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SUPER MoRRI – Scientific understanding and provision of an enhanced and robust monitoring system for RRI

D.6.1 Report on RRI Added Values Assessment Tools and Methods

Author(s): Emad Yaghmaei (TU Delft)

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EXECUTIVE SUMMARY

Description of work and task

Task 6.1: Library of tools and methods for assessing/measuring the added value of RRI (M1-M15; Lead: TUD, supported by CSIC, IHS, AU, UL)

Task activities include:

- The creation of a library and assessment of RRI, in coordination with the WP1.
- Collect reports and other data relating to indicators from the pilot user interactions, Task 7.3.
- Identifying risks and challenges of using self-assessment tool.
- Analysis of RRI assessment approaches from pilot user interactions. The analysis will focus on the uptake of RRI methods and how it varies across different stakeholders.
- Write report/publication.

Work progress and achievements

Task 6.1: Library of tools and methods for assessing/measuring the added value of RRI (M1-M15; Lead: TUD, supported by CSIC, IHS, AU, UL)

- **<DONE>** The creation of a library and assessment of RRI, in coordination with the WP1.
- **<In Progress>** Collect reports and other data relating to indicators from the pilot user interactions, Task 7.3.
- **<DONE>** Identifying risks and challenges of using self-assessment tool.
- **<In Progress>** Analysis of RRI assessment approaches from pilot user interactions. The analysis will focus on the uptake of RRI methods and how it varies across different stakeholders.
- **<DONE>** Write report/publication.
- **Associated output:**
 - Yaghmaei E., Van de Poel I. (2020). "Assessment of Responsible Innovation: methods and practices" Edited by Emad Yaghmaei (WP leader) and Ibo van de Poel, Routledge, Publication production phase
 - Yaghmaei E. (2020). "Standardisation of Responsible Innovation", ISPIM Innovation Conference, In press
 - Ceicyte J., Petraite M., Blok V., Yaghmaei E. (2020). "Responsible Innovation in Industry: The role of a Firm's Multi-Stakeholder Network", Bio#Futures: Foreseeing and Exploring the Bioeconomy, Springer Nature AG, In review process
 - Yaghmaei, E., Porcari, A., Mantovani, E., Flipse, S. M. (2019). "Monitoring the Value of Responsible Research and Innovation in Industrial Nanotechnology Innovation Projects" in "Nanotechnology: Regulation and Public Discourse" Edited by Iris Eisenberger, Angela Kallhoff, and Claudia Schwarz-Plasch, Rowman & Littlefield publisher, 2019. DOI: 10.13140/RG.2.2.21560.39686

Deliverable overview

Table 1: Deliverable 6.1 overview

No.	Deliverable Title	Lead beneficiary	Type	Diss. Level	Due/Delivery date
D6.1					

D6.1	Report on RRI added values assessment tools and methods	TU Delft	Report	Public	M15
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Deviations from the plan and problems encountered

- Task adjustments
 - For **Task 6.1** and its sub-task, “Collect reports and other data relating to indicators from the pilot user interactions, Task 7.3.”, the original project plan was to include also the pilot user interactions from WP7. However, as we don’t yet have any results of pilot user interactions, reports and other data relating to indicators from WP7 are going to be reposted in the deliverable linked to Task 7.3 at later stage of the project.
 - For **Task 6.1** and its sub-task, “Analysis of RRI assessment approaches from pilot user interactions. The analysis will focus on the uptake of RRI methods and how it varies across different stakeholders.”, the original project plan was to include also the pilot user interactions from WP7 for a comparative analysis. However, due to a delay on WP7, we cannot do the comparative analysis at this stage. As such, this proposed comparative analysis could not be carried out. Still, we do develop the self-assessment tool to be able to functionally compare other projects. But unfortunately, we could not carry out such analyses in D6.1 and in WP6. Instead, a comparative analysis of pilot user interactions is reported in WP7.

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List of Acronyms and Abbreviation

< KPI >	< Key Performance Indicators >
< MoRRI >	< Monitoring the Evolution and Benefits of Responsible Research and Innovation >
< RI >	< Research Innovation >
< RRI >	< Responsible Research and Innovation >
< SDGs >	< Sustainable Development Goals >
< SME >	< Small or Medium-sized Enterprise >

1. THE INVENTORY OF RESPONSIBLE RESEARCH AND INNOVATION ASSESSMENT TOOLBOX

To address first sub-task of Task 6.1, namely “The creation of a library and assessment of RRI”, in coordination with WP1, we developed a toolbox for assessing Responsible Research and Innovation (RRI), which is going to be integrated into Task 6.3 output as part of the project Dashboard.

