusion level. I don't know how to bridge what participants need and want and what the project needs and wants. The insight is that I don't have an insight yet.
- Until yesterday I did not dare to criticise the RRI concept but now I found that it was not sufficiently grounded intellectually, only framework level, and it will not succeed if it only stays on that level. Now it's necessary to open it to a social responsibility. Now I see that we are all in the same direction. The question is how to transmit this to social lab participants because they are on different levels. We are all in a process of transmission.
- As a facilitator, I don't know if it is good to feed participants with intellectual concepts, better to provide some good examples of small pilot actions that lead into something really useful, that they get inspired and go home do something similar.
- I have a good feeling where I am in the process. I wonder how to bring the participants to just try something, and then change the path again, this is to me the main challenge for the second workshop, to give a good impulse for the pilot actions.

- There are still grey areas, we need to bring in theory and learn from practise, social labs provide a good opportunity for that.
- The diversity is an opportunity for creativity. The discussions on the concept of RRI lead us beyond the keys, like shown in a little sketch, a tiny spot with responsibility around it. There is a lot of energy here, but how to channel all these ideas to do that in practice, that is a real challenge.
- The diversity of the concept is an asset, like in sustainability, and the creativity is quite important. And if it was easy there wouldn't be a problem. Scientific processes are socially constructed, 200 years old, and we are asking now to add more to it and we are struggling with that. The point of RRI is to change trajectories, but there is no cookbook for it. But I learned a lot here, got many inspirations for workshop 2.
- We should continue with our conversations and look for opportunities of synergies

PILOT-SOCIOMETRY

We have asked participants in a sociometrical exercise to position themselves in the room according to the answer they would give to different questions concerning the status-quo of their pilots. The following section shows an overview of the results.

<u>How many selected pilot ideas have you developed per lab?</u>

- Most Social Labs have developed between 3 and 4 pilot ideas to work on. Two Social labs, namely SL # 11 and SL #14 work with 5 pilot actions.

<u>When do you plan to do your 2nd workshop?</u>

- Three Social Labs plan do to their 2nd workshop already in fall 2018, most workshops, however, are going to happen in winter 2018 and spring 2019. Only SL #5 plans to do their 2nd workshop in summer 2019.

<u>How advanced is your most advanced pilot?</u>

- No pilot is finished yet. With most pilots, however, preparatory work has started; many are already in the midst of happening. Since one lab has not had its first workshop yet, this lab still needs to develop their pilots. Further, pilot ideas also had been dropped in three labs so far.

How confident are you that your pilots will be a success?

- Overall, the social lab managers and facilitators are confident that their pilots will be successfully implemented. Further, it was also questioned whether pilots even have to be measured with 'success' since their very process is important.

PILOT SYNERGIES

Participants were furthermore asked to write down on sticky notes the pilot activities per Social Lab and to pin it up according to a proposed cluster structure (that evolved again from the Social Lab reports). The following list represents a clustered overview of current pilot activities.

Workshops (10)

- SL2: Invited Workshops on RRI
- SL 2: RRI training suite (Key and AREA modules)
- SL 5: Involvement of CSOs into calls
- SL6: Integrating RRI into talent management in SME (Circular Economy)
- SL8: RRI training suite (Key and AREA modules)
- SL9: NCP trainings
- SL10: Workshop on RRI & Stakeholder Engagement
- SL 10: Consensus Conference
- SL10: Walkshop on Cityscapes
- SL14: Capacity Building of NCPs

Trainings (9)

- SL3: Pilot Action 4: RRI Training Participation for founders
- SL5: Training on RRI
- SL 6: Integrating RRI into potential Start-ups & SME founders
- SL11: Training on RRI by project leaders and partners
- SL12: Data for tomorrow
- Sl12: RRI for the EC
- SL13: RRI-Training Module for Police Academy (and maybe 2 other institutions)
- SL 18: RRI House (online platform for RRI training)
- SL19: Teach the Teacher

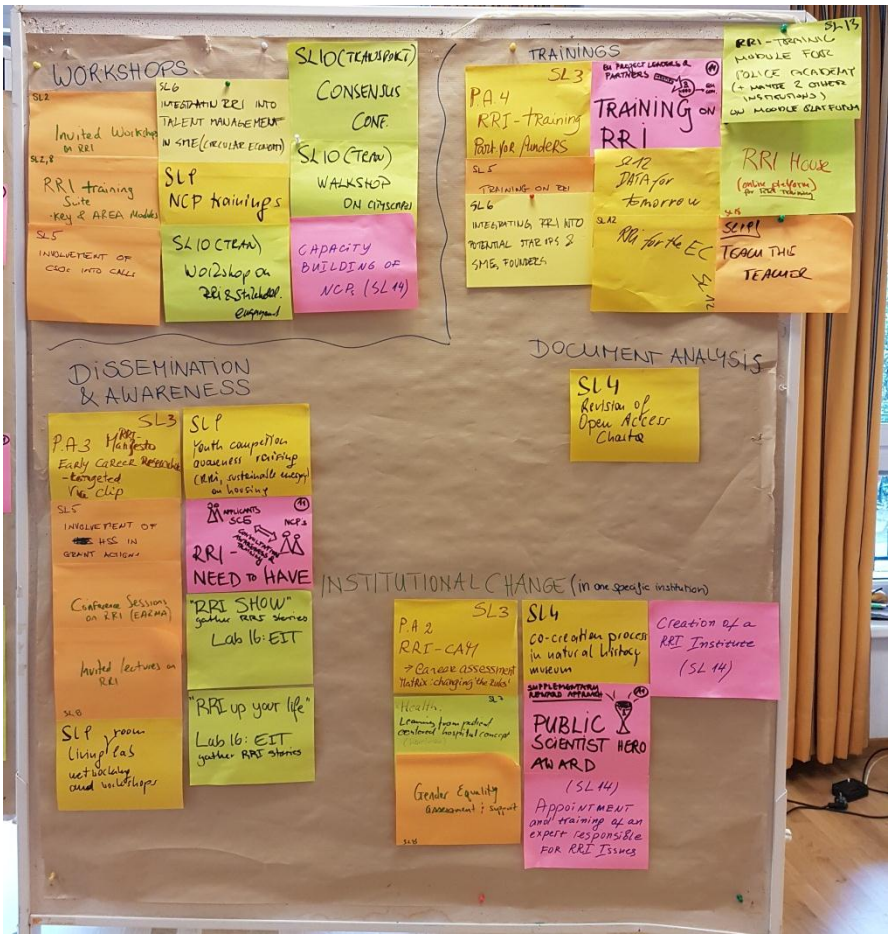
Dissemination and Awareness (9)

- SL3: Pilot Action 3: RRI Manifesto – Early Career Researchers targeted video clip
- SL5: Involvement of HSS in grant actions
- SL8: Conference Sessions on RRI (EARMA)
- SL8: Invited lectures on RRI

- SL9: Living Room Lab networking & workshops
- SL9: youth competition awareness raising campaign on housing
- SL11: Consultation Awareness and Training for NCPS and SC5 Applicants – RRI-Need to have
- SL16: RRI Show – gather RRI stories
- SL16: RRI up your life – gather RRI stories

<u>Institutional Change (in one specific institution)</u> (7)

- SL3: Pilot Action 2: RRI-CAM – career assessment matrix – changing the rules
- SL4: Co-Creation process in natural history museum
- SL7: Learning from patient centred hospital concept
- SL 8: Gender Equality assessment: support
- SL11: Supplementary Award Approach: Public Scientist Hero Award
- SL 14: Appointment and training of an expert responsible for RRI issues
- SL14: Creation of an RRI Institute



12: Pilot Clusters 1

<u>Document Analysis</u> (1)

- SL 4 Revision of Open Access Charter

Analysis & Assessment Tools (8)

- SL1: Find seeds of RRI in your project
- SL2: Public Engagement/MAA evaluation & best practice
- SL5: Criteria Settings (+SDGs)
- SL8: Public Engagement/MAA evaluation & best practice
- SL8: Research Communication evaluation & best practice
- SL14: Testing SRL in Food Tech
- SL18: Responsible Data Sharing
- SL 18: The Buda Matrix: Mapping RRI

Case Studies (3)

- SL7: Engagement good practice exchange
- SL7: Good practice exchange on trading shelf community health
- SL11: Value Added Transfer of best practices

No Running Pilot (2)

- SL15: Workshop not done yet (15. & 16.11. in Berlin)
- SL11: JOKER: Training SMEs

Stakeholder Engagement (5)

- SL11: Urban Transition Coalitions
- SL14: Connecting Science Education with AI Software Development
- SL17: Stakeholder Open Day for ART
- SL17: Stakeholder local community engagement
- SL17: Stakeholder needs survey for ART

Other (6)

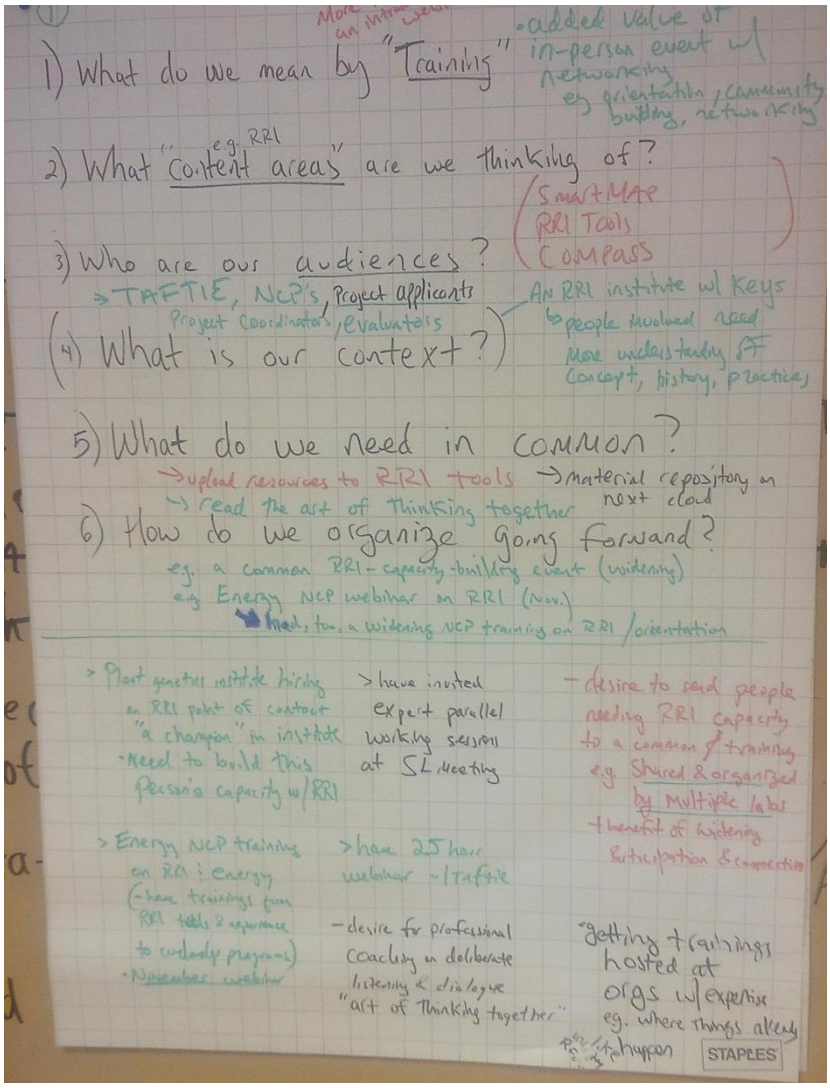
- SL1: Integrating RRI in ERC processes

- SL3: Pilot Action 1: Research Kiosk – dialogue platform + public engagement
- SL 6: Integrate RRI in TACR Practice
- SL 13: RRI application tool for SMEs especially working on AI
- SL 18 ARRIMSIM (garbage bin app)
- SL19 Dating between social scientists + nuclear energy

OPEN SPACE

In an open space workshop setting, participants engaged in in depth-discussion in topics mostly related to pilot actions.

<u>Cooperation & Training Development</u> *Shared Synergies between Social Labs*



14: Open Space - Cooperation & Training 1

<u>What do we mean by training?</u>

Added value of an in-person event for training, networking and community building (as distinct from a webinar aiming at awareness raising)

<u>Audiences and potentially additional audiences</u>

NCPs, project applicants, evaluators, funders, project coordinators, TAFTEE

<u>What can be common activities to support our trainings?</u>

Trainings already happening and have happened – combined resources related to specific RRI keys or RRI in general, or supporting people wanting to think RRI through in different fields, drawing from diagnosis of this specific field to know who to include in this project, which RRI projects do exist in this realm and how these could be adapted to other contexts.

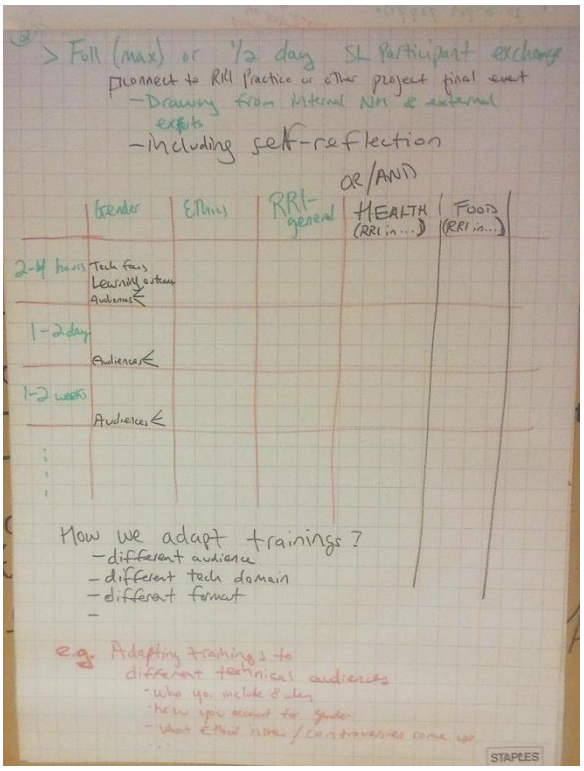
Information about these processes should be shared among the group whenever trainings are done to populate a matrix to catalogue activities and show the diversity:

* Target Group

* Subject Area

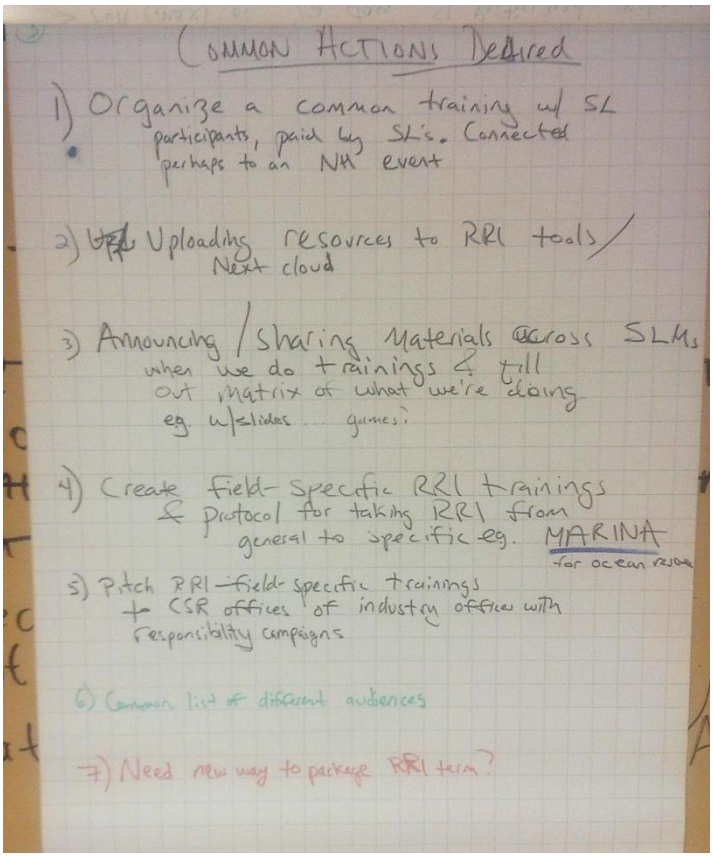
* Format

The possibility of a multiple Social Lab RRI training was discussed, which can be tied to an existing event when the consortium is already meeting and about two or three participants per lab might come together for a common training, so that they can build their own community and get a broader picture of the project.



15: Open Space - Cooperation & Training 2

The newsletter mailing list could be used as a communication tool among Social Lab participants and the NH website could offer a space for a pool with existing RRI tools and projects per field.



16: Open Space - Cooperation & Training 3

Main common actions desired

1. Common Training
2. Sharing Resources through uploading them on NextCloud or RRI tools
3. Sharing materials on what we are doing using matrix
4. Protocol to adapt the trainings from on sector to other contexts or structures
5. Pitch Industries and Organisations, who have budget to do CSR actions and responsibility campaigns, with RRI-specific trainings
6. Keeping track of different audiences reached
7. When selling the idea of the trainings, being conscious of the shorter term, formal shelf life of RRI as concept funded by the Commission and keeping the inherent elements of RRI in mind, which can

transcend and continue on

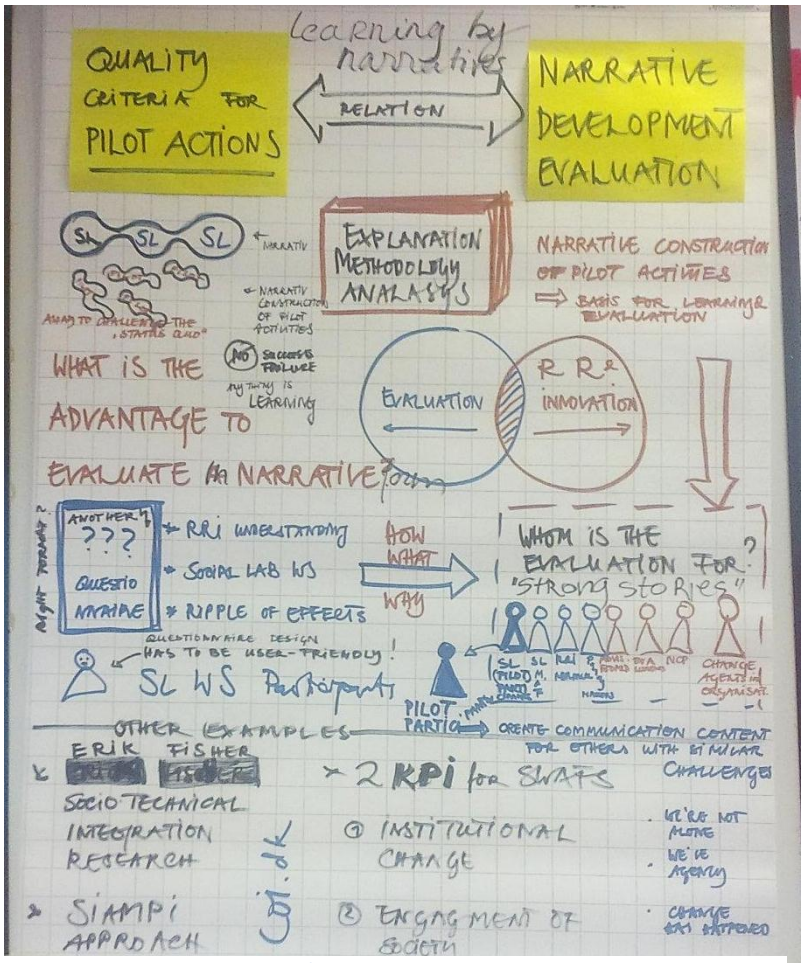
<u>Narrative Development (Evaluation)</u> *- The What, the Why and the How' - Learning from narratives' instead of a normative 'evaluation'.*

<u>What is the advantage of evaluating in narrative form?</u>

What we do with the SL and the Pilot Actions is to stir change in the way things are normally done through RRI. Each and every effort has a different context, but there is a common understanding of what is going on. This common understanding needs to be brought out systematically to communicate it. The stories are organized along the question of the What, the why and the how.

