

# PILOT ACTION

## BOOKLET

# May 2021



# SOCIAL LAB 1ERC

## EURO EXPERT AND RRI

Researchers might lack expertise how to best communicate their results and to engage new people online. The problem is exacerbated because of a lack of time and resources and because of a general skepticism among researchers towards public engagement. Pilot action participants thought it was important to create a new website which may help communicating research results to people outside the scientific world and increase engagement between researchers and information users because research findings can be helpful for legal professionals and people at court to improve legal processes by considering cultural expertise.

Pilot action participants created a website of the ERC funded [Euro Expert](https://euro-resp.com/) project that showcases the relevance of RRI by sharing research results from legal and anthropological research with relevant stakeholders such as cultural experts, judges and prosecutors. RRI is used as an instrument to increase the social impact of research. The website is specifically focused on informing a wider audience about the role of cultural experts in the context of legal decision-making.

Cultural experts, judges and prosecutors and other people who are interested can get the latest relevant research results easily from a dedicated website and can even contribute insights through blogs. The use of an easily accessible online space supports the spread of results and therefore increases interaction between legal researchers and society. The website could help to initiate a wider societal discussion about the benefits and challenges of cultural expertise in legal settings and the wider questions these raise.

By creating a communicable output and making legal research more accessible to people outside the scientific domain it may thus may help the legal scholarly field to become more inclusive, adaptive to social changes and aware of RRI. Furthermore, the website and the experiences gained with developing it may encourage the design of templates for other excellent science projects to develop their own websites. The website can be used as a model for other projects that want to engage a wider public and engage stakeholders in their work.

Please follow the link to learn more:  
<https://euro-resp.com/>



## SOCIAL LAB 1 ERC

## QUADRALOGUE

The Quadralogue addresses barriers of communication and routine between individuals with different roles in research and innovation. By bringing together these individuals who are not typically incentivized to discuss the bigger picture aspects of science and research, the Quadralogue seeks to overcome this barrier by bringing people together to discuss the social impact of research and innovation.

The design of the Quadralogue is a structured and facilitated 45-minute dialogue-game. By providing a unique 'gamified' environment to foster these conversations, the pilot action is a low-threshold way to bring together people who do not typically have a chance to share their expertise, concerns, experiences, and assumptions in their normal day to day routine. The barriers are removed by the protocol of the game, as each of the four participants are responsible for sharing their interpretations and first impressions of the experiences they share with each other in plain language.

Quadralogue began targeting researchers, students, community members and administrators. The students act as facilitators which empowers them and contributes to a discussion on an eye level. Administrators are able to share their experiences from the typically behind the scenes perspective of research. Scientists are given a chance to speak as members of society and not professional scientists. And community members, which is the most open-ended subgroup in the Quadralogue, can represent a cause that is context specific to the community in which the Quadralogue is taking place. Since its launch, the Quadralogue has since been taken up by members of the local municipalities, and entrepreneurs who want to know the impact of their business.

You can watch a video of Quadralogue on the Ben Gurion University campus:

<https://www.youtube.com/watch?v=jqYcPmQvMRI>.

To select English subtitles, hover your mouse over the bottom of the video and select the settings gear.

You can listen to a Quadralogue conversation (Hebrew) here:

<https://anchor.fm/bgu-radio/episodes/360----1-ebuiuc>.



1

The lesson learned from this pilot action is that public engagement is a fundamental and very important first step towards doing RRI. Additionally, public engagement is a means of breaking professionals and students out of their routine and can unlock creative reflection and brainstorming on otherwise latent topics.

2

One of the learnings from the pilot action is that these conversations can also be fun and interesting for participants, flipping the standard notion of societal considerations as a researcher's burden during grant applications into an opportunity for exploration.

3

This pilot action should be taken up by others because it is an entry point to RRI, can be organized almost everywhere and requires minimum financial and organizational effort.

Follow the QR code to an instruction video on how to play the Quadralounge game:



## SOCIAL LAB 2 FET

## IT'S ALL IN THE MEME



The Pilot Action addresses the issue of prejudices and biases in science, research and innovation. Our experience of our actions is biased towards what we expect, what we might see, what we believe. The irony is that prejudice and discrimination are inevitable by-products of the efficiency of human cognition. Although we like to think we are open-minded and objective, research shows consistently across all social groups that this is not the case. We are heavily influenced in ways that are completely hidden from our conscious minds in how we view and evaluate others, our surroundings and ourselves. The pilot action consists of developing new perspectives and opening up these hidden processes, which deal with our (collective) unconscious bias and prejudice.

The pilot action aims to reflect on emerging perspectives in science and philosophy and how this fuels profound insights in other domains such as art, culture, technology. The pilot action explores playful and participatory learning, in which sharing ideas about “cognitive” bias will lead to new ways of understanding ourselves through the other and ultimately unravel new ideas on what it means to be human in the 21st century.

The specific target group of “It’s all in the meme” are leaders and developers in the field of education, technology, design, art, science, research and innovation. They engage in playful and participatory learning and explore new realms of art, science and philosophy.

The pilot action develops a new understanding of implementing experiential knowledge and new modes of Operandi within the fields of Creative Industries and artistic research. It aligns with the policy of RRI to open up our thinking, collaborate across different disciplines and bridge knowledge domains by interrogating notions of complexity, uncertainty, creativity and innovation.

The “It’s all in the meme” is designed as a workshop format for 10-15 participants involving leaders and developers in education, technology, design, art, science, research and innovation who engage in playful participation and start navigating new level playing field for future policy, organization, collaboration and governance.

## SOCIAL LAB 2 FET

## QUANTUM REBELS

The Quantum tech field has for a long time been rather traditional in its culture towards leadership: masculine, competitive, control-oriented, result-driven, arrogant, “I” over “we,” etc. and the field is very unbalanced in terms of gender. With a new generation of leaders in quantum technologies in Europe, there is a great opportunity to modernize this culture and avoid the risk of repeating it. The Quantum Rebels addresses a lack of leadership issues in quantum research community for RRI. Leadership with non-authoritarian styles is / will be important to allow for more open, inclusive and, reflective R&I.

The Quantum Rebels comprises the design of a leadership training on non-authoritarian leadership styles for FET coordinators, through a workshop on best practices in leadership for principal investigators within the EU Quantum Flagship program. To prepare the workshop a survey will be sent out to a wider group of principal investigators, work package leaders and Quanteria project leaders to find out the views and learning needs from the target group themselves. To cross the psychological barriers and challenge established habits, the workshop is designed to be easily accessible and not too time consuming, organized back-to-back with a meeting of the Science and Engineering Board of the Flagship designed and facilitated by professional consultant on leadership. Further, the workshop would involve a modern (male) leader from an adjacent high-tech R&D field to set an example and show the benefits of new modes of managements.

The specific target groups of the Quantum Rebels are the FET coordinators. Strategically, the pilot action would leverage participation of multiple Quantum flagship partners in the Social Lab; coordinate to do a leadership training in connection to their main meeting. Since the Quantum flagship program has recently started, it is a good time to convene the key R&D people on important RRI topic.

The Quantum rebels is easy and less time-consuming training workshop format designed and facilitated by professional consultant on leadership. Since Quantum flagship program has recently started, it is a good time to convene the key R&D people on important RRI topic allowing for more open, inclusive and, reflective R&I.

The Quantum rebels could be iterated in a wider part of the Q-community (Quanteria, national programs, and institutes, etc.). Subsequent follow-up actions could also be envisaged, possibly with the support of the Quantum CSA (e.g., gender plan, training, annual survey).



## SOCIAL LAB 2 FET

## RRI ETHICS REVIEW

The RRI Ethics Review is a survey designed by a group of researchers working in RMOs with specific questions on the importance of non-regulatory / conventional ethics and research integrity issues in research organizations. The survey is easily replicable in any research organization in order to get an overview on how the researchers/ research organizations view ethical issues.

The RRI Ethics Review addresses the question of the importance of non-regulatory / conventional ethics and research integrity issues in European public research organizations to look beyond standard ethics regulatory issues and processes. Learning how organisations view the ethical issues can help solving the problem of unethical influence of power differentials and meeting structures on research practices. The RRI Ethics Review will help identify as a first step to addressing these ethical issues.



The specific target groups of the RRI ethics review are the researchers within public research organisations in general and the members of the European Technology Transfer Offices (TTO) circle in particular.

The design of the RRI Ethics Review comprised a survey of research management organizations (RMOs) and their approaches to ethics monitoring. The analysis was based on a specific set of situations that were described as potentially ethically problematic.

The outcomes of the survey showed that even though the organizations do take ethical issues into account, there are improvements to be made in the way how organized and transparent are the processes of imposing these onto the research community. Also, in short-term, project-based positions, the role of the project leader in instilling ethical standards is crucial, as staff on shorter contracts are often not integrated in the organization to the same extent as permanent staff. This pilot action should be taken by other research organizations because it provides overview of organizational level of ethical responsibility in research institutions.

Results were published in a paper: <https://www.euroscientist.com/ethics-in-research-issues/>

## SOCIAL LAB 3 MSCA

## KNOWLEDGE KIOSK



Public dialogue is an important scientific responsibility. Among others, it can empower citizens with information needed to make informed decisions, encourage the public to value and be more interested in science issues and eventually increase citizens' support for public funding of research. However, it is hard to find examples of effective dialogue systems, in which citizens play an active role and give their voice to science. Additionally, many researchers would like to contribute to public engagement but they do not know how to bring it to practice. We wanted to change this by developing the Knowledge Kiosk.

The Knowledge Kiosk is a series of co-creation workshops organised in Barcelona and Lisbon to design an original and effective dialogue system between citizens and researchers: an accessible, useful, practical and informative resource that favours scientific dissemination and dialogic engagement. For the implementation of the workshops, we developed our own Design Thinking methodologies: the first workshop round (in May and July 2019) exclusively targeted citizens, who developed first ideas on how an interaction of citizens and scientists on a regular basis could look like. To the second round of workshops (in November 2019), we exclusively invited scientists from all disciplines to choose ideas and develop them further. Finally, in a third round (in January 2020) the two groups met to finalize a prototype for Barcelona and Lisbon that ideally can be implemented on the longer-term.

The expected impact is that the Research Kiosk leads to more dialogic engagement between scientists and citizens. Specific target groups of the Research Kiosk are scientists working at Research Performing Organizations, innovators, CSOs and local, non-science affiliated citizens.

The Knowledge Kiosk attempts to foster this two-way engagement between science and society in real life through a series of co-creation workshops. The Kiosk is a fun and engaging activity in which citizens and scientists already engage in dialogue during the design of a long-term engagement format. It uses Design Thinking methodology and therefore involves the energy and capacity of local citizens and scientists in shaping possible prototypes for public engagement. The methodology can be applied in different cities by researchers, innovators and CSOs across Europe and the resulting prototypes can be adapted to different local circumstances and needs. This does need long-term organizational and institutional support for example through funding and by integrating it into research requirements and reward structures.

The methodology of the workshop series can be taken up as an open tool and shall serve as a "manual" to facilitate the organisation of the workshops in other cities and countries to allow the development of different prototypes according to the different local needs and desires of both target groups.

## SOCIAL LAB 3 MSCA

## RRI CAREER ASSESSMENT MATRIX

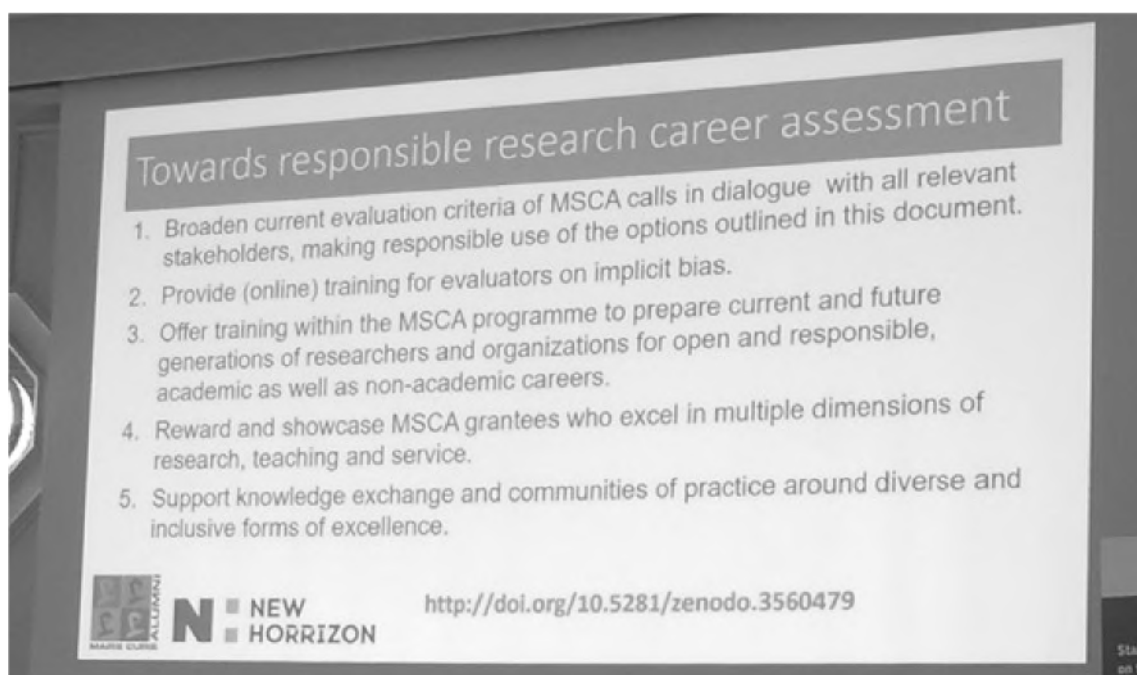
Growing evidence suggests that the evaluation of researchers' careers on the basis of narrow definitions of excellence is restricting diversity in academia, both in the development of its labour force and its approaches to address societal challenges. We wanted to explore directions for change in the current evaluation frameworks and practices that overemphasize publications in assessing the quality of research.

We wanted to analyse if the Open Science-Career Assessment Matrix could and should be adapted to involve more elements of RRI. To spur the debate and gather input we organized a plenary session and participatory workshop during the Marie Curie Alumni Association Conference in February 2019 in Vienna. On the basis of this input, discussions during the second Social Lab Workshop and online discussions we produced a policy brief Towards Responsible Research Career Assessment. The brief contains five recommendations including a call to MSCA policymakers to broaden current evaluation criteria of MSCA calls in dialogue with all relevant stakeholders and includes references to current developments in both indicator development as well as narrative evaluation.

The specific target groups of this Pilot are (inter)national research policymakers and (early career) researchers working at Research Performing Organizations. The brief has been embraced by the Marie Curie Alumni Association and presented at the MSCA Stakeholders conference. The hope is that this will lead to long-term impact on the evaluation criteria on which scientific careers and proposals are assessed.

The policy brief contains five recommendations including a call to MSCA policymakers to broaden current excellence evaluation criteria of MSCA calls in dialogue with all relevant stakeholders. More broadly, it means that funding institutions and research performing organizations need to rethink and adapt institutional assessment and reward structures from a responsibility perspective, to include elements like responsible research, teaching and community service as an equally legitimate and rewarding cause for a researcher. Improving the evaluation system in a concerted effort with research institutes and other funders will help fully realize a European Research Area that is open to all talents and knowledge practices. This diversity is essential to sustain academic careers, to strengthen the relevance and impact of science for society, and to enhance the resilience of our society and environment. Other organizations could use the policy brief, its sources and the process underlying it as an inspiration for improving their career evaluation system.

The RRI-CAM has resulted in a high-level policy brief embraced by both the Marie Curie Alumni Association and the NewHoRRizon project. The brief can be found [here](#).



Policy recommendations of the policy brief

## SOCIAL LAB 3 MSCA

# RRI MANIFESTO

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Traditionally universities facilitated researchers to train in activities only directly related to academic research. However, only a fraction of the current generation can feasibly make a sustainable academic career and many young academics are seeking a job outside of the university in business, policy and civil society. Simultaneously, research funders and policy makers are increasingly paying attention to other activities than pure research in their research assessment. This requires more attention to transferable skills in the training of early-career researchers.

We recognized that young scholars must be enabled more to learn to speak the language of Open Science & RRI and develop transferable skills accordingly. To bring the debate further, we organized a panel at the biggest European conference on research and policy: the Euroscience Open Forum in September 2020 in Trieste. The session was primarily concerned with how RRI and Open Science will align the development of research culture with the needs of society and with the needs of young researchers. In the session we discussed how RRI/Open Science activities enable early career researchers to engage with society by developing their communication skills, interacting with stakeholders, publishing open source code, writing data management plans, sharing their datasets through repositories and so on. Next to organizing this session, we also worked on a Manifesto comic about Marie, an early career researcher who experiences all kinds of RRI-related problems in her training and is asking herself whether she wants to go on with the PhD trajectory. The comic includes the possibility to share your own stories and insights and can be used during live conferences to gather further input for a final manifesto on RRI.

The specific target groups are ECRs, research policymakers and training institutes. The hope is to involve as many people as possible to have an impact on training programmes for ECRs like MSCA and possible throughout Europe.