To develop a toolbox for assessing RRI, assessment/monitoring approaches on RRI and relevant tools had to be identified as a first step. This had to result in a list of tools. This inventory maps existing assessment/monitoring tools against the Responsible Research and Innovation (RRI) or similar concepts e.g. Sustainable Development Goals (SDGs). It allows users to explore tools that may be useful when assessing their organization’s impact on RRI.

The inventory will be visualised on the SUPER-MoRRI website and can be downloaded as an MS Excel list with the tools and characteristics like name, developer, aim and target area of the tool. Filtration mode is available on the SUPER-MoRRI website to explore tools for a specific RRI principle.

The inventory is a living work and it will be expanded as soon as new tools are developed or identified.

1.1. How the tools were selected

To develop the list of tools the following activities were undertaken:

- Desk research on RRI approaches and RRI instruments.
- Desk research on assessment/monitoring tools.

The desk research provided the starting point for a list of tools to be considered for the toolbox. The list with tools was scrutinized and the tools to be included in the toolbox had to be selected. As the toolbox is to be used for assessment/monitoring, we first selected the tools that could be used for this purpose. Then the tools were evaluated on their usability in practice. The final selection of tools was aimed at a balanced covering of all RRI policy agenda areas¹ and R&I process dimensions².

1.1.1. Method

To include both obvious and less obvious RRI assessment tools, we first wanted to find which tools could theoretically and practically contribute to both ‘RRI Policy Agenda Areas’ (i.e. gender equality, ethics, open access, science and education, & public engagement) and ‘R&I Process Dimensions’

¹ Gender, ethics, open access, science and education and public engagement

² Diversity and inclusion, anticipation and reflection, openness and transparency, responsiveness and adaptive change

(diversity and inclusion, anticipation and reflection, openness and transparency, & responsiveness and adaptive change). We also wanted to identify what is the value of monitoring/assessing these aspects (from whichever perspective). To find such tools, we explored both literature in the field of innovation management (see Cooper & Kleinschmidt, 1995; Van der Panne et al., 2003; Tepic et al., 2013) and responsible innovation (see Hin et al., 2014; Raven et al., 2015; Scholten et al., 2016).

After the literature review, we adopted an approach similar to the systematic reviews in which systematic searches and formal summaries of the literature are used to identify and classify results of all major studies on a particular topic (Higgins and Green, 2006). The steps are as follows:

- Step 1: Searching ‘RRI Tool’ platform for all records related to ‘Assessment of RRI’
- Step 2: Removing duplicates
- Step 3: Removing bad records: All the tools in the resulting list are manually reviewed. We delete those records that appeared to be irrelevant, in that they were completely unrelated to ‘Assessment of Responsible Innovation or/and RRI’.
- Step 4: Snowballing and identify more relevant ‘Assessment Tools’

We thus searched the ‘RRI Tools’ database for the type of ‘Tools’ that had either ‘RRI’, or ‘Responsible Innovation’, or ‘Responsibility’, or ‘Monitoring’, or/and ‘Assessment’ in the search field. The ‘RRI Tools’ is generally considered the most comprehensive database for RRI and includes numbers of resources, tools, frameworks, and inspiring practices. Although not all tools are included, ‘RRI Tools’ typically includes the most prominent tools in a field of RRI. This search yielded the following number of tools per search that we stored to a local database in December 2019.

Searching Keywords	Number of Tools
RRI	49
Responsible Innovation	59
Responsibility	27
Monitoring	25
Assessment	47

Table 2. Number of tools published on RRI Tools database, classified by searching keywords

We intentionally used a broad definition as the concept is used and published in a broad range of resources e.g. tools, frameworks, and practices. We captured tools about how stakeholders ‘responsible their innovation processes’ and not only the specific term ‘RRI’ or ‘Responsible Innovation’. This broad search term, however, introduced tools that had little to do with the assessment and monitoring processes. We therefore read through all tools to assess whether they dealt with monitoring and assessment of RRI. While not a complete list of tools, the steps taken in data collection result in no bias towards any particular set of tool developers. Because ‘RRI Tool’ platform does not exhaustive, we lack some important tools to the close fields e.g. SDGs. By referring to Task 1.7 WP1, we have thus received inputs from stakeholders in considering other approaches close to RRI such as SDGs.