<u>Who are we communicating to?</u>

First and foremost to the people in the SL themselves – the what we do, how we do it and why we do it triggers reflection as part of the change process. As a collection these get a multiplier effect touching upon others not part of the labs



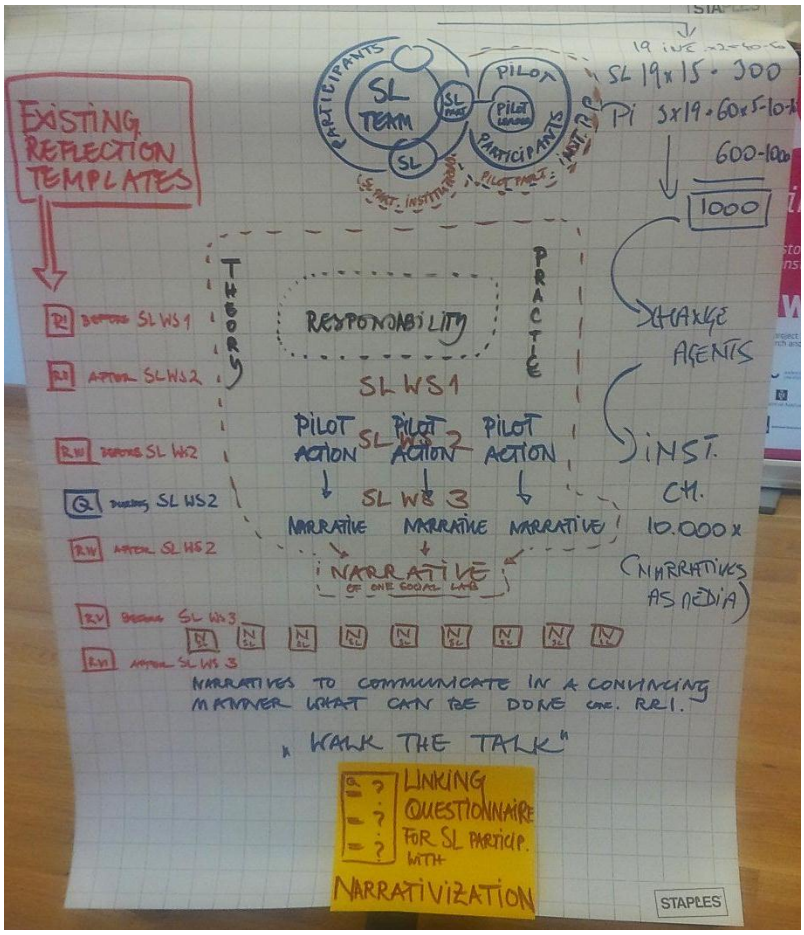
17: Open Space - Narrative Development 1

It helps if the story is a *<u>strong story</u>* and evidence is collected to substantiate this story. Inspired by SIAMPI and Eric Fisher's work – the selection of quality criteria is organized with those whose work is to be assessed in terms of quantifiable indicators. These indicators can be used to substantiate the stories.

<u>The logic of organizing data</u>

The evaluation logic relates to the core dimensions of the SLs *before* the workshop and *after* the workshop. The Reflection and Reporting Templates were used to gather initial data for narrative construction on the SLs. The next step is about narrative development on pilot actions. There will be new Reflection and Reporting Template for Moment 3 (Before WS 2) and Moment 4 (After WS 2)

The narrative development is supported by a set of questions prepared by WP8. A ZOOM call will be organized on 7.11.2018.



18: Open Space - Narrative Development 2

WP8 created a questionnaire, which is to be distributed by SL managers to SL participants to collect data on the learning effect of WS1 and gear the minds of those who want to reach again to the SL. Sending it out offers the option to enclose other relevant NH information

The pilot action leaders might forward the questionnaire to the pilot participants and thereby also reach those who do not participate in WS 2. Stories and narratives about pilot actions in order to spread the word in ways they make sense.

A generic and comparable design needs to be established so that also WS 2 happening in fall and winter 2018 can already use them. This design also needs to be included in the SL manual. (Also see the annex of this report).

Pilot Management

Social Lab participants should be motivated to do the pilot actions. Ideally, they are intrinsically motivated to implement the pilots in their working environment and the pilot actions become something self-sustainable.

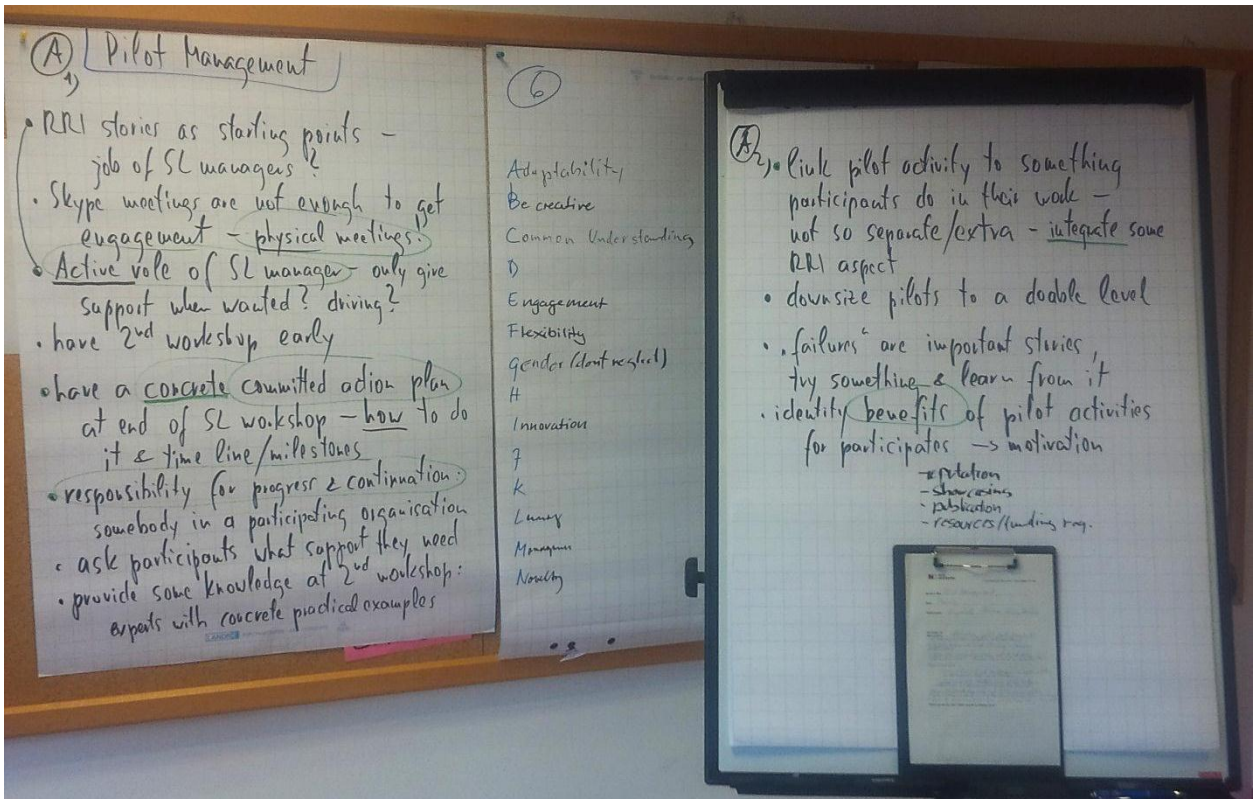
How to motivate extrinsically? By contacting, setting up skype calls etc. but these are only superficial solutions. Some SL managers have chosen to play a very active role in the pilot action, but with most it is mere support instead of active engagement.

Some SLs have chosen to use WS 2 as a part of setting up the pilot action and to offer the SL participants to work together on their actions. In general, physical face-to-face meetings are crucial in keeping up the teams. The NH project might also provide more incentives, such as upcoming publications where SL participants can be authors as well. Publish best case stories on the NH website – in connection with WP9 so that pilot actions can be promoted.

Communication Infrastructure in pilots – could be provided by NH as well, which might be useful for collaboration. It is crucial to ask participants about their needs to be supported to advance. In particular

those pilot activities where not much has happened so far are important in this regard. Pilot actions can be adapted and changed in order to become realistically implemented.

Our SL participants come with different sets of interests and values adding to our project's and role's interest. The framing of 'conflict of interest' might be counterproductive, it is about working with these different values and interests and our obligation to support common actions.



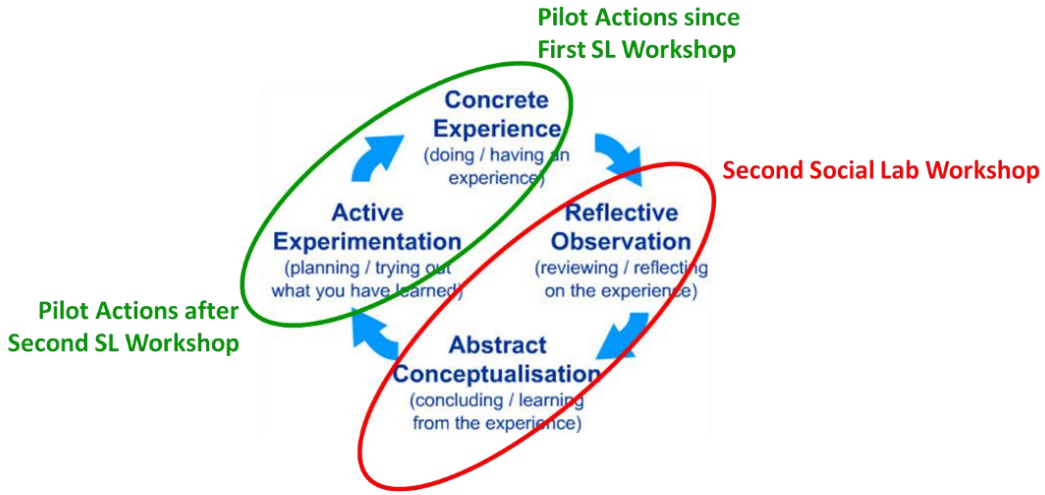
19: Open Space - Pilot Management

The Second Social Lab Workshop

The aim of the social lab is to develop questions which are empathetic for the participants' needs, which make sense for them and to support them continue their work. This is why we need to ask the Social Lab participants what has worked and what has not worked and why so? This evaluation needs to be integrated in the workshop. Further, participants need also to be asked about those, who have dropped out.

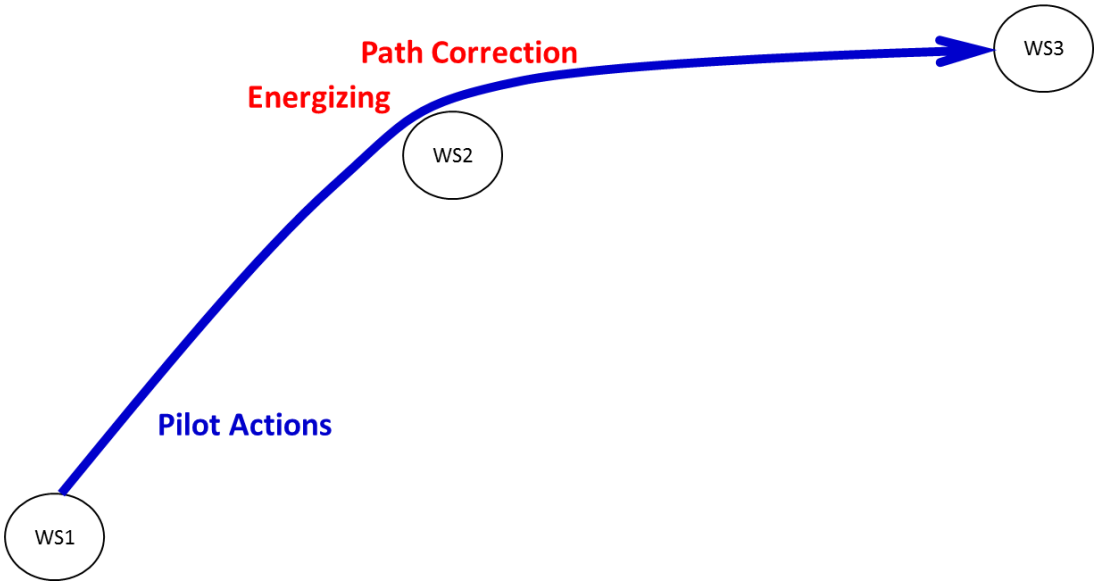
With regard to the second workshop a focus on what has worked so far is suggested. Further, playfulness is to be introduced and integrated in the workshops, e.g. by the means of a performance, or working on 'how to provide our story with a happy ending?'

Intellectual Purpose of 2nd SL WS within the experiential learning cycle of SL



20: Open Space - The Second Social Lab Workshop 1 (from generic WS 2 design)

Emotional Purpose of 2nd SL WS as Swing-by between 1st and 3rd WS of SL



21: Open Space - The Second Social Lab Workshop 2 (from generic WS 2 design)

"**Swing-by** is the use of the relative movement and gravity of an astronomical object to alter the path and speed of a spacecraft."

A more detailed generic design for Workshop 2 can be found in the Annex.

EXTERNAL OBSERVATIONS

In a final round, we asked all participants, who are not part of a SL to share their observations and give their final statements on the workshop.

The oversea partners Juan Guillermo Pérez, Varsha Persaud and Ravi Srinivas voiced their satisfaction about having gained deeper insights in the project and the social lab processes to take home in their living and working contexts. Stronger involvement in the project was asked for, which might happen on the level of deliverable contributions as well as external evaluations or reviewing processes.

As member of the advisory board, Jack Spaapen was overwhelmed by the diversity of the project and the social labs happening within. The questions raised at the workshop were held very relevant and need to find answers. The diversity within the project in the setting of researchers trying to communicate with society requires appropriate methods (such as PIPA – Participatory Impact Pathway Analysis). The same applies to evaluation – SIAMPI mapped out the different interactions between stakeholders and came up with categorisations that might be taken as qualitative and quantitative indicators in NH. With regard to the organisation and practical issues related to the Social Labs, there are methods out there which might be useful as well, e.g. works stemming from organisational sociology from the 70ies and 80ies, about group dynamics, leadership etc. Applying methods and building on existing insights is key. One-to-one exchange is important, but more attention needs to be put on group learning.

> "You should think a little bit more in terms of what do we want to achieve, what are possible ways and how could we use existing literature on it? The project is called New HoRRIzon, which is an ambitious title – but do you know how to get there?"

As internal external, Tung Tung offered to help establishing a common framework, by creating a matrix with methods, the role of managers/facilitators and the goals to achieve. Michael also hints to the material being compiled by NewHoRRIzon as well.

As Project Officer, Antonio Scarafino appreciated the possibility to participate in such a workshop. He asked for some necessary clarifications and voiced its surprise about some issues still remaining unsolved. The collected material throughout the project so far should be used and usable to convey the message to potentially interested stakeholders out there – those that are not participating in the social labs need to be involved as well.

Summary

By the means of using different methodologies and tools, challenges and solutions were discussed throughout the two days of the workshop. The discussed reflections as well as the in-depth open space workshop raised important issues which are crucial for continuing the work in the social labs and the pilot actions. Therefore, they should be discussed further and considered for the updated version of the social lab manual.

ROLE OF MANAGERS AND FACILITATORS

The different roles and tasks of SL manager and SL facilitator have been adopted and applied within the social labs. Discussing the thereby made experiences made the differences between these roles more obvious. Nonetheless, the exchange between managers and facilitators across social labs is regarded as being important. Additionally, there is an expressed need for more practical guidelines concerning group management and workshop methods, whereas already existing literature should be consulted.

PROJECT OUTLINES

The level of standardization is a remaining issue of discussion on how to systematize outcomes and outputs. The question "How to balance comparability between social labs" was a cross cutting topic in different working groups throughout the two days. The SIAMPI categories were put forward as potential solution. Another related common theme is the field of tension evolving between the Social Lab as a place for experimentation versus comparable outlines – how much input needs to be provided for in the social labs and how much space should be given to bottom-up ideas?

Further, synergies across the Social Labs played an important role. Several overlaps could be identified and will be used collaboratively. New working groups have been established accordingly.

STRUCTURE OF THE SOCIAL LABS

The framework of the social lab process and its components seemed to be rather clear. However, several participants emphasized uncertainties regarding a common goal. Where are the social labs heading to, 'where do we want to finish?' and 'how do we get there?' were recurrent questions. How can different expectations be clarified?

In spite of these open questions, there was a common agreement that pilot activities will function as best practice examples on how to implement RRI and/how to work in an RRI way. Social Labs are a place to try out and to experiment. Pilot activities are means for institutional change and can be regarded as "De-facto RRI".

One remaining issue thus is how to make pilot activities and pilot activists visible in the project and beyond.

COMMON UNDERSTANDING OF RRI

The workshop discussions reflected the current discussion on how to balance RRI theory and putting RRI into practice. There is an expressed need for an analytical framework to distill narratives, whereas again SIAMPI was mentioned as potentially useful tool. For further methods there is literature and experts to ask.

One shared appreciation evolved on social labs being a place for experimentation, to find free and wild ideas, a room for creativity, trial and error, chaos, diversity and experiencing de-facto RRI.

Workshops hence should focus on best practices and work as input of practical examples to stimulate their uptake of RRI.

Still, there are questions to be solved on how to address the present diversity of values: What does the project want, what do the participants want? How to develop narratives from different perspectives, and finally who is the author of formulated narratives?

GROUP COMPOSITION AND RECRUITMENT

Another recurrent topic was the permanent participation of social lab participants with regard to their recruitment. On the one hand, participants need to get motivation to stay, but on the other hand, fresh ideas of newcomers need to be integrated – how to do this? An even more pressing issue evolves around the question of how to include the opinions of those leaving the social labs and even further, of those, who are not participating at all.

PILOT ACTIVITIES

The visualization on SL pilot activities made format-based clusters of pilot activities visible. Most pilots have already started and happen at different levels – while some happen at a smaller scale, others focus on case studies or aspire institutional change.

Most pilot actions can find synergies with actions of other social labs. More detailed information about the pilot actions is necessary to facilitate team-up processes across WPs and SLs.

