CO-CHANGE
CO-create CHANGE in Research Funding and Performing

D6.1 Assessment of Added Value of RRI Based on Co-Change Labs and KPIs

Version 1.3

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Author(s): Emad Yaghmaei, Martijn Wiarda
Peer-reviewed by: György Pataki

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List of contributors

Emad Yaghmaei – TU Delft
Martijn Wiarda – TU Delft

List of abbreviations

< RRI >	< Responsible Research and Innovation >
< KPI >	< Key Performance Indicators >
< R&D >	< Research and Development >

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Introduction

The aim of WP6 is:

1. To provide evidence of the added value of the implementation of the RRI approach in research performing and research funding organisations through an assessment of the Co-Change Labs
2. (a) A comparative analysis of the Co-Change Labs (b) to identify relevant success factors and differences

This deliverable (D6.1) contributes to the objective of creating the evaluation framework of the Co-Change project. As stated in the DoA, in this deliverable, different types of impact (social, technological, organisational, political) are assessed in order to gain an overview of the elements an organisation, i.e. research funding and performing organisations, should be concerned with when performing and/or funding research and innovation projects.

To structure our discussion, in the first section we discuss and develop Key Performance Indicators (KPIs) for RRI dimensions. In section 2 and 3, we assess the KPIs in practice by asking the project managers and team members of the Co-Change Labs to assess which indicators they consider relevant for their work and later to assess their achievement in certain KPIs on a five-point Likert scale at two points in time (i.e. before and after the intervention) (this part will be reflected in D6.2). In section 4, we analyse the data collected from research funding and performing organisations and we conclude with the key findings, research implications, and directions for the Co-Change Labs.

1. Determining Key Performance Indicators (KPIs) for the Co-Change Labs based on RRI

Methodology

Our overall methodology for developing KPIs consists of four methodological steps, that are being carried out over the course of the project. Currently, we are working on the third step of the process. Below, we will highlight the various steps we followed. Table 1 provides an overview of our methodological steps.

Step 1: Literature Review

To include both obvious and less obvious RRI dimensions on the product and process level, we first wanted to determine which indicators could theoretically and practically contribute to making such a process 'responsible', and then assess the value of scoring/assessing these aspects (from whichever perspective). To find such indicators, we explored both literature in the field of innovation management and responsible innovation. This was motivated by the idea to study the value of RRI practices in the "midstream" (Fisher et al., 2006) of innovation, i.e. on the R&D shop floor (Schuurbiers &Fisher, 2009; Schuurbiers, 2011). This focus is essential when studying RRI-relevant aspects of innovation processes on the actual, ongoing R&D projects of transformative technologies.

Within the field of RRI, quality performance criteria are scarce in peer-reviewed, academic literature. We therefore resorted to reports of EU-funded projects and policy makers (e.g. Hin et al., 2014; Raven et al., 2015; Spaapen et al., 2015; Scholten et al., 2016).

From the paper and reports, we consider indicators as relevant when they align with RRI in four AIRR dimensions (Owen et al., 2021; Stilgoe et al., 2013), the six RRI keys, and environmental and social sustainability dimensions (see section 2). After removing redundant and irrelevant indicators, we obtained a list of 47 KPIs (see section 2; for the full list of KPI statements, see also Yaghmaei et al., 2019) (examples can also be found in the results section below, and the complete list in Appendix A). We then reformulated all these indicators into statements about processes, that people might agree or disagree with to a certain extent, in preparation of the subsequent 'scoring' of these elements on a 5-point Likert scale. In collaboration with Co-Change Lab members, we clustered these remaining indicators into themes, relating to Co-Change Lab aspects and specific RRI criteria, both on the product and on the process level of innovation practice. In preparation of the following workshop, we used MIRO boards (a digital collaborative platform).

Table 1: *Methodological steps*

Step	Description	Use
1	Literature review	
1a	(Academic) reports on RRI criteria	Find RRI criteria to add to performance criteria
1b	Develop RRI performance indicators and clusters	Integrate literature findings to compose general criteria list
2	Workshop for individual Co-Change Labs	
2a	Co-Change Labs categorize relevant items	Determine which RRI elements are relevant
2b	Combining elements into clusters of indicators	Determine which integrated aspects matter to the change labs
2c	Scoring of relevance of individual items	Determine how important change labs find the clusters
3	First analysis	
3	Initial academic analysis of workshop results	Determine which elements were always/never selected, identify cluster relations between companies
4	Monitoring institutional change within Co-Change Labs	
4a	First measurement of (RRI) projects in Co-Change Labs	T-0 measurement: starting situation for change labs
4b	Mid-term review(s)	T-1-n measurement: finding out how did projects develop
4c	Final measurement	T-n measurement: assess how did projects develop in the end

Step 2: Workshop for Individual Co-Change Labs

On 28th January 2021, we hosted an online workshop for the Co-Change Labs. The workshop consisted of three parts (also see table 1). After step 2b and 2c, we collected the results through photographs. These provide the input for the subsequent steps.

In the beginning of this phase (2a), representatives of each Co-Change Lab were asked to divide our 47 indicators into two categories: absolutely relevant to their on-going work, absolutely not relevant.

In the next step (2b), the indicators not considered relevant were discarded for each Co-Change Lab while the remaining indicators were clustered into categories by the Lab representatives. This clustering guarantees that the categories are relevant for the individual Co-Change Lab.

In the following step (2c), the Co-Change Lab representatives were asked to distribute a total of 100 points over their identified categories, to determine which categories they found to be the most important with regard to their influence on the quality of the ongoing work. The groups were free to determine their own approach towards the point distribution process. An example of these three steps for the AIT Lab is illustrated as follows:

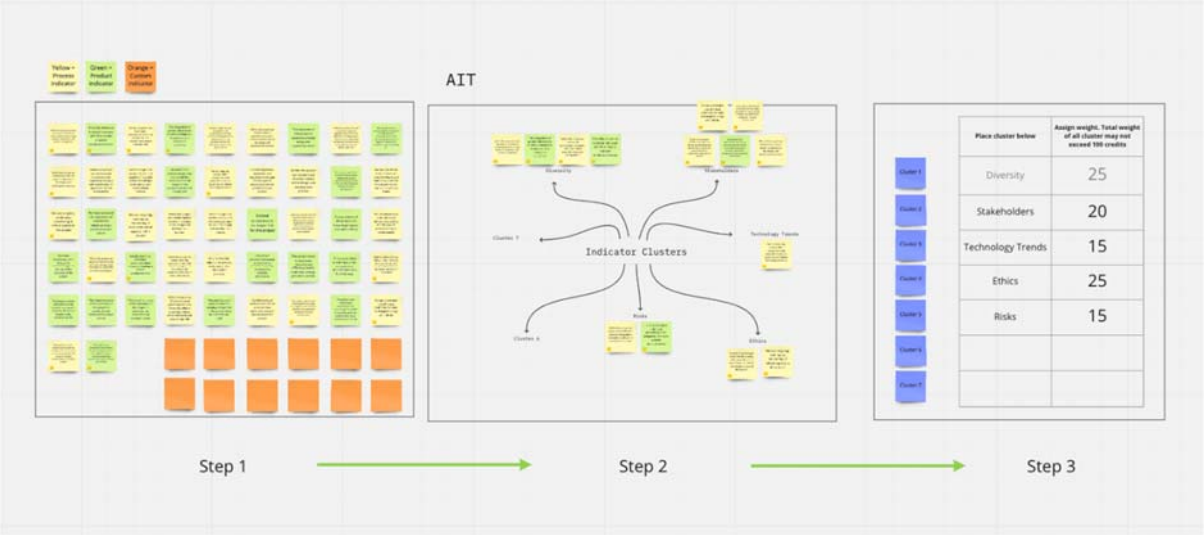

Figure 1: *Groups categorising the indicators into relevant and not relevant, and possibly including new indicator(s) for their Co-Change Labs (left). Participants clustering the elements into categories (middle). Resulting clusters, ready to be scored for their relative importance (right).*

Table 2: *List of participants of the workshop in January 2021. At the end of the workshop, scored clusters were gathered from participants to evaluate RRI performance indicators and clusters and help refine the workshop structure and its facilitation process.*

Co-Change Lab	Co-Change Lab, Location	Type of Organisation	Co-Change Lab Topic	Number of Workshop Participants (including Consortium Representative)
1	Research Alliance for Autonomous systems (RAAS), VTT; Finland	Research performing organisation	Creating standardised practices and defining core values for new technology	1
2	Tecnalia, Spain	Research performing organisation	SHAPE Lab - Setting-up an internal RRI consultancy service	3
3	PFNS, Serbia	Research performing organisation	Establish RRI practices & guidelines PFNS	2

Co-Change Lab	Co-Change Lab, Location	Type of Organisation	Co-Change Lab Topic	Number of Workshop Participants (including Consortium Representative)
4	NEN Stichting Koninklijk Nederlands Normalisatie Instituut, Netherlands	Research performing organisation	Including moral values in standard setting	1
5	DCE Delft Center for Entrepreneurship, Netherlands	Research performing organisation	Developing sustainable startup opportunities	0
6	Council of Tampere Region, Finland	Research funding organisation	Developing standardised RRI evaluation criteria	1
7	Machine Learning Lab, AIT, Austria	Research performing organisation	Establishing an ethics advisory service for machine/ deep learning	2
8	WWTF, Austria	Research funding organisation	Co-evaluating project proposals by medical and ethical experts	1

Step 3: First Analysis

Regarding our analysis, we aim to determine initial similarities and differences between the participating Co-Change Labs. We analysed which indicators were always or never chosen, and which indicators were found to be unclear, or wrongly formulated. We also compared the clusters that had been identified by the Co-Change Labs, to see if they formed the same clusters of indicators. The full results of this ongoing work will be presented in D6.2.

Step 4: Monitoring Institutional Changes within the Co-Change Labs

To monitor institutional changes, our method requires RRI project participants (here Co-Change Labs) to periodically fill in a questionnaire, consisting of the list of identified indicators (statements). We envision at least three monitoring points: at the beginning, midway, and end of a project's runtime.

Of course, performing the assessments themselves is not considered to be the primary goal here. We explicitly want our assessments to be 'food for thought' and deliberation within the Co-Change Labs: Why are certain elements scored higher/lower than others, and why do different project participants have different ideas about why a certain element is scored high/low.

After the project' assessment process is finished, we will do some final analyses. These analyses are mainly geared towards finding out if the Co-Change Labs, in which specific RRI efforts were deployed, differ in performance or performance development from projects without such specific efforts. We will also add the results of a subsequent qualitative analysis of our study (interviews with Co-Change Lab participants), to identify reasons why RRI performance progressed the way it did. Herewith, we hope to conclude whether RRI efforts can support the quality of ongoing Research and Innovation (R&I) work and see whether from the quality perspective, it makes sense to explicitly adopt certain RRI methodologies.

The following section contains the complete set of indicators. The section thereafter contains the analysis of all the Co-Change Labs.

2. Complete Set of Identified Indicators

Operational RRI Performance Criteria		
RRI	**Process**	**Product/Service**
Diversity & Inclusion		
Diversity and Gender Equality		
	Within the project, we value and nourish diversity (in the broadest sense) in both research, innovation, and project management	Diversity allows us to better innovate and thus results in better products/services
	Within the project we have equal participation of women and men in both research and project management	The integration of gender dimensions is actively integrated in research and innovation outcomes
	We have organisational arrangements to progressively eliminate barriers impeding women's advancement to top positions and factors inducing women to drop out of science	
Engagement		
	Within our project we use tools and mechanisms for organising dialogue with stakeholder on appraisal/ethical acceptability	The outcome of this project is assessed actively using user experience tools
	Within this project we used a systematic approach (specified how, when, and why) from the beginning to include various stakeholder viewpoints on a wide set of values (technical, social, ethical, legal, etc.)	We organise science communication/education activities aimed at educating citizens and generating awareness of aspects/issues of the innovations we are working on
	Within this project we include input of end users/customers in the design and development process	
	Within this project we include input of possible non-users/indirect stakeholders in the design and development process	
	Within this project we include input of suppliers (materials and/or knowledge) in the design and development process	
	Within this project we include input of funders/investors in the design and development process	
	Within this project we include input of civil society groups/NGOs in the design and development process	