‘RRI Tool’ platform does not have a systematic approach to show the tool developers. We therefore extracted the tool developer’ names manually by looking at the tools. We investigated the tools to develop broad categories of how they cover ‘RRI Policy Agenda Areas’ and ‘R&I Process Dimensions’.

A number of duplicates were found and eliminated. Further, all the identified tools were manually reviewed. We deleted those records that appeared to be irrelevant, in that they were completely

unrelated to ‘Assessment of Responsible Innovation or/and RRI’ or they were frameworks, case studies, pilot reports, practices, etc. This screening resulted in a short list of 13 tools where we include to our toolbox.

To further extend our search, the list of tools identified from ‘RRI Tools’ database was complemented by snowballing (i.e., searching in Google) and further expertise of the involved researchers. As such, in addition to the 13 identified tools from the ‘RRI Tool’ platform, literature review and snowballing resulted in a short list of 9 other tools where we also included to our toolbox. Hence, we distilled 26 tools into the toolbox. (see section 2.3)

1.1.2. How the toolbox sources were selected

The inventory was developed along with the SUPER-MoRRI self-assessment tool, and includes feedback received during its consultation periods. The tools included in the inventory are global in nature and, in most cases, free of charge.

The toolbox sources used in this inventory were selected based on the following quality criteria:

Content

– The toolbox offers tools across all pillars of RRI. Issue-specific tool sets may be selected when relevant for addressing a particular ‘RRI Policy Agenda Area’ or ‘R&I Process Dimensions’

Applicability

– The toolbox is generally applicable or country/region-specific, when relevant for addressing a particular ‘RRI Policy Agenda Area’ or ‘R&I Process Dimensions’

– The toolbox is applicable to all organizations or sector-specific, when relevant for addressing a particular ‘RRI Policy Agenda Area’ or ‘R&I Process Dimensions’

– The toolbox is applicable to all application domains and different types of organizations. These include Individual researchers, Research performing organizations, Research funding organizations, Industry, Civil society actors, Policy-makers, Investors, and Legislator. This list does not claim to be exhaustive but aims to give an indication of relevant actors.

– The toolbox is applicable in contextualized format. To connect the ‘Tool Inventory’ selection criteria with WP1 outputs, the toolbox includes contextualization information about its own criteria and/or indicators with description of possible use or misuse of the tool (Task1.1) and help the users to adapt those possible criteria and/or indicators to their specific situation.

Accessibility

– The toolbox is available in English

– The toolbox is available for free

Validity

– The toolbox is current and in use

Please note that the inclusion of a tool in the inventory does not imply an endorsement by any of the SUPER-MoRRI partners.

1.2. How to use the toolbox

Target users:

The toolbox is applicable to all application domains and different types of organizations. These include individual researchers, research performing organizations, research funding organizations, industry, civil society actors, policy-makers, investors, and legislators. This list does not claim to be exhaustive but aims to give an indication of relevant actors.

Users can filter the tools by type of tool and RRI principles. For each tool its source is provided as well as which organization(s) developed it, and a short description of the tool.

Filtration modes :

- Filtering by RRI Policy Agenda Areas (e.g. Ethics)
- Filtering by R&I Process Dimensions (e.g. Anticipation and reflection)
- Filtering by Tool Developers (e.g. UN Global Compact)
- Filtering by Application Profiles (e.g. Research funding organisations (RFOs))
- Search by keywords

1.3. Descriptions of tools

(1) SDG Action Manager

Tool name: [SDG Action Manager](#)

Tool developer: B-Corp / UN Global Compact

Tool description:

Developed by B Lab and the United Nations Global Compact, the SDG Action Manager is a web-based impact management solution to enable businesses to take action on the Sustainable Development Goals through 2030.

