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The RRI Co-construction Method offers a practical way to work with the Responsibility Navigator. The Danish Board of Technology designed the RRI Co-construction Method in collaboration with Institut für Höhere Studien, Vienna, University of Twente, Mandl, Lüthi and Partner and Fraunhofer ISI.

In the following you will find step by step instructions on how to do your own RRI Co-construction workshop using the Co-construction Method. But first, a brief introduction to the RRI Co-construction Method.

1. Introduction to the manual for the RRI Co-construction Method:

This manual builds on certain assumptions on what Responsible Research and Innovation can provide. Briefly stated, Responsible Research and Innovation (RRI) revitalizes the existing ways and needs in society

for making balanced political decisions on future research and innovation agendas (CSR, TA, IA, Risk assessment, ethical assessments etc) by putting emphasis on responsibility. RRI also aims at inventing and re-inventing more responsive and responsible ways of dealing with current research and innovation programs (eg. ICT in Medicare, Synthetic Biology, GMO, Shalegas fracturing, Nuclear energy) and of revising established research and innovation agendas which still actively shape our commons (e.g. Energy renovation, extraction of fossil energies).

The RRI Co-construction Method in a nutshell

The Resagora project developed a “Co-construction Method for RRI”. The purpose is to encourage reflective processes to help diverse and contesting stakeholders make research and innovation more responsible and sustainable in Europe. The RRI Co-construction Method is a workshop design that uniquely combines flow, input, reflection, iteration and discussion, that can make RRI happen. It does so by offering a coherent workshop process aligned with a governance framework for RRI, The Responsibility Navigator. The workshop process merges a rigorous bottom-up approach; building on stakeholders’ experiences with implementing responsibility measures in their everyday life, with top-down conceptual dimensions and principles for RRI, as conveyed by the Responsibility Navigator and based on in-depth empirical field investigations from the Resagora project.

Upstream reflection:

The RRI Co-construction Method is a specific workshop design made for upstream reflection on research and innovation. It can be used to strengthen and re-invent the responsibility aspects in strategies for research and innovation when:

1. Planning for new research and innovation agendas
2. Revising the execution of current research and innovation programs
3. Revising already established research and innovation agendas

Who can benefit from using the RRI Co-construction Method?

Actors and institutions that are directly concerned with the governance and development of research and innovation agendas. E.g.

- Funding institutions
- Universities
- Industry and companies conducting research
- Public administrations
- International organisations
- Policy-makers

Actors without research units, and therefore not directly involved in decision making processes affecting research and innovation processes such as CSOs, international organisations and industry associations, are important stakeholders and are crucial participants to the workshop process, but tackling their own core issues in this particular workshop process may be of less relevance.

2. Using the RRI Co-construction Method:

We recommend reading carefully through the manual. It is important that you stick to the outlined structure and flow of the workshop design when you carry out your own RRI Co-construction workshop. If you decide to change the sequence of the outlined phases, you are unlikely to achieve the intended level and intensity of reflection.

Workshop duration:

The original workshop process takes two days and is designed for 20-25 participants; including a working dinner, it involves a total of 16 hours.

The duration of the workshop process can be shortened according to number of participants. If the workshop is held with the minimum number of participants (see next paragraph), the sessions can be shortened accordingly. The importance of respecting the sequence of the sessions is reiterated here. In the manual you will find suggestions on which sessions can be shortened, which should remain at their full length and which ones can be clustered, if time constraints are tight (downscaling suggestions are forthcoming)

Number of participants:

The process could be scaled down to a minimum number of 6-8 participants representing each stakeholder-group to be involved. The maximum number of participants is 30, to ensure that all participants have the opportunity to speak and be heard in the plenary sessions.

Workshop costs:

The maximum budget per invited international expert is approx. 500 €, all inclusive, for a two day workshop in an easily accessible city in Europe (Transport, 300, Accommodation, 100 €, Venue and catering estimated 100 €) (current estimation 2016). The cost does not include the cost of an external facilitator and workshop materials such as flipcharts, prints, pens etc.

3. Structure of the manual

The manual is divided into two sections: the first section systematically describes the preparatory work and the time needed for planning the workshop. The second section provides a stepwise description of how to run the four phases of the workshop process which are: 1. Exploration phase: Exploring stakeholders experiences with RRI. 2. Presentation phase: Presenting dimensions and principles of RRI. 3. Investigation phase: Making effective use of The Navigators dimensions and principles. 4. Concretisation phase: Effectively practicing RRI. Throughout the manual, you will find additional material for presentations etc.