Operational RRI Performance Criteria		
RRI	**Process**	**Product/Service**
Diversity & Inclusion		
	Within this project we include input of policy makers in the design and development process	
Anticipation and Reflection		
Institutional Landscape		
	Our project is aligned with current regulation, standards, and the legislative landscape	For the outcome of this project becoming widely adopted, this project requires lobbying activities in the domain of decision making and policy development
	We have an official code of conduct/ethical review board that safeguards that this project can be carried out without issues	
(Impact) Assessment		
	We use ongoing, continuous monitoring of ethical aspects in this project	We have assessed the alignment of stakeholder values and our product/service values
	We use ongoing, continuous monitoring of socioeconomic aspects in this project	We have done analyses on (or have monitored) the socioeconomic impact of the products/services of this project
	We continuously consult other researchers and research projects to signal new and future technological trends	Societal acceptance is in this project risk management list
	Within our project team we regularly organise group deliberation (employee engagement, trainings, discussions, etc.) on societal/social/public/policy aspects	The outcomes of this project can have large macroeconomic effects
Public and Ethical Issues		
	We document best practices about ethical acceptability for this type of project during its development	There has, historically, been large public acceptance for the use of the outcome of this project
Responsiveness and Adaptive Change		
Risk Identification and Mitigation		
	Within this project we apply risk identification and risk management	Initially identified risks have preventively been mitigated, leading

Operational RRI Performance Criteria		
RRI	**Process**	**Product/Service**
Diversity & Inclusion		
	strategies to adjust the course of our project	to a better product/service
	Within this project we adopt a learning approach to adapt the research programme according to the viewpoints and ideas of other stakeholders	
Environmental Sustainability		
	Environmental values are actively included in the innovation process	This project provides substantial environmental benefits to society, compared to available alternatives
		This project leads to improved resource use efficiency (water, materials, energy, pollution, waste)
		This project does influence the ecosystem or environment in a positive way
Social Sustainability		
	Societal values (privacy, safety, health, security, data ownership, etc.) are actively included in the design process of this project	This project provides substantial societal benefits, compared to available alternatives (health, safety, solidarity, equity)
		This project gains trust by the implementation of its outcomes in society
		The outcomes of our project interconnect with societal support
Openness and Transparency		
Intellectual Property and Confidentiality		
	Within this project, IP in the form of patent applications (from our side) or acquiring licenses (from others) do not play a large role	Personal data and privacy issues do not play a major role in this project, once its outcomes are used
	Confidentiality of methods and results is not an issue within this research and development project	
Open Access and Transparency		
	Our project makes use of virtual platforms for data exchange for use	This project uses institutional mechanisms for promoting the results

Operational RRI Performance Criteria		
RRI	**Process**	**Product/Service**
Diversity & Inclusion		
	inside the company (e.g. laboratory notebooks, meeting minutes, etc.)	of our R&D activities publicly after these activities are finished
	Our project makes use of virtual platforms for data exchange (sharing) with clients	This project uses institutional mechanisms for promoting the results of our R&D activities to involved stakeholder groups after these activities are finished
	Research/innovation activities and results are actively and transparently communicated within the research network (stakeholders) during the project	

3. Evaluation per Co-Change Lab

Below, we report on the data we have obtained from all the Co-Change Labs. All sections start with a brief overview of the project at the level of the Co-Change Labs, followed by a short report on the data obtained. Two types of data are obtained:

- (1) the KPIs identified by the change lab, with their assigned relative importance (through the distribution of 100 points)
- (2) an overview of how many items out of our original 47 item-list were selected, for the RRI-relevant aspects we identified ourselves

3.1. Research Alliance for Autonomous systems (RAAS), VTT

3.1.1. About the Project

The principal target of the RAAS alliance is to advance research on autonomous transport and logistics in global markets. This Co-Change Lab aims to inherently integrate responsibility in the development of autonomous systems in different domains in a way that these solutions are socially accepted and desired.

RRI-relevant activities include:
The Co-Change Lab has engaged with various stakeholders and set up a Responsible Innovation working group. They have organised several RRI related events and trainings. Ultimately, it develops and implements a responsibility 'screening' for each project.

Key Performance Indicators:
RAAS has selected KPIs that they associated with diversity, openness, awareness, and transformation. The first three aspects resonate well with their action plan as RAAS engages with a wide range of stakeholders. RAAS predominantly focuses on the *process* of research and innovation (12 process indicators). Their KPIs relate to Anticipation & Reflection, Diversity & Inclusion, and Openness and Transparency. RAAS demonstrates that it finds codes of conducts, monitoring, and institutional mechanisms important in driving transformation. Research and innovation *outcome* indicators relate to promoting results, lobbying, and creating awareness. RAAS has additionally created three *customised* indicators that relate to including ethics and increasing societal support.

3.1.2. Data Analysis

Table 3: *Clusters of indicators as identified per Co-Change Lab*

RAAS	***Points out of 100***
Diversity	15
Awareness Raising in Society	25

Openness	20
Transformation	15
Awareness Raising in the Ecosystem	25

Table 4: *Comparison of our framework with the indicators identified by Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering by RAAS***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2 (3 process items/ 2 product/service items)	1/1 (1 selected process item out of a total of 3 process items / 1 selected product/service item out of the total of 2 product/service items)
Engagement	8/2	2/1
Anticipation and Reflection		
Institutional Landscape	2/1	1/1
(Impact) Assessment	4/4	4/1
Public and Ethical Issues	1/1	1/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	1/0
Environmental Sustainability	1/3	0/0
Social Sustainability	1/3	1/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	0/0
Open Access and Transparency	3/2	1/2
Custom Indicators		

	# process items/# product/service items (clustering from literature study)	*Clustering by RAAS*
We continuously attempt to increase the societal acceptance for this project	N/A	1
Ethical values are actively included in innovation process	N/A	1
The outcomes of our project interconnect with societal support	N/A	1
TOTAL (product/process/custom)	27/20/0 (47)	12/6/3 (21)

The Awareness Raising in the Ecosystem cluster is considered important (25/100), as well as Awareness Raising in Society (also 25/100). However, the data also shows that VTT did not pick any of the Environmental Sustainability and Intellectual Property and Confidentiality items, and only a few of the Engagement and Social Sustainability items as critical for their success.

The Openness and Transparency cluster is considered very relevant (20/100 points given in clustering). This seems, however, odd since Intellectual Property and Confidentiality – as part of Openness and Transparency aspects – were not picked as relevant.

3.2. Tecnalia

3.2.1. About the Project

The SHAPE Lab is part of Tecnalia and consists of experts in social aspects of technology that will provide integral RRI support to researchers and their working groups. The SHAPE Lab intends to systematically introduce and implement RRI principles in the different divisions of Tecnalia and to promote the uptake of social and ethical elements into the products and services from an early stage of development.

RRI-relevant activities include:
The SHAPE Lab creates a coherent and overarching RRI approach that unifies processes, instruments, and criteria for RRI at the management level. It aligns the RRI roadmap developed within Co-Change with the organisational Strategic Plan of Tecnalia.