A business should use the SDG Action Manager to do the following:

1. Find their starting point: Learn which SDGs matter most to you based on their company profile, and how to take action today.
2. Understand and share their impact: Get a clear view of how their operations, supply chain, and business model create positive impact, and identify risk areas for each SDG.
3. Set goals and track improvement.
4. Collaborate across their company: Invite colleagues to join the SDG Action Manager, contribute expertise, and see real-time progress and performance.
5. Learn at every step: Determine high-impact action based on thought-provoking yet actionable assessment questions, benchmarks, and improvement guides.
6. Trailblaze together: Join a global movement of companies working to build a better world for people and our planet by 2030.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(2) B-Impact Assessment

Tool name: [B-Impact Assessment](#)

Tool developer: B-Corp

Tool description:

B-Impact assessment shows your performance against comparable data sets on non-economic areas. You can compare yourself on your overall social and environmental impact and on specific areas like for instance taking at heart end users' interests, minimizing environmental impact, taking care of the well-being of your personnel and engaging stakeholders. As a socially and environmentally committed company, your goals go far beyond maximizing financial profits. B-Impact can help you with this, however it is more fitting for larger companies than small or medium-sized companies.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(3) CTI tool, Circular Transition Indicators

Tool name: [CTI tool, Circular Transition Indicators](#)

Tool developer: wbcSD & CIRCULAR IQ

Tool description:

Built by business, for business, the CTI Tool was designed to help businesses worldwide accelerate their circularity by supporting and guiding companies through the Circular Transition Indicators process.

The tool structures data and calculates the outcomes, supporting businesses in taking concrete actions towards their circularity goals. It also supports users to reach out to internal stakeholders or value chain partners for data requests that avoid confidentiality issues.

Leveraging the power of digitization and smart software solutions, the CTI Tool enables companies to accelerate their transition towards a regenerative circular economy.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: Anticipation and Reflection.

(4) Future-Fit Business Benchmark

Tool name: [Future-Fit Business Benchmark](#)

Tool developer: Future-Fit Business

Tool description:

The tool guide companies and investors to create value for themselves and society

1. For companies: Setting the right environmental and social targets, helping companies to take better day-to-day decisions in the pursuit of those targets, and show their progress more efficiently.
2. For investors: Identification which companies really are doing most to manage today's systemic risks and capitalize on new opportunities.
3. For advisors: Offer high-value services and solutions to help companies and investors embed the pursuit of future-fitness into the core of their business.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(5) Licara NanoScan

Tool name: [Licara NanoScan](#)

Tool developer: Empa, TNO & the Nano-Cluster Bodensee

Tool description:

This tool helps you to assess and weigh benefits and risks of nanomaterials and nanoproducts along the materials' or products' entire lifecycle. This tool assesses risks for workers, public and consumers and evaluates economic, environmental and societal opportunities.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: Public Engagement

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(6) Gender Equality Diagnostic Tool

Tool name: [Gender Equality Diagnostic Tool](#)

Tool developer: Australian Government & Workplace Gender Equality Agency

Tool description:

The Workplace Gender Equality Agency's ('WGEA' or 'Agency') Gender Equality Diagnostic Tool (Diagnostic Tool) helps you to analyse the status of gender equality and pinpoint gender equality gaps within your organisation. It can be used with the Gender Equality Strategy Guide (the Guide) to assist with the development of a strategy for addressing inequalities. You can use this tool before you develop your overarching strategy or as part of a regular review process.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Gender Equality

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(7) ORBIT Self-Assessment Tool

Tool name: [ORBIT Self-Assessment Tool](#)

Tool developer: ORBIT: Responsible Research and Innovation in UK ICT

Tool description:

The self-assessment tool is part of the suite of services that the ORBIT project offers to its users and stakeholders. The ORBIT self-assessment tool is implemented in the form of an online survey. In order to allow the identification of the level of achievement of RRI in a particular aspect by a particular user, the majority of the questions of the survey take the form of a five-point Likert scale comment on a statement provided in the question, ranging from fully disagree to fully agree. Upon completion of the survey the user will be provided with an automatically generated overview of their RRI maturity, based on the score that was recorded in their answers. This initial feedback which will take the form of a radar diagram as indicated earlier will be supplemented with a set of links to further help and support that users can make use of, to ensure that they undertake their research or innovation activities responsibly. In addition, the self-assessment tool will also point to the various other services that are provided by the ORBIT project, which covers most of the aspects of RRI. Finally, the survey will encourage users to make contact with other members of the ORBIT community, to foster the development of an RRI culture and the sharing of good practice.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(8) Designing for Values Tool

Tool name: [Designing for Values Tool](#)

Tool developer: TU Delft

Tool description:

Online Courses on Design for Values & Responsible Innovation. By using the online course, you will be able to:

1. Critically scrutinize your product design to identify and address ethical issues that your products may give rise to.
2. Translate values into design requirements using the 'values hierarchy'.
3. Apply 'design for values' as a way to systematically integrate ethical and societal values (such as sustainability, safety, equity and privacy) into the design of your own technology or projects.
4. Recognize how values play a role in design processes and identify the different stakeholders involved.
5. Make better decisions in the design process of socially acceptable products and technologies.
6. Recognize value conflicts in design -even if or after values have been built into them- and develop strategies to overcome them.
7. Improve your ability to communicate the choices you make in your design in terms of underlying values.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(9) Societal Readiness Level Thinking Tool

Tool name: [Societal Readiness Level Thinking Tool](#)

Tool developer: H2020 NewHoRRizon project

Tool description:

The thinking tool offers practical guidance for researchers who wish to mature the societal readiness of their work. The primary goal is to help researchers align their project activities with societal needs and expectations. The thinking tool asks reflective questions to stimulate thinking about how to integrate ideas about responsible research and innovation into research practice, at different stages in the project life.

Target/end users: Research Performing Organizations

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(10) COMPASS Self-Check Tool

Tool name: [COMPASS Self-Check Tool](#)

Tool developer: H2020 COMPASS project

Tool description:

The COMPASS Responsible Innovation self-check tool aims to help Small and Medium-Sized Enterprises (SMEs) in highly innovative sectors to learn how to effectively integrate Responsible Innovation practices (RI) into their company and innovation management. The tool will help SMEs to assess where their company stands, how they compare to peers, and what they can do to make their innovation practices more responsible. The COMPASS self-check tool is a learning instrument that guides a company through the most important RI practices in company and innovation management. Each question points out the importance of certain RI practices and the provides answer options in form of good practices. The tool automatically scores and benchmarks a user's results against other users' results.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(11) RRI KPI Analysis Tool

Tool name: [RRI KPI Analysis Tool](#)

Tool developer: H2020 PRISMA project

Tool description:

PRISMA project developed a method to intuitively score performance on both certain RRI dimensions and general innovation management criteria. The scoring method builds upon an earlier innovation quality monitoring tool, the 'success factor based live innovation project scoring and evaluation' tool, and expands the former tool with specific RRI elements. One can track progress in time, in a semi-longitudinal study of approximately 18 months. The tool has an added value as a strategy to implement RRI in industrial innovation practice. The tool provides insights of opportunities and challenges to integrate RRI approaches on real industrial research and innovation cases.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(12) CEN/WS 105 Guidelines to Innovate Responsibly

Tool name: [CEN/WS 105 Guidelines to Innovate Responsibly](#)

Tool developer: H2020 PRISMA project

Tool description:

The aim of this CEN Workshop is to share and further develop the exemplar roadmap methodology developed by PRISMA, an EU funded project launched in 2016.

The Workshop's goal is to design a practical guideline to help companies to approach and evaluate the most significant ethical, legal and social impacts expected by the development of their innovative products, and to identify an RRI vision and operative RRI actions to address them.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(13) Benchmarking for a Better World

Tool name: [Benchmarking for a Better World](#)

Tool developer: The World Benchmarking Alliance (WBA)

Tool description:

Benchmarks provide an essential tool for measuring and comparing corporate performance on the SDGs. The tool equips financial institutions, companies, governments, civil society and individuals with the information they need to exert their full influence and encourage others to do the same. By supporting the private sector in its role to deliver on the SDGs, the WBA can help companies move from aspiration to action to achievement.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(14) ISO 26000 Social Responsibility

Tool name: [ISO 26000 Social Responsibility](#)

Tool developer: International Organization for Standardization (ISO)

Tool description:

ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way. This means acting in an ethical and transparent way that contributes to the health and welfare of society.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(15) ISO 31000 Risk Management

Tool name: [ISO 31000 Risk Management](#)

Tool developer: International Organization for Standardization (ISO)

Tool description:

ISO 31000, Risk management – Guidelines, provides principles, a framework and a process for managing risk. It can be used by any organization regardless of its size, activity or sector.