We noted that especially RRI and Open Science training could contribute to the development of transferable skills such as being able to communicate and engage with the general public and wider stakeholders, conduct ethically acceptable research and openly share your data, code and wider research content. Attention to RRI and Open Science transferable skills may thus help to fill the gap that currently exists between academia, business, CSOs and broader society. We discussed how this also means that policymakers, research organizations and funders should make a concerted effort to not only provide training on RRI and Open Science transferable skills but also think of incentives and change assessment criteria accordingly. This is necessary so that the young researchers of today are prepared for the world of tomorrow.

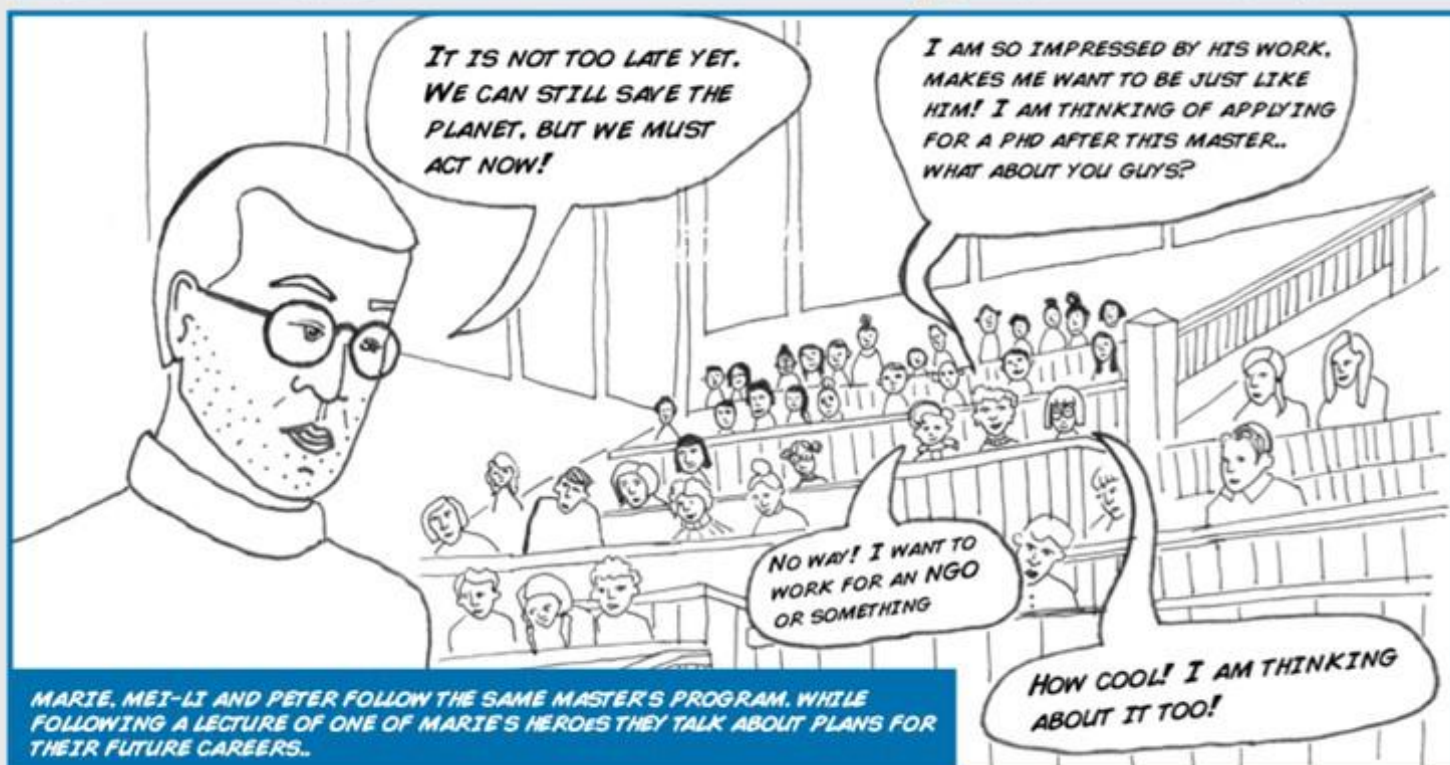
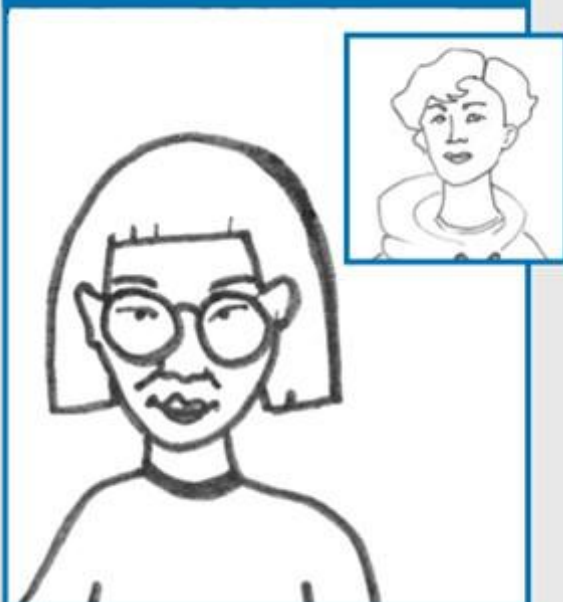
## MATERIALS

We organized an [ESOF session](#) called Who is responsible for transferable skills and how can RRI and Open Science help? The session can be viewed on [Youtube](#) and one of the session participants wrote an article on the session for the Euroscientist [website](#). Next to that, we have also produced an RRI Manifesto comic (see next page) which can be used during conferences to start a conversation about problems around RRI amongst early career researchers.

## II. Improving research culture: realizing responsibility!



AND SO ARE HER FRIENDS MEI-LI AND PETER



■ MAKING SCIENCE EDUCATION AND CAREERS ATTRACTIVE FOR YOUNG PEOPLE AIMS AT IMPROVING SCIENCE AND TECHNOLOGY LITERACY IN OUR SOCIETY.

MARIE IS  
COMMITTED  
TO MAKE  
HER DREAM  
COME TRUE.  
SHE PUSHES  
HERSELF TO  
WORK HARD  
AND STUDY  
HARD TO GET  
THE BEST  
POSSIBLE  
GRADES..  
SHE  
GRADUATES  
AS ONE OF  
THE BEST OF  
HER CLASS.



AFTER WORKING HARD ON HER GRADES, HER CY AND  
MOTIVATION LETTER MARIE APPLIES FOR A PHD POSITION  
IN GLOBAL SUSTAINABILITY SCIENCE



## SOCIAL LAB 3 MSCA

# RRI TRAINING

The European Commission has asked research funding applicants to reflect on elements of RRI in their applications. National Contact Points (NCPs) are funding advisors whose job it is to provide applicants with the right information to improve their prospects in getting funding. MSCA NCPs discovered that they had a lack of knowledge on advising on RRI aspects. As RRI is becoming more and more important for their everyday advice work, not knowing how to advise on this aspect therefore provided a major barrier towards its implementation.

We designed and delivered a full day training on the role of RRI in MSCA funding practice to funding advisors who were member of the MSCA NCP network called Net4Mobility+. Multiple calls were made in preparation; knowledge gaps were identified with the help of a questionnaire and a member of the Social Lab team provided the interactive training. This included an overview of the academic and policy background of RRI, best practice examples and concrete, easy to use tools from RRI-tools that NCPs could forward to applicants. In the afternoon we presented parts of the diagnosis of MSCA and put MSCA NCPs to work in several interactive formats in which they were asked to relate elements of RRI to their advice practice. Next to that, with support from the Marie Curie Alumni Association and representatives from two MSCA Innovative Training Networks (SAF21 and IMGENE), we conducted a webinar on Winning Innovative Training Networks (ITNs) with RRI. We explained the relevance of RRI for proposal writing and (former) grantees provided examples from their own research practice.

The specific target groups were MSCA funding advisors and prospective MSCA ITN applicants. The goal was to show the relevance of RRI for proposal writing. The training for NCPs resulted in positive reactions from those attending, development of training materials catered to MSCA and a report with recommendations for all MSCA NCPs. The hope is that funding advisors will integrate it in their advice practice. The webinar resulted in positive reactions by prospective ITN applicants and slides were shared online for those interested to involve RRI in their project proposals.



Providing funding advisors with the right information and examples of RRI is very important as they are central actors in the European funding ecosystem. By sharing existing materials with them and translating it into accessible content, the training helped to close the implementation gap between RRI knowledge and funding advice practices. As an example of training-the-trainer, the Pilot may help increase knowledgeability of RRI in funding advice. Inspired by this experience and after feedback from our Social Lab participants, we organized a follow-up webinar for prospective MSCA applicants to share ideas on how RRI may improve the quality and competitiveness of their research funding proposals.

The RRI Training has resulted in a fully developed training for MSCA NCPs of which they can appropriate slides for their advice practice. The webinar has been posted on [Youtube](#) with a link to [slides](#) for further reading.

## SOCIAL LAB 4 INFRA

# GREEN VILLAGE



The main objective of the Initiative is to disseminate and share knowledge of the Responsible Research and Innovation (RRI) principles within a highly innovative research Community, the Green Village at the University of Delft, in order to make RRI a principle guiding the way innovations can be developed, tested and demonstrated in their experimental real-life setting.

The focus in this Initiative was on societal engagement, one of the four cornerstones of the Green Village mission in relation to ethics, gender equality and open access and governance. Two workshops with social lab team members on analysing and implementing the RRI framework in an experimental innovative technical research community were conducted.

Workshop I introduced RRI principles to the Green Village and elaborated project-specific RRI approaches in three selected projects:

- [AQUABATTERY](#), a project that aims at developing a battery that works on water basis,
- [HEMEL\(S\)WATER](#), a project in which rain water is collected and processed for drinking and
- [RADD](#), a project on automated driving.

In the six months between the two workshops these projects were asked to implement the aspects discussed in workshop I and present it in Workshop II to another audience, composed by experts on open science, gender and diversity, sustainability management and RRI in general.

As a result, each of the projects could benefit from the activity and appreciated the critical evaluation from outsiders. All three projects included most of the RRI principles in their procedures and governance and in their business strategies: One project in its entire business model, one project in the civil society approach and one mainly in their safety (ethical) approach. However, all of them could identify aspects in all RRI keys for further improvement.

One important lesson learnt from the process was the stable support of convicted and dedicated individuals, such as the support of a former director of the TU DELFT as well as motivated members of the projects participating in Workshop I. Unless RRI is institutionalised, success of RRI implementation actions rests on the shoulders of these change agents.

Project Managers of three selected research and innovation projects of the Green Village presented their project and discussed in small groups how they better could integrate RRI principles in their work. In preparation for workshop II, half a year later, they had the opportunity to de facto consider RRI in their project and discuss the changes.

It needs quality Standards for innovation projects that incorporate RRI principles. The reflection of the projects internally and with external experts during workshops and the assessment and development of these high innovative projects will provide important insights and have a guiding function for other projects at Green Village.

All three projects used existing best practices to relate to the RRI principles and developed them further according to the reflections of the pilot workshops.

These are projects that are experimenting in a special created environment (Green Village) where some general guideline rules often are not applicable. Guidelines for a practical use of the RRI principles within such small extremely innovative scientific communities with multi stakeholders' interests based on the pilot experiences will be worked out by the local team if additional funding can be allocated.



## SOCIAL LAB 4 INFRA

# MAGNA CHARTA

The European Commission faces the following challenges in the realm of research infrastructures (RI): Not all RIs have a defined Access policy, there is fragmentation and diversification of Access policies, a lack of common understanding on concepts, and a lack of transparency (Adam Tyson, Research and Industrial Infrastructures DG Research & Innovation, EC).

The main aim of this pilot action was to integrate RRI in the European Charta for Access to Research Infrastructures - Principles and Guidelines for Access and Related Services (EC, 2016), since RRI principles were not sufficiently represented in the Charta at that moment. As the document has a guiding function for RI the team decided to revise the document and integrate RRI principles.

As the Charta was designed as a “living document” from its very first draft, it led itself towards revision and update. Therefore, a lab team of five people worked together, the host of the pilot action coming from a funding agency. They were analyzing the Charta and revised it applying an internal iterative approach. Afterwards, they developed reports and presentations on their results. Finally, they presented their work in Brussels and discussed them with DG RTD and ESFRI representatives.

As the following actors have been involved in the drafting of the Charta, they are the main percipients (European Commission, ESFRI delegations, e-IRG delegations, EARTO (European Association of Research and Technology organisations), LERU (League of European Research Universities), CESAER (Conference of European Schools for Advanced Engineering Education and Research), EUA (European University Association), NordForsk (Nordic Research cooperation), Science Europe. Furthermore, RI providers and potential users might strongly benefit from a reword Charta which embraces the open access approach. The document will be accessible also to a wider international context (such as OECD-GSF/GSO etc).

This Charter “sets out non-regulatory principles and guidelines to be used as a reference when defining Access policies for Research Infrastructures and related services” and should although not binding be considered by research infrastructure providers. Any mentioning and consideration of RRI principles will help to spread the word on RRI and sustain the important discursive shift towards responsible research and innovation. Regardless of the take up of the final revised version as offered by our PA team, providers and users of RIs might get sensitised to the RRI approach and adapt their own practices.

### Tangible outputs

1. Revised Version of Charta, sent to EC (DG RTD unit), ESFRI (Jan Hrušák) and others
2. Organisation of a workshop as a satellite event of R+I days, 24-26 September 2019, Brussels



## SOCIAL LAB 4 INFRA

# MUSEUM LAB

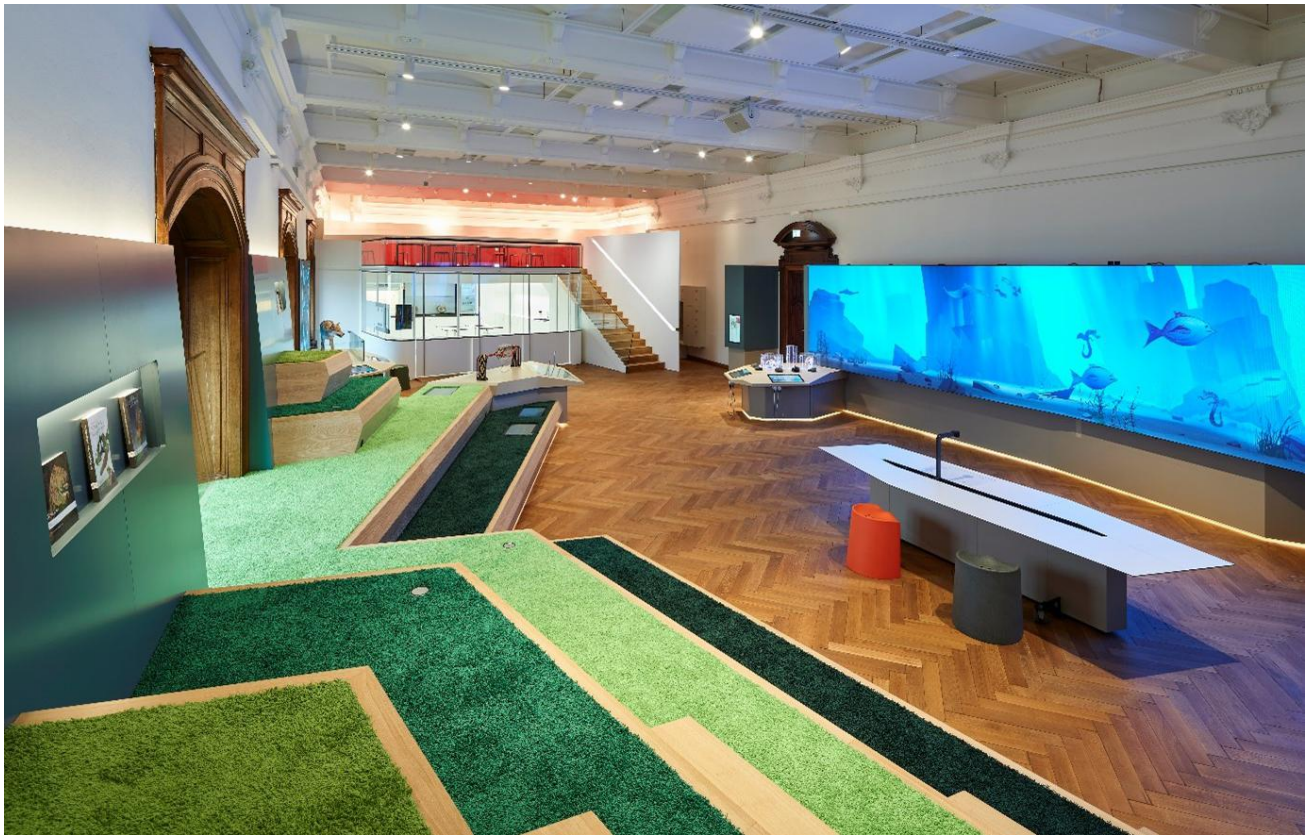
The Natural History Museum Vienna as one of the largest non-university institutions in Austria aims at getting more open and diverse and wants to follow an RRI approach in future initiatives. The main aim of this pilot action is to create a social lab within the museum, including museum staff, but also external stakeholders or optional future collaboration partners to create new alliances between science and society and intensify communication and awareness raising on actual topics of science and society, making “the museum leaving its ivory tower”.