4. Your feedback

If you carry out a workshop with the RRI Co-construction Method, we would very much like to hear about your experiences with it. What worked? What did not work, and why? What recommendations for adjustments do you have?

Planning the RRI Co-construction (two day) workshop		
What is needed	What- and how to get going	Tips & details
Preparatory work for the two day workshop	Start the preparations minimum 3 months before the start the workshop.	The indicated times are the minimum timeframes needed to do sufficient preparatory work. It is better to plan for more time than less!
Number of participants	20-30 participants	See “Recruiting participants”
Total time and staff needed for prep work?	Realistic estimation on work-effort needed	An organizing team consisting of 1 full time project leader and 2 part time assistants for 3 months. The project leader can advantageously decide to start first preparations 6 months before (e.g recruiting high-ranking stakeholders) part-time or less and then increase the effort in terms of time-amount and assistance later on in the process.
Early planning		
Venue/ Catering	Venue large enough for 4 or 5 tables at which 6-7 participants comfortably can discuss, without disturbing other tables.	Remember to order catering and a working dinner between the two days.
Arranging accommodation	Do this as early as possible in the process.	It is nice to accommodate participants close to the venue or to have venue and accommodation at the same location, if possible. Be aware of the cancellation procedures of the hotel. They differ and can cost you a lot of money if you are not aware.
Flipcharts	5 flipchart holders are needed	If you don’t possess flipchartholders and flipcharts, you can rent them.
Tables	5 tables for group work are needed	
Recruiting participants	Desk-top research to identify the right participants. Selection criteria: - mid-to high-ranking informed	Recruitment: emails, telephone calls. Keep track of the process in e.g. Google docs. Often invitees need to be contacted many times. Timing is

	<p>participants with direct experience of processes enhancing responsibility within their field of expertise.</p> <ul style="list-style-type: none"> - diversity in terms of fields, gender, opinion, age, position within organizational hierarchy . <p>Screen potential participants by doing a brief telephone interview to find out whether they possess the necessary knowledge.</p>	<p>crucial. Recruiting should start at least two months before the workshop. High-ranking stakeholders and policy makers should be contacted much further in advance; they may have packed schedules a year ahead. Participants from industry are difficult to approach directly. Often their contact details are not accessible through the web and it is often necessary to contact them via written requests to a general management office.</p>
<p>Invitation letter</p>	<p>A short, precise letter which is attractive across many fields of expertise.</p> <p>Example word doc</p>	<p>Make sure to have colleagues or peers involved in the process of shaping this letter. Feedback ensures the quality of the letter.</p> <p>An important reflection is to think about the “style” of communication to use. Addressing a purely academic audience requires a different style to addressing an audience in industry; therefore inviting participants from diverse institutional settings requires a tailored invitation letter.</p> <p>Remember to put precise deadlines for responses in the invitation letter. Remember to state when you expect to send out further details about the workshop.</p>
<p>Confirmation mail</p>	<p>Example word doc</p>	<p>Request for biography and photo for the participants list.</p> <p>Hotel requirements, confirmation of the working dinner, remind the participants to arrange their own travel unless you are arranging it for them. Explain how to reclaim expenses.</p>
<p>Deciding for mode of facilitation</p>	<p>Take a decision on whether to hire a professional facilitator or to facilitate the workshop yourself.</p>	<p>If you employ a professional facilitator, then make sure she/he is thoroughly briefed on the purpose and idea of the workshop. Walk slowly through the workshop design with her/him.</p>
<p>Intermediate planning</p>		
<p>Prepare participants list</p>	<p>Example word doc</p>	<p>It can take more time, than you expect! Often bios have to be cut back and it can be tedious work to chase participants for photos and</p>

		bios!
Information material at the workshop	The Responsibility Navigator pdf Five page background paper, “Dimensions of The Responsibility Navigator” (“the five pager”) word doc	Read carefully through the material. Decide who should do each of the presentations. The background paper is the short version of the Navigator we used for the workshop. The examples in her differ from those in the Navigator, which could also be chosen for the workshop.
Recruit staff for the workshop days	You need a moderator/notetaker for each group table	e.g Apart from the 3 organisers already involved in the planning of the workshop, you need to involve 2 more.
Final preparations		
Information package to send out	Send out the info-package a week before the workshop. Content: Programme Background paper The Navigator List of participants, Info on hotel/practicalities Re-imbursement procedure	Five page background paper, “Dimensions of The Responsibility Navigator”. This is where the dimensions of the navigator are presented for the first time with some background information on Responsible Research and Innovation.
Prepare the questions for the sessions on flipcharts	The flipcharts can be handwritten or printed in advance	Each question is written on flipchart and presented by the facilitator at the start of the session in concern.
Print handouts for all participants	Programme Background paper List of participants Evaluations Example word doc	To be handed out during the workshop.
Information for moderators/notetakers	Print briefing instructions for your staff Example word doc	Invite your staff (moderator/notetakers, facilitator) to the briefing meeting before the workshop start
Prepare nametags for clothing (and tables if you like)		
The workshop days		
Expect last-minute cancellations		There are always between approx. 1-5 participants who cancel very late. Think about having a plan B for group work. Don’t have a group discussion with only two-three participants at one table. It creates a much more dynamic discussion when there are minimum four participants around the table. You might need to leave out one table entirely.
Briefing of	Remember to meet approx. two hours	Walk slowly through the program