OPEN SPACE

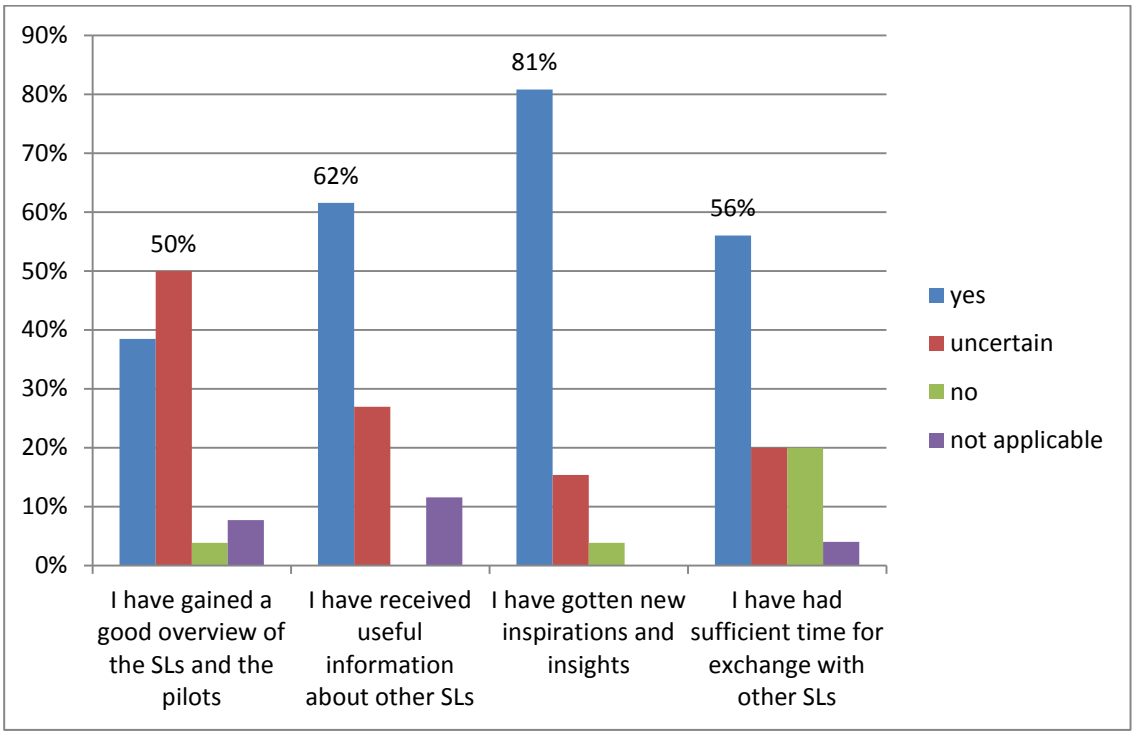
The Open Space Workshops were used to discuss narrative development (evaluation), synergies between pilots, pilot management and the design of the second workshop (see Annex).

Pilot management remains an important task to be elaborated more fully across labs. Notwithstanding uncertainties, pilot actions are working successfully in nearly all of the different labs. Still, there is a need for deeper exchange on social lab pilot activities.

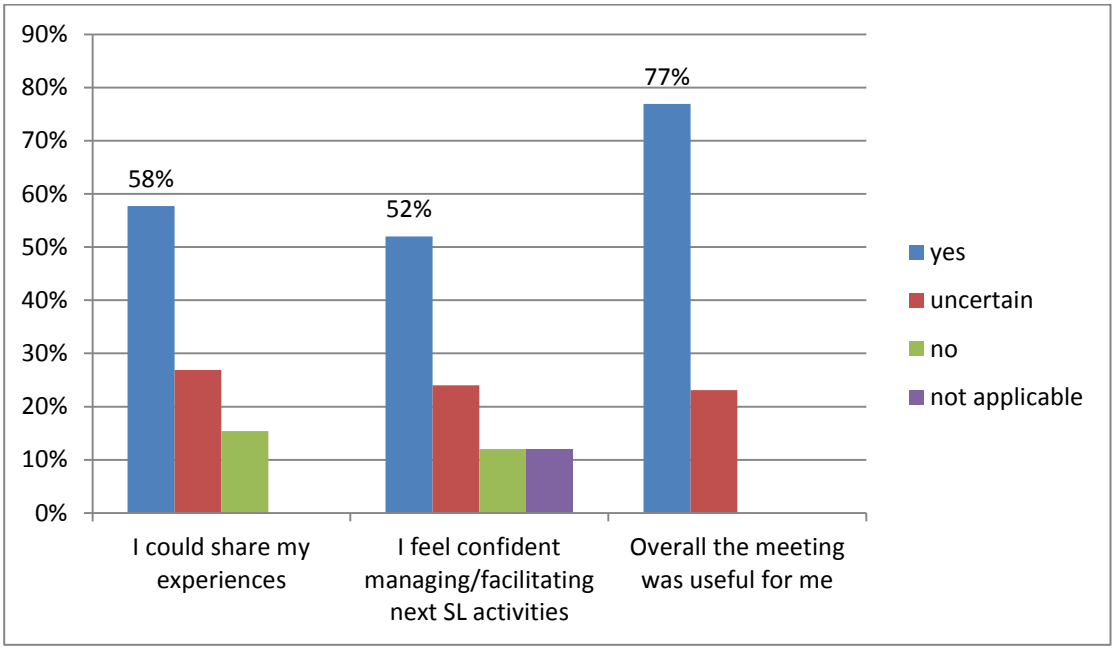
In general, we are progressing in the project across all social labs. The next question to be answered is how to communicate our messages and findings to interested stakeholders, policy makers, and steer collaboration beyond EU borders.

Feedback Results

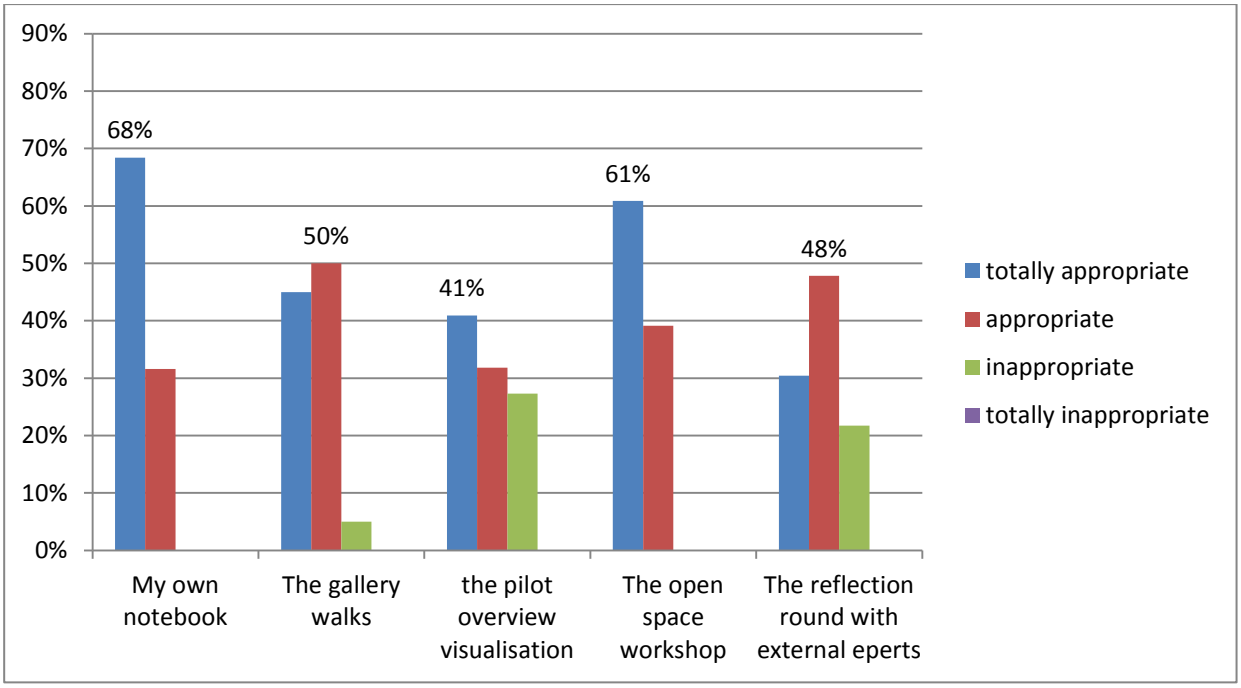
The following section shows the results of the quantitative section of the handed out feedback questionnaire.



22: Feedback 1, answers per item, own calculations



23: Feedback 2, answers per item, own calculations



24: Feedback 3, answers per item, own calculations

Annex

LIST OF FIGURES

GENERIC DESIGN FOR WORKSHOP 2 (Christoph Mandl, Hanna Mandl, Markus Hauser)

Nr.	What	How
1)	What is the purpose of this 2nd workshop of this social lab?	Input by SL manager or SL facilitator
2)	How much do I care about RRI now? What is my ambition regarding RRI?	First in groups of two then in plenary
3)	Per pilot action: - What does the pilot action look like now as compared to at the 1st workshop? - What is the RRI issue at stake? - Which barriers and which enablers to RRI did/does it address? - Which organisations and actors were/are involved and why? - What was frustrating / inspiring? - What are our insights? - What are our questions?	Working on the 7 questions separately in the pilot actions groups and then presenting in plenary Newcomers join one of the pilot actions groups to listen and learn
4a)	"Playful task" per pilot action: Show a scene from your story that conveys either your frustration or your inspiration	Prepare separately in the pilot actions groups Newcomers join one of the pilot actions groups to participate
4b)	Each pilot actions group shows prepared scene	At the end of each scene a designated "stage director and assistant" give advice for next scene
5)	Addressing the questions raised in 3) Creating a time structure first	Questions with limited interest are discussed in parallel small groups Questions with interest by most participants are discussed in plenary via a variety of input, dialogue or fishbowl
6	Personal decisions concerning pilot actions: Continue (love it) – Modify (change it) – Leave it – Create a new pilot action	Time for individual decisions first in silence and then made visible in plenary
7	Detailing until 3rd workshop per pilot action: a) What is our shared intention and aspiration? b) What is the name of our pilot action? c) Which aspects of the visions and of current reality do we address? d) Who is pilot action owner/driver, who is co-	Prepare the answers to all six questions separately in the pilot actions groups on flipcharts and then presenting in plenary

Nr.	What	How
	driver, and who is part of the team? e) What support do we need from SL Manager? f) What are the initial and next actions?	
8	Reflection on 2nd workshop: - What was inspiring and engaging for me? - What are my thoughts and feelings about fulfilling the purpose of the social lab	First individually on pin cards (for documentation) and then sharing in plenary

ROLES WITHIN SOCIAL LABS

SL Nr	Name	Organsiation	SL Manager	SL Facilitator
#1	ERC	IHS	Erich Griessler	Christoph Mandl
#2	FET	GenOK	Michael Berstein	Fern Wickson
#3	MSCA	UvA	Anne Loeber	Joshua Cohen
#4	INFRA	ZSI	ilse Marschalek	Maria Schrammel
#5	LEIT	WU	Peter Novitzky	Vincent Blok
#6	RISK	TACR	Zbyněk Machát	Lukáš Paleček
#7	HEALTH	FhG	Tanja Bratan	Philine Warnke
#8	FOOD	GenOK	Michael Berstein	Fern Wickson
#9	ENERGY	ZSI	Maria Schrammel	ilse Marschalek
#10	Transport	IHS	Robert Braun	Elisabeth Frankus
#11	ENV	FGS	Ulrike Wunderle	Caroline Paulick-Thiel
#12	SOCIETY	SciencesPo	Robert Gianni	Ulle Must (so far)
#13	SECURITY	VTT	Mika Nieminen; Veikko Ikonen	Ulle Must; Janika Tyynelä
#14	EXCELLENCE	TECNALIA	Antonia Bierwirth	Raúl Tabarés Gutiérrez; Markus Hauser
#15	SWAFS	FhG	Stephanie Daimer	Philine Warnke
#16	EIT	AU	Mathias Wullum Nielsen	Hanna Mandl
#17	JRC	IHS	Robert Braun	Elisabeth Frankus
#18	Instruments	AU	Mathias Wullum Nielsen	Christoph Mandl
#19	EURATOM	IHS	Elisabeth Frankus	Robert Braun

WP2	Exc Sc
WP3	Ind Leaders
WP4	Soc Chllnge
WP5	Div of Appr

CHALLENGES IDENTIFIED IN THE ANALYSIS OF REPORTINGS

- Structure of Social Lab
  - How to time workshop methods appropriately (e.g. time dedicated developing pilots)
  - How to create an adequate time structure for the workshop
  - How to ensure permanent participation of participants
  - How much time/effort should be dedicated for explaining/understanding RRI

- Common understanding of RRI
  - How to deal with different levels of pre-knowledge of RRI
  - How to strike the balance between theory (metatheory) and practice
  - How to address different perceptions of RRI (holistic vs. key-oriented)
  - How to explain/define RRI easily understandably and comprehensively enough
  - How to integrate the fact that RRI is not equally relevant or applicable to all

- Role of Manager & Facilitator
  - How to document all of the workshop's outputs
  - How to make sure that the common theme does not get lost
  - How to support the emergence/elaboration of (pilot) ideas as SL manager
  - How to motivate participants towards commitment and engagement
  - How to make sure that everyone gets heard
  - How to avoid biasing group opinions and results

- Project Outlines
  - What are the processes and purposes of the pilots
  - What Cross-Lab materials need to be available
  - What are processes and purposes of the Social Labs
  - What to address within the SLs: Social Challenges or RRI
  - What evaluation framework needs to be considered within the SL
  - What are expected activities to happen within the SL (e.g.: To engage with societal actors?)
  - What are expected outcomes (vs outputs) of SLs

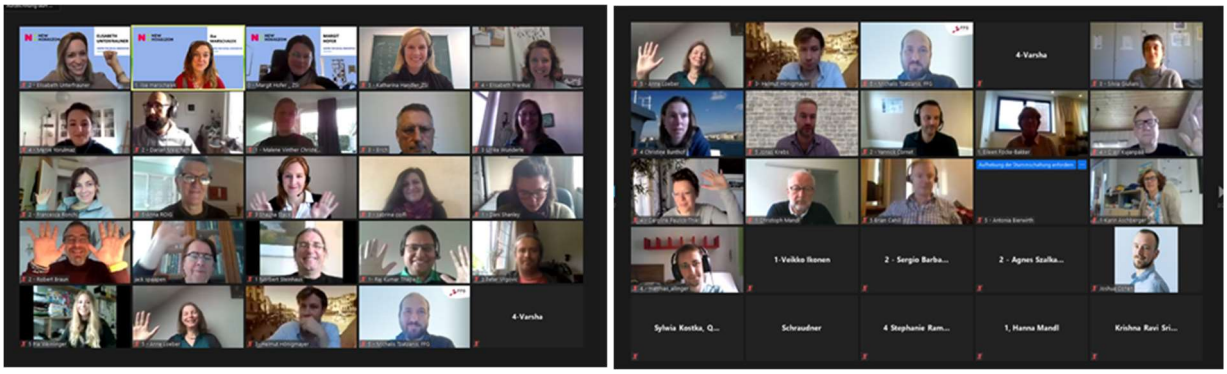
- Group Composition & Recruitment
  - How to motivate people to participate in a SL
  - How to keep participants motivated to stay
  - How to integration further members into the SL team
  - How to deal with group heterogeneity (incl. RRI pre-knowledge)
  - How to recruit business partners/industries
  - How to recruit citizens' organisations
  - How to recruit policy partners & EC
  - How to reach more participants from abroad

Documentation
Cross-Sectional Workshop
12th and 13th of October 2020

(virtual meeting)

Authors: ilse Marschalek, Katharina Handler, Margit Hofer, Elisabeth Unterfrauner, all: ZSI; and contributions of group moderators

Vienna, October 2020



Picture 1: Group photo (day 2)

1. Preamble

The workshop was meant to be held as a face to face event on March 10th and 11th 2020 in Vienna. Due to the upcoming Corona Crisis and the first signs of an expected general Lockdown across Europe, the project management team decided to cancel the event and postpone it to a later date when the situation would have become better again. Unfortunately, because of the ongoing Pandemic, also in autumn 2020 the travel restrictions still did not allow for a face to face meeting. Therefore, the entire event was transformed into an online format. This decision was taken by the whole consortium during a virtual consortium meeting in June 2020.

2. Context

This workshop is one element of the learning cycle of the social labs set up in the course of the NewHoRRIzon project and the second workshop in a row of cross learning events as foreseen in the DoA (tasks 7.2 and 7.3). The first cross sectional workshop took place on 24th and 25th October 2018 at Reichenau/Rax and invited all social lab managers and facilitators for a two-day retreat for learning and reflection and elaborating the social lab method and the pilot activities further. This second workshop situated almost at the end of the lab cycles was dedicated to allow all lab participants, the pilot hosts (“sponsors”) in especial, non European project members, as well as advisory board members to see what has been carried out by all labs and exchange on which lessons could be drawn from these experiences.

3. Goals and non goals

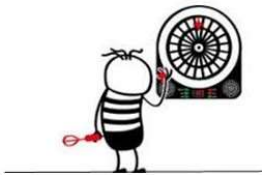
In the event we pursued the following goals and non goals:

Goals:

- Present/Introduce the big picture of pilot actions in social labs
- Reflecting and learning from experiences: look back (what have we achieved in terms of experimenting with RRI)
- Reflecting on Social lab approach - method
- Reflecting: look forward (sustainability, further integration of RRI)

Non-goals:

- CM/ project and organisation
- Evaluation of Social labs and their pilots
- Validate narratives; no reflection of narratives



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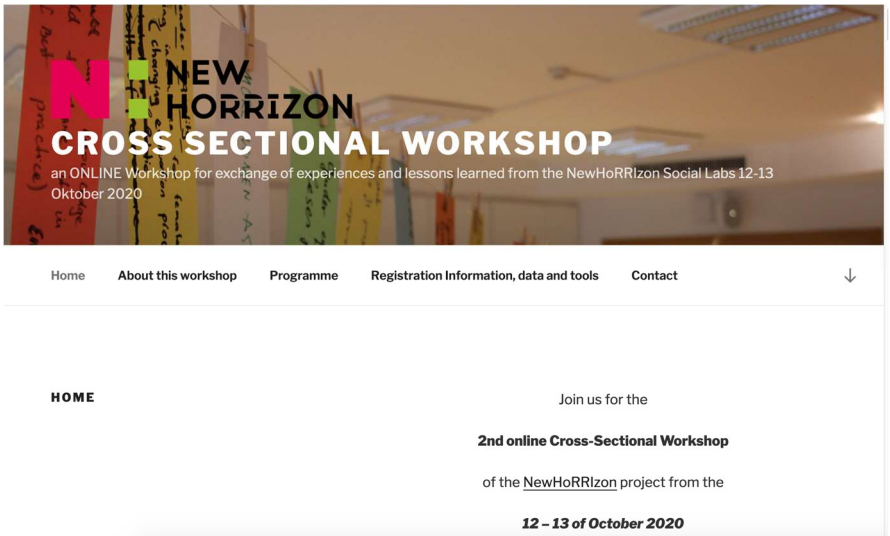
4. Invitation, Registration and Exchange

Next to ZOOM (https://zoom.us/), the video conference tool that was used for the online workshop, several means and tools were used for different purposes.

4.1. Event page - Information, Invitation

For an easy and smooth information flow, an **event page** was set up (https://nh-cross-sectional-workshop.zsi.at/). The site provides basic information on the programme, the tools used as well as information on data generation, usage and storage, the contact details and most important, details to the registration procedure. In addition, an **invitation video** was produced to summarize in short the main aim and topic of the workshop.