Using ISO 31000 can help organizations increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change

(16) EDGE Tool

Tool name: [EDGE Tool](#)

Tool developer: UK National Coordinating Centre for Public Engagement (NCCPE)

Tool description:

Interactive tool to assess your institution's support for public engagement. Users clarify their purpose for engaging with the public in nine steps:

1. Mission: Create a shared understanding of the purpose, value, meaning and role of public engagement to staff and students and embed this in your strategy and mission.
2. Leadership: Support champions across the organisation who embrace public engagement
3. Communication: Communicate consistent, clear messages to validate, support and celebrate it, and ensure open and two-way communication with members of the public and community organisations.
4. Support: Co-ordinate the delivery of engagement to maximise efficiency, target support, improve quality, foster innovation, join up thinking and monitor involvement and impact
5. Learning: Provide opportunities for learning and reflection and provide support for continuing professional development and training.
6. Recognition: Recognise and reward staff involvement within recruitment, promotion, workload plans and performance reviews, and celebrate success with awards or prizes
7. Staff: Ensure that all staff – in academic and support roles – have opportunities to get involved in informal and formal ways.
8. Students: Proactively include and involve students in shaping the mission and in the delivery of the strategy, and maximise opportunities for their involvement.
9. Public: Invest in people, processes and infrastructure to support and nurture the involvement of individuals and organisations external to the institution.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Public Engagement

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(17) GENDER-NET IGAR Tool

Tool name: [GENDER-NET IGAR Tool](#)

Tool developer: H2020 Gender-Net project

Tool description:

The aim of this tool/site is to assist research funding and performing organizations as well as researchers and peer reviewers/evaluators with the know-how to integrate sex and gender considerations into policies, programmes, and projects, and to raise awareness about the importance of sex and gender in research and innovation.

Target/end users: Research Performing Organisations

RRI Policy Agenda Areas the tool contributes to: Gender Equality

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(18) Measuring Impact of Citizen Science (MICS)

Tool name: [Measuring Impact of Citizen Science \(MICS\)](#)

Tool developer: H2020 MICS project

Tool description:

MICS project provides metrics and instruments to evaluate citizen-science impacts on the environment and society.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(19) RIS3 Assessment Wheel

Tool name: [RIS3 Assessment Wheel](#)

Tool developer: EU Smart Specialisation Platform

Tool description:

The development of a tool for the synthetic representation of the progress made in drafting/designing a RIS3 allows condensing a huge amount of information in one visual modality. Although limitations might play a significant role, namely those linked to making a complex process appear simple, the assessment wheel can usefully support a number of activities, e.g. self-assessments, peer-reviews, expert contributions, presentations at dissemination, discussion and negotiation meetings, etc.

The wheel is built on the basis of the six steps described in the [RIS3 Guide](#) and the identification of 3 critical factors for each step.

The scaling tool (from 0 to 5) estimates the seriousness of the evidence provided in the process as far as each critical factor is concerned with the following meaning:

- 0 = no information available on the specific element
- 1 = poor
- 2 = to be improved
- 3 = fair
- 4 = strong
- 5 = excellent

Once the assessment is complete, the final result would appear in a form of "spider graph" where the strongest and weakest positioning would be easily highlighted. This immediate visual recognition of strengths and weaknesses would allow focusing further activity such as:

1. completion / upgrade of the national or regional RIS3;
2. appropriate consideration of territorial features, priorities and needs in the multi-level governance process at country level;
3. preparation and negotiation of funding programmes such as the EU cohesion policy operational programmes;
4. reviews, comparisons and benchmarking;
5. reflection on training/coaching activity needed in a particular defined segment;
6. definition of co-operation activities and establishment of mutual learning / twinning tools.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(20) SDG Impact Assessment Tool

Tool name: [SDG Impact Assessment Tool](#)

Tool developer: Gothenburg Centre for Sustainable Development

Tool description:

The SDG Impact Assessment Tool is a free online learning tool that visualizes the results from a self-assessment of how an activity, organisation or innovation affects the SDGs. It aims to stimulate the user to get a better understanding of the complexity of sustainable development and the different aspects of the SDGs. In the end you will be better equipped to prioritize actions ahead.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change

(21) ActivityInfo

Tool name: [ActivityInfo](#)

Tool developer: BeDataDriven B.V.

Tool description:

ActivityInfo is a Monitoring and Evaluation software for data collection and reporting which works online and offline. It is optimized for reporting on activities which are geographically dispersed and implemented by multiple partner organizations. ActivityInfo simplifies information management,

M&E, coordination and planning for humanitarian and development programs. It can also be used as a protection case tracking and case management system.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: All policy agenda areas, namely Gender Equality, Ethics, Open Access, Science and Education, Public Engagement.