moderators/notetakers	before the start of the workshop with your staff and the facilitator. You want to feel well-prepared and relaxed when the participants start to arrive.	and instruct the moderators/notetakers on how to listen actively, do's and don'ts, what you want to be noted down, etc.
Create a welcoming atmosphere	Remember to meet the participants with an open and friendly attitude.	This seems like an obvious point but often there are so many practical things to deal with that it can be difficult to calm down and be really present yourself as an organizer. Please bear this in mind. Creating an open and explorative atmosphere is key for the success of the workshop.
Reaping Knowledge	Flipcharts, computers, presenting group-work	Use flipcharts, one for each table. The group needs to choose among themselves "a group rapporteur" who writes on the flipchart and present the group results. It is optional if the group prefers to choose one person who does the writing and another who does the oral presentation. The notetaker is from the organising team and take notes for the organisers. Be aware of the effect a laptop can have on group work. The note taker behind a computer screen can give the impression of hiding or building a wall. Group-work presentations should always be done by a group member, not by the moderator/notetaker. Sometimes the group calls for the moderator to do this work. This can be a subtle way for the group to disclaim ownership/responsibility for their own findings.
Group dynamics	Self-selecting groups, pre-arranging groups, plenum conversations	We recommend that smaller groups are self-selecting, but request that they choose diverse participants from session to session. Ideally everyone should have worked with everyone else in different groups. If you notice that certain participants tend to stick together, then gently take charge of the situation and guide group composition for the next session.
	Plenum sessions	Move chairs into one circle or have this circle settled in the middle of the room with break-out tables placed on the outskirts for group work. The plenaries are led by the facilitator using a talking stick: in the middle of the circle a stick is put down, anyone

		who goes into the circle to pick up the stick, can speak, after speaking the stick is put back into the circle. No-one is allowed to speak unless they are holding the stick-holder; you cannot pass the stick on to someone else, it must be put back into the circle.
	Written evaluation at the end of the workshop	Participants fill in the pre-written evaluation form.
Follow up	Immediate evaluation of the process	Facilitators'/ notetakers' first impressions

The 4 workshop phases:

Phase 1: Explore

“The exploration phase warms up the participants, who do not necessarily know each other beforehand, and introduces the notion of RRI. In small groups, consisting of workshop participants and one organising team member, participants deliberate on and discuss RRI in relation to their own experiences of doing RRI within their field. In phase one, it is crucial to create an open and confident atmosphere that encourages participants to share challenges, conflicts and barriers that they have experienced when implementing RRI. The challenges, conflicts and barriers collected in this phase create the basis for discussions in the next phases of the workshop and are continuously addressed and expanded on throughout the workshop. In order to be able to do this, it is necessary to put down the collected experiences in writing, e.g. on a flipchart, cards, on (digital) slides, etc., and have these notes presented in the following phases. A rapporteur is chosen for each working group to present the findings in the following sessions, either to plenary or to the continuously changing members of the working groups” (Bryndum et al 2015 chapter 6. e-book forthcoming)

Phase 1. Exploring stakeholders experiences with RRI.		
Time	What	How/ why
11.00	<ul style="list-style-type: none"> Welcome Explaining the purpose of the workshop 	<p>The first phase starts in plenary.</p> <p>The chairs are put in a circle before the arrival of the first participants.</p> <p>Organizer: Welcome as organizer (5 minutes)</p> <p>Presenter: “What did we invite you for? What do we want to accomplish together?” (10 minutes)</p>
11.15	Introducing everyone	Facilitator: Introduction to Day 1