This video can be accessed on the website as well as on Vimeo (https://player.vimeo.com/video/453643065)

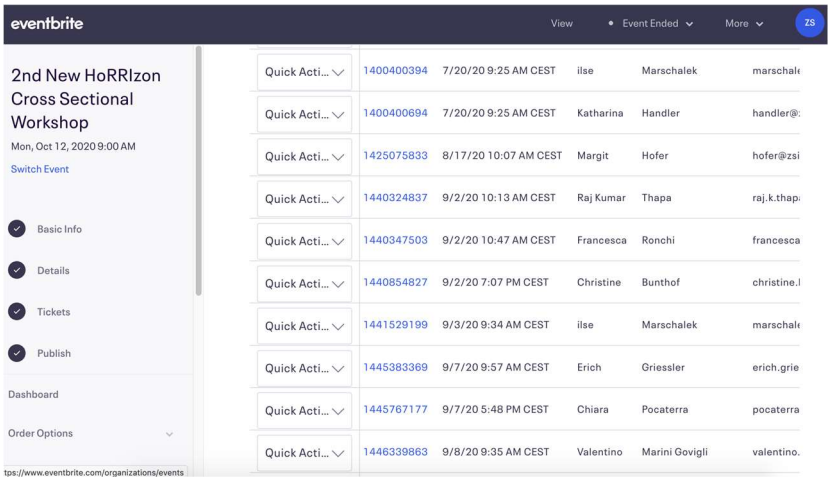


Picture 2: Cross sectional workshop event page

4.2. Registration - participation management

As organisers we recommended a maximum number of 4 workshop participants per social lab, out of which a minimum of 1 project staff member, to get a minimal critical mass for the workshop, but also not having a few of the labs overrepresented.

For the registration we used an open source tool called 'Eventbrite' (www.eventbrite.com) that allowed smooth management of all the registrations from the social lab participants. This includes the overview on already registered participants, elimination of double registrations, sending emails and reminders on workshop starts. Also, the connection with the used tool ZOOM, was implemented to allow direct access via the given ZOOM link.



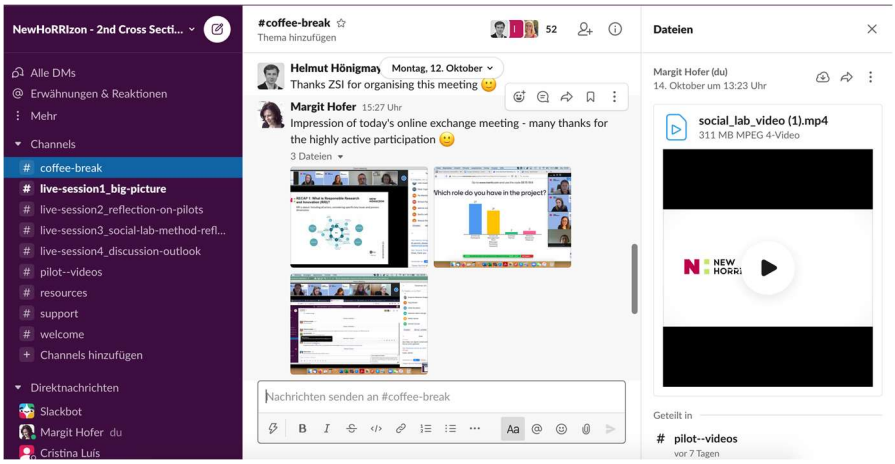
Picture 3: Registration management - Eventbrite

In total, 74 participants registered. Three other participants participated although they had not registered and were added manually.

4.3. Sharing of resources - exchange and discussion

Guiding through the workshop and providing all resources also after the meeting, we set up a Slack channel. The possibility to comment and discuss on certain resources and issues was an important argument to decide for this platform.

This decision has also the advantage to allow further discussion and exchange among the participants of the workshop. As of today, the slack channels have 52 participants.



Picture 4: NewHoRRIzon - Cross Sectional Workshop Slack channels

The channels will be kept online beyond the event, at least until the end of the project.

5. Structure of the Meeting

After research and testing, the ZSI organisational team decided to use online tools that are already rather widely known and thus hopefully easier to use for the participants. The tool for live exchange sessions among all participants was ZOOM. It was accompanied by other tools like slack channels, which also allowed for exchange and contributions beyond the scheduled live sessions, as well as MIRO boards for group works and mentimeter for visualisations.

The meeting mainly consisted of 4 live sessions, fostering as much as possible interactivity, providing group works in smaller break out rooms. As it is recommended not to schedule too much time for real time online sessions, we provided much information on slack channels which could be assessed any time , so that it did not take up too much time for long presentations during the live sessions.

Furthermore, also the documentation of the meeting, miro boards, presentations etc. were shared after each live session in order to allow participants to have a look in retrospect or others who had missed the session to access that which was shown and discussed. The live sessions were scheduled in Middle Eastern time, according to the location of the majority of our participants, however, on day 2 a later afternoon session

should also allow oversea partners to join the meeting in real time. Lunch breaks were scheduled for at least two hours, considering the widespread home office situation and giving the participants time to browse through slack channels in the meantime.

6. Participation - Facts

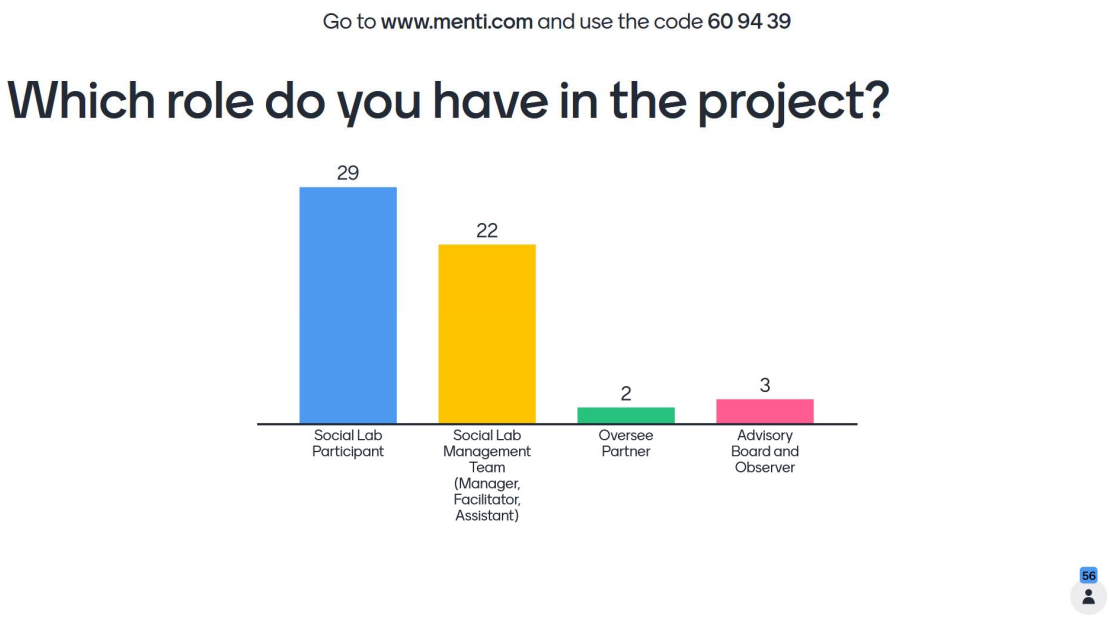
Via the registration site 74 participants could register and receive detailed information and links to the ZOOM live sessions. Three participants were brought in at the last minute without registration and also joined the meeting. The number of participants being present in the ZOOM sessions changed throughout the event, the highest number of participants who were present at the same time was 69.

The group of participants was composed as follows:

In terms of location:

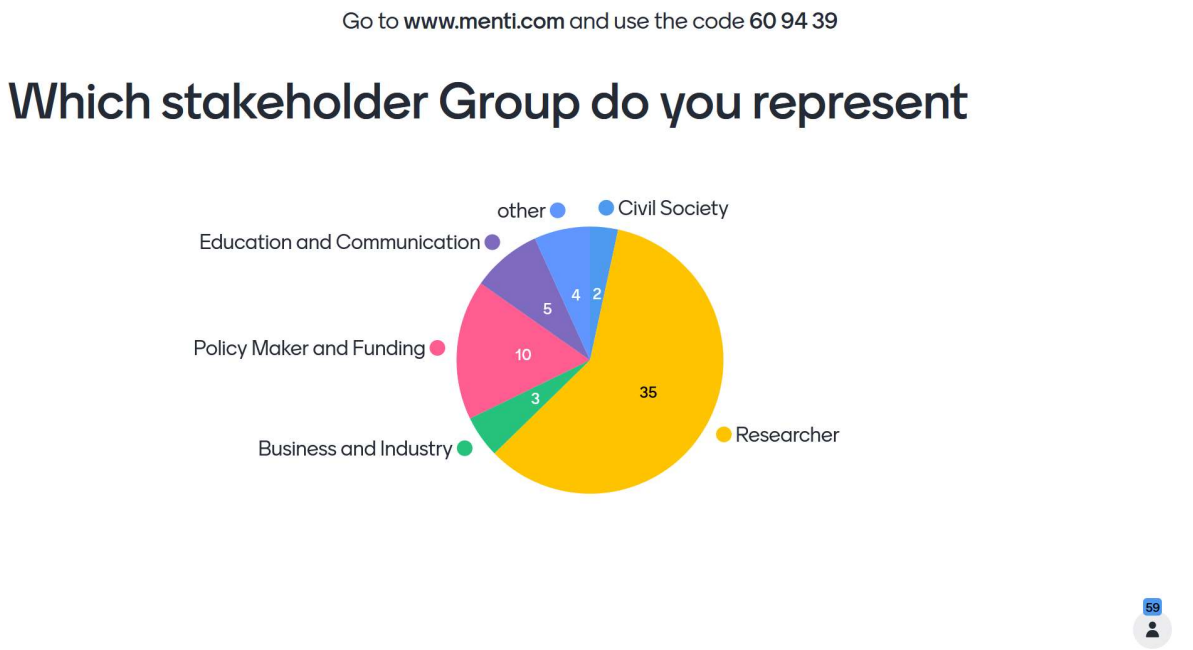
Picture 5: Mentimeter Poll: Where are you located? - with a comprehensible bias of IHS, FFG and ZSI team members - all located in Vienna

In terms of role in the project:



Picture 6: Mentimeter Poll: What is your role in the project?

In terms of stakeholder group:



Picture 7: Mentimeter Poll: Which stakeholder group do you represent?

7. Minutes

Day 1: 12th October 2020

THE BIG PICTURE

Time	what
09.30 – 10.00	Welcome, opening, introduction, project overview
10.00 – 10.40	Sharing experiences in Social Labs part 1
	Coffee break
10.45 – 11.30	Sharing experiences in Social Labs part 2
	Lunch break

REFLECTION ON PILOTS

Time	what
13.30 – 14.30	Reflection on results and achievements
14.30 – 15.00	Group presentations

Morning - The Big Picture (9:30 - 11:30 AM)

The first plenary session was mainly used to say hello, see who is in the room, set up a few rules of working together and give participants an overview of the New HoRRIzon project and its social lab approach, organised around the 19 programme lines of Horizon 2020 of the EC. We gave a recap on the understanding of RRI, the structure of Social Labs and the idea of pilot activities.

(link to introduction slides)

The four work packages carrying out Social Labs (WP 2-5) gave short lively presentations of the lab activities, giving few best practice examples and also allowing present lab participants to share their experiences.

The slides of these presentations can be found here:

WP 2 presentation
WP 3 Presentation
WP 4 presentation
WP 5 presentation

Afternoon - Reflection on Pilots (13:30 - 15:00 PM)

The afternoon of day one was mainly organised in parallel sessions to which participants could allocate themselves. We had five rather equally sized discussion groups on different topics, guided by a pre-selected moderator, pre-prepared MIRO boards were provided to visualise the discussions.

Parallel Session Overview:

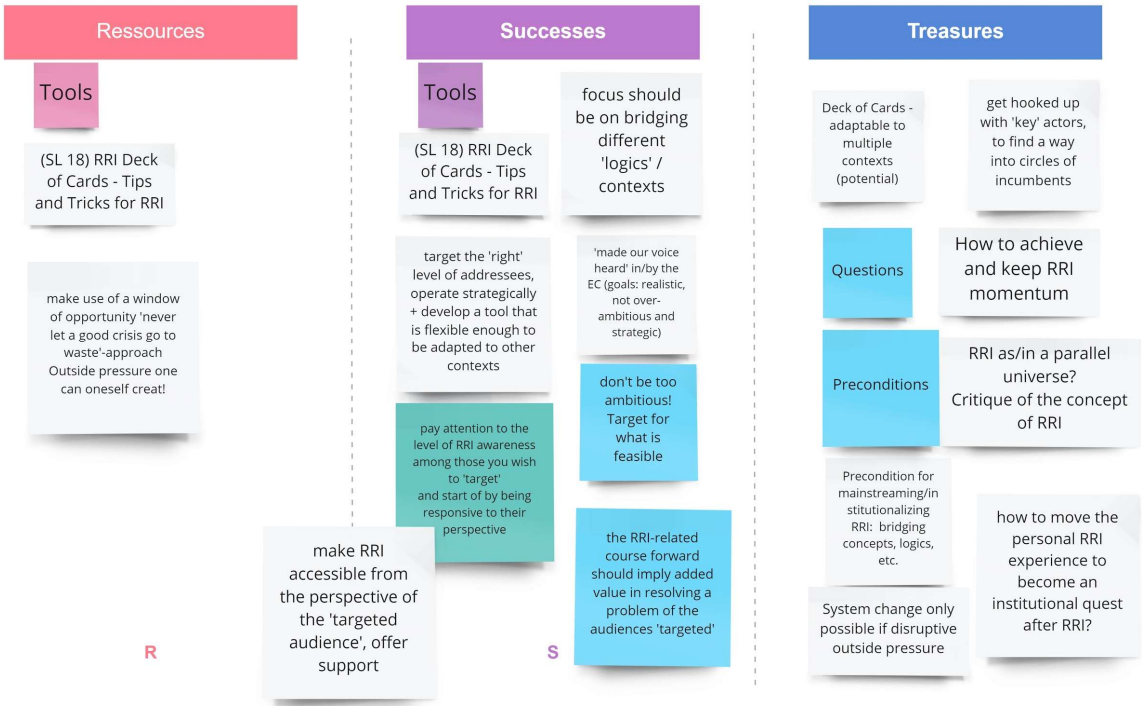
- Group A: Case Studies, best practice, institutional change
- Group B: Training
- Group C: Workshops, events, discussions
- Group D: Dissemination, awareness, tools, websites, documents
- Group E: Case Studies, best practice, institutional change

○ A: Case Studies, best practice, institutional change (moderated by Anne Loeber, UvA)

The topic of this breakout group was to discuss RRI case studies, best practices and the (connected) institutional change.

This breakout group started off from a very concrete example and then formulated real challenges. The group discussed issues of sustainability of RRI in the sense that of course, many social lab participants gained individual experiences, but what comes next? This was identified as a real challenge: RRI might have been formulated in institutions already, but how can we bridge between the levels of experiences and of mainstreaming of RRI; the personal spend time and implementation and the new

‘normal’. It is a real challenge to go beyond the one- stop experience of having RRI implemented and continues working.
The group shared different experiences on how they worked towards making this jump and a lot of insights were shared and summarized (please see Picture 8: Miro Board - Case Studies, best practice, institutional change).
A highlight in this respect: it takes quite some effort not only to work in a single moment, but to think about what additional action is needed to make that change towards sustainable RRI integration - the ‘new normal’ - truly happen:
Two scenarios are important in this respect that can be used to bridge:
a) Making use of moments of crisis, just like ‘Never let a good crisis pass’!
b) But one could also work towards enabling such moments and foster ‘creative pressure’.



Picture 8: Miro Board - Case Studies, best practice, institutional change

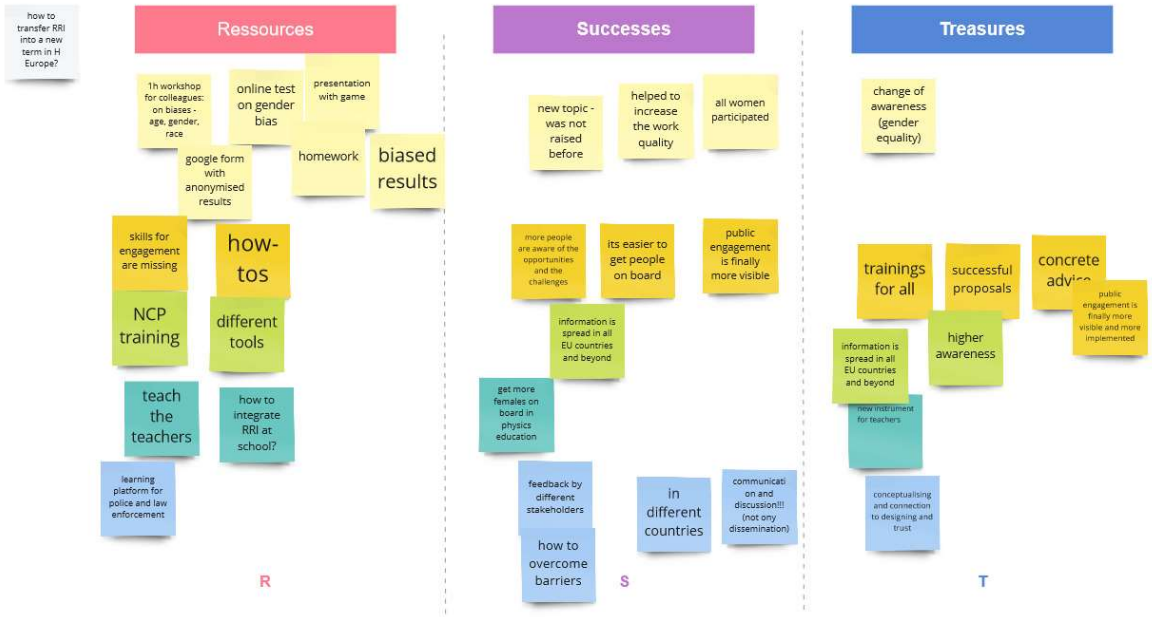
○ B: Training (moderated by Elisabeth Unterfrauner, ZSI)

The breakout group was dedicated to discuss RRI training which were developed as pilot actions. We had four pilot hosts from Social labs attending the session and one participant with extensive experience in RRI training who contributed with his insights. The sticky notes that refer to one pilot are all in the same colour; in the following also a bit of context information:

- Training for a research organisation on biases in research (with focus on gender aspects) - light yellow sticky notes: 1 hour workshop with presentation and

gamified approach; worked very well, more workshops were planned but did not take place due to the Corona outbreak.

- Experience in different RRI training events - dark yellow: the participant was not involved in a pilot action dedicated to RRI training but took part in the breakout group because he was very much interested in the topic and as he has vast experience in RRI training.
- NCP training- green: two days-training for NCP network who needed advice and training for the daily work with applicants
- Teach the teacher- turquoise: addressed the question how to integrate RRI at school and how to get more females on board in STEM subjects.
- Training and learning platform for police and law enforcement- blue: was trialled in different countries with co-creation approach.