It initiates a substantial internal and external communication campaign to raise awareness of RRI and its importance, and develops an internal capacity building programme for staff, which will also serve as a location for capturing learning and experiences of RRI within the organisation. The SHAPE Lab aims to provide integral RRI support to researchers and their working groups within Tecnalia as well as to their external partners and affiliates.

Key Performance Indicators:
The SHAPE Lab has selected KPIs that they associate with diversity, design, RRI, and impact/outreach. The 'RRI' and 'Outreach' KPIs relate well to their communication campaign goals. In addition, they strive to introduce RRI to their staff. Hence 'Gender and Diversity' might prove a valuable indicator for this mission.

The SHAPE Lab predominantly focuses on the *process* of their work (9 process indicators). Their KPIs relate to Anticipation and Reflection, Diversity and Inclusion, and some to Responsiveness and Adaptive Change. Research and innovation *product* indicators (3 product indicators) relate to monitoring, lobbying for, and promoting results. The SHAPE Lab has additionally created three *custom* indicators that relate to developing new socio-ethical tools and methodologies to include socio-ethical aspects in R&D, and to continuously disseminate and exploit their R&D results.

3.2.2. Data Analysis

Table 5: *Clusters of indicators as identified per Co-Change Lab*

SHAPE Lab	***Points out of 100***
Gender and Diversity	5
Socio-ethical Design	35
RRI Portfolio	40
RRI Ecosystem Impact	10
Scientific Outreach	10

Table 6: *Comparison of our framework with the indicators identified by the Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering by SHAPE Lab***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	2/0
Engagement	8/2	1/0
Anticipation and Reflection		
Institutional Landscape	2/1	0/1
(Impact) Assessment	4/4	4/1
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	1/0
Environmental Sustainability	1/3	0/0
Social Sustainability	1/3	1/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	0/0

	# process items/# product/service items (clustering from literature study)	*Clustering by SHAPE Lab*
Open Access and Transparency	3/2	0/1
Custom Indicators		
We will continuously improve our portfolio with socio-ethical tools and methodologies	N/A	1
Socio-ethical aspects are actively included in the R&D team activities	N/A	1
We continuously disseminate and exploit research outputs and outcomes	N/A	1
TOTAL (product/process/custom)	27/20/0 (47)	9/3/3 (15)

In the case of Tecnalia, Socio-ethical Design and RRI Portfolio aspects seem most important (together 75/100 points). But only limited aspects on the product level were chosen (3 out of 20, over 9 out of 27 process items) This indicates a high process focus, and less product focus. None of the Public and Ethical Issues or Environmental Sustainability indicators were selected, as well as none of the Intellectual Property and Confidentiality aspects. In contrast, in total 3 new RRI-relevant items were added as customised indicators.

3.3. Faculty of Agriculture of the University of Novi Sad

3.3.1. About the Project

The RRIzing Lab is mainly focused on institutional implementation of five RRI keys – Science Education, Gender Equality, Public Engagement, Ethics and Open Access. The mentioned keys are to be analised, promoted, and monitored at the Faculty of Agriculture (PFNS) of the University of Novi Sad. Examples of good practice of RRI shall be presented to the whole university to serve as a precedent for improvement of these aspects at other faculties.

RRI-relevant activities include:

The major goals of the RRIzing Lab are to have an assessment of the current state of certain RRI keys (Gender Equality, Open Access, Science Education and Public Engagement) at PFNS, and to detect not only weak points, but also good practices that are already present, but not recognised as RRI. Moreover, the goal is to promote good practices further and beyond PFNS, and to improve detected weak points at

PFNS. This will be achieved by experimenting and designing concepts for institutional change within this Co-Change Lab and promoting them throughout the rest of the university. The goal is also to empower responsible research and innovation, by employing a bottom-up approach (by influencing mindset of all the actors involved in teaching and research), together with a top-down approach (implementation of institutional changes, by actively involving top management).

Key Performance Indicators:
The RRIzing Lab has selected KPIs that they predominantly associate with system-wide inclusion, engagement, and alignment of ethical values. In addition, institutional activities are important to them as well. Their inclusive, engaging, and aligning clusters match with their ambition to employ aligned bottom-up and top-down approaches to drive institutional change. The RRIzing Lab predominantly focuses on the process of their work (15 process indicators). Their KPIs relate to Diversity and Inclusion and Anticipation and Reflection, although they also selected KPIs from the remaining categories. Overall, the RRIzing Lab has chosen many KPIs, indicating the need for a radical change on many fronts. Research and innovation product indicators (9 product indicators) relate to the dissemination of results via lobbying, science education, and institutional mechanisms. The RRIzing Lab has not developed any custom indicators, which implies that the suggested indicators might have covered their areas of interest.

3.3.2. Data Analysis

Table 7: *Clusters of indicators as identified per Co-Change Lab*

RRIzing	***Points out of 100***
Inclusion	9
Public Engagement	20
Stakeholder Alignment	35
Institutional Activity	12
Ecosystem	12
Ethical Issues	12

Table 8: *Comparison of our framework with the indicators identified by the Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering from RRIzing***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	2/2
Engagement	8/2	4/1
Anticipation and Reflection		
Institutional Landscape	2/1	2/1
(Impact) Assessment	4/4	2/1
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	1/0
Environmental Sustainability	1/3	1/1
Social Sustainability	1/3	1/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	0/1

	# process items/# product/service items (clustering from literature study)	*Clustering from RRIzing*
Open Access and Transparency	3/2	2/2
TOTAL (product/process/custom)	27/20/0 (47)	15/9/0 (24)

The RRIzing Lab selected all Institutional Landscape, as well as most of the Open Access and Transparency, and Diversity and Gender Equality indicators. On the process level, only 15 aspects (of 27) were selected, and 9/20 on the product level. Public Ethical Issues were not considered relevant.

3.4. NEN Stichting Koninklijk Nederlands Normalisatie Instituut

3.4.1. About the Project

The Royal Netherlands Standardisation Institute (NEN) is an organisation that connects parties and stakeholders – that together form committees – to ensure that they can establish agreements such as standards and guidelines. NEN plays a crucial role in connecting actors in innovation ecosystems. In addition, these agreements have a tremendous impact on society, the economy, and technological developments.

RRI-relevant activities include:
The Delft University of Technology, as part of Co-Change, is currently exploring what factors can obstruct and increase the social responsibility of the standardisation process. In addition, various workshops were conducted. Based on those insights, a working group will be established that enhances the responsibility of NEN's practices.