A multi-stakeholder social lab was set up to strengthen RRI within the institution at a strategic level. A series of three workshops was conducted within this social lab.

- **Workshop 1** addressed stakeholders and optional future collaboration partners,
- **Workshop 2** worked with staff of the museum
- **Workshop 3** brought the two groups together and started a co-creation process building up new collaborations and communication formats to the museum, by taking the RRI principles into account



Workshop at the Natural History Museum Vienna to make “the museum leaving its ivory tower”



The Completed Deck 50 © NHM Vienna

The Natural History Museum Vienna as one of the largest non-university institutions in Austria aims at getting more open and diverse and wants to follow an RRI approach in future initiatives. The main aim of this pilot The exhibition and education department created a new communication area within the museum, [Deck 50](#). In the course of developing this participatory room, new forms of communication and collaboration internally and externally could have been experienced and established. The museum staff opened up to questions, ideas and needs from outside the museum, and external multipliers, representing different target groups could discuss and contribute to actual topics of the museum and create new collaborations. The workshops were moderated by external facilitators which were positively accepted. For setting up the programme, applied methods and the recruitment procedure the work was carried out in very close collaboration with museum staff and external facilitators to combine both internal and external views which finally allowed for a friction free process. ction is to create a social lab within the museum, including museum staff, but also external stakeholders or optional future collaboration partners to create new alliances between science and society and intensify communication and awareness raising on actual topics of science and society, making “the museum leaving its ivory tower”.

Collaboration workshops like the ones in the Museum Lab contribute to answering the question how museum and society could collaboratively get engaged in addressing societal challenges of our time. New understandings of cooperation have to be established, offering new forms of outreach and engagement. Such workshops as the ones in this pilot, help gaining new insight on how to involving external stakeholders into actual museum work.

The pilot action organized moderated and documented workshops in the Natural History Museum Vienna, two of them involving external stakeholders who were invited for future collaborations. These workshops evoked fresh ideas and food for thoughts, as well as concrete new projects, such as [“nhm on tour”](#). These documentations could be used for other institutions to set up a similar process.

The team could launch the topic of science and society. As a consequence of the “spirit” created among museum staff during the second Workshop a group of scientists asked for a new communication format called “science and society” which will be designed together with external partners and will be central to actions on deck 50.

## SOCIAL LAB 5 LEIT

# INVOLVEMENT OF CSOS/NGOS IN GRANT PROPOSAL WRITING

The research conducted during the NewHoRRizon diagnosis revealed the particular need for the involvement of NGOs/CSOs into research and innovation project proposals, as these groups are the ones mostly missing. The pilot actions try to address this need by developing and test-driving such a collaboration.

Initially, the main goal of this pilot was to find ways how to a higher society engagement into the idea-generation, project-goals definition, and project proposal submission together with the public. The involvement of the broadest group of parties should be encouraged (NGOs, CSOs, SMEs, scientists, other relevant stakeholders). This was planned in experimental sites (e.g. FabLabs, Citizen Labs, etc. – there are more than 500 labs in the EU). The method could be, for example, the so-called sandbox experiments, which we currently actively encouraged by the European Committee. This goal was also consistent with the aims of the 3 O's – open science, open innovation, open to society.

In effect, we organized a closed-door workshop with several representatives of NGOs and CSOs to obtain a deeper understanding of why CSOs and NGOs often do not collaborate in grant proposal writing and therefore, miss out on opportunities to collaborate in research that may suit their needs. Through this workshop we found out that CSOs/NGOs have issues relating to funding bodies and networking. Often times, this comes down to failing to speak the same language as academics and business partners have a different working culture; to having different interests and having a hard time in finding the right contacts for collaboration. CSOs/NGOs can also have different needs when it comes to research and innovation and its results, because they are more interested in practical outcomes, often related to issues of social justice and social change. The identification of all these barriers and hurdles opens a new horizon for further discussion with CSOs and NGOs and may inform funders and policymakers about the type of support that CSOs and NGOs need if they want to become part of research consortia.

NGOs/CSOs are one of the missing stakeholder groups from the inter-disciplinary multi-stakeholder collaborations in EU projects. Our diagnosis research highlighted in the requirements, as well as in the interviews the need of inclusion of NGOs/CSOs into these projects.

The objectives of our investigation were twofold:

1

to identify and reflect on the causes of the barriers and hurdles of the increased involvement of CSOs/NGOs in the initiation of project proposal-writing endeavours, and

2

informed by these reasons, to design a prototype of proposal writing process that would be successful in inviting CSOs/NGOs into collaborative projects since their conception.

These objectives were expected to lead to greater societal cohesion and increased efficiency and overall societal benefits resulting from challenging R&I developments. Even so, the Pilot Action stopped after achieving the first objective. It turned out that participants didn't find a common ground in the acquisition of particular proposals. A possible explanation for not achieving the second objective is that participating stakeholders in the workshop did not necessarily have the same interest in research projects. For instance, Oxfam Novib was involved in the pilot action and had an interest in particular calls outside Europe, while other participants such as representatives of a consultancy firm in sustainable food, or a representative of a Higher Education Institution in the field of serious gaming, had completely different interests.

The Pilot Action had partially helped to introduce RRI, especially for NGOs and CSOs. They became familiarized with the concept of RRI. Normally, these types of organizations assume they engage in RRI because they are doing good or try to do so. However, as RRI is a broader concept including dimensions like reflection and anticipation, NGO's/CSO's were able to broaden their understanding of responsibility and apply this broader understanding in their primary process. Unfortunately, due to reasons that are unknown to the team, we were unsuccessful in attracting further collaboration with NGO/CSO stakeholders. We repeatedly tried engaging with them in meaningful relationships however, it never properly took off. Therefore, we presented the findings from the closed-door workshop, which are valuable on their own regard.

SOCIAL LAB 5 LEIT

# PRIVACY-PRESERVING ONLINE IDENTITY VERIFICATION

Multiple European and other countries are exploring the possibility of checking the age and identity of online users, approving or blocking access to websites. Often, online tools such as digital identity verification applications function as tools for mass surveillance. They soak up personal data and often use it purely for economic gain, for example by selling it to the highest bidder.

To this end, the company of YOTI is a member of a B-corporation framework, which tries to focus on ethical and responsible innovations, while collaborating with multiple stakeholders in the process. They have actively incorporated this framework during their work and are successful in attracting governmental and non-governmental actors as their clients. As such, they developed an age and identity verification platform that can be used online while preserving the users' privacy. This includes, for example, vulnerable children and adults. Multiple collaborators were working on the project of YOTI, which in turn led to various applications. The presentation shared with us during the 3rd Social Lab workshop demonstrated that this solution was already implemented by both governments and non-governmental sectors.

From YOTI, we learned that responsible business practices can also create a viable business case and new and innovative products considering both the economic aspect as well as staff, consumer and environmental interests. That is to say, YOTI developed a trusted identity platform that helps individuals prove who they are without mass surveillance. They did this by devising an R&D process that does not only look at the economical bottom line, but also considers the interests of consumers, staff, the environment and responsible governance. To that end, YOTI set up a council that scrutinizes our business process with people from background of human rights, open data and consumer rights. As a core principle, they wanted to put the data into the hands of the users themselves, thus increasing transparency on what is done with the data.

They set-up multiple ways to engage with possible stakeholders, for instance during the LEIT social lab. They also worked together with the Responsible Innovation Compass project and asked an expert to do an algorithm impact assessment and working with the Center for Democracy and Technology in the US. They found a group of angel investors to sponsor the efforts and are now a certified B Corporation. Their efforts haven't been without success: in the past 5 years 6.5 million users have downloaded the app.



## SOCIAL LAB 5 LEIT

# RESEARCH INTEGRITY OF EARLY-CAREER RESEARCHERS

There is a unified set of ethical and research integrity requirements throughout Europe. However, it is often the experience of researcher that these requirements are implemented and reviewed in various occasions and degrees. This pilot action tries to review and understand these differences by conducting online surveys with questionnaires among early-career researchers. Early career researchers are among the consistently educated and trained group on research integrity. Understanding the differences, motives, and degrees of implementation together with practices is crucial and relevant not only for academia but also for businesses, as most of the early-career researchers will work for the latter group at certain moment of their career (approx. 96%). If European research & innovation want to achieve greater responsibility, a deeper insight is needed to the implementation of research integrity during the formation years.

In other words, the problem is that throughout Europe, early-career researchers often have to deal with very different research integrity requirements. Understanding the differences, motives, and degrees of implementation together with practices is crucial and relevant not only for academia, but also for businesses.

To this end, a new initiative occurred in our Social Lab in collaboration with early-career researcher to investigate the uptake or responsibility in relation to research integrity. The rationale to conduct this investigation from the viewpoint of LEIT is that most of the researchers will at certain stages of their careers will join business and non-governmental organizations.

We conducted expert interviews with 4 to 5 experts in both The Netherlands as well as Poland. We found that the understanding of the concept of research integrity is different in different countries. In the Dutch context, people often use the term scientific integrity. On the other hand, we found that there is no formalized training for superiors and advisers who are already working in the scientific enterprise. In Poland we found out that research integrity is integrated in courses of early-career researchers on research methodology and publishing. Here, there is the similar problem that supervisors are not trained on research integrity.

Interestingly, we also found that not much is known about research integrity outside of the academy. This is important, because many researchers eventually go and work outside the academy. An offer to publish these results has been exploited by Social Lab participants and currently the manuscript is submitted and accepted (Kersschot et al. 2021).



## SOCIAL LAB 5 LEIT

## RRI TRAINING

Responsibility in research and innovation (R&I) is an essential requirement driving the European R&I agenda since 2010. Either through the concept of Responsible Research and Innovation (RRI), open science initiative, or increased socio-ethical reflection, the aim of increased involvement of stakeholders affected by R&I processes is one of the driving forces behind this unmet need. The involvement of diverse groups and their particular interests incorporates substantial challenges such as: How can different societal groups be included in sustainability research and innovation? How can researchers, innovators and policy-makers collaborate effectively? What collaboration tools are available? How can resistance to socio-technological innovations for sustainability be eased? Most importantly, how can we build the necessary capacities for this with the researchers and innovators of tomorrow? Awareness on these issues, and increased capacity to act upon them, are prime challenges to including more stakeholders into research and innovation and allowing those affected to have a voice in the process.

This pilot action explored the opportunities offered by responsibility in research and innovation to deliver impactful and inclusive training to researchers and innovators. By developing and providing trainings on RRI to students, (early career) researchers and innovators, we learned that RRI trainings can be integrated at an early stage in the career development of researchers and innovators, even at the Bachelor's level. Specifically, innovators have tools for collaborating with other actor groups and thinking of the societal impact of their inventions.



The aim of this pilot action was to investigate, facilitate, and enhance effective transdisciplinary trainings and discussions of groups with a broad diversity of stakeholders. These include BSc, MSc, PhD students, academic and non-academic researchers, innovators, and businesses (SME/MNE).

After conducting conference workshops and trainings in the Netherlands, Spain and Kazakhstan, mainly at MSc and professional level, the team of several Social Lab participants and a range of university staff to professional trainers, collected anonymized data. This data can be used to inform the advancement of further research in cross-disciplinary R&I discussions and the effectiveness of various training approaches in diverse discourses. For instance, we applied an RRI tool in a workshop with engineers in cleaner production and consumption in order to help them to further extend their awareness and opportunities for responsible action.

Multiple activities emerged from this pilot actions, namely, conference workshops with junior researchers during the European Roundtable of Sustainable Consumption and Production in Barcelona (Spain), October 15-17, 2019, and third-party training activities involving students of the Metropolitan Analysis, Design & Engineering Master program (Amsterdam, October 2, 2019), executed by Wageningen University (Blok) and professionals, innovators in Kazakhstan, executed by the Ethics school (Malsch, [www.ethicschool.nl](http://www.ethicschool.nl)). The training is integrated in curriculum of Wageningen University and [www.ethicsschool.nl](http://www.ethicsschool.nl) offers tailor made RRI training for professionals and innovators, based on the PA.

The evaluations of this pilot action with students, professionals and innovators helped to further develop the RRI training for various stakeholders.

The training helped all stakeholders involved in the training process (e.g. students, professionals, innovators and engineers), mainly in awareness raising and the provision of strategies for action. For instance, the pilot action organized a training workshop during a conference in Barcelona on cleaner production and consumption, which was mainly attended by engineers. They attended the training workshop because they were interested in responsible design and here they could learn about how to operationalize their original responsible intentions.

The training activities will continue as they are taken over by Social Lab participants and their institutions. One of the participants was Ineke Malsch representing the Ethic school. She adopted the training in her course portfolio ([www.ethicschool.nl](http://www.ethicschool.nl)).

Moreover, the output of our work will not only increase the awareness of the multitude of discursive methods in cross-disciplinary R&I collaborations, but will also collect valuable insights for future research relevant to the collaboration between private and public actors for responsible R&I. For a clear example, see <https://www.tandfonline.com/doi/full/10.1080/23299460.2019.1608785> in which the workings of the RRI tool is explained.



## SOCIAL LAB 6 RISK

# DESIGNING AN EXPERIENCE-BASED TRAINING MODULE FOR ASPIRING ENTREPRENEURS

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This Pilot Action answers to the challenge that there is an absence of training that would provide people from small and medium enterprises (SMEs) and other aspiring entrepreneurs with RRI awareness in a structured and consistent manner. The entrepreneurs have but few possibilities to learn how to think about their work with RRI in mind. As a result, opportunities to build responsible businesses are being missed.

The objectives of this Pilot Action are to raise general awareness of RRI among entrepreneurs, to let entrepreneurs identify new opportunities and strengths of their projects through implementing the RRI principles and to inspire action towards practical use of responsible innovation principles in SMEs.

The actors envisioned to be involved in the implementation of this Pilot Action included business incubators, SME representatives and know-how providers (in the fields of RRI and entrepreneurship). The impact was expected to be tangible in terms of early-stage formation of business ideas and their implementation as new SMEs are formed and developed. As the founders are typically very keen on the role their new businesses would play in the society and SME ecosystem, the uptake of RRI principles was expected to be a welcome guidance and possibly even considered to be an advantage in relation both to the public and funding providers.

In between Workshops and during the second Workshop further discussions were held to see how the action could be taken up by start-up incubators in Poland and Ostrava in the Czech Republic. It appeared that there was no general agreement on the underlying ideas, and it was difficult to fully integrate the envisioned ideas in the programmes because they were already set. Therefore, work on the Pilot got stalled. The Pilot was reinvigorated during the 2nd Social Lab Workshop, but the new leader of the Pilot Action changed employment and thus her priorities and she ceased her involvement.



## SOCIAL LAB 6 RISK

## RRI IN TA CR PRAXIS

The aim of the Pilot Action is to help TA CR to develop the role of RRI in its activities as a key nationwide supporter of R&D. TA CR is a governmental agency providing support of R&D in the Czech Republic. It is not the only provider, but with the number of projects it is running and the volume of funding it maintains, it has become the main actor focused on SMEs in this field in the country.

There has already been some success in implementing RRI in TA CR practice. RRI is explicitly incorporated in the upcoming framework funding programme Sigma (with emphasis on gender, open access and participation).

In 2019 the Social Lab Manager was further asked to collaborate in cases that were related to Open Access. For the first time, TA CR took an explicit standpoint and defended the necessity of a wider implementation of Open Access, for example in inter-report preparation proceedings.

There was also a growing interest in Public Engagement as there would be a Pilot of public consultations in funding programs Éta and Zéta.

In 2019 the Social Lab manager also started to collaborate in preparation of internal development project called SmarterAdmin. The project is focused on development in two main areas: implementation of strategic management and dealing with so-called horizontal agendas (open access, gender, participation) in TA ČR guidelines, rules and criteria.

In 2020, TA CR joined a CSA project [Pro-Ethics](#) which is focused on devising an ethics framework, together with a set of practical guidelines and actionable criteria for assessing the quality and ethics of participation processes.

In 2021, a methodical department was created, which gathered all people involved in RRI or in RRI-connected projects.

This pilot action affected mainly the processes and evaluation standards in the funding agency itself. It will have much broader impact in the long run. Later, it could also serve as an example of best-practice for other Czech funding agencies and influence this institutional field.

This pilot action is a lesson of an institutional change. It can be inspiring to similar research-funding bodies that wish to implement the RRI principles into their work. The main lessons learned will be disseminated through RRI Network meetings.

## SOCIAL LAB 6 RISK

# TALENT MANAGEMENT IN INNOVATIVE SMEs

The Pilot activity focuses on developing Talent Management (TM) on an example of an innovative SME. It builds upon the concept of circular economy, specifically in the field of biodegradable polymers. Talent management (a critical activity for an organization's ability to recruit, retain, and produce the most talented employees available in the job market) has been identified as a key factor that enables SMEs to respond to major societal challenges and to link R&D with their actual business.

During the Social Lab workshop discussions, the topic of innovative Human Resource Management (HRM) was identified as a particularly problematic one. Further discussion revealed that a lot of SME representatives are not aware of an explicit HRM strategy in their companies and that they feel they have an opportunity to formulate such a strategy while linking it with RRI principles (such as public engagement, gender equality and ethics).