Picture 9: Miro Board - Training

Interestingly the developed trainings are set on very different levels, with each a distinct target group. The treasures of these training activities referred to the direct impact on the participants, i.e. changed attitude and awareness but also to the tools and instruments that were shared as part of the training and which served as practical service and support tools. Training participants also acted as multiplayers contributing to a wider impact of the trainings.

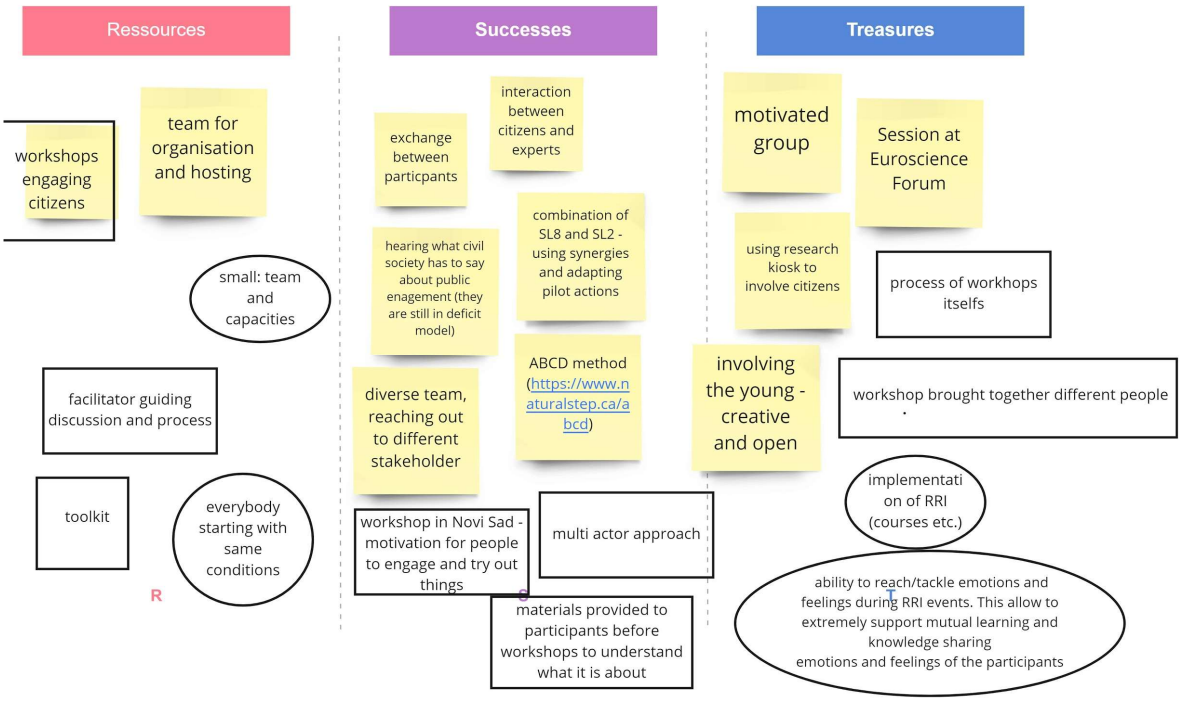
- C: Workshops, events, discussions (moderated by Katharina Handler, ZSI)

The breakout group was dedicated to discuss workshops, events and discussions, which were developed out of the pilots. The participants were given the chance to speak about their pilot and the specific problems addressed, the relation to RRI and their experiences made. Out of these contributions ressources, successes and treasures have been collected.

Ressources
In general it was stated that everybody was starting with the same conditions. The teams and their capacities were rather small. However, a motivated team for organisation and hosting as well as a facilitator for guiding discussions and the process in general were seen as prerequisites. More specific resources of single pilots mentioned by participants were e.g. workshops engaging citizens or toolkits used for developing a pilot.

Successes
A definitive success factor was the involvement of citizens and the civil society. It was interesting and important to hear what civil society has to say about public engagement since citizens are still in the deficit model. The exchange between citizens and experts was seen as valuable.
It also was successful to provide materials to participants before the workshops to make them understand what they will be about and to set one step out of the deficit model. The chance to participate in workshops of pilot actions was a motivation for people to further engage, try out things and to exchange with other participants. Furthermore, diverse teams enabled outreach to different stakeholders.
Also some very concrete approaches and methods were mentioned by the participants: E.g. a combined workshops of two different social labs allowed for using synergies and adapting pilot actions accordingly. As concrete successful examples the ABCD methods and the multi actor approach have been mentioned.

Treasures
The process of the workshops itself, bringing together different people, was perceived as treasure. Working with a motivated group and involving the young, which are regarded as creative and open, were seen as valuable. The RRI events of the pilot activities encouraged the ability to reach, share, but also to tackle emotions and feelings of the participants. This allowed for supporting mutual learning and the sharing of knowledge. The implementation of RRI was seen as further treasure as well as some concrete outcomes of the pilots like a session at the Euroscience Forum or the research kiosk to involve citizens.



Picture 10: Miro Board - Workshops, events, discussions

- D: Dissemination, awareness, tools, websites, documents (moderated by ilse Marschalek, ZSI)

Ressources

In general, it can be said that the social lab and pilot activities ask for much personal efforts by the participants. Not all of them are able or willing to invest this, so there were drop outs in each social lab, however, one of the successes also was, that we could keep a group of interested and engaged people in the lab – even until the second cross sectional workshop.

Other resources mentioned were the time and space offered for the lab work. To be able to discuss, exchange, meet different people from other backgrounds and countries, share expertise, and brainstorm on ideas is regarded as an important resource for which often the daily life work does not allow for.

Pilot actions could make use of the lab teams, in terms of their networks and contacts, but also of their knowledge and other support, they also made use of diverse social media channels.

However, resources in terms of time and money were rather scarce, so keeping the maintenance cost low for a website was seen as important, also to look for further funding possibilities.

Successes

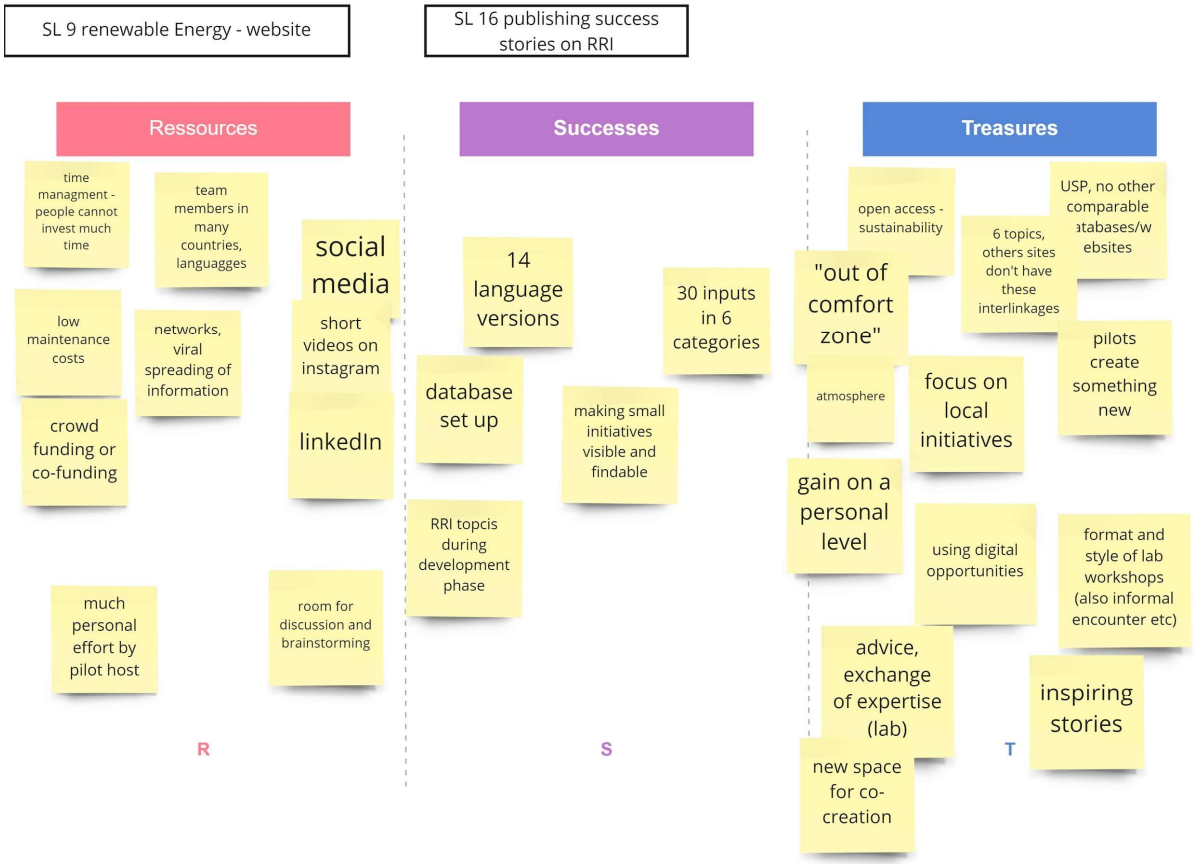
We had 2 pilot activities present in the group, the renewable energy website in Hungary (SL 9) and published RRI success stories (SL 16). The pilots could have gained many successes, so a database was set up, offering 30 inputs in 6 categories and 14 language versions. Furthermore, local initiatives could have been made visible and thus findable.

Participants also highlighted the work with the RRI topic during the pilot generation as a success.

Treasures

The pilot actions created something new, in the case of the data base it offers additional topics and interlinkages which do not exist elsewhere, especially the focus on local initiatives. Furthermore, it is open access and therefore sustainable.

The lab experience itself was regarded as treasure and the personal gain participants could take home. They liked the atmosphere and also to be taken out of one's own comfort zone and taken to new horizons. A new space for co-creation in a nice and open atmosphere was created. Participants got inspired by new ideas and appreciated the mutual advice and exchange between participants.



Picture 11: Miro Board - Dissemination, awareness, tools, websites, documents

- E: Case Studies, best practice, institutional change (moderated by Helmut Hoenigmayer, IHS)

The group stressed the importance of the Social Lab team's support throughout the whole process as an important resource to successfully work on their pilot actions.

Furthermore, the Social Lab facilitation was seen as an important resource to reflect and adapt pilot actions within the Social Lab.

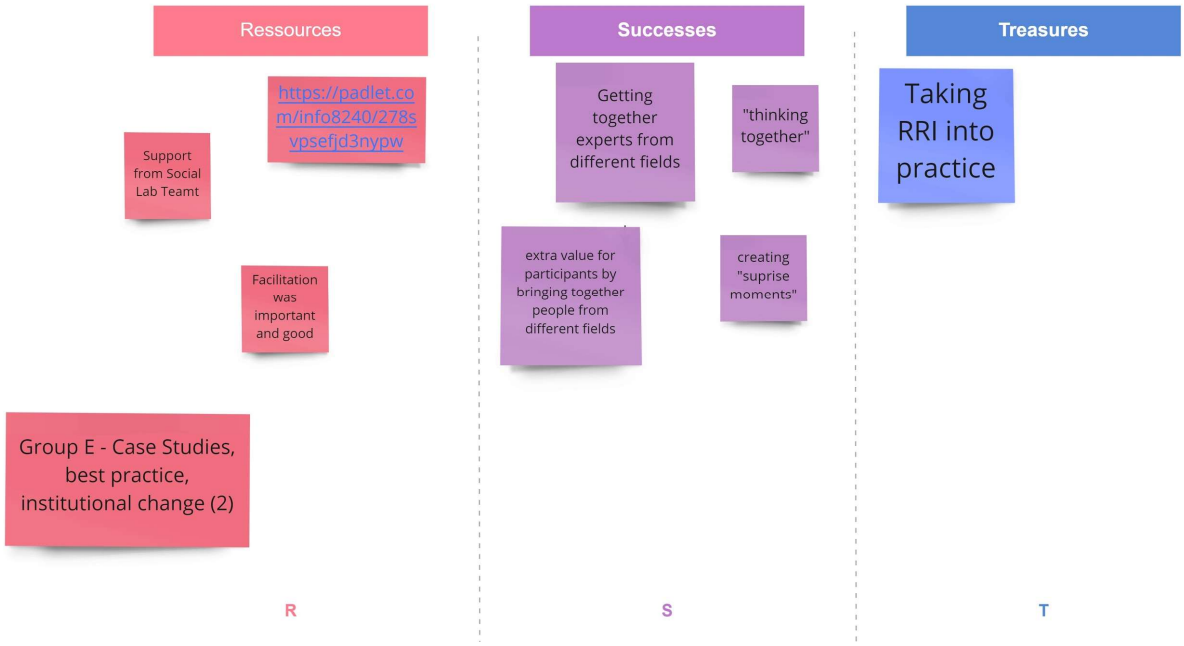
One resource for future events that was created as a pilot within one of the Social Labs is the RRI tricks and tips game. It can be retrieved at https://padlet.com/info8240/278svpsefjd3nypw

Participants voiced their enthusiasm that it was made possible within the Social Labs framework, to bring together a variety of stakeholders.

The process of "thinking together" was very much appreciated and the extra value for participants by bringing together people from different fields to working on a specific societal challenge.

Connected to the importance of the Social Lab Team and the facilitation, one participant voiced that he was enjoying the "surprise moments" that happened within the course of the Social Labs. Here, he was referring to getting new insights on (but not only) RRI and also to start seeing things from different angles which in turn offered new and enriching perspectives.

These aspects were described as successes by the participants in break out group E. There was a wide consensus among the participants present that in their experience, the fact that they were capable of taking RRI into practice was the biggest "treasure" of their Social Lab experience.



Picture 12: Miro Board - Case Studies, best practice, institutional change - II

Back in the plenary, all groups presented their results and insights.

A video clip of the group presentations can be found at: group presentations

Day 2: 13th October 2020

SOCIAL LAB METHOD REFLECTION

Time	what
09.45 – 10.00	Arrival, technical testing
10.00 – 10.25	Wrap up of day 1, external observations
10.25 – 11.25	Discussion Rooms (Social lab methodology; Sustainability of Pilot Actions; Next steps pilot activity; institutionalisation/change agents, ad hoc topic)
	Coffee break
11.30 – 12.00	Group Presentations
	Lunch break

DISCUSSION, OUTLOOK

Time	what
15.30 – 15.45	Presentations, open issues
15.45 – 16.30	The virtual RRI exhibition
	Coffee break
16.30 – 17.00	Comments and summary with external observers, discussion
17.00 – 17.30	Feedback, round up and next steps

Morning - Social Lab Method Reflection (9:45 - 12:00 AM)

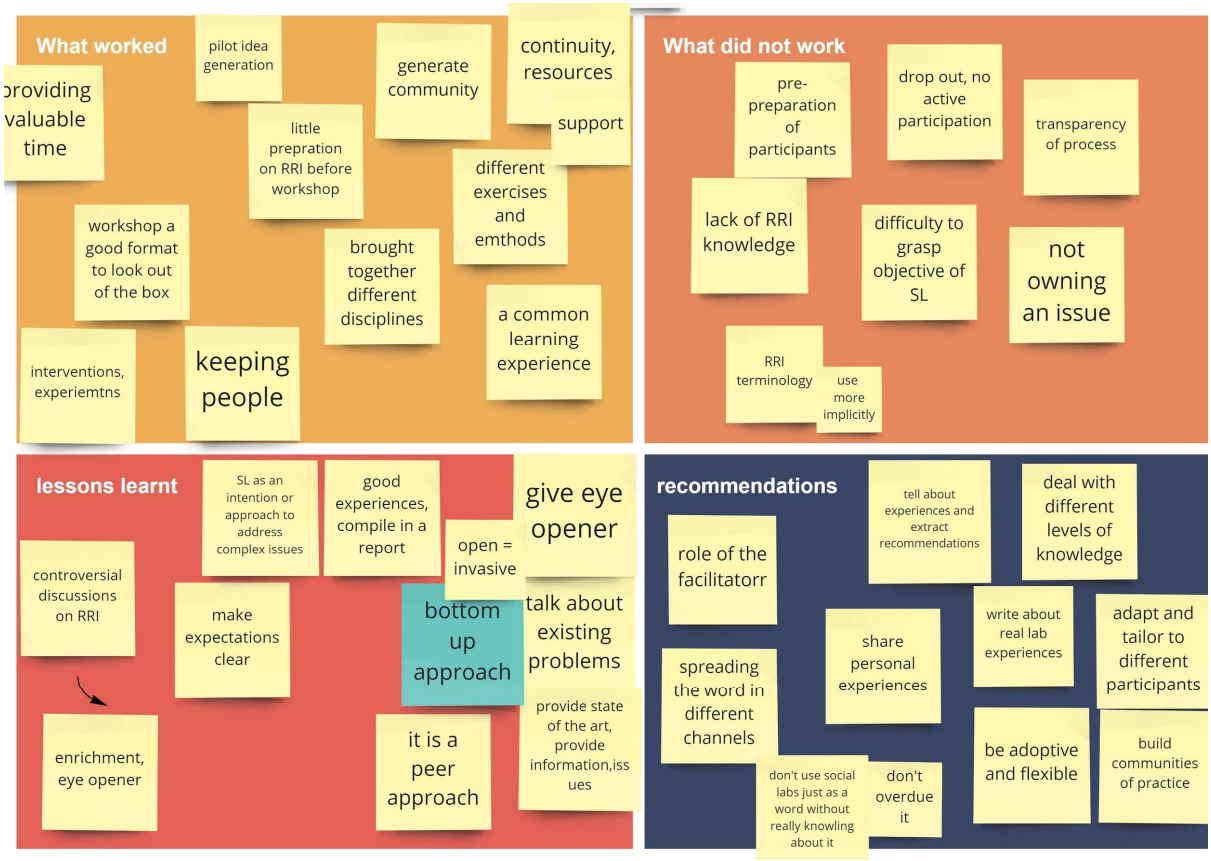
Again, the whole group could split and self select pre- defined break out groups according to interest. One further room was open for an additional topic. One of our AB members took the opportunity and offered an additional topic.

Parallel Groups Overview:

- Group 1 Social Lab methodology
- Group 2 Sustainability of pilot actions
- Group 3 Next steps for pilot activity

- Group 4 Institutionalisation agents of change
- Group 5 RRI in evaluation

Group 1 SL method (moderated by ilse Marschalek, ZSI)



Picture 13: Miro Board - SL Method

What worked

Most importantly, we were able to keep people! Although it demands a lot from the participants, some of them stayed with it from the beginning to the end, and even to this workshop. For participants the lab was a common learning experience. They appreciate the lab as valuable time they were offered, spending with persons from different disciplines. The workshops were regarded as good formats to help to think out of the box with different exercises and methods and also brought together different disciplines. The labs generated community. Lab participants liked the workshop formats, the different exercises, and also the pilot idea generation, the experiments they could implement. For this process they received continuous support and also resources, so they were not only on their own. It was considered as being important to get knowledge on RRI before the workshop.

What did not work

Therefore it was seen as difficult, if participants did not have enough knowledge on RRI. Not all labs prepared their participants well enough. This was seen as an obstacle, as the group could not start from the same level of knowledge. The lab process itself was not easy to grasp, participants had difficulties in understanding the goal and purpose of the labs and its activities, they regarded the process as not transparent enough to understand from the beginning.

The topic of RRI itself was seen problematic, at least in the existing jargon. Some labs even avoided using the term, some dealt with it implicitly, but often it led to controversial discussions.