		<p>The facilitator presents herself and encourages everyone to briefly state their name and their affiliation with RRI.</p> <p>Everyone: Short introduction of themselves</p>
11.35	<p>Session 1 Starts in plenary and then proceeds in groups:</p> <p>Question: <i>In what ways does RRI relate to your experience?</i></p>	<p>Presenter: 5 minutes presentation with hand-outs</p> <ul style="list-style-type: none"> • What is RRI about? • Why is it relevant (for the European Commission)? • What is the purpose of the workshop? • Where does RRI derive from? • What can you contribute? <p>Example ppt</p> <p>The facilitator encourages everyone to take a seat in a small group (max 6-7 people incl. notetaker)</p> <p>Participants self-select group. Group discussions with question on flip chart: <i>In what ways does RRI relate to your experience?</i></p> <p>Objective: Warming up; getting to know each other and the concept of RRI.</p> <p>Write up experiences and views (agreements/ disagreements) are written on flip chart by participants.</p> <p>NB: The notetaker is from the organising team and take notes for the organisers. The group needs to choose among themselves “a group rapporteur” who writes on the flipchart and present the group results. It is optional if the group prefers to choose one person who does the writing and another who does the oral presentation (see the preparation section of the manual).</p>
12.10	<p>Plenary: Sharing experiences and views</p>	<p>Objective: Exploring relations between RRI and participants’ work experiences. Participants share their experiences and views they talked about in the groups either as groups (flip charts) or as individual contributions. Questions for understanding are encouraged but no discussion.</p>
12.30	<p>Lunch</p>	

13.30	<p>Session 2</p> <p>In newly formed groups:</p> <p>Question:</p> <p><i>What challenges/ conflicts/ barriers for practicing RRI do you experience?</i></p>	<p>Objective:</p> <p>Increase mutual understanding about challenges/ barriers/ conflicts of RRI in participants' work experience</p> <p>Participants form new groups with different people.</p> <p>Question on flip chart: <i>What challenges/ conflicts/ barriers for practicing RRI do you experience?</i></p>
14.15	Short break	
14.30	<p>Session 3</p> <p>Groups (same as session 2):</p> <p><i>Describe the two most important challenges/ conflicts/ barriers for RRI in detail</i></p>	<p>Participants return to their groups.</p> <p>Question on flip chart:</p> <p><i>Select the two most important challenges/ conflicts/ barriers from Session 2 and describe the barrier, who is challenged and what are the conflicts?</i></p> <p>Flip chart: The two most important challenges/ conflicts/ barriers with description</p>
15.00	<p>Group presentations:</p> <p>Participants get up and move from flip chart to flip chart</p> <p>End of Phase 1</p>	<p>Objective: Deepening and opening the subject; enriching it with personal experiences.</p> <p>Participants move from flip chart to flip chart.</p> <p>Rapporteurs (non-consortium members) present flip charts from Sessions 2 and 3.</p> <p>Questions for understanding are encouraged but no discussion.</p>
15.40	Coffee break	

Phase 2: Present

“The aim of phase two is to take a step back, leave the intense bottom-up group work for a while and make way for an introduction to the various principles and dimensions of the Responsibility Navigator for RRI (The Navigator). First, the core objective, principles and dimensions of The Navigator are presented in a short and effectively visual way. Afterwards the participants share and discuss first impressions with each other seated in small groups together with an organiser/moderator. This phase is concluded by a plenary session together with participants summing up the first workshop day by sharing and deepening the insights gained regarding how their own experiences about RRI relate to the presented dimensions and principles” (Bryndum et al 2015 chapter 6. e-book forthcoming)

Phase 2: Presenting dimensions and principles of RRI		
16.10	Session 4 Plenary Presentation: Important responsibility dimensions for practicing RRI	Presenter: Presentation with hand-outs Example ppt <ul style="list-style-type: none"> • What are the framework dimensions and principles? • How can these support practicing RRI? • What should the framework dimensions and principles achieve? • What are cases to illustrate what framework dimensions and principles mean?
16.45	Session 5 In newly formed groups: Deepening understanding of the framework dimensions and principles	A moderator/notetaker sits with a newly formed group of participants (equal size) comprising people who were not in a group together previously Objective: Clarify and discuss the framework dimensions and principles. Questions: <i>What aspects of the framework dimensions and principles are useful? What aspects of the framework dimensions and principles need clarification?</i>
17.10	Session 6 Plenary Sharing and deepening insights about dimensions and how they relate to RRI	Objective: To deepen understanding of the dimensions and how they relate to RRI. Question: <i>How do the dimensions connect to your experiences about challenges/ barriers/ conflicts?</i> Clarification and deep discussion Note takers capture important issues.
18.00	End of phase 2 and day 1	
19.00	Dinner	TBA