Specifically, participants agreed that it would be advisable to create RRI-inspired guidelines for Talent Management. During the Lab, it was also confirmed that in order to successfully implement the new principles, having the cooperation of an innovative SME would be key in illustrating the relevance of RRI in TM and TA (talent acquisition) guidelines. Experts in adult education and HR development would be invited to think along, as their expert opinions are crucial for this type of activity.

The main target group identified was primarily management in innovative SMEs (with some potential confirmed also in the institutions that support the formations and early development of SMEs such as business incubators and accelerators). These people have a very strong and direct influence on how these businesses are run and how their internal culture, standards and personnel strategies are set. The impact was therefore expected to be rather significant and observable in terms of the RRI principles guiding both recruitment and HR-development processes.

Unfortunately, the work on this Pilot Action got stalled because of organizational difficulties. Finally, the power sponsor of the Action went on maternity leave and the work on the Pilot Action ceased.



## SOCIAL LAB 7 HEALTH

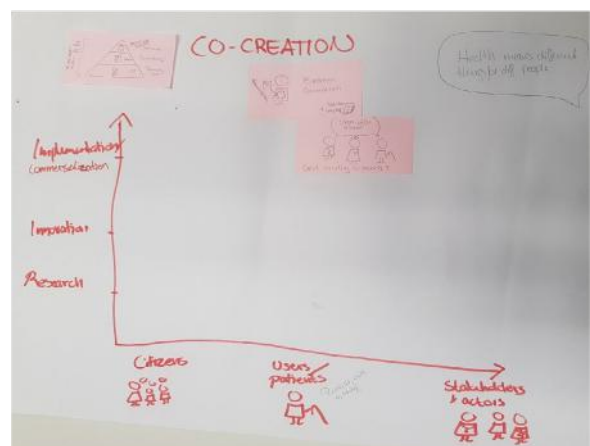
# GOOD PRACTICES OF CO-CREATION

There is a growing sense that patients' healthcare needs and wishes are not always properly met because there is a disconnect between patients, healthcare providers, industry, researchers and policy makers. Co-creation is seen as an approach that can help to reduce this disconnect and strengthen the role of patients and relatives in health care research.

Various positive examples of co-creation exist in healthcare policy making, research, product and service development as well as clinical decision making. However, in general, such participatory approaches are exceptions rather than the norm. The pilot action "Co-Creation examples" aimed to spread knowledge about such initiatives by presenting selected examples to demonstrate the range of applications, show the benefits of co-creation in health and inspire uptake. The pilot action identified suitable co-creation initiatives and interviewed a few of them.

The results of this pilot action are presented in a book chapter and will help those interested in co-creating feasible, acceptable and effective healthcare processes. Initially, the scope had been more narrow and research-focused, but over time it shifted from trying to systematically identify good practices of co-creation with a structured interview-guide and coding scheme, towards choosing a variety of interesting and successful co-creation initiatives and presenting them in a brochure, only carrying out informal interviews if necessary. This probably served the current need for more healthcare stakeholders becoming aware of such initiatives better.

The specific target group of the pilot action are all healthcare stakeholders, such as patients, self-help groups, industry representatives, researchers, policy makers, clinical managers, etc. It is expected that they will broaden their horizon about co-creation in different healthcare contexts.



## SOCIAL LAB 7 HEALTH

# ENRICHING FUNDING MECHANISMS

The pilot action “Enriching Funding Mechanisms” aimed to address the fact that there seems to be a lack of exchange regarding responsible funding among research funders. The pilot action particularly addressed health funding although the problem exists more widely. The aim is to increase impact of research for patients and society more broadly through better incorporating RRI in the evaluation of proposals and in the assessment of ongoing and completed projects by funding agencies.

We aimed to learn from funders who already have good practices in place through interviews and a document analysis. Questions included specific measures that they have undertaken to foster RRI in their routines, as well as impacts on patients and society that they can see from these measures. For this purpose, a selection of funding bodies was approached. Not all responded, but we managed to gather information from four different funders. We learned that RRI as a label is not always necessary as some funders in the field already are aware and have an (implicit) understanding of what responsibility means in the health sector. We also learned that ethical evaluation criteria should be adapted to different technology fields in order to be applicable. Finally, we learned that responsible funding indicators should pay attention to the diversity of a project consortium: Do applicants for example integrate a wide range of stakeholders, with different experiences and expertise on gender and ethics?



Various practices of responsible funding were identified. They range from an internal ethical review committee for the evaluation of ethically sensitive research topics, the requirement that solutions should be co-created between researchers and other stakeholders from the very beginning of a project and throughout its whole lifecycle, working groups including different stakeholders in funding areas with a broad ranges of stakeholders, assessment of proposals with a screening grid that comprises all relevant aspects including many RRI issues, to a national programme called Fostering Responsible Research Practices (FRRP), which focusses on research integrity, quality and social impact. As such good practices exist, exchange and discourse about them would be beneficial to create learning and transfer. A first step could be our summary of the findings. We developed a [brochure](#) to summarize these findings in an easily accessible and user-friendly way

## SOCIAL LAB 7 HEALTH

# PATIENT INVOLVEMENT IN CLINICAL SERVICE DESIGN



Clinical services in hospitals have traditionally been designed with too little focus on the needs of patients and their relatives. The Pilot Action aimed to spread knowledge about an initiative that tried to change this by increasing patient engagement in Karolinska University Hospital in Stockholm, where patients became routinely involved in service design. The group were interested spreading knowledge about the Karolinska model and introducing it in one department in a different hospital: the Agia Sophia Children's Hospital in Athens.

Involving patients in clinical service design can increase the quality of services and the extent to which hospitals actually meet the needs of their patients. To facilitate mutual learning, a visit to Stockholm by Greek representatives as well as a visit by a Karolinska representative to Athens took place. The latter was part of a workshop with different representatives from the hospital and beyond, including a patient representative and a participant from the European Commission. In addition to champions of patient involvement, more skeptical participants were also present. Moreover, with the help of a questionnaire for practitioners, we found out that certain organizational and cultural barriers may inhibit real patient engagement.

We learned that the envisioned institutional change was hard to achieve during the Social Lab and would require a longer-term strategy. However, we were satisfied that the Pilot Action has started the process in the Agia Sophia Children's Hospital in Athens and will be continued by the PA hosts and other champions brought on board.

- A network between people interested in strengthening patient involvement and insights gained in how this can be achieved.
- Initial steps towards cultural change in the Children's Hospital in Athens.



## SOCIAL LAB 8 FOOD

# BIAS2

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Legislative changes have made discrimination illegal in most countries. But we are facing a second-generation of bias (implicit bias) which refers to subtle forms of inherent and unconscious bias. Past studies indicate that people's behavior is shaped by implicit or unintended biases, stemming from repeated exposure to pervasive cultural stereotypes. Biases based on race, nationality, religion, class, age, sex, and sexual orientation (to cite a few examples) may unintentionally guide our thoughts and actions. In addition, and specifically, gender bias is often implicit and negatively impacts people in R&I organizations. The pilot action BIAS2 aims at raising awareness about the existence and implications of bias in our working group, lab, office etc. The particular focus of the first round of bias awareness raising is related to gender inequality in science.

The design of BIAS2 is a one-hour very open and friendly workshop which can be held at the workplace during usual/ general assemblies or in a dedicated time. The workshop will allow the participants to face the fact that implicit bias exist, to anonymously run an online test (optional, they may also just listen) – which will drive their attention on possible biases they are affected by – and to discuss with the colleagues the collated results of the group. It is important to establish a non-judgement atmosphere, so “ground rules” will be set at the beginning and try best to ensure anonymity.

The specific target groups of the Bias2 R&I organizations.

The lesson learned from this pilot action is that gender bias specifically is often implicit and negatively impacts people in R&I. It is tough challenge to tackle this form of second-generation bias since often times, people do not fully realize that discrimination occurs or, even worse, deny its existence. Even when people are being truthful, self-reports can only reflect what they believe about their orientations, whereas implicit measures bypass this limitation. This pilot action should be taken by others because it allows one to test and reflect on their potential own biases, without proposing solutions or “cures”, bearing in mind that a conscious, responsible researcher would be capable of recognizing and assessing whether his or her biases might have the potential to affect his perceptions, judgments or the objectivity needed in scientific working.

The training designed, tested and refined with a smaller group can be replicated to larger audiences. The training materials with instructions can be obtained directly from the PA host: Francesca Ronchi ([francesca.ronchi@isprambiente.it](mailto:francesca.ronchi@isprambiente.it))



## SOCIAL LAB 8 FOOD

# CONFESSION TIME

Research projects often take on multi-actor efforts without getting coaching or having opportunities to reflect formally on ways to improve these efforts. The Confession Time aims at filling this gap by developing an interactive module to allow running research projects sharing experiences on implemented Multi-Actor Approaches (MAAs), “the coordinators’ café.”

The design of the Confession Time involves selection of adequate pair of project (2-4) to be involved in the coordinators’ café, selection and invitation to participants (WP leaders and coordinators), organization of the day event, during which projects can share experiences and reflect on the lesson learnt, and drafting an assessment of the day event. The day event includes the plan for the day as well as guiding questions for reflection during the coordinators’ café.

The specific target groups of the Confession Time are researchers and other stakeholders of the projects (WP leaders and coordinators) with the direct involvement in the project activities of different end users and multipliers, MAA projects “focus on real problems or opportunities that farmers, foresters or others who need a solution are facing.

Multi-Actor Approaches (MAA) are becoming core of many national and international funded projects as driver of bottom-up and grounded innovative solutions. The co-construction process of MAAs, project, however is complicated, as it requires the creation of innovation networks, where individuals meet to bring forward and co-create knowledge on selected topics. The Confession time enables to confess the opportunities and challenges of MAA in research projects based on the experiences and enables in sharing the best practices among the participants.



The Confession Time is designed as a workshop format for the researchers and other stakeholders associated with the project to meet and share their experiences and reflect on the lesson learnt.

## SOCIAL LAB 9 ENERGY

## RENEWABLE ENERGY KNOWHERE



The renewable energy field is constantly changing, the foundations, associations, small and big NGOs break up and suspend their operation, more and more university departments and faculties are dealing with sustainability and renewable energy. The [Renewable Energy Knowhere](#) is a link summary of the EU countries' renewable energy status (Education, Entrepreneurs, NGOs, Community power projects, Local initiatives, Researchers and (State) Authorities). The output of the database is a zoomable online- map focussing on the Hungarian renewable energy field that offers possibilities to search for specific categories. The map is providing for open access to this data to everyone interested in the field, offering the possibility for science education and public participation.

The Renewable Energy Knowhere is designed as an online map offering filter options to look at specific categories: Education, Entrepreneurs, NGOs, Community power projects, Local initiatives, Researchers and (State) Authorities. Using the expertise of the social lab participants as well as contacting local authorities, organisations and NGOs, these categories have been filled with information.

At a first attempt data has been collected for 13 countries represented in the Social Lab. Since the social lab team members from Estonia, Slovenia and Hungary contributed, further updates were restricted to the level of Central and Eastern Europe.

The website has been developed and is now fed with information. The final website will be again shared with stakeholders working in the field to distribute its results and make the field of renewable energy in Central and Eastern Europe accessible and knowledgeable to everyone.

The specific target groups of Renewable Energy Knowhere are researchers, students, tenants, NGOs, companies, authorities and community members interested in the field of renewable energy. The webpage is expected to create a profound overview of existing information and redirects to a multiplicity of different information sources. Thereby, it eases the process of working in the field of renewable energy in Central and Eastern Europe.

A lesson learned from this pilot action is that the accessibility of information is a crucial step when it comes to raise awareness of existing efforts in the field of renewable energy to tackle the energy and climate crises.

The [Renewable Energy Knowhere](#) is a webpage that is, once finished, maintained for at least two years by the web developing company. It is a map linking to several different levels of information about the field of renewable energy with a particular focus on Central and Eastern Europe. It hence represents a one-stop-knowledge base for everyone with an interest in the field.

## SOCIAL LAB 9 ENERGY

## TRAINING ON RRI

The goal of this pilot was to share and transmit the RRI concepts and their importance to the National Contact Points (NCPs) of the Secure, Clean and Efficient Energy programme line.

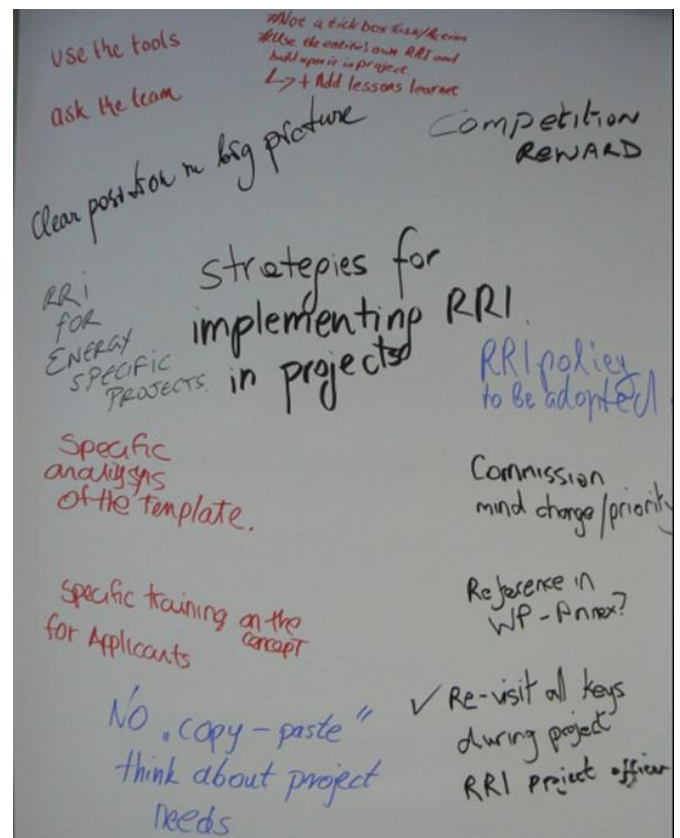
The ENERGY NCPs were the primary target group of the RRI training. In their role in funding and counselling agencies, however, they do play an important role as disseminators and norm-setting agencies and thereby impact researchers, businesses and other organisations and stakeholders involved in European ENERGY research projects.

The focus of the training was hence put on the dissemination of RRI and the manifold possibilities of how to integrate RRI into energy projects and proposals. The training presented a holistic definition of RRI addressing all keys and dimensions. The pilot action thus aimed at enabling NCPs to offer guidance to enquire about the topic and to disseminate the concept for further RRI implementation.

The pilot host is acting as ENERGY NCP and coordinating the C-ENERGY project amongst all ENERGY NCPs. This established connection was used to win participants for the training. The training itself was organised by ZSI as Social Lab Management Team. The training lasted for one and a half days in Vienna and did not only present RRI as a theoretical tool but further included practical experiences of the Smarter Together project case of Vienna. All participants learned about the concept as well as available tools and resources on RRI and felt substantially empowered to advise on RRI in their work as NCPs.

The training represents an effective tool to disseminate RRI and further strengthen the implementation of the concept at multiple levels. Not knowing the concept and all possible resources on RRI is a major barrier towards its implementation.

The NCP training pilot action has conducted an RRI training specifically designed for ENERGY NCPs. The feedback to the training was overwhelmingly positive, the participants got equipped with further resources on RRI and specifically asked for a reprint of a booklet produced in the RRI-tools project, ZSI was contributing to. The reprint is necessary, so that every participant of the training can not only receive a booklet on their own, but further, to disseminate RRI as a concept to be implemented. Thus, the pilot action has resulted in three tangible outputs: [a RRI training](#)



## SOCIAL LAB 9 ENERGY

# RESPONSIBLE RESEARCH AND INNOVATION (RRI) THROUGH LIVING LABS (LL)

This pilot aims at assessing the approaches and concepts of Living Labs (LL) and related activities with regards to RRI content. The focus lies on LL related to "energy in cities". It aims at bridging the gap between RRI in theory and RRI in practice. It hence represents a dissemination activity of RRI in Living Labs, but further aims at re-informing RRI with existing practices. The survey set up in the pilot action specifically asks Living Labs about all the six RRI keys and their respective implementation in the Living Lab and hence addresses RRI as a holistic approach.

A survey was designed and implemented as self-administered online survey to check the RRI application among Living Labs working on the field of energy in cities. The survey was then shared with the European Network of Living Labs ([ENoLL](#)), distributed amongst a researched base of national Living Labs and also disseminated at the Smart Cities World Conference in Barcelona in November 2019. Unfortunately the response rate was quite low but the results nevertheless show some interesting insights.

The results suggest that the knowledge transfer between Living Labs and RRI does not work too smoothly. Living Labs do have the clear potential to specifically implement RRI in practice with regard to open design spaces, innovation spaces, involving the public in public-private partnerships, involving communities of practice and interest and hence provide for good examples for how to do RRI in an open and enabling context, while also having a scientific approach to the actions taken. However, RRI seems an abstract concept for Living Labs, which led many to end their participation in the survey, once RRI was introduced.

By participating in the RRILL survey, the participants learned about RRI and automatically start to reflect on their RRI integration in their Living Labs. The expected outcome is that by getting more present, RRI might also get more visible in their Living Lab activities.

The RRILL has set up an online survey directed at Living Labs related to Energy in Cities.