Lessons learnt

Some of the lab participants have dropped out. It was difficult to get engaged without "owing" an issue. Another discussion is on balancing between bottom up and top down approach, as either telling about existing problems and running the danger of being too invasive, whilst allowing participants to find their own issues which they could better take up and pursue later on.
The lab process itself is a peer approach, which means that all lab participants, including the management team should have an equal say. However, expectations have to be made clear, right from the beginning.

Different viewpoints on RRI led to controversial discussions, for some, this was also enriching and eye opening.

The Social Labs as such are regarded as an appropriate intervention to address complex issues, and the good experiences gained in the labs have to be compiled in a report and shared with others.

Recommendations

The important role of the facilitator and the importance of good moderation was highlighted as key components of a successful lab. It needs good and mindful facilitation of the workshops with diverse and appropriate exercises and methods. It was recommended to be adaptive and flexible according to the groups' and individuals' needs and to tailor the programme to the different participants. Also, the different levels of knowledge have to be considered.

It is necessary to tell about the personal experiences and extract even more recommendations out of it, words could be spread among different channels and communities and thus a community of practice could be built.

However, attention should be paid that the social lab approach is not applied carelessly. To undertake social labs without really knowing how to run it, should be

avoided. The approach should not be overused, we should not “overdo” it and offer Social labs on too many occasions and make them thus inflationary and in the following insubstantial and toothless, losing the strong potential of the social lab approach.

Group 2 Sustainability of pilot actions (Moderated by Robert Braun, IHS)

Several pilot initiatives were briefly presented: RRI Manifesto, Training on biases in research (with special focus on gender), Renewable energy knowhere, Young people in the city in conversation with policy makers.

Concerning the last one, the pilot host shared his experience in this pilot where young people (high school students and university students) in a workshop reflected on their role in the city and how they perceived the city. And then they drew a second scenario how they wished the city to be. Policy makers took part but they came only for a little time and seemingly did not take up any of the ideas the young people provided. So the question really was, how to make policy makers aware of the opportunity that they have in such public engagement events and what they miss out. The other question is whether the students might feel frustrated if they do not recognize any of their input on the policy makers’ agenda.

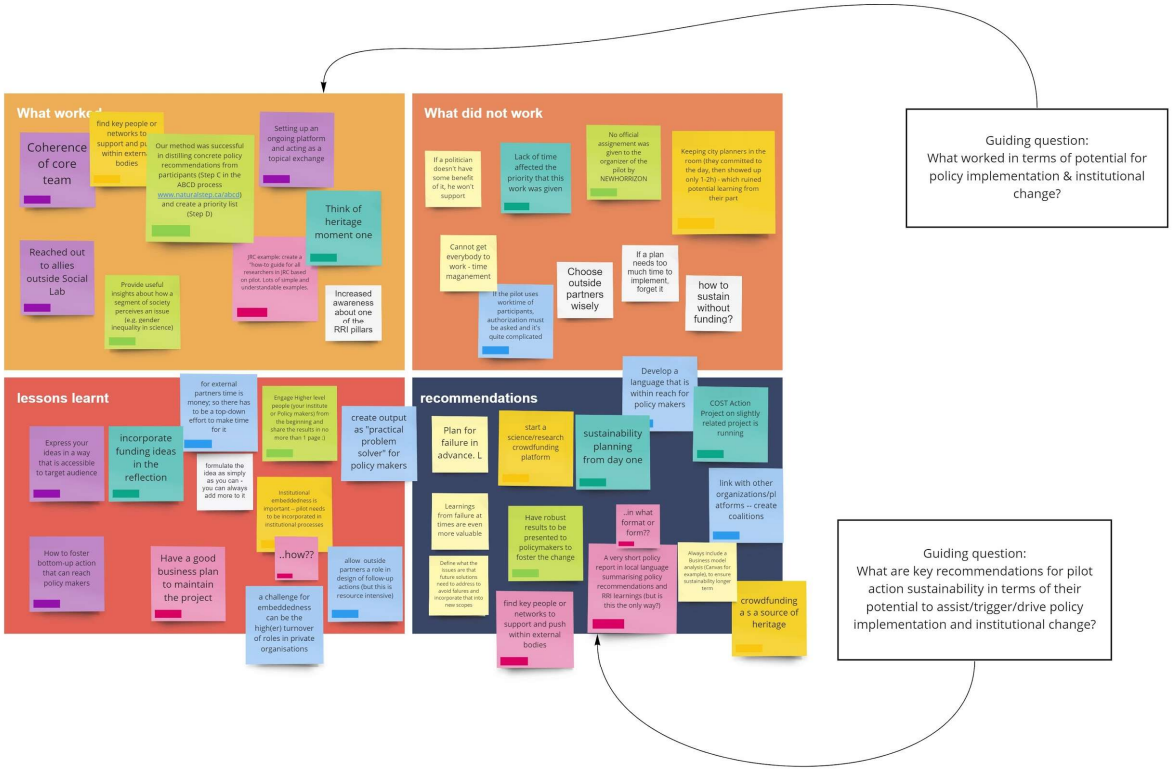
There three potential solutions discussed in relation how to sustain the pilot:

1. Funding: could be European funding eg. Cost action, crowdfunding campaign (NH could also start one);

2. Institutional embeddedness: seek assignment from higher up, prepare well and find convincing arguments

3. Reach out and engage with policy makers: through e.g. policy brief, or find adequate language that speaks to them. Also educating policy makers was seen as key as public engagement can be a tool for them in order to work for their voters (in case they are also politicians) and to find solutions to practical problems (in case they are policy makers only).

Pilots were small scale experiments. What can we learn from them to make them instruments for policy implementation and drivers of institutional change?



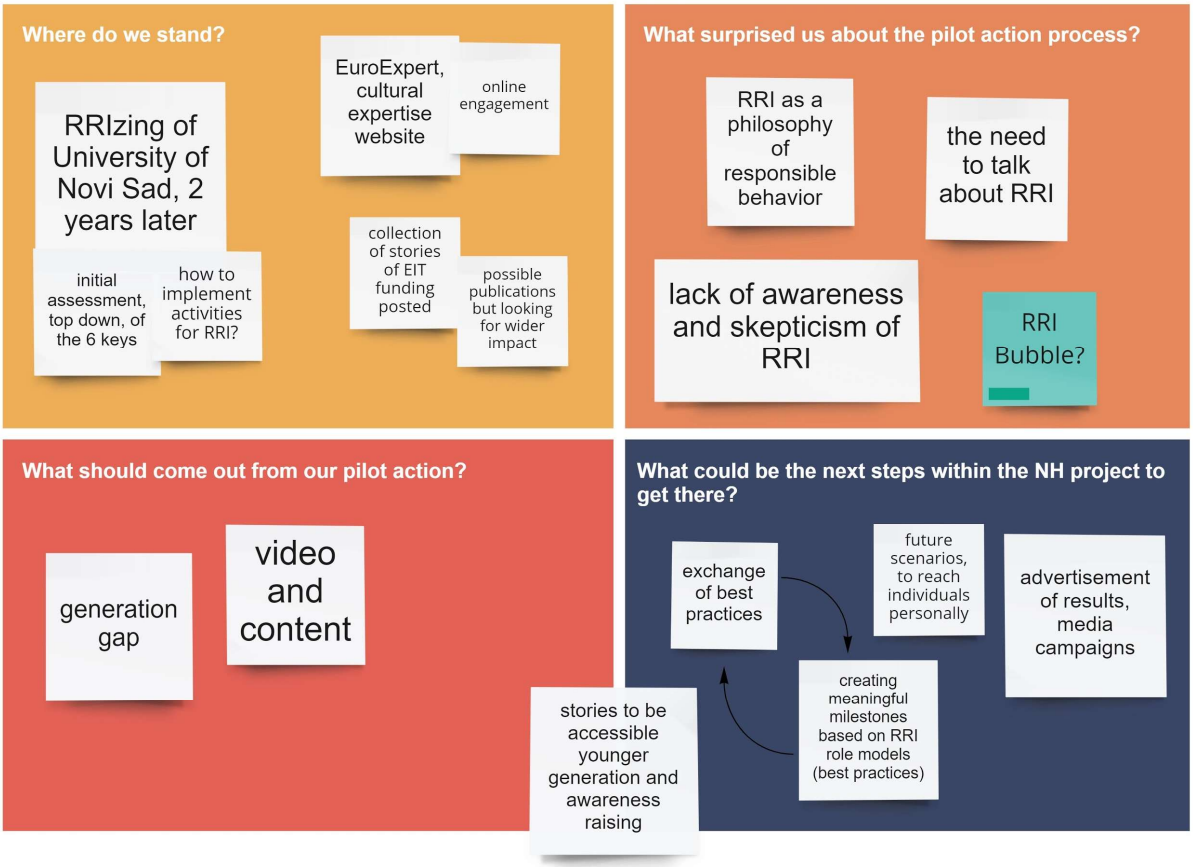
Picture 14: Miro Board - Sustainability of Pilots

Group 3 : Next steps for pilot activity (moderated by Shauna Stark and Helmut Hoenigmayer, IHS)

The group discussed 3 pilot actions:

- RRIzing University of Novi Sad
  - They are 2 years into the implementation of the RRI team in the university
  - Began with a top down approach where one university department was evaluated by the RRI team on the 6 keys
  - They have the results, but now they are stuck on coming up with activities to improve the department's performance on each key
- RRI stories
  - Have the stories gathered from EIT funding that includes RRI principles now the question is how to package the stories and make them interesting to wider audiences?
- EuroExpert website

        - Website has been developed with podcasts, book chapters, blogs, photos. A lot of material now the focus is on engagement and trying to attract people to website
- What came as a surprise during the process?
    - In University context, RRI was quickly interpreted as a philosophy of responsible behavior
    - Most agreed that the fact that RRI, when explicitly discussed, met with resistance or could not be taken for granted, was surprising because they consider RRI principles as a given when being a good researcher or professional
    - It became known that RRI is a bubble- outside of it there is a lack of awareness and skepticism. People need to be won over on RRI.
- What should come from the pilot actions:
    - Novi Sad: university team added a customized key (maybe this is the kind of effect RRI should aim for and the kinds of information that should be shared with EC how RRI is interpreted in context) of 'Generation Gap'. They are working on creating programs for all RRI keys with a special focus on their RRI inspired key of 'Generation Gap' to promote conversation and understanding amongst different generations.
    - RRI Stories and Euro Expert: both want convincing, attractive, engaging video and content to attract younger generations
    - Stories so that RRI can be more accessible and to raise awareness to younger generation
- Next steps
    - Exchange of best practices with RRI role models/people and institutions who were successful with their pilot action or RRI implementation, which include milestones of their implementation so that these pilot actions can compare or at least understand what the progress looked like (challenges, opportunities, strategies, partnerships, etc)
    - Future scenarios would be really helpful to illustrate the importance of and risk of not implementing RRI
    - Advertisement of results, media campaigning



Picture 15: Miro Board - Next steps for pilot activities

Group 4: Institutionalisation and Agents of Change (moderated by Elisabeth Frankus, IHS)

In the session on Institutionalization and Change Agents, in which 7 people participated, experiences from the pilot activities with regard to the institutionalization of RRI were exchanged. One positive experience was the creation of a learning platform where people at the local level can be sought out to network with RRI. Change agents were described as multipliers who are responsible for spreading the idea of RRI within and beyond organizations. The participants agreed that it is essential to communicate experiences in order to reach possible interested people.

In the discussion on the pilot activities, it was found that some people experienced them as too "small", which meant that no (long-term) change could be achieved. In addition, the concept of RRI was described as too fussy in part. Some participants saw the danger that RRI could be understood differently by different people. According to the participants, it sounds easier in theory than it often is in practice, to involve different stakeholders to discuss a topic. Likewise, some people agreed that aspects of RRI are often not consistently implemented in everyday work due to lack of time or money resources.

Conclusions:

In order to install Change Agents in organizations in the long term, not only a deeper examination of change processes is needed, but also the support of superiors and financial support for necessary measures. Furthermore, it always makes sense to build on what already exists. This means it is advisable to scan companies for existing RRI approaches and build on the findings instead of starting from scratch. In the future, RRI must be understood as an integral part of the work and implemented in daily operations. It is helpful to regularly exchange experiences with like-minded people. The project NewHoRRIzon has to push RRI in the different research areas in order to bring about change.

Lessons learned:

- RRI is to be understood as a bottom-up process, which nevertheless needs top-down involvement to implement the concept in practice in the long run
- Change agents do not have much power, but they have an impact on processes
- Change Agents need additional time that they can invest in the dissemination of RRI
- Change is a slow process that can last a long time.
- Change agents are niche actors who are moving new ideas
- Building on formal processes and ways of thinking to initiate change
- If there is no basis for new approaches (such as appropriate discourse, platforms, structures), tried and tested methods are quickly revert back to old setups (especially when the first challenges arise)

Picture 16: Miro Board - Institutionalisation

Group 5: RRI in evaluation (moderated by Jack Spaapen, AB and Katharina Handler, ZSI)

At the beginning all participants briefly introduced themselves, referring also to their experience with RRI. Out of this the discussion on RRI in evaluation emerged, considering first of all what did not work, what were lessons learned and which recommendations could be drawn out of this. At the end also positive aspects were collected, which definitely exist, but are not obvious at the first sight.

What did not work

Only quantifying values in evaluation are not adequate. Evaluators often do not take RRI in account, which may be caused by a lack of knowledge on RRI at the evaluators' side.

Other problems mentioned are the lack of organisational and societal perception of researchers as well as the lack of research funding. Also, there still seems to be a system level impact for the academic loop, where only numbers of publications count.

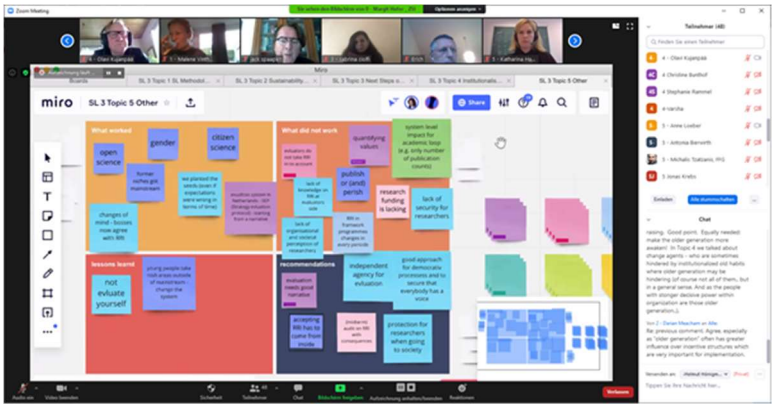
Also difficult related to the perception of RRI when it comes to evaluation is the naming of RRI, which changes e.g. in every period of the framework programmes.

Lesson learnt and recommendations
Evaluation should not be based on quantifying values but definitely needs a good narrative.
Another recommendation mentioned is to not evaluate yourself, but to install independent agencies for evaluation. Midterms audits on RRI should be implemented and carried out with respective consequences.
Accepting RRI is not something that can be enforced from outside, but it needs personal conviction of all people involved when it comes to the implementation of RRI. Furthermore a system change is recommended as RRI is a good approach for democratic processes and to ensure that everybody has a voice. Therefore researchers need to be supported by their institutions and the research community when they are supposed to involve citizens in their work.

What worked
Reflecting experiences, challenges and lessons learnt helped participants to notice what already worked with regard to RRI in evaluation. It was a success that the seeds were planted, even if the implementation itself took longer than initially expected. This also led to a change of mind of people concerned - for example directors, managers, head of companies and institutions now agree with RRI. Former niche topics got mainstream, referring e.g. to open science, gender, citizen science etc.
One successful example of RRI in evaluation is the SEP (Strategy Evaluation Protocol), an evaluation system in the Netherlands which starts from a narrative.

Picture 17: Miro Board - SL Method

Back in the plenary, all groups presented their results and insights.



Picture 18: Presentation of Group Work

A video clip of the presentations can be found at:
[Group presentations]

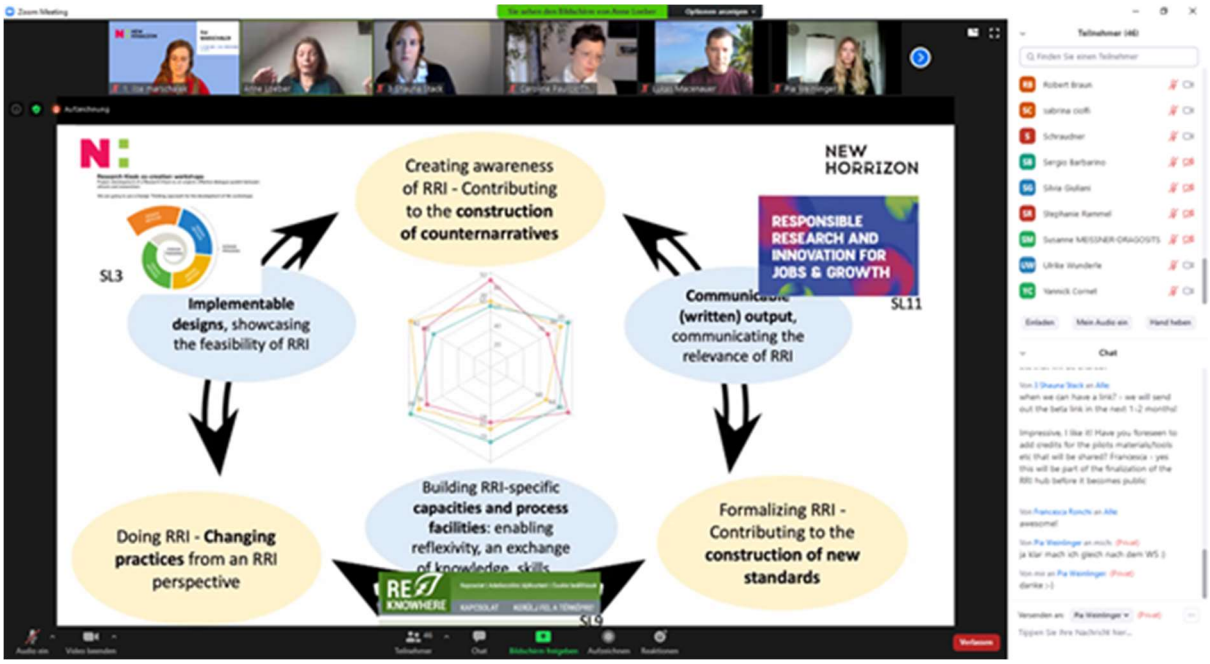
Afternoon - Discussion, Outlook (15:30 - 17:30 PM)

In the afternoon plenary session Shauna Stark (IHS) and Pia Weingartner (FFG) presented the first drafts of the upcoming project exhibition, the so called “RRI ex” - which was initially meant to be a multipurpose RRI roadshow (Task 9.4.2), but according to the actual COVID situation has been transferred into an virtual tool.

Picture 19: Screenshots of RRI ex (preliminary version)

This virtual tour was followed by a presentation by Anne Loeber (UvA) on the work being carried out on the narratives, based on the work of the social labs (WP 8).