Key Performance Indicators:
NEN has selected KPIs that they predominantly associated with inclusion and market acceptance of standards. In addition, NEN intends to improve activities in relation to its responsive and anticipatory capacity. The first two clusters relate to the notion that standards are collectively shaped and if all parties agree, then this will lead to a high adoption of the standard. In particular, the indicators to engagement are ought to be most important for them. To increase the positive social impact of standards, NEN selected indicators that relate to anticipating impacts and to quickly respond if necessary. NEN predominantly chose *process* indicators (15) as they are a process facilitator and have a limited influence on the product. Nevertheless, 9 *product* indicators were chosen to explore how the products can be guided.
NEN has not developed any custom indicators, which implies that the suggested indicators might have covered their areas of interest.

3.4.2. Data Analysis

Table 9: *Clusters of indicators as identified per Co-Change Lab*

NEN	***Points out of 100***
Inclusion	30
Reflexivity	5
Anticipation	13
Market Acceptance	39
Responsiveness	13

Table 10: *Comparison of our framework with the indicators identified by Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering from NEN***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	1/1
Engagement	8/2	6/2
Anticipation and Reflection		
Institutional Landscape	2/1	1/0
(Impact) Assessment	4/4	1/2
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	2/1
Environmental Sustainability	1/3	0/1
Social Sustainability	1/3	1/1
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	1/0
Open Access and Transparency	3/2	2/0
TOTAL (product/process/custom)	27/20/0 (47)	15/8/0 (23)

NEN places Market Acceptance next to Inclusion in terms of importance for success (together 69/100 points). The Engagement indicators have been widely selected (6/2 out of 8/2 for process and product indicators respectively). Interestingly, Public and Ethical Issues indicators were not selected, while Reflexivity, Anticipation, and Responsiveness as clusters received 31 points out of 100. Also, none of the Open Access and Transparency' process indicators were selected by NEN.

3.5. DCE

3.5.1. About the Project

One of the sub-organisations of the Technical University of Delft that stimulates entrepreurship is the Delft Centre for Entrepreneurship (DCE). DCE's vision is to become a global leader in both research and education in the areas of entrepreneurship and innovation. The former is strived for by means of high-quality education programmes at a bachelor, master, and even PhD level. These programmes are not merely theoretical but have a hands-on component as well. This allows the programme's approximate 750 students to experience what it is like to start their technology-based firms and venture projects. Furthermore, DCE has strong links to the highly successful YES!Delft university-linked business incubator. For these reasons, they play an important role in training our next generation of entrepreneurs that can shape the societies of tomorrow. DCE's vision is to support the YES!Delft incubator to become a global leader in training and facilitating responsible and innovative start-ups.

Problems Confronted

DCE has been non-responsive throughout the project. Hence, creating commitment and achieving collaboration appeared unattainable. A reason for this might be the added workload for DCE due to the pandemic. We tried to get into contact with different contact persons. However, this did not to work until now. For that, we do not have any data from DCE yet. In case DCE continues to be non-responsive, TUD would follow the same action plans with DCE's successor.

3.6. Council of Tampere Region

3.6.1. About the Project

The Council of Tampere Region operates as a regional development and regional planning authority. It pursues the interests of the region, our 22 municipalities, inhabitants, and businesses and carries out research, planning, and analyses. It promotes the region's interests nationally and internationally. Furthermore, it coordinates the cooperation between the various actors and influences within the region. The emphasis in the regional planning and other regional development is on matters regarding vision and strategy. The CTR aims for the wide integration of responsibility in the regional innovation ecosystem to become a new normal. The goal of the Co-Change Lab is to incorporate the concept of RRI evaluation into future funding calls.

RRI-relevant activities include:

The Council of Tampere Region Co-Change Lab is increasing regional competencies on how to include elements of responsible innovation into innovation projects and funding. The work in the Lab is going to be based on the previous experiences within Co-Change by implementing ethical evaluation into the European Regional Development Fund. By using those experiences, we develop an understanding on how elements of RRI can be used in regional development and how to increase the

awareness of responsibility of innovations in different groups and networks of innovation actors. We have already started this process by organising a workshop focusing on how to evaluate and integrate RRI elements at the level of an innovation project. The target group of the event consisted of the funding applicants. This event served its purpose regarding awareness raising. We also got great results from interviews with the projects that had used the RRI elements in their project applications. These provided us with useful information on how to continue the development process. The next step is to recognise the key actors of the innovation ecosystem that should be included in the discussions on regional RRI development for them to disseminate the knowledge and increase the awareness in the region.

Key Performance Indicators:
CTR has selected KPIs that predominantly revolve around Diversity, Engagement, and Inclusion. In addition, CTR values Legitimacy. This resonates with their aim to incorporate regional perspective and values in their regional funding policies. CTR chose almost only *process* indicators (11). This could be because their work focuses on the process of evaluating funding calls, whereas the exact products might predominantly be the result of beneficiaries. 2 *product* indicators were chosen. These relate to the assessment of how their products align with values and relate to the necessary lobbying activities for decision making and policy development. CTR has not developed any custom indicators, indicating that the suggested indicators suffice.

3.6.2. Data Analysis

Table 11: *Clusters of indicators as identified per Co-Change Lab*

Council of Tampere Region	***Points out of 100***
Ethical Diversity	25
Inclusion	30
Engagement	30
Legitimacy	15

Table 12: *Comparison of our framework with the indicators identified by the Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering from CTR***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	1/0

	# process items/# product/service items (clustering from literature study)	*Clustering from CTR*
Engagement	8/2	6/0
Anticipation and Reflection		
Institutional Landscape	2/1	1/1
(Impact) Assessment	4/4	1/1
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	1/0
Environmental Sustainability	1/3	0/0
Social Sustainability	1/3	1/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	0/0
Open Access and Transparency	3/2	0/0
TOTAL (product/process/custom)	27/20/0 (47)	11/2/0 (13)

The Council of Tampere Region selects Inclusion and Engagement aspects as the main success-related KPI (together 60/100 points). 11 process indicators (of 27), while only 2 product indicators (of 20) were selected, reinforcing the idea that interests are considered more important for project success than process success.
Whereas Ethical Diversity was selected as one of the only 4 clusters with 25 points out of 100. None of Open Access and Transparency indicators were selected as relevant items, and neither were Environmental Sustainability and Public and Ethical Issues. This will be discussed in an interview with the Co-Change Lab.