The [survey](#) is specifically adapted to the context of living labs, however, it can be adapted to any other case in order to raise awareness on RRI as well as to see which RRI aspects are considered or put into practice.



## SOCIAL LAB 10 TRANSPORT

# CRITICAL AUTOMOBILITY STUDIES LAB (CAS)

The problem addressed by the pilot action emerged from both the diagnosis and the Social Lab process: The transport sector is technology-driven, often seeking for technological rather than societal solutions; a technology-fix perspective reduces the “human factor” to “users” and renders their active involvement in research-processes to be perceived as both non-desirable and non-viable; a knowledge-hierarchy is created, where industry and academia (as “experts”) are given dominance in setting agendas and roadmaps. Automobility is considered by SL participants as the epitome of this “technofix” and “user only” stakeholder perspective, thus a critical assessment of, transdisciplinary and stakeholder inclusive approach to the study of the context, innovation process and societal impacts of automobility as a system is required.

The pilot action, by applying a critical, RRI perspective, challenges the current system of automobility, discusses and offers research-based alternatives and to better research and innovation in automobility by applying stakeholder inclusive, transdisciplinary principles and processes to R&I. Thus, at a formal first launch the pilot action created a platform for critical exchange about practices, imaginaries and options for change within transport research. 22 participants attended and the Lab is continuing to collectively work on “critical automobility studies” as a field of research, through increased exchange between Social Lab participants and beyond.

The pilot action and the to be established discipline would like to include RRI principles in transport/mobility research. Thus, all stakeholders of these research fields (researchers, policy makers, industry innovators as well as citizens, and the larger public) are targeted. Impact is expected to be bringing change to how transport research (especially in automobile related research) is conceptualized and practiced.

The pilot action attempts to challenge both the fundamental concepts of how research (and research policy) in transport is conceptualized, as well as how research is done. It brings novel social science and philosophy findings to transport research as well as propagates trans-disciplinarily and STEM/SSHA integration.

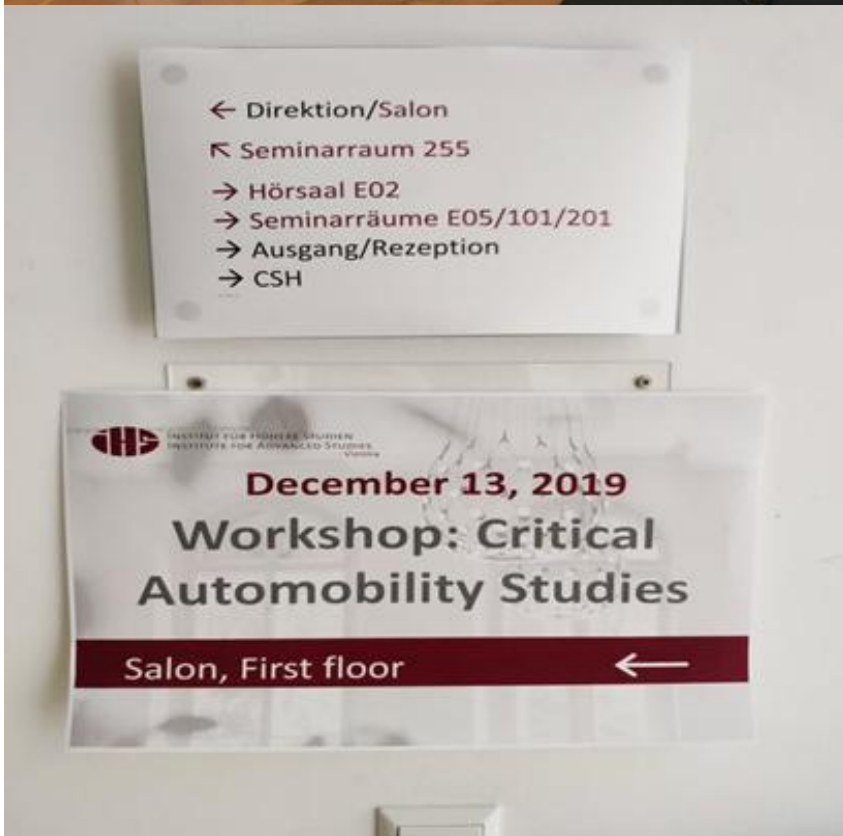
Stakeholders and Austrian participants of the Social Lab participated in the launch event of the pilot action in Vienna, December 2019.

The tangible outputs of the PA are:

- (1) the launch of a [website](#) in March 2020 to facilitate exchange among the people who participated and the members of Social Lab 10 TPT
- (2) the [Critical Mobility Manifesto](#) designed with participants of the Social Lab.

A blog was initiated to further facilitate dialogue and share automobility related critical experiences. The website was spread among all Social Lab contacts and beyond (more than 100 contacts) to participate via writing blog entries, sharing resources, and forwarding the website to other institutions as to achieve maximum outreach. The call for entries (including photos) was shared on mailing lists and other dissemination channels, resulting in 39 entries by academics, policy makers and activists in transport – all reflecting on the Corona crisis with an RRI eye utilizing the learning from the Social Lab process. The platform offers further opportunities for dissemination of NewHoRRizon findings in Transport and potential transformational change towards more RRI praxis in Transport, via developing blog entries into academic publication (discussions with the editors of Mobilities are going on). A planned citizen science event in IHS on the ‘Long night of Research’ involving photos and a workshop sparking ideas of change in transport policy and praxis was not possible due to the COVID-19 pandemic.

## Picture of the CAS launch event



## SOCIAL LAB 10 TRANSPORT

# GENVOICE

The ambition of this pilot action was to experiment with integrating the “unheard voices” of future generations who typically are not engaged or involved in research only as future beneficiaries into transport R&I processes – also in context of the contemporary civil society movements (Fridays for Future) and the societal responsibility towards their future generations.

Through a two-round process, young adults (morning session: school class of 16-17-year-old participants; afternoon: students 20-25 years old) participated in the GenVoice experimental workshop. The event followed a three-step process:

- First, participants debated about their personal experiences with transport in the area in Zilina (Slovakia), talked about their expectations for this workshop and described the travel experiences they make in their everyday lives.
- Second, they created visions of a desirable future and an ideal present mobility system.
- Third, solutions were created on how to make these visions become reality.

The pilot action left a lasting impression on both, the participants and the organizers (transport researchers). Specifically, the school class clearly enjoyed the openness of the process and being asked their opinion upon contemporary issues, while also being able to bring in their own (everyday) experiences. They found the workshop fun, inspiring and empowering – they enjoyed being creative. The organizers were satisfied as well, having left an impression on the participants both in terms of content and inducing a feeling of agency through eye-level conversations. Furthermore, the organizers sought to get the results of the event on the radar of policy-makers in the city and city-planners to engage an even wider group of stakeholders in the GenVoice experiment.

The pilot action should be taken up by others to broaden the dialogue in research and innovation on contemporary developments and issues and to engage and stronger consider the needs of a stakeholder group not necessarily being “heard” or valued within academic/research debates: young adults. Furthermore, the event provided the participants with insights into topics of scientific discourse, while researchers gain insights into the challenges, perceptions and interests of an often times neglected and paternalized stakeholder group.

The main output is the **process of the workshop** as open process of engagement with young adults (as case study material), consisting of world café and group exercise sessions following a three-step process: (1) Understanding the current mobility context and experience: good and bad; group exercise with post-its, then organized by theme. (2) Envisioning a desirable, “perfect” mobility system: collage exercise. (3) Proposing and voting on solutions to reach the vision.

## N: FEEDBACK

NEW  
HORIZON

### What was the most important thing you learned at the workshop today?

#### About the process

- “By combining multiple ideas and opinions, things that benefit our country and people can arise”
- “We can work on a topic that we have never discussed with and be interested in it”
- “Basically, we learned nothing extra new because we only presented our thoughts and ideas. We have learned how to express our opinion and find new possibilities for this problem.”
- “That we should be more interested in what is happening around us, especially in our city and traffic situation. We should discuss this more and come up with solutions.”

#### About mobility

- “People should be more interested in the functioning of transport and as much as possible fill the environment and influence it”
- “We have a choice. They are all for a healthy life. Environment. Problems with Traffic Situation in Zilina”
- “That we should be more interested in transport”
- “That we should talk more about transport problems in Slovakia”
- “We could talk about problems between our cities = we found that they are similar and can be compared with the ones we experience here in Zilina every day”

#### About sustainability

- “The environment must be considered”
- “You need to protect the Earth. If you want, you can”
- “The future is in our hands and we should do something”

NEWHORIZON.EU

### Feedback by participants

## SOCIAL LAB 10 TRANSPORT

# MOBALANCE CONSENSUS CONFERENCE

The pilot of the mobalance Consensus Conference aimed for engaging stakeholders in the research process through empowerment and involvement in agenda setting and decision making in the research process itself. The initial social problem-assessment revolved around societal inclusion/exclusion (originating from the social lab process), with R&I being a closed-system, non-inclusive and driven by experts' conclusions and a focus on technology rather than societal needs and expectations.

The pilot action addressed these problems through the methodology of a one-day Consensus Conference (an application targeting empowerment and engagement of stakeholders in scientific decision-making): 20 participants of a wide range of stakeholders were invited to debate and specify the defining characteristics of a "mobility budget", and to find a consensus between all stakeholders involved and the experts present.

The (mobility) experts provided their knowledge by informing participants about the questions they are dealing with and their own assessments on how to solve these questions. The stakeholders were asked to provide their own perspectives – resulting in exchange between experts and stakeholders about their problem perceptions and suggested solutions. This, however, also led to discussions on the limitations of the mobalance project, as some stakeholders concluded to widen the scope, while the scientific experts mentioned that they're not able to broaden their scope this drastically. Furthermore, the experts presented their findings and conclusions at an open final event, re-inviting the stakeholders present during the Consensus Conference and beyond.



mobalance Consensus Conference

The mobalance Consensus Conference included stakeholders from administration, the private sector, academia, NGOs, interest groups, public enterprises, public institutions, and of course also the scientific experts themselves.

The format of the Consensus Conference is highly transferable and works pretty much anytime stakeholder inclusive decision-making in a workshop-setting is desired – the format is considered to be both inclusive as well as open, while the process is assessed to be exciting as well as insightful.

#### **The main outputs are**

1. the documentation of the Consensus Conference format describing the feasibility within research setups (planned to be written up for an academic publication on stakeholder inclusive methods; not published yet), and
2. the conference aiding the mobalance research team to further their research agenda by finding an approach that was backed by multiple stakeholder groups, highlighting challenges the researchers were initially not aware of. The experts perceived the format, however, a challenge in terms of treating such complex issues/questions within a one-day-setup.

## SOCIAL LAB 10 TRANSPORT

# RESEARCH GOES 2 STREET

The Pilot Action resulted from the assessment that increased exchange between research and society is a necessary requirements for the development of inclusive, democratic and open R&I structures, processes and institutions in transport. A main issue addressed through this pilot action was therefore the language barrier between different stakeholder groups – specifically academic and civil society. The aim was to overcome the lack of knowledge and relationship between these two worlds (research universe and social networks), both intellectually, and physically.

Inspired by Jane Jacob's walk and Aristotle's peripatetic learning, the Pilot Action aimed at initiating a walking dialogue in the Vallecas neighbourhood of Madrid, Spain – together with the teams of CIVITAS ECCENTRIC Living Lab, the Technical University of Madrid (ItD\_UPM), the City Lab Collab, and the interested associations and residents of Vallecas. The structure was two hours of promenade with 4/5 stops, with oral presentations from the scientific experts (explaining their research about mobility and the locality of the transport system in the area), who were then questioned by the attendants, who brought in their own point of views and experiences.

The pilot action included a number of stakeholders and throughout this one-day-event a total number of approx. 50 participants attended the walkshop in various stages, including researchers, city technicians, students, mobility consultants, and members of diverse grassroots and NGOs.

The pilot action should be taken up by others as the format is deeply democratic, getting researchers out of their "ivory towers" and their research being discussed in an open space on eye-level with people from the neighbourhood. As for stakeholders, the event gives residents more insights into the hidden activities within their district and offers insight into the specific research going on within their area.

The main output is the video of the event (recording and presenting the walkshop format for researchers, lay people, students, etc.), which (upon feedback gathered from participants) is perceived to be a positive experience with an innovative approach (the street as a neutral space for an open dialogue), enabling many interactions within the diverse sets of actors present. Vulnerable user groups could, for example, highlight their difficulties in everyday mobility-setups directly to transport researchers. Participating lay people, on the other side, could gain insights into mobility related research within their areas.



Video: <https://www.youtube.com/watch?v=IFPsWMHyyHU>

SOCIAL LAB 10 TRANSPORT

# WORKSHOP ON RRI AND PUBLIC ENGAGEMENT



The Pilot Action addressed a lack of awareness RRI in Transport and Mobility (research) and aimed specifically to focus on the Czech Republic by developing and providing policy recommendations for increased exchange between society and research. The focus was the question of how to change the mindsets of stakeholders at different levels (policy, R&I, civil society, industry) towards more democratic, inclusive and open culture for R&I.

The approach of this pilot action was a workshop on RRI and Public Engagement. The event followed the structure of providing input through key presentations regarding the long-term perspective of the Transport and Mobility sector and an introduction to RRI-approaches. This input was then discussed in a fishbowl conversation format. Within world café sessions, the specific areas of autonomous mobility, public transport, and AI & Ethics were discussed.

As for autonomous mobility, for example, participants concluded that autonomous mobility will happen whether we like it or not. Therefore, society should be included to decide where to be heading with this development. This entails society being stimulated to be part of this process.

The pilot action affected the (mindsets of) participants. Actors from research, policy, NCPs, industry and a representative of a CSO were present, aiming specifically for a change of the R&I system within the Czech Republic (and potentially beyond).

The pilot action should be taken up by others, as it's (1) building awareness of the social component inherent to technology, and (2) widening the perspectives of participants through the diverse set of stakeholders being present, who contribute to the event via different sets of knowledges and providing increased insights for everyone also in terms of how to address contemporary challenges within the sector.

Concluding recommendations for R&I were: (1) Criteria for funding should include societal aspects. (2) Research funding should address societal desirability issues and move away from a tech-focused approach. (3) Stakeholders should be involved in decision processes about research agendas. (4) Policy actors need to be included. (5) Responsibility needs to be framed as an opportunity.

The outputs are the concluding recommendations of the event and the network stemming from the workshop for the progression of the Social Lab. The event helped to bring the attention of public institutions to the questions related to democratization of decision-making processes. Stakeholders generally acknowledged that RRI is an important concept and that the public should be more involved into discussions on research agendas. More public engagement should take place e.g. through participation in evaluation panels or other forms of decision-making. This would also provide democratic legitimacy for corresponding decisions made by policy makers.

## SOCIAL LAB 11 ENVIRONMENT

# PUBLIC ENGAGEMENT – FROM ‘NICE TO HAVE’ TO ‘NEED TO HAVE’

“The transition to a cleaner and healthier planet is a systemic change that affects all levels of society. If citizens and stakeholders are not part of developing the social and technological innovations and solutions it will become more difficult to bridge the gap between those wishing to move faster and those thinking they are already being pushed too far. Also, as challenges become more urgent, experts and scientists may gravitate towards imposing more radical solutions and seeing public engagement as an unnecessary hindrance to rapid transition, thus increasing the risk of stimulating public resistance to the sustainability agenda. It is therefore of utmost importance that public engagement is seen as a prerequisite for sustainable development and consequently integrated into SC5 R&I project designs”.

The message is meant as an incentive to reflect on the importance of public engagement in R & I calls and proposals: The group encourages researchers and representatives of funding agencies on the national and European level to make public engagement a fundamental part of R & I calls, proposals and activity. You are invited to disseminate the message!

While there is growing impatience among the general public with regards to implementing sustainability solutions, there are also growing signs of a ‘sustainability backlash’ among other parts of the public that do not feel represented by proponents of rapid societal transformations towards a healthier and cleaner planet. Despite increasing public worries, the Pilot group stressed that public engagement is often not a part of research projects. This may have to do with the fact that it is often not integrated in call requirements for environmental research and innovation.

The development process followed a clear idea how the arguments should be collected and integrated: A survey among the Social Lab (business, research, civil society, public officials) and their networks was conducted. Questions focused on arguments used to convince funding agencies and project partners about the necessity of public engagement in projects and activities in the past and, in contrast, on arguments against engagement. The provided arguments and experiences were presented and discussed at the second meeting of the Social Lab and ultimately integrated in the short piece of text.



## SOCIAL LAB 11 ENVIRONMENT

# PUBLIC INNOVATION COMPASS

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Two workshops at the World Resources Forum: The workshops opened up the concept of RRI to conference participants and paved the way in participative exercises how RRI could be of benefit to their specific work context.

The Public Innovation Compass has not come into being yet as designed by the Pilot group. But it inspired those in the group as well as many participants of the second workshop that concentrated on its potentials at the World Resources Forum. It might be of relevance to you – so check it out.

Public innovation is a booming sector of research and innovation that aims at combining the responsible use of human resources, materials and time with high effectiveness in work processes. Many public innovation efforts of different scope and outlook produce valuable insights and ideas how to reach this objective. However, it remains an open issue to what extent such efforts allow for participation. The protagonists therefore wanted to organize a new workshop to discuss concepts and ideas around a Public Innovation Compass that could support the mainstreaming of participative practices in the public sector oriented by RRI principles.