Slides can be found at: [WP 8 presentation]



Picture 20: ZOOM live session - Presentation of Narrative Development

8. Conclusions, Summary

In relation to the goals of the second-cross-sectional workshop introduced in the beginning of the event, find here in the following section a brief reflection:

1. Present/introduce the big picture of pilot action in social labs

A two-days online meeting obviously cannot provide enough room to present all work which has been done in the 19 social labs, however, according to the pre-defined goals and the expressed needs of our participants, comprehensive information has been made easily accessible to get all the information and get a complete picture. According to the structure of the event, we did not only use the ZOOM live meetings, but also the slack channels to report from the labs.
All descriptions of pilot activities (“two-pagers”), overviews of lab activities (“posters”) including output materials as provided by the lab teams were uploaded to the slack channels to be accessible for the participants of the event. 20 short videos have been self recorded by participants and were uploaded to the slack channels, also 1 explainer video and part 1 of a series of cross sectional pilot videos. During the introduction presentations given by the workpackage leaders on day 1, also lab participants and pilot hosts in especial were given the floor to speak about their experiences to give information from first hand. The break out session on day 1 was solely dedicated to exchange and reflection of pilot activities, stimulating questions

were used to especially allow lab participants to talk about their experiences. With 29 participants of social labs present during the event we could find lab participants in each of the break out groups.

2. Reflecting and learning from experiences: look back (what have we achieved in terms of experimenting with RRI)

Five parallel groups on day 1 were each dedicated to discuss pilots according to cluster topics. The focus lied on discussing resources that were committed to realise the pilot, successes of the various pilots (i.e. looking back at what we have achieved) and collecting the treasures. Resources to be committed to realise an RRI pilot comprised personal efforts, tools, workshops, team of committed colleagues, support from the Social lab team, facilitators guiding through the process and networks spreading shared information.
Participants also discussed different strategies to overcome issues that were faced and how to overcome barriers in the process. In this respect it was also mentioned to use opportunities that might appear and turn circumstances in order to change the awareness towards RRI. The exchange between different participants and the inclusion of multi-stakeholder groups was seen as a key success factor by many workshop participants. Setting a focus, but being at the same time flexible was considered as a key success factor.
Finally, several participants explicitly mentioned a high level of personal gain they were able to extract from their participation.

3. Reflecting on Social lab approach-method

On day 2 one the parallel groups was particularly dedicated to reflect on the Social Lab approach. Furthermore, lab participants took part in all plenary and break out group discussions and could thus contribute with their personal experiences.

Although participants told about their personal efforts they had to dedicate to the process, many of the lab team members stayed within the lab process, and also attended the cross sectional workshop, even if the last lab workshop had already taken place a year ago. For many participants the lab was a common learning experience. They appreciated it as valuable time and the workshops as appropriate formats to help them think out of the box. They could tell about their personal gains, although they have been brought out of their comfort zone at times as well. They felt being part of team, and when sometimes the hosts felt the pilot activity as an additional workload, they still appreciated the continuous support they received throughout the lab process.The nature of RRI as a bottom-up and top-down process was also reflected in the experiences of the lab participants, who at times had difficulties finding their own issues which they could better take up and pursue in their pilot activities or should address issues as identified in the analysis beforehand. However, having controversial discussions in the labs, carried out on eyelevel, rather was experienced as an enriching activity.

In their role as pilot host they became agents of change who were responsible for spreading the idea of RRI, and thus could influence topics and processes in their institutions at least to a certain extent. As participants they became part of a community of practice which needed to be expanded. They would like to tell about their experiences, in the labs and during the pilot implementation to be shared with others.

In general, the Social Labs as such are regarded as an appropriate intervention to address complex issues, and the good experiences gained in the labs have to be shared with others.

4. Reflecting: look forward (sustainability, further integration of RRI)

One parallel group on day 2 was particularly addressed to the sustainability of pilot actions, which showed three viable options to sustain them beyond the project's and the social labs' lifetime: search for additional funding (concrete options were discussed), aim to institutionalise the pilot; and reach out to policy makers.

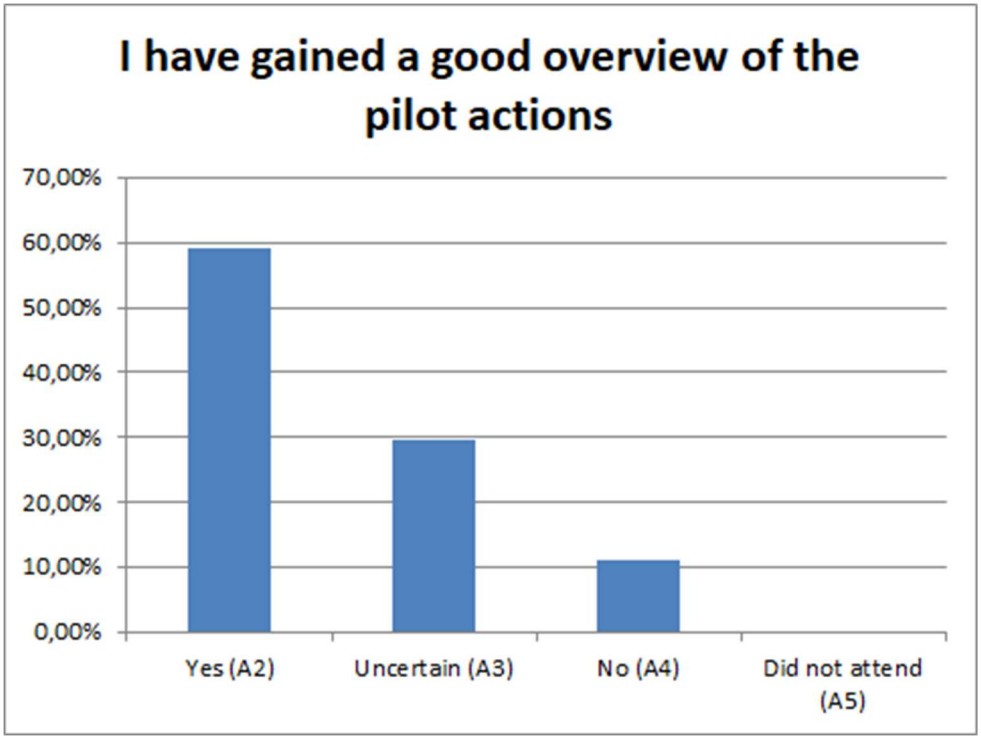
The future of RRI turned out to be a cross-sectional topic as it was discussed several times. Arguments focused on RRI in Horizon Europe (and the abolition of the Swafs calls) and other funding instruments and whether RRI has already been successfully and broadly been implemented so that RRI would find its way into the next framework nevertheless. Also a change of terminology and a focus on some of the keys breaking up the holistic notion of RRI was a recurrent topic in these discussions.
These perceptions are also rediscovered when having a look at the results of the feedback questionnaire that, inter alia, asked for expectations on the future of RRI. Many believe - although the term itself might disappear after the H2020 program - that still some of the topics will be "incorporated" in the daily scientific routines. As a "the old style of doing science" no longer meets today's requirements, it is regarded that the concept will become "more and more important" and "evolve naturally". It is expected that it will "continue to grow", however, some are "worried", and it is also seen that working on RRI will become "more difficult" as there will be "no equivalent" in the new Horizon Europe program.
Even more, it is required that participants "keep the spirit" and "spread the word" on it and implement the concept in their work routine, until it will be "widely accepted and taken for granted by all levels of society". Core principles of RRI should be kept and researchers should "stay critical, demanding and co-creative". Especially, with the expertise developed during projects such as the NewHoRRIzon project, "we need to be ambitious on its practical applications and societal impact". The "science FOR society principle should not be given up", and if "implemented effectively, it will be an enhancement for Research and Innovation activities and projects". "Europe 2020 should include the results into the next cycle".

Answering the feedback question, what will you do in order to keep RRI alive, some lab participants state that they will “maintain the pilot project” and “follow best practices evidenced by the pilot actions”. They will “spread the RRI approach” in many ways, tell and “write about it” and “highlight the significance of such practices for societal transition for inclusive and sustainable impact of Research and innovation”, as well as “relating to the failure of conventional Research and innovation processes in addressing the societal and environmental issues”. Some will also stay “involved in projects and policies that adhere to it”. It is seen as important to put some “efforts to influence science policy”, for this “joining forces with the most important stakeholders” is seen necessary.
Participants state to “continue to use the resources developed by the project” and include RRI principles “regularly in the work”. Experiences of “lab workshops” will be taken up and “co-creational matters will be implemented into new projects”.
Rather than sticking to the terminology, more “care about the issues behind RRI” should be taken while “putting pressure on different R&I-Ecosystem stakeholders to take the issues/challenges of RRI seriously into consideration”.

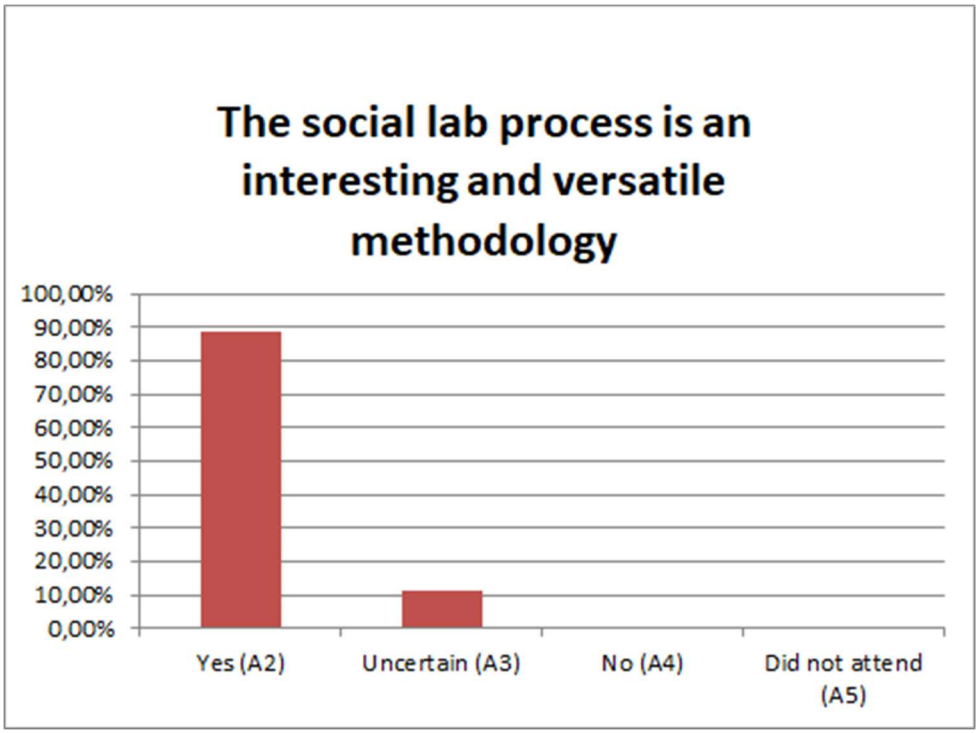
As the reflection above shows, all the four defined goals were reached.

9. Feedback

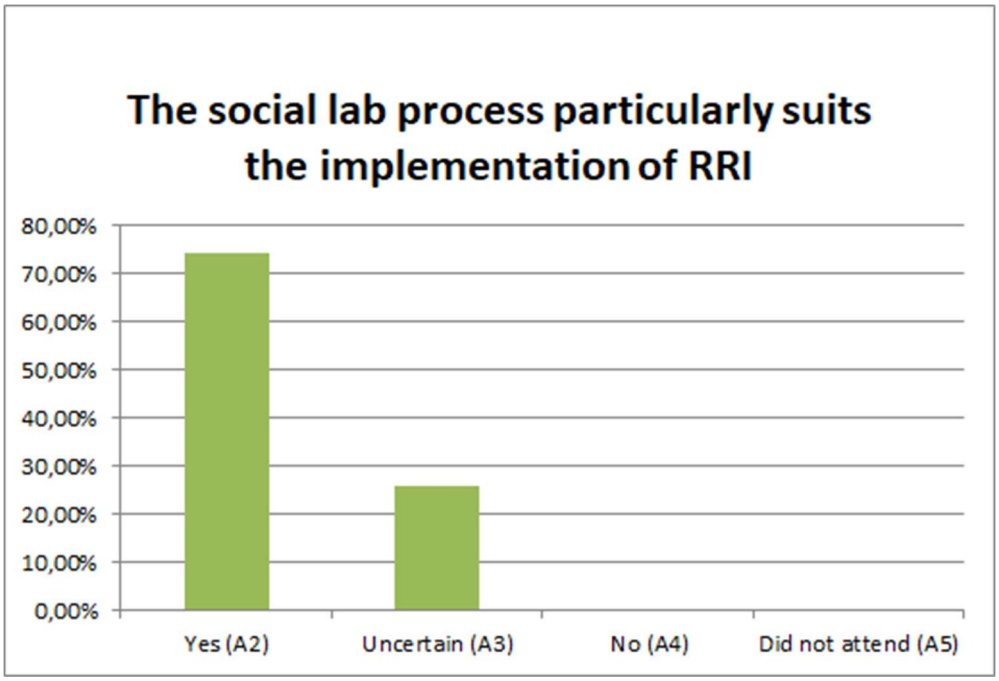
The following section shows the results of the quantitative section of the online feedback questionnaire.



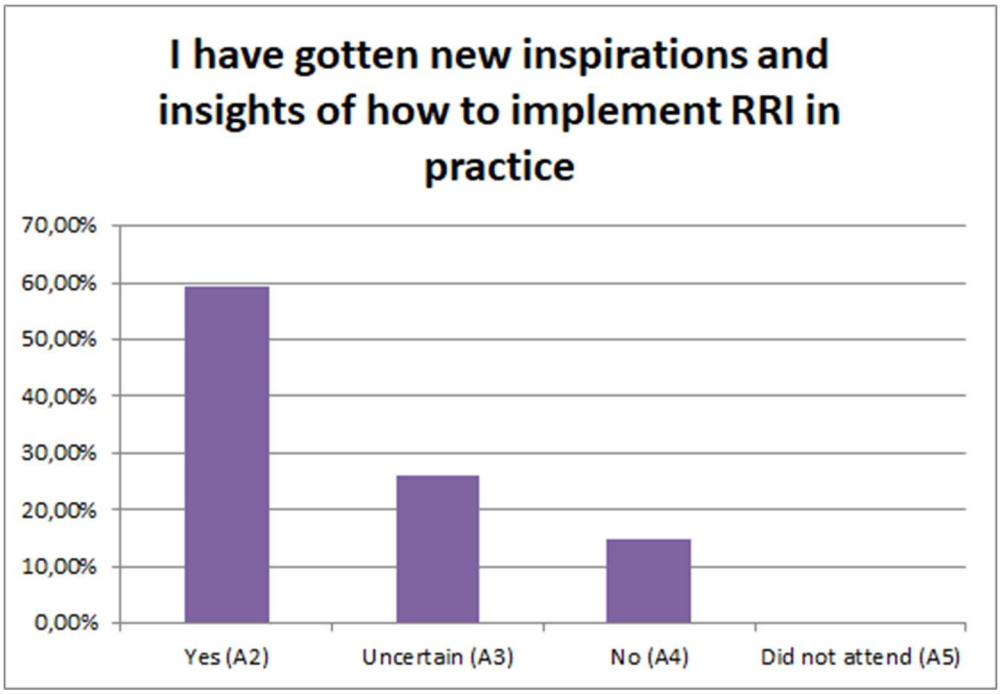
Picture 21: Feedback 1, own calculations



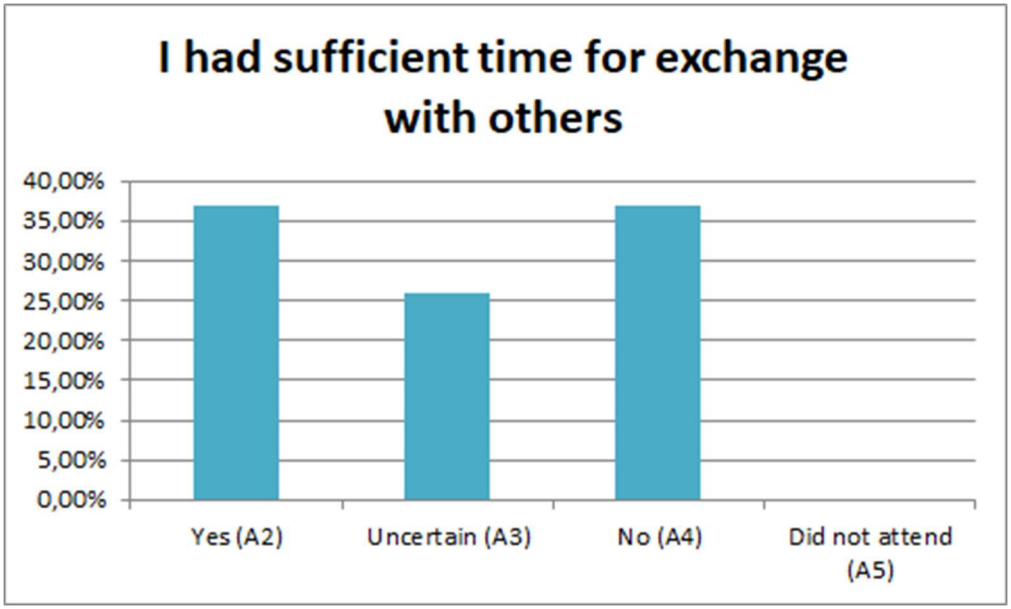
Picture 22: Feedback 2, own calculations



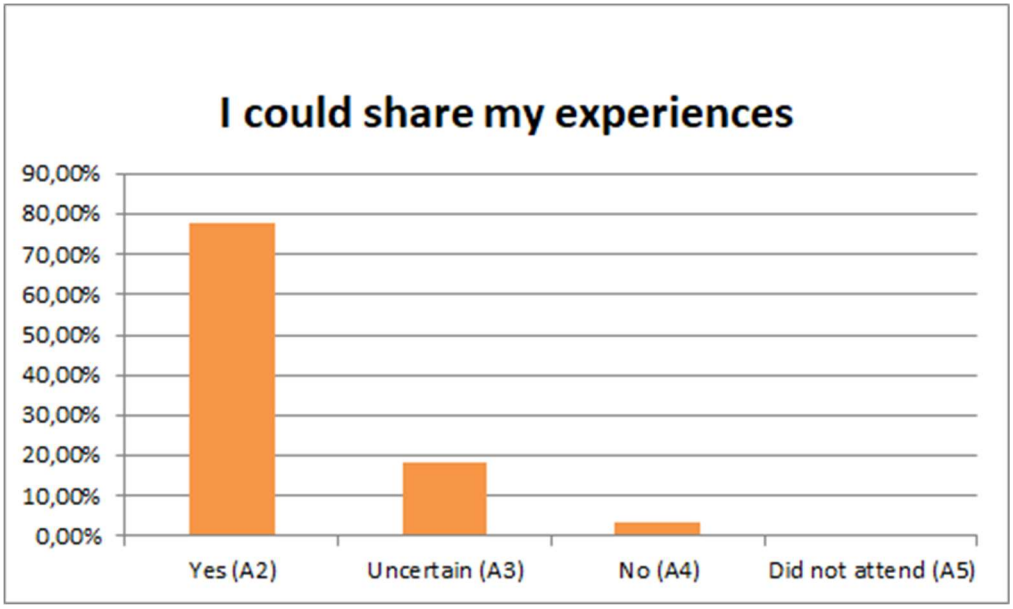
Picture 23: Feedback 3, own calculations