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(22) OECD Toolkit for Mainstreaming & Implementing Gender Equality

Tool name: [OECD Toolkit for Mainstreaming & Implementing Gender Equality](#)

Tool developer: OECD

Tool description:

This online resource will guide you in implementing the OECD Recommendation on Gender Equality in Public Life. In addition to better familiarising you with the Principles, the Toolkit lets you compare indicators and good practices in use in numerous countries. The self-assessment tools will help governments assess the strengths and weaknesses of their gender policies, which in turn, will help policy makers set priorities for improvement.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Gender Equality

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(23) WEP United Nations tool for gender equality in firms

Tool name: [WEP United Nations tool for gender equality in firms](#)

Tool developer: United Nations (Global Compact-UN Women)

Tool description:

Self-assessment tool addressed to promote gender equality in the private sector, focused in different areas: leadership, workplace, community etc. The tool offers results about the organization position in the different aspects. In each area the tool proposes questions organized in sub-sections: commitment, implementation, transparency and measurement.

Target/end users: Industry

RRI Policy Agenda Areas the tool contributes to: Gender Equality

R&I Process Dimension the tool contributes to: Diversity and Inclusion

(24) Gender Institutional Transformation

Tool name: [Gender Institutional Transformation](#)

Tool developer: European Institute for Gender Equality (EIGE)

Tool description:

This step-by-step self-reflection tool helps institutions transform, starting from their basic values and beliefs, to the rules and regulations that lead to more effective working outcomes. It is targeted at public institutions within the EU as bodies that are accountable for gender equality. The tool is more adapted to the public bodies than private.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Gender Equality

R&I Process Dimension the tool contributes to: Diversity and Inclusion

(25) Responsibility Navigator

Tool name: [Responsibility Navigator](#)

Tool developer: FP7 Res-AGorA project

Tool description:

The tool illustrates a brief description of the Res-AGorA principles and requirements for responsibility-related governance. It includes a set of questions which those interested in 'navigating' towards responsabilisation in Europe and beyond would have to ask themselves in order to arrive at practices and directions that are widely accepted. The ten principles are organised into the three dimensions of:

1. Ensuring Quality of Interaction
2. Positioning and Orchestration
3. Developing Supportive Environments.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Governance

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

(26) ORION open science self-assessment tool

Tool name: [ORION open science self-assessment tool](#)

Tool developer: H2020 ORION project

Tool description:

As part of ORION's Evaluation, Analysis and Benchmarking activities, a self-assessment study has been carried out, examining the views and practices of Open Science in the ORION partner Institutions; four research performing organisations (RPO) and two research funding organisations (RFO). This has been done through two different studies:

1. First, a qualitative study of the most relevant views and practices on Open Science at ORION institutions, done through eleven interviews that involved six Directors of the RFPOs participating in the ORION project, the director of a civil society organisation and four RRI promoters at RPOs.
2. Secondly, a large-scale quantitative study regarding the prevalence of these views and practices throughout the RFPOs, based on an online questionnaire disseminated through all staff members of the four research performing organisations and the two research funding organisations in the ORION Open Science project.

Target/end users: Individual Researchers; Research Performing Organisations; Research Funding Organisations; Industry; Civil Society Actors; Policy-Makers; Investors; Legislators

RRI Policy Agenda Areas the tool contributes to: Open Access

R&I Process Dimension the tool contributes to: All R&I process dimensions, namely Diversity and Inclusion, Anticipation and Reflection, Openness and Transparency, Responsiveness and Adaptive Change.

2. COLLECT REPORTS AND OTHER DATA RELATING TO INDICATORS FROM THE PILOT USER INTERACTIONS

In Progress, see 1.4. For more information, see Task 7.3 and its linked deliverable.