3.7. AIT

3.7.1. About the Project

AIT focuses on the challenges that surface during the application of machine learning and artificial intelligence. While artificial intelligence and machine learning are very helpful and promising technologies that pervade our professional as well as our private lives, they can be the source of unfamiliar problems or even dangers. For example, facial recognition software or smartphone data by mobility analytics raise critical questions about data protection, privacy, ethics, and even democracy. By the establishment of the Co-Change Lab, the motivation was to understand the background of these technologies and the way that problems of machine learning arise. The different ways of thinking about these technologies are being investigated in the Co-Change Lab: the approaches of IT researchers and those of social scientists. Co-Change Lab members are also working on raising awareness on the challenges and changing practices at their own institute and beyond (by mapping the researchers and other stakeholders who would cooperate with them). As there is a lack of incentives for research funding and performing organisations to think about the challenges of machine learning technologies and to minimise their potentially problematic social and ethical consequences, the AIT Co-Change Lab would like to find useful practices to make this technology more human-centered and less dangerous for our lives.

RRI-relevant activities include:
The AIT Co-Change Lab wants to better understand the relationship of machine learning and artificial intelligence to questions of data protection, privacy, and ethics. This importantly includes the very framework conditions under which these practices take place, such as how the calls of research financing organisations are structured.
AIT wants to raise awareness and contribute to data protection, privacy, and ethics by changing research-related practices inside and outside AIT through discussions in workshops and conferences as well as research projects. Furthermore, it aims to institutionalise research practices, e.g. guidelines and support structures on ethics-related questions, open science and open access, stakeholder engagement, and gender relations, to this end.

Key Performance Indicators:
AIT has selected KPIs that they associated with Inclusion, Ethics, Risks, and Technological Trends. The importance of these clusters is relatively balanced. AIT therefore seems to be interested in the inclusive risk assessments of emerging technologies. This strongly matches AIT's goal of focusing on the challenges that arise from new digital technologies. AIT chose 10 *process* indicators that touch upon inclusivity, TA, and transparency/openness. 4 *product* indicators were chosen which aim to capture to what extent AIT is able to mitigate risks and develop better products/services. AIT has not developed any custom indicators, indicating that the suggested indicators suffice.

3.7.2. Data Analysis

Table 13: *Clusters of indicators as identified per Co-Change Lab*

AIT	***Points out of 100***
Diversity	25
Stakeholders	20
Technology Trends	15
Ethics	25
Risks	15

Table 14: *Comparison of our framework with the indicators identified by the Co-Change Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering from AIT***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	2/2
Engagement	8/2	1/0
Anticipation and Reflection		
Institutional Landscape	2/1	0/0
(Impact) Assessment	4/4	2/0
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	1/1
Environmental Sustainability	1/3	0/0
Social Sustainability	1/3	1/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	0/0
Open Access and Transparency	3/2	3/1
TOTAL (product/process/custom)	27/20/0 (47)	10/4/0 (14)

AIT selected 14 items to be relevant, 10 process items (of 27) and 4 product items (of 20). Diversity and Ethics are considered most important (each 25/100). None of the Public and Ethical Issues indicators were selected. This will be discussed with the Co-Change Lab in an open discussion/interview.
AIT together with WWTF have selected the least Engagement indicators among all Co-Change Labs – a total of 1 indicator (1/0 of 8/2 for process and product indicators).

Whereas Open Access and Transparency was selected as one of the main KPIs (3/1 of 3/2), Institutional Landscape, Environmental Sustainability, and Intellectual Property and Confidentiality (IPR) were not selected at all and seem to be irrelevant for this Co-Change Lab.

3.8. WWTF

3.8.1. About the Project

For WWTF as a scientific funding agency, the main interface for including RRI principles consists of our "Funding Guidelines" which specific funding instruments, funding criteria, and selection procedures. As the Funding Guidelines are due for an update, this provides the opportunity to take into consideration RRI principles (especially Open Access and Open Science) and their potential inclusion at the end of this process.

RRI-relevant activities include:
WWTF identified its current needs and opportunities in terms of RRI and ideated new promising RRI practices. WWTF is subsequently experimenting with these practices. Here the focus lies on citizen engagement and building change coalitions. Successful practices will then get institutionalised.

Key Performance Indicators:
WWTF has selected KPIs that they associated with communication (dissemination, learning, etc.) both in-, and outward. This is reflected by KPIs related to Openness and Transparency, and KPIs related to Engagement with the public. In addition, Gender Equality and Diversity appear to be of strategic importance for WWTF. WWTF chose 4 *process* indicators and 2 *product* indicators. WWTF is unique in the sense that they have developed relatively many custom indicators (5). Almost all indicators are perceived to be equally important, there is one exception: Less important is the ability of WWTF to check if funding applicants have ethics votes before starting a proposal.

3.8.2. Data Analysis

Table 15: *Clusters of indicators as identified per Co-Change Lab*

WWTF	***Points out of 100***
Input from Outside	35
Gender and Diversity	35
Ethics	5
Outreach and Transfer	25

Table 16: *Comparison of our framework with the indicators identified by the Co-Chhange Labs*

	# process items/# product/service items (clustering from literature study)	***Clustering from WWTF***
RRI Indicators		
Diversity and Inclusion		
Diversity and Gender Equality	3/2	1/1
Engagement	8/2	0/0
Anticipation and Reflection		
Institutional Landscape	2/1	0/0
(Impact) Assessment	4/4	1/0
Public and Ethical Issues	1/1	0/0
Responsiveness and Adaptive Change		
Risk Identification and Mitigation	2/1	0/0
Environmental Sustainability	1/3	0/0
Social Sustainability	1/3	0/0
Openness and Transparency		
Intellectual Property and Confidentiality	2/1	1/0
Open Access and Transparency	3/2	1/1
Custom Indicators		

	# process items/# product/service items (clustering from literature study)	*Clustering from WWTF*
Within the funding program we strive for equal participation of women and men in both research and project management	N/A	1
The integration of gender dimensions is actively asked for in the application	N/A	1
Societal values (privacy, safety, health, security, data ownership, etc.) are actively included in the design process of this funding programme. (Digital Humanism)	N/A	1
Within this funding programme we try to increase the input of civil society groups/NGOs in the research	N/A	1
Within this funding programme we ask applicants to show that they have ethics votes before they start a proposal	N/A	1
TOTAL (product/process/custom)	27/20/0 (47)	4/2/5 (11)

WWTF selected Input from Outside and Gender and Diversity as the most important clusters (together 70/100). In total, most of the RRI-related aspects were not considered as relevant (WWTF has selected a total of 6 indicators out of 47). WWTF has added 5 customised indicators.