Phase 3: Investigate

Phase three aims to deliberate on the usability and effectiveness of The Navigator’s dimensions and principles in-depth and with regard to the identified challenges, conflicts, and barriers for practicing RRI (day one, phase one). Therefore, the findings from day one are discussed under the light of each of the Navigator dimensions and principles. The crucial aspect of this phase is to have the group rapporteurs from the previous day introduce thoughts and ideas on challenges, conflicts, and barriers for RRI to a different group of participants. This forms the basis for their thorough work with The Navigator in phase three. In this way, participants again communicate their experiences, open up and engage with experiences of other groups while discussing these in relation to The Navigator (Bryndum et al 2015 chapter 6. e-book forthcoming)

Phase 3: Making effective use of The Navigators dimensions and principles		
Time	What	How/ why
9.00	Session 7 New groups on Dimension 1: Ensuring quality of interaction	Presenter: presentation with hand-outs: Recap and example of Ensuring quality of interaction (5 min) Yesterday’s rapporteur from each table remains at her/his table while all other participants go to other tables. Participants work with the two most important challenges/ conflicts/ barriers identified at that table in Session 3. Rapporteur explains them. Question: <i>What does ensuring quality of interaction mean to you in this context? How can you use this dimension to resolve the two most important challenges/ conflicts/ barriers?</i> A participant (non-consortium member) summarizes on flip chart
9.45	Session 8 Same groups on Dimension 2: Positioning and orchestration	Presenter: presentation with hand-outs: Recap and example of Positioning and orchestration (5 min) Question: <i>What does positioning and orchestration mean to you in this context? How can you use this dimension to resolve the two most important challenges/ conflicts/ barriers?</i> A participant (non-consortium member) summarizes on flip chart
10.30	Coffee break	
11.00	Session 9 Same groups on Dimension 3: Developing supportive environments	Presenter: presentation with hand-outs: Recap and example of developing supportive environments (5 min) Question: <i>What does “developing supportive environments “mean to you in this context? How can you use this dimension to resolve the two most important challenges/ conflicts/ barriers?</i> A participant (non-consortium member) summarizes on flip chart
11.35	Plenary: Presentations	Each group presents its findings about all three dimensions Questions for understanding are encouraged but no discussion.
12.00	Session 10	Participants return to their groups and reflect on the usefulness of the

	<p>Reflecting on the framework dimensions End of phase 3.</p>	<p>three dimensions with regards to participants' work experiences in connection with RRI. Questions on flip chart:</p> <ul style="list-style-type: none"> • <i>In what ways are the three framework dimensions and principles practical and useful to resolve challenges/ barriers/ conflicts in RRI?</i> • <i>What is difficult/ problematic about practicing each framework dimension?</i> <p>Objective: Exploring the practicality of the framework dimensions</p>
12.30	Lunch break	

Phase 4: Concretise

The aim of phase four is to make RRI tangible and closely relate it to concrete practices and the institutional settings you are working with. At this stage it is important to deliberate on how to implement RRI in your specific field. Participants should think about how to address the issue of RRI in their respective organisations and fields, which expertise and resources are necessary to support RRI, which RRI strategies could be developed and visualize what these strategies could look like, etc.

This final phase of the workshop also includes reflections on the participants' assessment of the workshop and their learning outcome. These considerations are not only helpful for the participants own learning processes but also for the workshop organising team who may choose to further pursue RRI.

Phase 4: Effectively practicing RRI		
13.30	Session 12 Plenary: What support is needed to effectively practice RRI?	Plenary Two note-takers are taking notes. Facilitator: Question on flip chart: <ul style="list-style-type: none"> • <i>What support is needed to effectively practice responsible research and/or innovation in relation to your area of expertise?</i> Objective: Ideas from participants to enhance the practicality of the framework
14.30	Coffee break	
15.00	Session 13 Plenary: What did you learn in these two days that will be useful in your work?	Plenary Two note-takers are taking notes. Question on flip chart: <ul style="list-style-type: none"> • <i>What did you learn in these two days that will be useful in your work?</i> • <i>What was confusing?</i> Objective: Ideas from participants to enhance the usefulness of the workshop
15.55	Session 14 Plenary: End of phase 4 and closure	Presenter/organiser: Closure and final announcements <ul style="list-style-type: none"> • Sharing e-mails so participants can continue the conversation. Have excel sheet, a notebook or piece of paper ready. • Hand out the written evaluation, encourage the participants to fill it in immediately and collect the completed evaluations before the participants leave • Collect key contacts from the workshop participants e.g. Who did the participants consider crucial to contact to develop RRI further in their specific context.
16.00	End of Workshop	