3. BENEFITS, RISKS, AND CHALLENGES OF USING SELF-ASSESSMENT TOOL

Here we reflect on the most salient observations we gathered with respect to RRI self-assessment' benefits, risks, and challenges:

3.1. Benefits

Broadening assessment

RRI in organizations can build on existing activities. The added value of RRI in such circumstances is not to introduce assessment as such, but rather it is to broaden the scope of assessment, particularly in the following, related senses:

- Currently, assessment is often limited to commercial or legal risks and liabilities, or to safety, health and sustainability issues, and/or issues for which some form of assessment is required by law. In the light of RRI, such assessment can be broadened to include impacts on other value dimensions (like privacy, fairness, equality to name some) or related to broader societal issues.
- Assessments, in particular more formal ones, may often only be done to show that the law (or some other form of regulation is met), rather than using insights from assessment to improve the innovation.
- Assessments can also be broadened by including (more) outsider perspectives in the assessment. This might be done by organizing a stakeholder dialogue, but even if such stakeholder engagements turn out to be difficult (see previous point), it may be worthwhile to include outsider perspectives in assessment content-wise. This will often improve the quality of the assessment and may prevent unpleasant surprises.
- Assessments normally focus in role-responsibilities of the actors. An RRI focus should try to broaden our understandings of responsibility to a more collective approach, where there are responsibilities that affect all of us, beyond our role responsibilities such as taking care of the environment, equality and inclusion issues, or transparency and openness. This collective responsibility has also a foresight component, thinking in the future generations, anticipating our impacts.

RRI monitoring

An important way in which RRI in organizations may be stimulated and implemented is through monitoring of RRI performance.

Self-assessment tools may stimulate and help organizations to think about what they want to achieve with RRI, and then next to monitor whether their RRI activities indeed help to achieve such objectives. This also allows an adaption or reformulating of the organization's RRI strategy and activities if appropriate.

One broader question here is whether such RRI monitoring should be done by the organization itself or should include some form of external auditing. Both would seem to have their advantages and disadvantages. Internal monitoring may be easier to implement and less sensitive for an organization; Moreover, as the organization takes the initiative itself it may be more open to learn from experiences. On the other hand, only internal monitoring may raise doubts in the outside world whether RRI activities are merely a form of windows-dressing or whether there is a real commitment to RRI. Experiences with for example Responsible Care suggest that it would seem advisable also to introduce some form of external auditing in the longer run. Even if that is the case, voluntary internal monitoring might be a useful first step.

3.2. Risks and challenges

Honesty

Using a self-assessment tool requires that the evaluator should avoid aiming to give the highest result for the organization's performance if it does not fulfill the criteria or if there is no written evidence for it. Organizations should not focus on the best possible results but rather evaluate its situation truthfully – otherwise the tool would not be of any use and would not be suitable for comparison. If it is done dishonestly, organizations will not get the maximum benefits from the tool. If they do it thoroughly, they can have a realistic picture, what is a good take-off point for further RRI activities.

In other words, evaluating ourselves has always inherent risks to any self-assessment tool. These risks are basically related to honesty. Being the evaluator and the evaluated subject at the very same time it is difficult to avoid some attractive but, all in all, harmful tendencies. Self-assessment tools vary in their abilities to prevent honesty problems and provide a setting where all participating organizations approach self-assessment in a similar way. At the same time, there are some tools that have no interest in comparison with other organizations, but in learning objectives.

Cherry-picking

'Cherry-picking' refers to selecting what you want from the outputs based on what is easiest for you rather than what accounts for the highest priorities. This harmful tendency is to provide good – better than the real – results in order to please the boss, shareholder etc. or have a fancy comparison with competitors.

Blind folders

Even if one can resist these temptations, user may have *solid blind folders*. This means, that a view on the organization is more advantageous than what the performance of the organization in reality is. Loyalty to the organization and ignorance of the real processes are only two of the potential sources for blind folders.

Time and Energy

The temptation to avoid meaningful self-assessment is bigger *when there is no time, energy, will etc.* to explore the real status of RRI in the organization and/or *openness to face whatever the result of the self-assessment will be.*

To summarize, user should be aware of these characteristics in the organization and do not let to be trapped by them. Actually, the evaluator has also a great role in overcoming the limitations of the tool stemming from its self-assessing nature.

4. CONCLUSIONS

The objective of the inventory of Responsible Research and Innovation Assessment Toolbox is to support stakeholders in aligning their strategies with the RRI. The ‘Tool Inventory’ is going to be visualized in the SUPER-MoRRI website.

The inventory is supported by an Edited Volume namely “Assessment of Responsible Innovation: methods and practices”, edited by Emad Yaghmaei (WP6 leader) and Ibo van de Poel, Routledge Publishing, 2020. Stakeholders from different kinds and different countries are encouraged to use the inventory and study the edited volume as a source of inspiration and adapt as necessary.

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SUPER MoRRI

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