The Pilot Action comprised a lively discussion and reflection process: The original goal of the Pilot Action as defined during the first meeting of the Social Lab was to gain insight into the path of integrating public engagement into research and innovation by establishing a symbolic reward system for ‘public scientists’ next to the established academic system. However, after organizing a workshop on this topic at the World Resources Forum at Antwerp in February 2019 and an interview series among conference participants how this symbolic reward system should look like, the group used the next Social Lab meeting to discuss their original objective. They came to the conclusion that they did not want to solve the problem of traditional research cultures and reward systems from ‘outside’, by adding an external price next to the existing reward system, but wanted to stimulate an orientation towards RRI in sectors of innovation with a high potential of societal impact.

A new workshop was conducted at the World Resources Forum in Geneva in October 2019. The key take-aways from this workshop were discussed at the final Social Lab meeting: Public innovation needs science-based models, reliable data and iterative evaluation tools that show impact and public value. A future compass should support behavioural and cultural change towards the adoption of RRI principles, which contribute to achieving the Sustainable Development Goals. Once it could be developed, the use of such a compass can be facilitated by incentives such as regulations, financial or peer recognition on the individual, organizational and systemic levels.

## **Impressions from the WRF-conference (Feb. 2019) and the Workshop at the WRF (Oct. 2019)**



## SOCIAL LAB 11 ENVIRONMENT

# RESPONSIBLE RESEARCH AND INNOVATION FOR JOBS & GROWTH

A brochure of 12 pages, DIN A4: four best practice project examples demonstrate the clear advantages of RRI as far as the Commission's objectives of jobs and growth are concerned. The main message is "Impact through participation" and each success-factor to raise societal impact is linked to a project example:

- Create real-world labs: Innovation City Bottrow
- Develop ownership: Cuve Waters
- Promote citizen science: Roadkill
- Involve local stakeholders & investors
- 

The practice examples visualize how RRI can produce a noticeable impact and highlight the significance of participation, that "facilitates a better understanding of societal challenges, gives access to data and information gathered on location, and promotes mutual learning with the assimilation of different perspectives, the use of adapted technology and better implementation of innovative options."

The brochure is meant to convince the yet unconvinced: Being responsible does not exclude the creation of jobs and growth! Thus we want to provide decision-makers with good practice examples, facts and figures to show that participative and transdisciplinary research can actually help in the creation of jobs and growth.



Brochure as [download](#)

Right from the beginning, the group was intrigued by the question how to reach the unconvinced and those unfamiliar with the benefits of relevant stakeholder participation in R&I. They actively decided that it was necessary to think outside the box to reach beyond the RRI community and thus linked participation to the concept normally thought to be diametrically opposed to RRI, the logic of jobs and growth. And they decided to work impact-oriented to reach the respective community, give a clear guideline how to produce this impact and give practice examples in order to prove the argumentation and visualise how RRI can produce a noticeable impact.

The development process was characterized by a participatory approach, taking in advice and ideas from the Social Lab and beyond. Early on, when the group decided on the structure and content, edited texts of introduction and conclusion as well as on concise project examples to prove their argument, another best-practice example was taken in to make the point for local stakeholder & investors involvement. A first draft of the brochure design was finished for presentation and discussion when the Social Lab met for the second time and after taking in further advice, the brochure was finalized and disseminated, mainly through the channels of the institutions that were represented in the Pilot Action and the consortium.

The brochure benefits from the contributions by Prof. Dr. Matthias Bergmann (ISOE), Dr. Daniel Dörler (BOKU), Dr. Armin Haas (IASS), and Prof. Dr. Philipp Schepelmann (Wuppertal Institute).

## SOCIAL LAB 11 ENVIRONMENT

# TRAINING ON STAKEHOLDER INTEGRATION

A training concept on stakeholder engagement and integration: The training workshop addresses especially consortium lead partners and participants of research and innovation projects to build RRI capacities in public engagement. The concept was tested in a pilot training at the Austrian Research Promotion Agency in February 2020.

The training is designed as an incentive to reflect on the value of stakeholder integration for your own work and includes exercises that provide hands-on experience in the use of participatory approaches to engage stakeholders. The facilitator makes use of suitable case-studies that highlight the skills needed to overcome barriers and identify enablers required for effective engagement.

Many researchers are increasingly interested in stakeholder integration but have no experience or concise idea what it actually means and how to integrate specific formats – such as a multi-stakeholder-process – into a research project. The design needs to be adapted and the process should be organized and realized within a consortium. Accordingly, the group decided to design and provide a training opportunity for grant applicants and project leads as a best practice example to be taken up into regular trainings for the target groups on the national and European level.

The development process of the training concept started in the first Social Lab meeting when the group got intrigued by the problem and decided to set up and test such a training opportunity for project leads and applicants for national or EU-grants with the support of a researcher experienced with multi-stakeholder processes. They looked into multi-stakeholder processes in just-finished EU-projects and existing projects. Based on this research, it was agreed to invite a researcher from the [ENGAGE-climate project](#) who could provide specific experience and run the Pilot Action training. The expert was invited to the 2nd Social Lab meeting where the design and structure of the training was developed and next steps were discussed.

The training took place in February 2020 as a 1-day workshop in Vienna with a diverse group of participants, mainly researchers from large research institutes and representatives from national funding organisations as well as three NCPs. The training contained an introduction highlighting the benefits of stakeholder integration to research especially as far as quality of outcomes and societal impact was concerned. A theoretical and then practical insight into multi-stakeholder processes followed by applying a case-study in several steps and intensity of integration. Barriers and opportunities became obvious and were reflected in the last part of the training.

In the final session of the Social Lab, the outcomes of the pilot training were discussed and the next steps in the development process of a useable training concept decided upon. It is planned to produce a leaflet that will raise awareness and provide the design for a training workshop to a wider audience in order to be taken up into regular trainings.



## SOCIAL LAB 11 ENVIRONMENT

# URBAN TRANSITION COALITIONS

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Coalition building in urban transition conflicts: to bring together different civil society stakeholder groups in order to study interest formation, coalitions building and sustainability learning in a specific area of urban transition conflicts.

Civil society inclusion is most relevant to successful urban transitions. Although the Pilot Action has not been realized, concept is still most valuable to consider:

Multi-stakeholder processes in the environmental domain are often subject to power imbalances and many voices are therefore not sufficiently heard leaving them with little room to contribute and impact successful urban transformations. Thus, the original goal was to work on urban transition coalitions and to study and support interest groups with a similar stake how to overcome differences and identify common objectives: to exchange views, discover overlap of concerns, values, interests and activity. By forming alliances, power imbalances can be countered and the voices of engaged and concerned citizens can become more influential in transition conflicts.

The main idea was to bring together the biographical 'ends' of society – the young and the elderly – and, as there was one Pilot Action participant particularly interested in the gardening aspect, the group decided to study and work with urban garden activists (dominantly: young) and traditional urban gardeners (dominantly: old) about views and practices on gardening and its social and climate benefits in a growing city. There were intense discussions on the concept. However, as the Pilot was very much linked to Berlin and to specific expertise, most participants who were not familiar with the gardening perspective, could not support its realization. They felt ownership for the general idea of urban transitions coalitions and came to the conclusion in the final meeting of the Social Lab, that it would be better to widen the Pilot Action topic, to have for example two case studies, to benefit from the expertise and commitment of the group and indeed to foster interaction and exchange of experiences between different fields of research. They plan to engage in a policy brief in the framework of the NewHoRRizon project.

SOCIAL LAB 12 SOCIETY

# RESPONSIBLE DEMOCRACY (IN AN AGE OF DIGITALISATION)

The Responsible Democracy pilot action addresses the role of deliberative democracy in the uptake of digital governance models and tries to analyse the best options to establish an ethically sound and democratically based methodology. With the increasingly stronger role of digitalisation how can we guarantee the possibility to have a meaningful and responsible participation of citizens in the design and evaluation of public policies? In this sense the pilot addresses all the keys adopted by the European Commission. How can we foresee an ethical model of science policies in a digital world? Are we considering the necessity to provide citizens with sufficient knowledge (Open Access; Science Education). What forms of engagement can be implemented that respect the democratic need to be included with the one of being responsible?

The design of the pilot was to start a series of workshops with the inclusion of high-level academics, researchers working as policy-makers (JRC), and national support agencies that can interact with little official restrictions. Accordingly, the participants can more promptly implement some of the suggestions arising from the debate.

The specific target groups of the pilot action were researchers and researchers working as policy-makers who are exploring paths to tackle societal challenges. The policy makers are potentially also able to share their experiences with other colleagues and/or scientists. Scientists are given the chance to explore close aspects of their researches and also to aspire for an impact, given the presence of policy-makers.

The lesson learned from this pilot action is that democratic deliberation and individual responsibility are crucial criteria to evaluate the appropriateness of policies implementing scientific frameworks. Consequently, public engagement is a fundamental and very important first step towards doing RRI. The workshop was the first of a series of initiatives in a joint effort with the JRC. The overall plan is to continue a dialogue with policy-makers who are closer to political scientists so to produce relevant documents and guidelines accessible at different levels. One example are the recent documents published by the JRC, which were also an initial object of discussion (<https://ec.europa.eu/jrc/en/enlightenment-research-programme>).

These kind of pilot actions are very important to provide policy-makers with innovative research and to offer an informal space where academics and policy-makers can interact and learn from each other. This pilot action should be taken up by others because it is a highly efficacious measure to implement RRI and ethical approaches to science policies as it overcomes limitations often visible in other official occasions.

The Responsible Democracy is a first attempt to discuss and promote the basic methodology to implement the governance of digitalisation through the integration of traditional features with innovative challenges and measures. It is a first moment in a process of dialogue between policy-makers, researchers and practitioners to address digitalisation of Europe's governance. The next steps will be planned according to the actual obstacles of organizing meetings and most probably a literary exchange will be initiated between academics and policy-makers.

SOCIAL LAB 12 SOCIETY

# RRI AND “CHANGES TO THE NATURE OF WORK”



The pilot addresses the challenges generated by the introduction of data science and artificial intelligence. Furthermore, the pilot discussed how these technologies are affecting and will change labour and its processes. Changes to the nature of work due to automation and data-driven technologies are a high policy priority for the European Union, Member-states and regional governments. While new technologies can create new jobs, many roles and tasks will also be transformed by the introduction of automation processes. Newly created positions and responsibilities may require combinations of digital and social skills that are currently in short supply. The pilot action aimed at addressing these issues with a special concern for the dynamics present in the Limburg region of the Netherlands. It focused on aspects related to governance, ethics, science education, open access, ethics.

The design of the pilot was meant to address these problems through the adoption of the focal perspective of RRI as a framework able to facilitate a reflection on innovative challenges. Experts, policy-makers and end-users discussed and learnt from each other about the challenges related to this crucial aspect and their possible solutions.

The specific target groups of the pilot action were researchers and policy-makers who are exploring paths to tackle the automation of process directly or indirectly related to the labour sphere. In this way the organisers hoped to help policy-makers in understanding the main issues around digitalisation and automation of work, and design policies to reduce its potential ethical downsides. At the same time, researchers dealing with digitalisation in general had the chance to understand the ethical challenges potentially embedded in an apparently pure technical process.

The pilot addressed a concrete but still general aspect which can highly benefit from the RRI approach because its innovative and fine-grained nature in regulating uncertainty. It offers a clear example of the benefits of RRI in everyday lives and for actors who might be sceptical about ethics and its role in concrete challenges. In this way RRI can prove to be useful in domains that are external to social sciences and it can show its potential.

The pilot action proved to be beneficial to participants as it targeted the specific challenges of the region where it was held (Limburg, The Netherlands). As often the different actors of a specific context are unaware of each other's competences and needs, the pilot was a fruitful occasion to learn about the different possibilities, but also challenges, that the digitalisation of work entails. Limburg province is undergoing a deep economic and social requalification due to a change in the production system (previously relying on fossil fuels). Accordingly, the institutions have been investing resources in order to incentivise the uptake of a digital identity in the region, meaning jobs relying on or implemented through digital tools. However, the level of innovation required to implement such objective, raise several challenges due to the uncertainty in terms of available tools

SOCIAL LAB 12 SOCIETY

# SOLIDARITY FOR EUROPE (EUROSOLIDARITY)

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The pilot aimed at discussing the role of solidarity in addressing societal challenges through RRI. The background of RRI served as a basis to understand what measures that are beyond the given legal framework can be adopted to increase the general level of social justice. The workshop was designed according to a multi-actor perspective, aiming at bringing together different individuals dealing with solidarity from different angles. More specifically, abstract considerations informed by political philosophy, together with political scientists and academics dealing with bioethics aspects, convened together so to dialogue on the different levels of solidarity, from theory to practice. In this way the workshop intended to represent a fruitful space to understand reciprocal obstacles and the difficulties inherent in the translation into concrete actions of solidarity principles. RRI proved to be a fertile link between all these aspects as the notion is a clear example of this chain that goes from principles to practices.

In order to facilitate a circular reflection examples from case studies in the field of bioethics were provided. This helped, on the one hand, theorists to understand current societal challenges, on the other hand, practitioners to understand better the democratic objectives behind the principle of solidarity. The workshop involved researchers from various disciplines discussing the idea of solidarity against the backdrop of responsible innovation. How can research and innovation be beneficial to implement principles of solidarity. The side objective of this pilot was to raise awareness about RRI to researchers who are not explicitly adopting this framework.

The pilot explored the connections between RRI and solidarity through their application in different domains (e.g. bioethics). The workshops aimed at triggering the curiosity of the participants and shift their usual perspective by showing commonalities between the objective of RRI and those of solidarity.

The specific target groups of the EuroSolidarity pilot action were mainly researchers and civil society representatives. Also students were present so to increase the familiarity with RRI. However, the long-term objective was also to reach policy-makers who are usually referring to principles of solidarity without having all the necessary information to be able to implement it in a significant manner.

EuroSolidarity can represent a fruitful example of the necessity to adopt a holistic perspective about societal challenges and explore potential bridging points. Furthermore, by soliciting a shift of perspective, EuroSolidarity can be used as a case to highlight the necessity to think in broader terms when addressing a societal issue.

## SOCIAL LAB 13 SECURITY

# CAPACITY BUILDING OF RRI IN HIGHER SECURITY EDUCATION

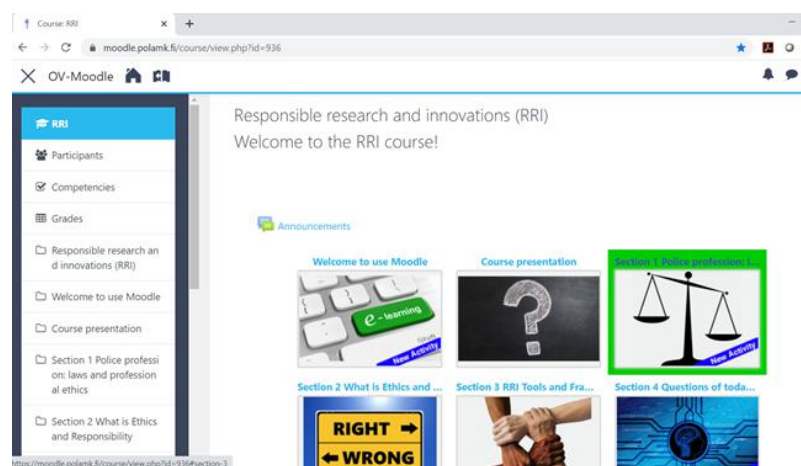
The pilot action addresses the lack of different responsibility related approaches in Finnish security education overall, and in the case of the [Finnish Police University College](#). Specifically, the pilot action works towards increasing the role of RRI in the curriculum of the University College. These actions relate to the themes of ethics and science education.

The pilot action advances the goals of responsibility in the security education through interactive approaches. In practice, this means applying the principles of gamification through an interactive Moodle-learning platform and a tailored game on the theme of RRI in the field of security, which deals with responsibility issues in real-life based situations by simulating them.

The pilot action has facilitated the uptake of RRI in the very distinct and often problematic field of security related higher education. The action has brought students into contact with a wider sense of individual and societal responsibility arising from the concept of RRI. Moreover, the teaching staff benefits from the interactive game as a tool for demonstrating the dimensions, uses and benefits of RRI approaches.

This pilot action has introduced RRI and responsibility approaches to a highly relevant yet problematic field of security. As a result, RRI forms a more coherent part of the curricula of security education in the Policy University College of Finland. A lesson learned from this pilot action is that education and training initiatives may start as a voluntary approach but could later emerge as an integral part of the curriculum. The course, which was made available for Policy University College's students in Moodle (internal course) can be further customized for institutions performing security related education.

Capacity building of RRI in higher security education has facilitated the uptake of RRI in security related higher education in Finland and specifically in the Police University College of Finland. The tangible output from the pilot action is the learning platform, which includes the interactive "RRI in security field"-themed [game](#).