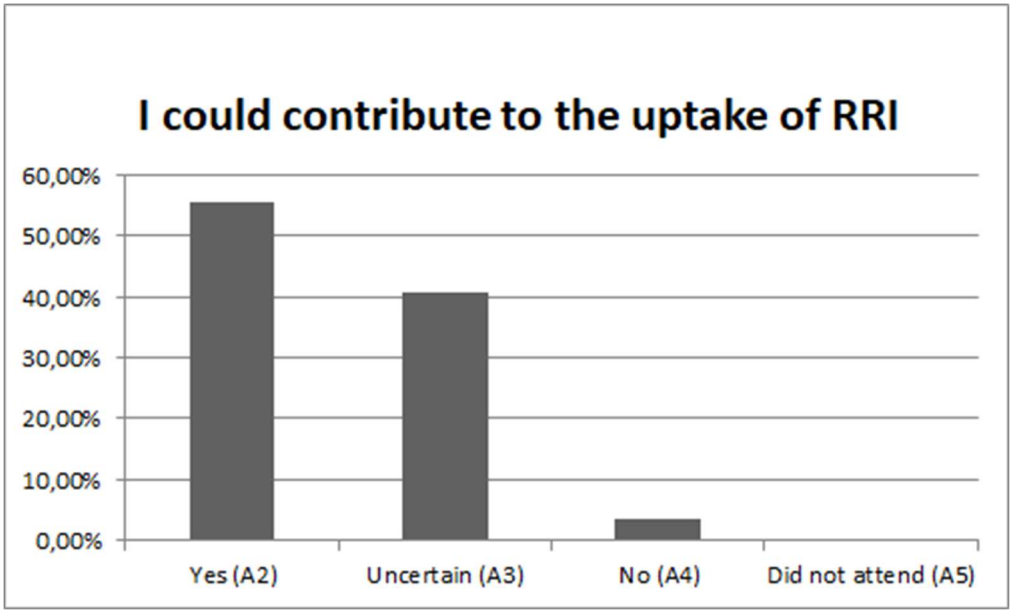
Picture 24: Feedback 4, own calculations



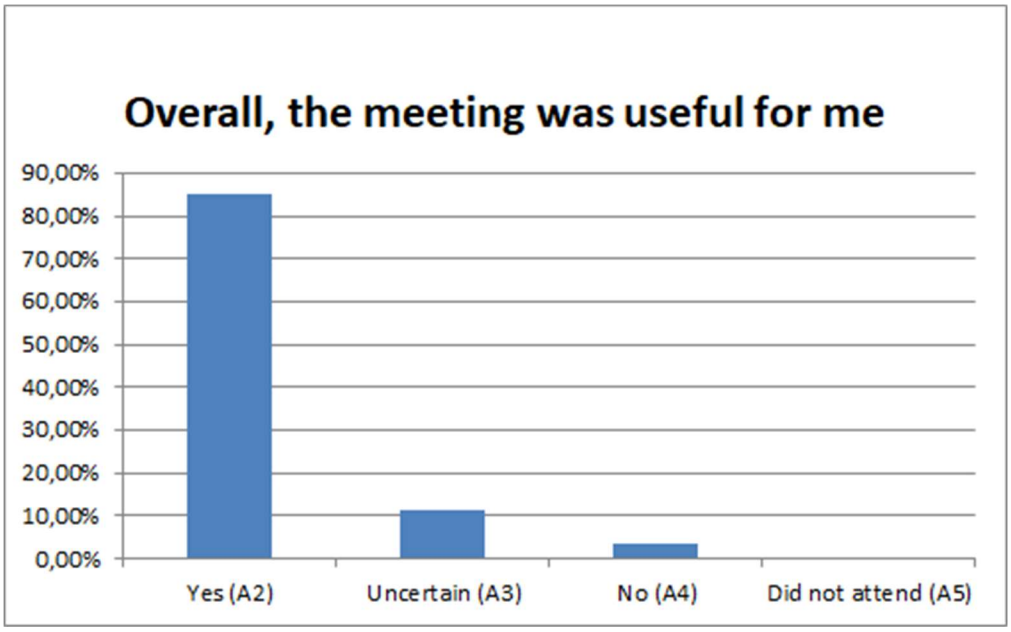
Picture 25: Feedback 5, own calculations



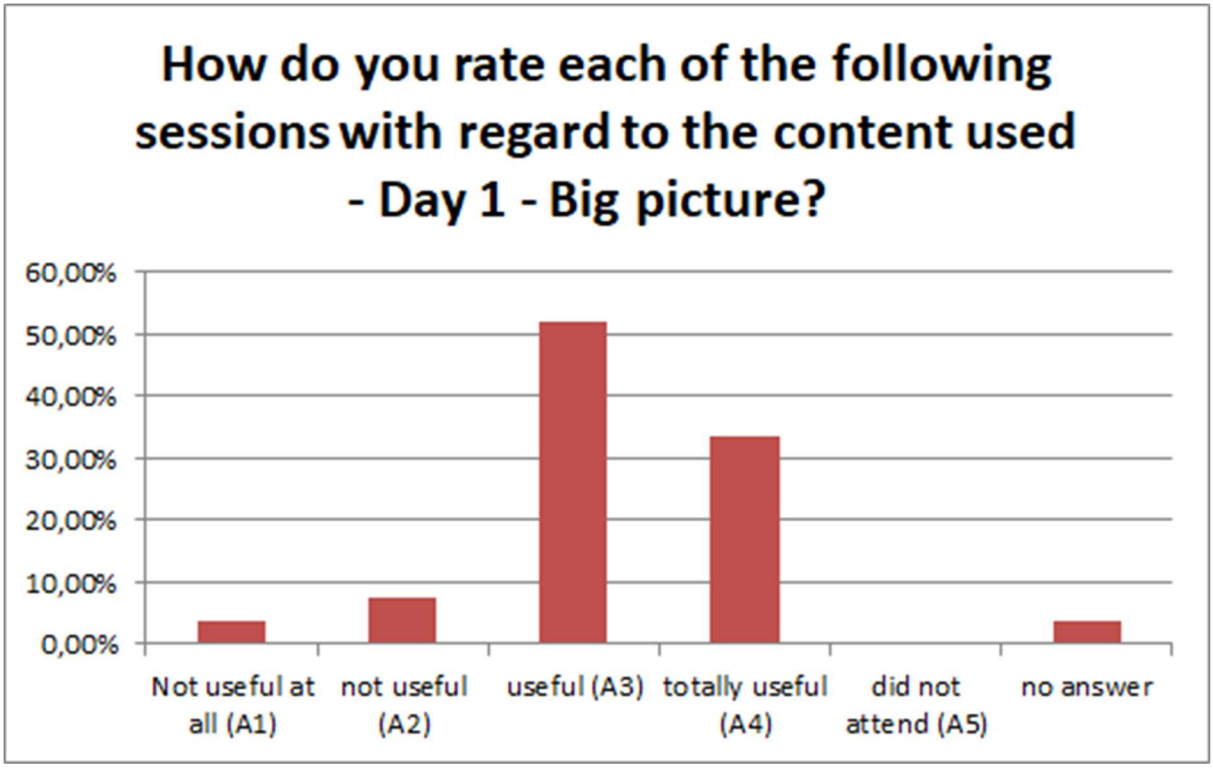
Picture 26: Feedback 6, own calculations



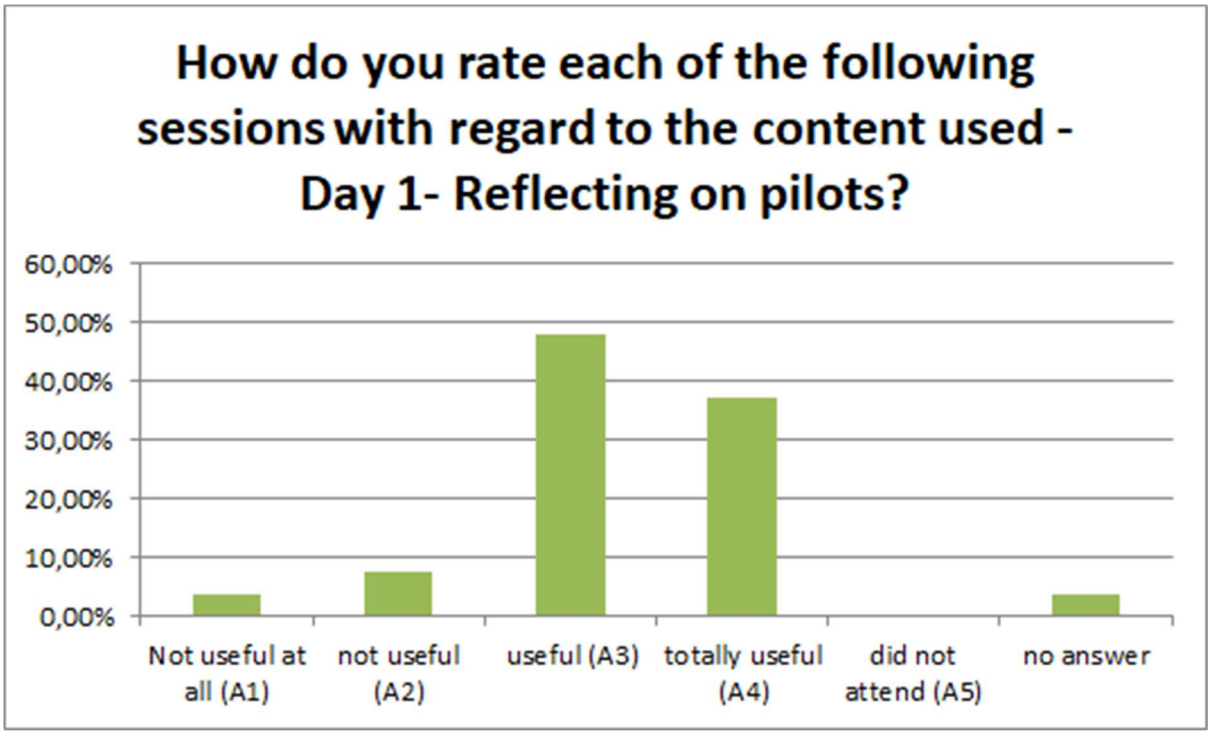
Picture 27: Feedback 7, own calculations



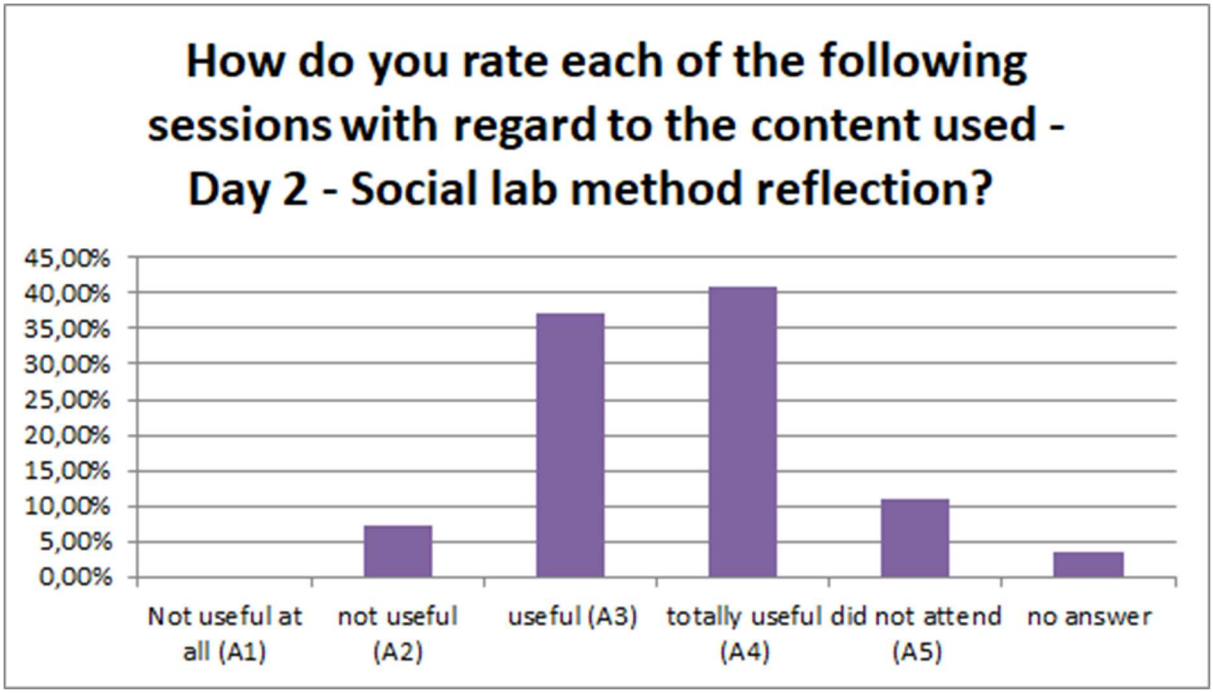
Picture 28: Feedback 8, own calculations



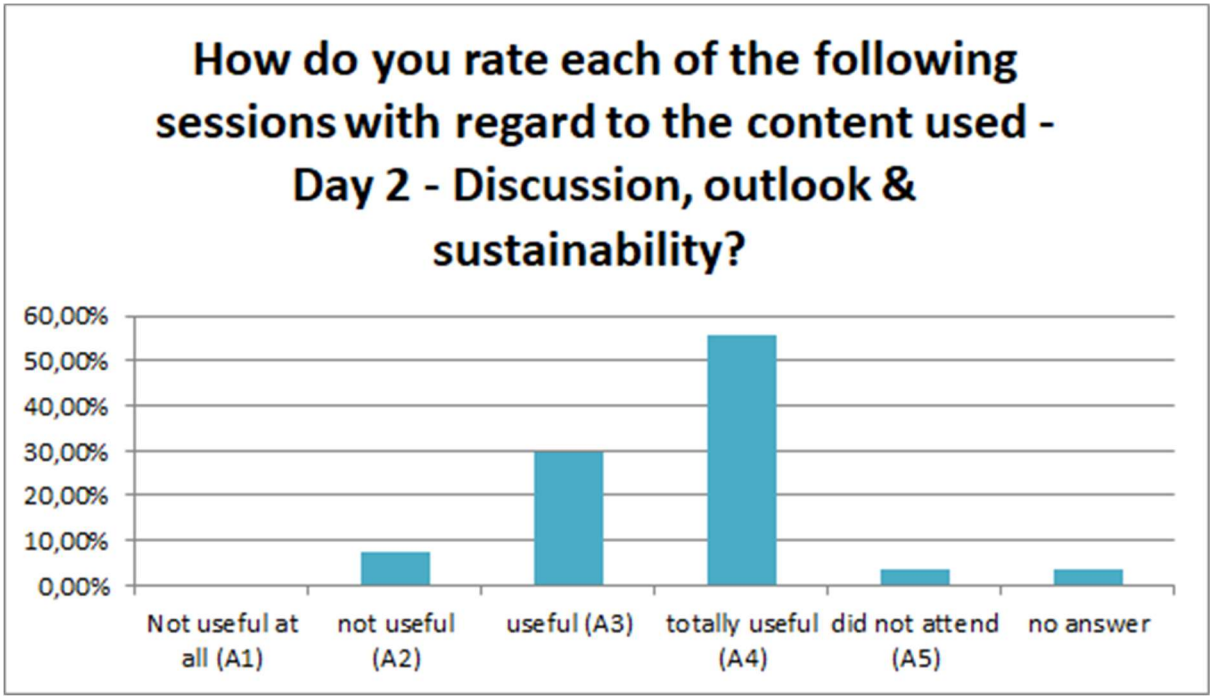
Picture 29: Feedback 9, own calculations



Picture 30: Feedback 10, own calculations



Picture 31: Feedback 11, own calculations

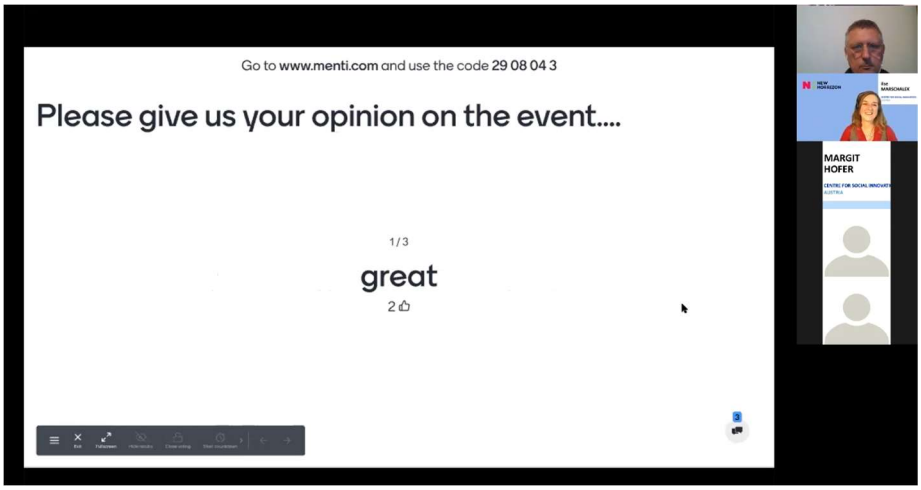


Picture 32: Feedback 12, own calculations

Answering the question “How would you like to contribute to the NewHoRRIzon project in the near future?”, many participants state that they would still “like to contribute”, by either helping to make the “output of the pilot accessible and sustainable” or “contribute to the process of narrative construction and dissemination”, on “spreading the word on RRI by using the resources developed”, or even “participate to its actions (social labs or others)”.

Some would like to “continue collaborating together” and “stay in touch”. They want to bring “results” to their “communities”, “platform” and “association”, to “spread the word” and also to try to “influence policy makers”. They offer to share knowledge and expertise gained” through the involvement in the project activities, also to a “broader audience” and thus contribute to further “dissemination and awareness raising”.
But also in addressing the scientific community there are some suggestions, like writing a “paper” on it, or “research the RRI concept in depth” and “focus on the implementation of it with more international stakeholders. The “young generation” should be inspired for “adopting and implementing RRI aspects in their daily lives” and understand the “necessity of RRI in Research and innovation activities”.

Additionally, we asked for immediate feedback at the event and gathered it live via mentimeter:



Picture 33: Feedback via Mentimeter

“Great. Thank you for the excellent organisation. Thanks to all for the active participation...You wouldn’t want to be in Vienna today anyway! So all in all a great meeting! Great workshop! I liked the use of online tools! Great organization and dynamics. Shows how much is possible even in this way. It was very good to participate with participants of all WPs. Gives you a broader view. Is RRI more than a policy area that the European Commission was previously more enthusiastic about? Great workshop, thank you for organzing it! I think we could have used a bit more time on the group discussions, though. Great, thank you! Well done, really enjoyed it. Thank you! Thx. See you soon. Great meeting, strict moderation, good guidance. Great format and moderation, very inspiring discussions. Very good atmosphere!! International, transdisciplinary, well-organised, networking-effect, reflective and inspiring. Well done! Was a great WS! Amazing Job ZSI Team :) Learned a lot. Very interesting exchanges, showing that the subject is still highly relevant. Stay safe!”