WWTF is the only organisation that considered engagement as fully irrelevant, despite the fact that Outreach and Transfer and Input from Outside scored pretty high under their clusters.

4. Identified Indicators in Research Funding and Performing Co-Change Labs

Section Overview and Relevance

As one of the Co-Change objectives, we set out to do a comparative analysis of all Co-Change Lab types of organisations, i.e. research performing and funding organisations. However, as indicated in the section above, we did not acquire all the measurement points for the quantitative assessments of all the Co-Change Labs yet, since one Co-Change Lab (DCE) did not provide us with the necessary data (in spite of repeated requests from our side). As a result, we can only do a comparative analysis for the field for which we did acquire enough data: the research funding organisations, with two Co-Change Labs, and research performing organisations with five Co-Change Labs.

Introduction

Out of 47 indicators, 40 (85%) functioned as 'relevant' and 7 (15%) functioned as 'irrelevant' for the research performing Co-Change Labs and 19 (40%) functioned as 'relevant' and 28 (60%) functioned as 'irrelevant' for the research funding Co-Change Labs. Of these 47 'relevant' indicators, 42 indicators emerged as 'relevant' for the Labs. E.g., the indicator "Within the project, we value and nourish diversity (in the broadest sense) in both research, innovation, and project management" as an indicator under 'Diversity & Inclusion: Diversity and Gender Equality' category is implied as 'relevant', whereas the indicator "This project provides substantial environmental benefits to society, compared to available alternatives" as an indicator under 'Responsiveness and adaptive change: Environmental Sustainability' category is implied as 'irrelevant' for all research performing or/and funding organisations.
In order to help derive our RRI indicators for research performing and funding organisations, the Co-Change Labs have identified relevant indicators within their projects from 47 RRI indicators.

Although the selection of relevant indicators of each Co-Change Lab varied in RRI sub-categories, the fact that these variations probably reflect differences in the stage of implementation of RRI within companies, the result supports our ideas on later re-categorising of indicators through an iterative process.

We asked the Co-Change Labs to sort the 'relevant' items into clusters of items. The comparison of clusters of indicators identified by seven of the Co-Change Labs demonstrates that there are clearly common clusters among them. Common clusters are 'Inclusion', 'Diversity', 'Ethics', and 'Ecosystem'.

We also asked the organisations to score the relative importance of the identified clusters compared to one another, by distributing 100 points over their identified clusters (Figure 4). Although the common clusters' importance may differ from one Co-Change Lab to another, it was evidenced that these clusters were likely seen as important for other Labs within same type of organisation, albeit at varying rates.

Table 17: *Overview of total number of indicators*

Co-Change Labs	Process Indicators	Product Indicators
RRI Indicators	27	20

Table 18: *Identified RRI indicators from literature study*

RRI (topic/cluster)	# process items/# product/service items
Diversity and Inclusion	
Diversity and Gender Equality	3/2 (3 process items/2 product/service items)
Engagement	8/2
Anticipation and Reflection	
Institutional Landscape	2/1
(Impact) Assessment	4/4
Public and Ethical Issues	1/1
Responsiveness and Adaptive Change	
Risk Identification and Mitigation	2/1
Environmental Sustainability	1/3
Social Sustainability	1/3
Openness and Transparency	
Intellectual Property and Confidentiality	2/1
Open Access and Transparency	3/2

The indicators that were chosen most frequently relate to signalling new future technological trends; including societal values in the design process; valuing and nourishing diversity; learning from stakeholders; and communicating results to stakeholders. Below is the list of frequently selected indicators by the Co-Change Labs.

KPI	**Freq. selected**
We continuously consult other researchers and research projects to signal new and future technological trends	8

KPI	Freq. selected
Societal values (privacy, safety, health, security, data ownership, etc.) are actively included in the design process of this project.	8
Within the project, we value and nourish diversity (in the broadest sense) in both research, innovation, and project management	6
Within this project we adopt a learning approach to adapt the research programme according to the viewpoints and ideas of other stakeholders.	6
Research/innovation activities and results are actively and transparently communicated within the research network (stakeholders) during the project	6
Diversity allows us to better innovate and thus results in better products/services	5
Within this project we include input of end users/customers in the design and development process	5
Within our project team we regularly organize group deliberation (employee engagement, trainings, discussions, etc.) on societal/social/public/policy aspects	5
This project uses institutional mechanisms for promoting the results of our R&D activities to involved stakeholder groups after these activities are finished	5
Customised indicators	5
Within the project we have equal participation of women and men in both research and project management	4
Within our project we use tools and mechanisms for organising dialogue with stakeholder on appraisal / ethical acceptability	4
Within this project we used a systematic approach (specified how, when and why) from the beginning to include various stakeholder viewpoints on a wide set of values (technical, social, ethical, legal, etc.)	4
Within this project we include input of civil society groups/NGOs in the design and development process	4
We organize science communication/education activities aimed at educating citizens and generating awareness of aspects/issues of the innovations we are working on	4
We have an official code of conduct/ethical review board that safeguards that this project can be carried out without issues	4
For the outcome of this project becoming widely adopted, this project requires lobbying activites in the domain of decision making and policy development	4
We use ongoing, continuous monitoring of ethical aspects in this project	4
We have assessed the alignment of stakeholder values and our product/service values	4
Gender dimensions are actively integrated in research and innovation outcomes	3

KPI	Freq. selected
Within this project we include input of policy makers in the design and development process	3
Within this project we apply risk identification and risk management strategies to adjust the course of our project.	3
This project uses institutional mechanisms for promoting the results of our R&D activities publicly after these activities are finished	3
Our project makes use of virtual platforms for data exchange (sharing) with clients	3
We have organisational arrangements to progressively eliminate barriers impeding women's advancement to top positions and factors inducing women to drop out of science	2
Within this project we include input of possible non-users/indirect stakeholders in the design and development process	2
Within this project we include input of suppliers (materials and/or knowledge) in the design and development process	2
Within this project we include input of funders/investors in the design and development process	2
Current regulation, standards, and legislative landscape for this type of project provides no problems to our project	2
We use ongoing, continuous monitoring of socioeconomic aspects in this project	2
We have done analysis on (or have monitored) the socioeconomic impact of the products/services of this project	2
We document best practices about ethical acceptability for this type of project during its development	2
Initially identified risks have preventively been mitigated, leading to a better product/service	2
Environmental values are actively included in the innovation process	2
This project does not influence the ecosystem or environment in a harmful way	2
The implementation of the outcomes of this project in society is not dependent on societal support	2
Confidentiality of methods and results is not an issue within this research and development project	2
The outcome of this project is assessed actively using user experience tools	1
Societal acceptance is no major risk for this project	1