## SOCIAL LAB 13 SECURITY

# DEVELOPING A WEB-BASED RRI COMPASS TOOL FOR SMES

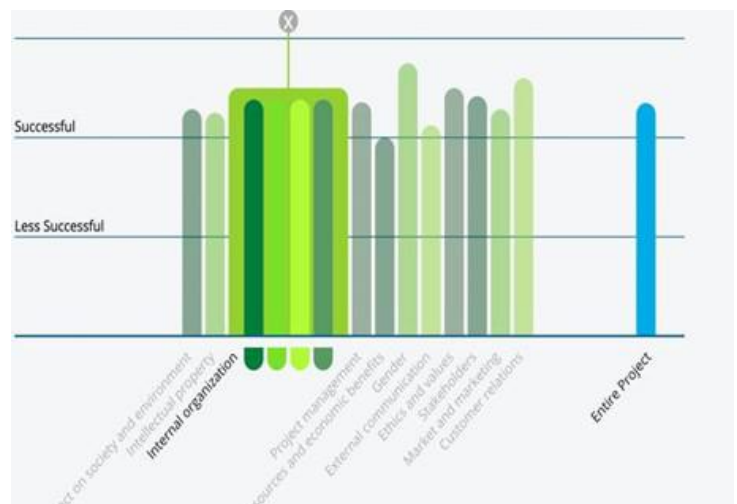
The pilot action addresses the challenge faced by many SMEs with regards to the incorporation of responsibility and ethics related issues to their day-to-day work. Unlike bigger companies, SMEs usually do not have sufficient resources to thoroughly consider various aspects and dimensions of responsibility in their activities. Furthermore, there is a general lack of performance indicators for the measurement of responsibility. In general, the pilot action connects to themes such as ethics and governance.

The pilot action, owned by YAGHMA Company, creates a “compass” toolkit and provides a framework, for the development and promotion of RRI in SMEs. The toolkit is targeted to enable SMEs in the field of Artificial Intelligence to measure their project performance against tailor-made Key Performance Indicators (KPI) and monitor them over time. Corporate reporting is a tool for supporting business activities of SMEs towards more responsible actions. RRI focused KPIs help to make responsibility related actions and impacts visible and thus creating incentives for RRI. In addition, RRI compass tool helps to equalize the gap between large companies and SMEs.

The pilot action will work with different companies in the field of AI and security. “Business Reporting on the Responsible Research and Innovation (RRI): A Practical SMEs Guide” -is available in the RRI Ex tool.

Going beyond regular communication to stakeholders, an effective corporate reporting tool is key to building trust and aligning investment through transparency and accountability. In addition to informing external stakeholders, such as investors, corporate RRI reporting is a powerful stimulus for internal conversation and decision-making with regard to contributing to responsibility within a company.

The output of the pilot action is an RRI compass tool for SMEs especially working on AI that supports the uptake of RRI approaches in SMEs by facilitating the creation of a measurement tool for corporate reporting. The tangible output from the pilot action is the framework tool co-developed with companies working in the field of AI.



## SOCIAL LAB 13 SECURITY

# EXTENDING CSR TOWARDS ETHICAL AND RESPONSIBILITY FRAMEWORK: IMPACT ON SOCIETY (FIBS)

The pilot action addresses the complicated problem of measuring social responsibility and potential security issues with different indicators. Companies are increasingly looking for reliable indicators, usable tools and well-defined approaches to understand and measure social impacts, which are harder to measure than, for example, pure monetary impacts. Societal impact has become prevalent in company strategies, especially due to the introduction of SDGs (Sustainable Development Goals) and implementation of CSR (Corporate Social Responsibility). The challenge is that the measurement approach should be simultaneously simple and methodologically sophisticated. The pilot action connects to themes such as ethics, gender, engagement and governance.

Specifically, the pilot action works towards the integration of social responsibility indicators for the broader measurement of societal impact in the partner organizations of the [Finnish Business Society \(FIBS\)](#). The target group of the pilot included companies that were taking part to three half-day FIBS Focus Group sessions led by VTT. The Focus group sessions were targeted towards presenting and co-developing tools for the measurement of societal impact by the companies. The participants pondered questions such as:

- What can be measured?
- Why it is important to measure?
- What is important to measure in terms of societal impact?



The pilot action has facilitated the potential for uptake of RRI related indicators related to broader social impact in the field of businesses where Corporate Social Responsibility (CSR) is the norm. The sessions were developed in cooperation with the companies and FIBS in order to respond to the needs of the participants. As a result, the pilot action has involved the broad array of different kinds of businesses involved in FIBS and many of their stakeholders as well.

This pilot action has provided ways to scrutinize, co-create and integrate different social responsibility indicators into businesses. The co-development sessions organized together with FIBS have proven to be a useful way to gather relevant stakeholders together and to share experience from different contexts. Working with the two related, yet different, concepts of CSR and RRI has proven to be a mutual learning experience for the pilot action organizers and the companies, between pragmatic and more theoretical approaches.

Extending CSR towards ethical and responsibility frameworks has facilitated the uptake of a broader measurement of the concept of responsibility and societal impact among the Finnish Businesses part of the Finnish Business Society. The co-created indicators for the participating companies included dimensions such as: public engagement, ethics, governance, and a focus on consumers as citizens. The main output from the pilot action is the lecture and other materials from the training sessions published by the Council of Tampere Region webpages.

SOCIAL LAB 13 SECURITY

# RESPONSIBLE AI FRAMEWORK AND EVALUATION CRITERIA FOR CALL FOR PROPOSALS

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In recent times, Research and Innovation actions related to Artificial Intelligence (AI) have become increasingly popular, gathering substantial amounts of funding. However, there is simultaneously an increasing need to create ethical standards and criteria for the AI related R&D funding to scrutinize the safety, transparency and trustworthiness of the funded actions. These relate to themes such as ethics, governance, engagement, science education and open access. The responsible AI framework and evaluation criteria address the aforementioned challenges in the call for proposals.

The main function of the AI framework and funding criteria is to assess the ethical standards of proposals to create incentives towards ethical and responsible development of AI. The pilot action developed a set of questions related to responsibility aspects of project proposals that were attached to the official project application template. In addition, an evaluation criteria was designed for this set of questions.

The need for the pilot action came from the Council of Tampere Region. The pilot was backed up by civil servants and accepted by the politicians. The pilot thus helped to transfer RRI approaches and keys to the institution and its funding criteria. The additional responsibility related criteria for funding AI activities further spreads the impact of RRI by helping to incorporate responsibility into the project applications. As a result, the affected parties are the institutions applying for funding from the Council, such as universities, business development agencies and municipalities.

This pilot action has introduced a new kind of criteria into RDI funding in Finland and in Europe for regional funding. A lesson learned from this pilot action is that RRI related funding criteria can make an impact in the uptake of RRI into RDI projects and actions. In sum, this pilot action should be taken up by others because it facilitates the uptake of RRI into the policy arena, to different funding organizations and to R&D activities. Furthermore, in terms of resources, it is also relatively light process to implement. The evidence of the merits of the pilot is reflected by the fact that its application into other institutions is under discussion and Council of Tampere Region is continuing to apply the criteria for future calls.

The Responsible AI framework and evaluation criteria for call for proposals is a practical tool for funding institutions that facilitates the uptake of RRI in R&D. The output from the pilot action is the set of questions and an evaluation criteria for these questions which has been published at the [Council of Tampere Region](#) webpages. The evaluation of ethical aspects and responsibility of the funding applications can be conducted through these tools.

Areas of responsibility	Brief explanation
Ethics	<b>Project activities and outputs must be in line with prevailing values</b> <ul style="list-style-type: none"> <li>Integrity, human dignity and individual freedom: actions and their outputs must serve needs of the society in a way that supports human rights, freedom and cultural diversity.</li> <li>Equity and equality: Innovation must promote equal opportunities for use and be accessible to different groups of people, regardless of physical and psychological differences.</li> <li>Privacy: people must have the right to manage and control their personal and self-generated data.</li> </ul>
Engagement	<b>Key stakeholders and relevant groups of civil society should be identified and genuinely involved in project development</b> <ul style="list-style-type: none"> <li>Comprehensibility: decisions and actions should be explained and justified to users and other stakeholders.</li> <li>Acceptability: Innovations and actions must be acceptable, usable and desirable from the point of view of stakeholders and citizens.</li> <li>People's control over innovation: people must be able to choose how and when innovations are introduced to achieve goals.</li> </ul>
Openness/transparency	<b>Activities and outputs should be as transparent as possible, to enhance learning and interaction, which support development.</b> <ul style="list-style-type: none"> <li>Transparency: the objectives, activities and results of the project should be discussed and communicated to stakeholders and citizens in a truthful and transparent way.</li> </ul>
Safety/Reliability	<b>Operational outputs must be reliable and safe</b> <ul style="list-style-type: none"> <li>Reliability: Innovation must be reliable enough for the purposes for which it is used. For example, users should be ensured that the data collection is reliable and that the system does not transfer data to third parties uncontrollably.</li> <li>Safety: Innovation safety should be auditable whenever necessary and the risks of misuse should be minimized.</li> </ul>

## SOCIAL LAB 14 WIDENING

# ATTRACTING MORE PUBLIC IN TECHNICAL UNIVERSITY OF CLUJ-NAPOCA (TUCN)

Science and technology disciplines often lack attractiveness for young people – especially for young women. There are only few female role models in science and technology and current curricula in science and technology have difficulties to address socio-ethical issues.

The pilot action at the Technical University of Cluj-Napoca (Romania) addresses these problems. It tries to broaden the thematic scope of teaching materials used at the university and to include socio-ethical topics in STEAM curricula. It tries to enrich and to deepen the socio-ethical dimension of research as well as the dimension of sustainability in STEAM. In this way STEAM disciplines should become more attractive for young people, particularly young women.

The pilot action team sees RRI as an opportunity to introduce socio-ethical aspects in technology, as RRI is a way to meet some of the inequalities that occur at the educational system. In addition, they think that RRI could be a vehicle to work with students from different socio-economic backgrounds.

The pilot action will work with different companies in the field of AI and security. “Business Reporting on the Responsible Research and Innovation (RRI): A Practical SMEs Guide” -is available in the RRI Ex tool.

The actions tried to develop science education and public engagement activities to enrich teaching materials delivered at the university by adding sustainability and social aspects. Members of the Social Lab team see RRI as an opportunity to address these problems by introducing socio-ethical aspects in technology and using RRI as a vehicle to attract people to the technical research fields. They also see as RRI as a way to meet some of the inequalities that occur at the educational system. In addition, they think that RRI could be a vehicle to work with different pupils that come from different socio-economic backgrounds.



The team organized two science education activities to strengthen research dissemination and to attract young people, especially female students, to STEAM research fields. The workshops focused on the design of the future electric vehicle and the green city:

1. Co-working with the university students in order to disseminate the research activities of the Electrical Engineering Faculty of TUCN (April 30th to May 30th, 2019). University students were trained in the design, optimization and testing of electrical machines, including sustainability, equality and environmental aspects in the process. After the workshop they had the opportunity to build a model in a month in the research group laboratories under the supervision of the researchers. 60 students attended the course, 30 students-built prototypes, more than 60 students attended to final assessment, with high female participation.

2. „The green city in TUCN“ (October 31st 2019 to January, 2020) This workshop aimed to present the importance of the research in the field of Electrical Engineering and the socio-ethical impacts in the future. Several children at schools with different socio-economic status participated in 3 groups of 20 pupils from different environments (urban/rural). The driving element of this pilot action is the research institution's need to attract young talent to their disciplines and research. They have mainly worked towards public engagement, science education and gender equality.

## SOCIAL LAB 14 WIDENING

# PROMOTION OF OPENNESS AND ETHICS IN SCIENCE AT THE INSTITUTE FOR PLANT PHYSIOLOGY AND GENETICS (IPPG)

The pilot started with a presentation and a public discussion organised by Tecnaia on July 10th, 2018 in Sofia, Bulgaria about RRI at The Institute of Plant Physiology and Genetics (IPPG) of the Bulgarian Academy of Sciences (BAS). In Bulgaria current science and technology research often fails to address socio-ethical issues. The pilot was designed to address this gap and to promote ethical, transparent and accessible research through raising public awareness. The IPPG Institute organized several communication and outreach activities to support this aim, as for example a public forum in which people can learn about science, technology and innovation as well as ask scientists questions. The pilot action disseminates the concepts of RRI and Open Science at the IPPG in a dedicated Facebook group [1] and seminars on Open Science and ethics [2].

### 1. Communication and Outreach activities

- IPPG organised an open-air exhibition in Sofia about the activities and history of the institute on October 14th, 2019 on the occasion of the 150th Anniversary of the Bulgarian Academy of Sciences (BAS)
- A round table on the collaboration between IPPG and the International Atomic Energy Agency (IAEA), about the past, present and future of the collaboration between the two institutions.
- The screening of a documentary movie about a patron of the former institute of Genetics Doncho Kostoff in December 2019.
- IPPG invited high school students from the American College and the National School for Ancient Languages and Cultures in Sofia to visit the institute, Autumn 2019.

### 2. Ethics in science

- In March 2019, the institute created an ethics committee to monitor and evaluate ethical problems in and between the different research units of the Bulgarian Academy of Science. It also developed an ethical code with ethical principles for biomedical research involving human subjects in the institute.



Documentary movie about Acad. Doncho Kostoff – patron of the former institute of Genetics



Round table – Collaboration between IPPG and International Atomic Energy Agency (IAEA) – past, present and future

[1] <https://www.facebook.com/ippg.bas.1>

[2] [http://www.bio21.bas.bg/ippg/bg/?page\\_id=1758](http://www.bio21.bas.bg/ippg/bg/?page_id=1758)

Especially the outreach activities greatly increased the visibility of the academy for the public and attracted young scientists to the institution and contributed to ethical and transparent science to:

1. Create research that is transparent and accessible
2. Raise public awareness and visibility of IPPG
3. Sustain and develop options for collaborations
4. Engagement in global societal challenges



Open-air exhibition in Sofia about the activities and history of BAS and IPPG with posters presenting the history and work of BAS scientists

## SOCIAL LAB 14 WIDENING

# RRI TRAINING 2.0

# FOR NCPs

Several members of the of European network of NCPs of WIDENING ([NCP WIDE.NET](#)) observed during the 1st Social Lab workshop that there was very little information material available about RRI for their programme line. In particular, information in languages other than English was missing. The pilot action team took initiative and created and translated information about RRI for WIDENING programme applicants in several languages and organized training workshops on RRI in several WIDENING countries. The pilot action is orchestrated by the NCP WIDE.NET network.

After the first Social Lab workshop the TECNALIA team travelled to different countries, to promote RRI in the WIDENING community. In this period, they were invited by NCP WIDE.NET network to help NCPs get more familiar with the topic of RRI. As a result, a training took place in summer 2018 on RRI for the entire NCP network. This training was held on July 3rd to 4th, 2018 in Innsbruck, Austria. Its aim was to provide an overall understanding of RRI and its different keys. This event was attended by 16 NCPs.

Thereafter, the Czech WIDENING NCP created a complete module on RRI in Czech language for applicants. After the 2nd Social Lab workshop, the Spanish WIDENING NCP translated this module into Spanish and other participants considered providing more translations as teaching material in their standard training activities for grant proposal writing. In addition, the Social Lab team supported training events on RRI in different EU member states and third countries, countries, such as in Lithuania and Armenia. The Social Lab management either participated in these events or supported the Social Lab team in other ways by providing them with RRI related content accompanying European Commission requirements.

The following workshops have been conducted by the National NCPs:

- Workshop on proposal writing for TWINNING (70 participants) and ERA Chairs calls respectively in Prague, Czech Republic, June 19th, 2019 and October 14th 2019.
- Spanish WIDENING Info day that was held on the 24th of September of 2019 at Seville. The Tecnalia team was present with a dedicated talk about RRI. 33 potential applicants participated in the info day.
- SiS.Net SWAFS NCP Network project meeting in Yerevan, Armenia, February 2020.
- Lithuanian info day for H2020 thematic areas: Inclusive, innovative and reflective societies (SC6) and Science for and with Society (SwafS). February 18th 2020, Vilnius (Lithuania).

The pilot action introduced the idea of RRI into a variety of organizations and enabled researchers from several EU countries to include it in their WIDENING grant proposal. Several actions have benefited from this pilot focusing on the practical aspect and sharing existing knowledge and resources on RRI. The general training helped NCPs to relate RRI to their own context and operationalize it in their own practices and then led many WIDENING applicants to start to consider involving aspects of RRI in their research applications.

Tangible outputs

- A training module in Armenian, Czech, Lithuanian, Polish and Spanish language that introduces RRI to WIDENING applicants
- Five workshops for WIDENING applicants

Training with NCPs on July 3rd/4th 2018 in Innsbruck, Austria.



NCPs Workshop in Prague, Czechia, 19 June 2019 and 14 October 2019: workshop on proposal writing for TWINNING [1] and Spanish Widening info day that was held on the 24th of September of 2019 at Seville [2].



[1]<https://www.h2020.cz/cs/eit-jrc-horizontalni-aktivita-euratom/sireni-excellence-a-podpora-ucasti/akce/seminar-k-priprave-projektu-do-vyzvy-twinning>

[2]Link to the Workshop: <https://eshorizonte2020.es/mas-europa/difundiendo-la-excelencia-y-ampliando-la-participacion/eventos/taller-responsible-research-and-innovation-rri-en-la-preparacion-de-propuestas-al-programa-spreading-excellence-and-widening-participation>

## SOCIAL LAB 14 WIDENING

# “RRIZING” THE UNIVERSITY OF NOVI SAD

Higher education institutions in Serbia are often little acquainted with RRI. The University of Novi Sad, although it already had promoted the concept of open innovation, had only scattered knowledge about, and experience with RRI.