KPI	Freq. selected
This project leads to improved resource use efficiency (water, materials, energy, pollution, waste)	1
This project provides substantial societal benefits, compared to available alternatives (health, safety, solidarity, equity)	1
The implementation of the outcomes of this project in society are not hampered by issues of trust	1
Within this project, IP in the form of patent applications (from our side) or acquiring licenses (from others) do not play a large role	1
Personal data and privacy issues do not play a major role in this project, once its outcomes are used	1
Our project makes use of virtual platforms for data exchange for use inside the company (e.g. laboratory notebooks, meeting minutes, etc.)	1

Research Funding Co-Change Labs' Indicators

We checked how the indicators that the Co-Change Labs selected relate to our own clustering of indicators. Table 6 shows an overview. e.g. for the "Diversity and Gender Equality" aspect, Council of Tampere Region scores 1, indicating that of the 3 process items, they identified 1 as relevant, and of the 2 product items, they considered 0 to be relevant. The research funding organisations seem to favour process indicators that predominantly relate to Engagement. On the other hand, Environmental Sustainability and Public and Ethical Issues are considered less relevant. Most weight is given to clusters/KPIs regarding the interaction with society.

Table 19: *Comparison of our framework (Table 5) to the indicators identified by our 2 research funding organisation (RFO) Co-Change Labs.*

	# process items/# product items	Council of Tampere Region	WWTF
RRI			
Diversity and Inclusion			
Diversity and Gender Equality	3/2	1/0	1/1
Engagement	8/2	6/0	0/0
Anticipation and Reflection			
Institutional Landscape	2/1	1/1	0/0
(Impact) Assessment	4/4	1/1	1/0
Public and Ethical Issues	1/1	0/0	0/0
Responsiveness and Adaptive Change			
Risk Identification and Mitigation	2/1	1/0	0/0
Environmental Sustainability	1/3	0/0	0/0
Social Sustainability	1/3	1/0	0/0
Openness and Transparency			
Intellectual Property and Confidentiality	2/1	0/0	1/0
Open Access and Transparency	3/2	0/0	1/1
Custom Indicators	0	0	5

Table 20: *Point distribution over clusters of indicators per change labs of RFOs. The sum of the scores is 100 for each Co-Change Lab.*

Council of Tampere Region	Points out of 100	WWTF	Points out of 100
Ethical Diversity	25	Ethics	5
Inclusion	30	Input from Outside	35
Engagement	30	Outreach and Transfer	25
Legitimacy	15	Gender and Diversity	35

Research Performing Co-Change Labs' Indicators

Furthermore, we checked how the indicators of research performing organisations relate to our own clustering of indicators. Table 7 shows an overview. E.g., for the

"Engagement" aspect, NEN scores 8, indicating that of the 8 process items, they identified 6 as relevant, and of the 2 product items, they considered 2 to be relevant. Research performing organisations seem to favour process indicators, implying that they deem the process more important than the products. Overall, "Diversity and Gender Equality", "Engagement", and "(Impact) Assessment" were considered the most important areas of RRI. Clusters such as "Environmental Sustainability", "Intellectual Property and Confidentiality", and "Public and Ethical Issues" were considered less important or not important at all. These results are reflected by their own cluster names which revolve predominantly around inclusion/engagement, and awareness/reflection.

Table 21: *Comparison of our framework (Table 5) to the indicators identified by our 5 research performing organisation (RPO) Co-Change Labs.*

RRI	# process items/# product items/# custom items	PFNS	Tecnalia	VTT	AIT	NEN
Diversity and Inclusion						
Diversity and Gender Equality	3/2	2/2	2/0	1/1	2/2	1/1
Engagement	8/2	4/1	1/0	2/1	1/0	6/2
Anticipation and Reflection						
Institutional Landscape	2/1	2/1	0/1	1/1	0/0	1/0
(Impact) Assessment	4/4	2/1	4/1	4/1	2/0	1/2
Public and Ethical Issues	1/1	0/0	0/0	1/0	0/0	
Responsiveness and Adaptive Change						
Risk Identification and Mitigation	2/1	1/0	1/0	1/0	1/1	2/1
Environmental Sustainability	1/3	1/1		0/0	0/0	0/1
Social Sustainability	1/3	1/0	1/0	1/0	1/0	1/1
Openness and Transparency						

	# process items/# product items/# custom items	PFNS	Tecnalia	VTT	AIT	NEN
Intellectual Property and Confidentiality	2/1	0/1	0/0	0/0	0/0	1/0
Open Access and Transparency	3/2	2/2	0/1	1/2	3/1	2/0
Custom Indicators	0	0	**3**	**3**	0	0
Total		15/9/0 (24)	9/3/3 (15)	12/6/3 (21)	10/4/0 (14)	15/8/0 (23)

Table 22: *Point distribution over clusters of indicators per Co-Change Labs of RPOs. The sum of the scores is 100 for each Co-Change Lab.*

PFNS	Points	Tecnalia	Points	VTT	Points	AIT	Points	NEN	Points
Inclusion	9	Gender and diver-sity	5	Diversity	15	Diversity	25	Inclusion	30
Public Engagement	20	Socio-ethical design	35	Aware-ness raising in society	25	Stake-holders	20	Reflexivity	5
Stake-holder Alignment	35	RRI portfolio	40	Open-ness	20	Techno-logy Trends	15	Anticipation	13
Institutional Activity	12	RRI Ecosystem impact	10	Transformation	15	Ethics	25	Market Acceptance	39
Eco-System	12	Scien-tific Outreach	10	Aware-ness raising in the ecosystem	25	Risks	15	Respon-siveness	13
Ethical Issues	12								

Analysis between RPO and RFO fields

RPOs and RFOs appear to differ in the RRI areas that they value. While both groups favour process indicators and interaction with society (inclusion/engagement), RFOs have chosen less indicators as relevant. In addition, RFOs did not value “Risk Identification and Mitigation”, and “Impact Assessment” as much as RPOs did. Both groups found “Environmental Sustainability” not relevant.

We will further work on tailor-making the indicators, monitoring the Co-Change Labs and we will share the identified possible barriers for the inclusion of RRI in the next deliverable of WP6 (D6.2).