In this pilot action, the university encourages its staff to start embracing RRI and to embed and sustain the concept in its own institution. The Faculty of Agriculture at the university decided to use a top-down approach in this matter and to take first steps to systematically introduce RRI principles into its activities as higher education institution. Other units of the university (Faculty of Technical Sciences and Institute of Food Technology) will observe these activities and integrate lessons learned in their context.

In order to start to “RRIze” its institution, an ad-hoc “RRI team” at university level was set up. The team focused on each individual RRI key and selected an additional topic, i.e. the generational gap. The team carried out an RRI diagnosis of the entire university. This exercise resulted in a detailed report that has been presented in the Social Lab and provided useful insights how to work with the individual keys at the university. The RRI team promoted keys such as gender equality or public engagement which they thought deserved particular attention. But the pilot action also provided a vehicle to work on other pressing issues such as the brain drain that affects Serbia. So far, a number of actions have been carried out: the RRI diagnosis, a dedicated webpage, a leaflet and a brochure were created, and a workshop was organized.



Currently eleven people are involved in the initiative at the University of Novi Sad, eight are allocated to the individual keys and three are working as managers and administrative staff. Each person oversees one RRI dimension. The university formed its own RRI team and delegated roles focused specifically on the keys plus one extra (generational gap). So far, the pilot action was successful in disseminating RRI. It is one of the few pilot actions that took an “institutional approach” towards RRI, trying to introduce RRI at the institution. The RRI diagnosis the university conducted was very helpful for this purpose. Currently, more activities have been proposed, but they demanded for funds from the Social Lab and are also pending because of COVID-19.

Next steps include deepening the knowledge on RRI and its dimensions through evaluation of this and other pilot actions, as well as by discussing the future of RRI. This is expected through a series of educational events for university members to exchange experiences about RRI and introduction of the RRIZing process between staff members of different faculties in order to “RRIze” their institution. Finally, the appointment of an RRI ambassador will support the sustainability of these activities.

In this pilot action the University of Novi Sad took first important steps to embed and sustain RRI in its activities. University staff was encouraged to build relationships and to generate diverse and effective interactions to introduce RRI into the university. The pilot action could become an example to be transferred to other Universities.

This is a great example on how you can change your own university to make it more responsible. This university has started a journey to implement RRI in a practical way that can have a lasting impact on institutional level promoting a structural organizational change.

Since March 2020 the University of Novi Sad cooperates with TECNALIA in a recently funded new RRI EU project called CO-CHANGE and more resources will be allocated at the university to this topic as they are part of a change lab. However, there are also challenges ahead. Now they are engaged in **CO-CHANGE** will probably accelerate it engagement in the concept and serve as a showcase for improvement of all these aspects at country level. The University of Novi Sad has also been granted with another Horizon 2020 project, "Embedding RRI in Western Balkan Countries: Enhancement of Self-Sustaining R&I Ecosystems", with acronym **WBC-RRI.NET** that will start on March 2021.

### Tangible outputs:

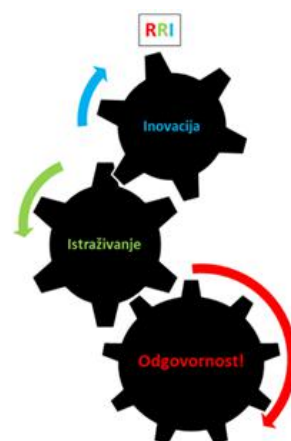
#### • RRI diagnosis (for internal use of the university only)

An initial RRI diagnosis was conducted into the UNS context, which resulted in a common understanding of current practices. Here, different and diverse perceptions were observed towards RRI but also different achievements in certain fields. Some conclusions are:

- Open access is mostly achieved through the upload of academic papers to repositories (Green route). Gold open access is also used. No specific support for open data (not common).
- Gender equality is regulated in national laws but in practice it is heavily influenced by gender imbalances of research fields. No legal complaints notified recently but no significant support to improve gender balance.
- Ethics is mostly applied through codes of professional conduct. However, not many examples exist of academic behaviour (institutional level).
- Science education is mostly under-represented (science fairs and exhibitions with limited and modest participation). No existence of alternative approaches for scientific education outside the institution or to promote scientific thinking.
- Modest public engagement. Scarce communication with the public and usually through PR offices and due to project-related commitments. Only a few successful cases of continuous public engagement and public participation (Faculty of Agriculture).

#### • Educational flyer for informing University staff about RRI

- RRI present state and future challenges a round table for the University staff to discuss this topic. Institutional activities, RRI education and promotion have been planned for January – April 2020, but unfortunately due to the pandemic situation, all events were postponed. However, in summer 2020, gender equality was presented as one of RRI keys and some dialogues on gender equality were opened, on several occasions in small groups at the Faculty of Agriculture.
- In 2020 summer there also was an online introductory Lecture & discussion about the RRI principles and implications held online for the BioSense institute employees.



Ideje koje čine osnovu RRI -ja je možda jednostavno razumeti, ali njihova implementacija može biti teška. Prema tome, izazov je u tome da naučna zajednica ne samo razume ciljeve RRI principa, već i da ih realizuje.

#### Pet zlatnih pravila za uvažavanje RRI principa u istraživanjima

1. Razmišljajte o tome šta društvo želi
2. Uključite različita zainteresovana lica i članove društvene zajednice u planiranje i usmeravanje istraživanja
3. Uzmite u obzir sve moguće uticaje vašeg istraživanja
4. Budite otvoreni i transparentni
5. Budite responsivni i prilagodljivi

SOCIAL LAB 15 SWAFS

# MEASURING THE IMPACT OF RRI

The pilot action addresses the need to measure the impacts of RRI at project level and share the findings with non-academic and academic audiences. For that purpose the pilot action attempted to create an easy-to-use template that can support a wide range of stakeholders in their evaluation of RRI activities. For this purpose, the pilot action also promoted the connection and exchange between ongoing SwafS projects and existing RRI knowledge hubs, such as NewHoRRIzon or [SUPER MoRRI](#) to create closer links as well as cross-project learning and synergies.

The first version of the template was created in an interactive, discourse-oriented meeting in July 2019 in Berlin, during which small groups further developed the pre-existing MoRRI indicators of economic, societal, democratic and scientific benefits (now further generalized to impacts) of RRI. The pilot action group is currently working on a refined version of the indicators as a basis for future use and stronger exchange across projects.

Target groups of this pilot action and potential users of the template are researchers, practitioners and particularly those stakeholders who are familiar with RRI, are involved in SwafS projects and who are interested in promoting cross-project synergies and measuring their project impacts with the help of [MoRRI indicators](#).

The specific value of this pilot actions is that it addresses the practical needs of H2020 projects to develop their impact measurement along the MoRRI indicator framework. The pilot action contributes to the development and emergence of good practice examples with the help of participating stakeholders who enrich the pilot action work and template design with their own field- and discipline-specific experiences and expertise. Working with their illustrative, contextualized practical examples and insights from their work is a meaningful way to deconstruct and concretize RRI impacts. The pilot action work is designed in a way that promotes cross-project synergies between SwafS projects which have been working in the past years to conceptually enrich the knowledge base. Beyond ensuring a closer exchange and alignment of past and present work on (impacts of) RRI, this work uncovers the observed need for a more nuanced and systematic approach on identifying and assessing the benefits and impacts of RRI (on project level). With an increased awareness for these needs and utilities, this pilot can also set the basis for the deepening of the work in future practical contexts.

The results of this pilot action will feed into the ongoing discussion of the SUPER MoRRI project.

A document with a list of economic, democratic, societal and economic indicator descriptions (on the basis of MoRRI indicators) is going to be developed. The final version of the template is not yet available. It will be re-circulated within the Pilot action team, redesigned and made ready for first pre-tests and further application. The table on the next page shows the current version of the suggested indicators for economic benefits.

## Group 2: Economic impacts / benefits

Old version/ MorRI basis	Short-term outputs (Tangible results stemming from a project activity during the project, from 6 months onwards)	Midterm outcomes (During and directly after the project)	Longterm impacts (Broader effects beyond the beneficiaries (intended and unintended, positive and negative))
Better solutions due to inclusiveness	Increased chances of leveraging multiple perspectives from onset of project	Synergies and superior performance through exploitation of best talent/human capital available	Inclusiveness leads to superior solutions, products and services, which challenge the status quo and set new market standards. Science and economy form a mutually reinforcing network.
Increasing trust	Relationship building between previously siloed sectors	Enhanced process transparency and cross-sectoral sensitization through well-established networks, intense knowledge exchange and shared agendas	Shift towards an understanding of economy as an open and responsive system that acts as a catalyst for science and for societal wellbeing
Increasing anticipatory skills	Exposure to new challenges with support from relevant societal actors	Alignment of normative standpoint on impact goals and mitigation of negative impacts	Alignment of economic incentives towards resolving tensions between actors rather than vice versa
Better performance	tbd	tbd	tbd
More cost-efficient data collection	Finding, testing and contrasting alternative ways of data collection that are more cost-efficient	Development and increased usage of more intelligent methods and instruments of data collection	Traditional data collection methods are surpassed by more sustainable and cost-efficient methods
Changes in training, skills and culture of science	New promotional, reward, scholarship and grant giving processes that incorporate RRI principles into the evaluation and assessment process	Market rewards will favor institutions with leadership that promotes ethical and responsible relationship between science, society, and economy	Understanding of science and economy as mutually responsive, anticipative and intertwined systems for learning and development built around the principles of RRI
New business and funding opportunities	Proactive outreach and engagement activities with previously siloed actors in society	New business models and markets that reflect / align societal needs with economic possibilities/modalities.	Economy as an instrument to tackle grand societal challenges and development of sustainable mindset towards labor/resources

## SOCIAL LAB 15 SWAFS

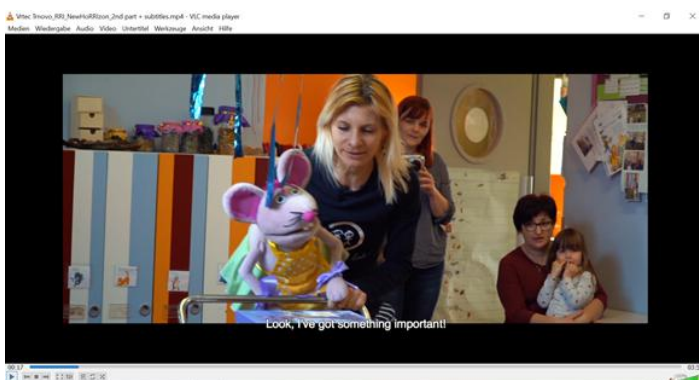
# RRI EDUCATION

The European Commission invested a lot within the SwafS programme in many different kinds of science education formats addressing different target groups starting at the age of teenagers, but focussing on higher education and young researchers. This pilot action addresses younger children at kindergarten age and the age primary education as well as teenagers.

In this pilot action, three project teams showcased their individual approaches on how science education can introduce the concept of responsibility or aspects of RRI:

1. Kindergarten Pedagogy: Inquiry based learning involving a puppet. Featured outcomes: video and didactic comments on the approach (Trnovo kindergarten Ljubljana)
2. Citizen participation in research - Clinical studies: [i-consent project](#): information in clinical trials for children. Featured outcome: video for 12-13 year olds, (FISABIO, Valencia)
3. Cross-European STEM education for students: [Edu-Arctic project](#): Webinars and a "Polarpedia" on STEM education topics for 13-20 year olds (Polish Academy for Sciences)

The project teams have also explored opportunities for (cross-project) collaboration.



The target groups of "RRI Education" are primarily educators and those developing curricula for kindergartens and schools. In the case of the i-consent project (2), researchers and hospitals involved in clinical trials are the main target group. Teachers of STEM subjects in secondary schools and teenagers are the target groups of the Edu-Arctic project. All these groups can use the materials provided by the organisations and projects featured by this pilot. Ultimately, the target groups are children and teenagers. The different formats of education in this pilot building on experimentation, videos or webinars offer resources that can complement classical educational formats or even redefine them (in the case of inquiry-based learning in the kindergarten (1)).

The basic question is whether science education for children and teenagers today provides enough opportunities for reflections about aspects of responsibility, such as ethical standards (protection of life, resources and the environment in general) or diversity or inclusion. Moreover, as these aspects are rather abstract, they might need special formats to make them accessible. The examples featured in our pilot action offer different inroads in an illustrative way and contacts and sources for those who want to get to know more.

- There is a [pilot action website](#) on the NewHoRRizon - SwafS - website, which offers contacts and links to different materials.
- A [video](#) on inquiry-based learning and the didactic comments to the video have been produced in the course of the pilot action and can be found on the pilot action website.
- [Guidelines](#) for tailoring the informed consent process in clinical studies provided by the i-consent project
- More Information provided by the websites of the involved organisations and projects (i-consent project and Edu-Arctic project).

SOCIAL LAB 15 SWAFS

# THE FUTURE OF SCIENCE ? SOCIETY

## Your voice has been heard

Posted on November 20, 2019



## Update on SwafS and RRI in the upcoming EC framework programme

A big thank you to everyone who came forward and supported SwafS and RRI in the public consultations on Horizon Europe launched by the European Commission!

We are relieved that our requests for a stronger consideration of SwafS and RRI have made it into the report on the web-based consultations. Considering the fact that there was no mentioning of SwafS and RRI before the public consultations this is indeed a big win!

The following section has been included in the part 'Widening/European Research Area' under the heading 'on citizen science' as the central feedback from the public consultations:

The vision of a European research landscape that is societally engaged is at risk. The pilot action "The future of Science ? Society" addressed this uncertainty about the future role of actions that have been promoted in Horizon 2020 under the umbrella of Responsible Research and Innovation (RRI) and in the Science with and for Society (SwafS) programme. It brought together committed stakeholders who lobbied for a new and advanced SwafS-like programme and developed scenarios of multiple, plausible futures of science-society interactions- a(s) pioneering achievement in its field.

The pilot action engaged in three joint support activities for RRI and SwafS:

1. The pilot action contributed to the [Pathways declaration](#) to support RRI in the Horizon Europe and established links to further SwafS projects as signatories for the declaration.
2. The pilot action engaged with others in the NewHoRRizon project to mobilize SwafS stakeholders to take part in the [public consultation process](#) on Horizon Europe.

3. Finally, the pilot action performed a highly interactive scenario workshop with stakeholders who, guided by a thorough methodology, created four different scenarios of the political, societal and research landscape in 2038 in the European Union. These novel scenarios represent the product of profound discussions and evaluations of a wide range of political, societal, economic, technological and ideological factors and variables that might evolve very differently and affect science-society relations in general and individual RRI elements to a different extent. The scenario work has also inspired a journal article ("Multiple futures for society, research, and innovation in the European Union: Jumping ahead to 2038") which presents the four scenarios and discusses challenges and opportunities related to the different political and ideological paradigms predominating in the four radically different futures (Status April 2021: submitted to the Journal of Responsible Innovation).

The pilot action feeds debates and influences the discourse about RRI and does hence affect and address all stakeholder groups and institutions that deal with RRI in their work. These can be, for example, researchers, policy makers, funding organisations, practitioners but also individuals from different disciplines. With its joint public actions and scenario work, it also aimed to sensitize less involved or informed groups about the importance of holding this debate if we have a genuine interest in research that is aligned with societal needs.

The scenario work is a very unique comprehensive work that provides material and ideas to feed the current and future debate on RRI and gave us a glimpse of how a probable future might look like - one that might bring technological advancement and social innovations, but also political ideologies that threaten the advancement of RRI. Seeing that our efforts for the Pathways declaration were visible and that "our voice has been heard", when we mobilised participation in the public consultation, we are motivated to welcome interested stakeholders to join us on this path to make an impact for a future with RRI.

- Pathways Declaration, see
- <http://pathways2019.eu/declaration/>
- Take action for SwafS, see <https://newhorizon.eu/take-action-for-swafs/>
- Scenario Descriptions and Sketches: These are currently further developed for different dissemination purposes in form of a brochure and social media content. As from April 2021, they can be reached via our pilot action website <https://newhorizon.eu/want-to-engage-for-societally-engaged-research-and-innovation/>
- Scientific publication / article submitted to the Journal of Responsible Innovation (Daimer, Havas, Cuhls, Yorulmaz, Vrgovic, & Griessler, 2021).

SL 16 EIT

# RRI SHOW

The [European Institute of Innovation and Technology \(EIT\)](#) is an EU body established in 2008 to increase the innovation capacity in Europe. EIT connects innovators from private companies, academia, and teaching talents in Knowledge and Innovations Communities (KICs), in other words, they connect key stakeholder from the knowledge triangle between business, research and technology, and education. KICs aim to develop new products and services, establish start-up companies, and train future entrepreneurs through a variety of educational programmes. Each KIC is designed to address a specific societal challenge but in the eyes of the Social Labs participants, recently, other considerations, such as securing financial sustainability of the operations, has gained greater priority. The Social Lab participants mapped and collected RRI stories – case examples of how RRI keys have been addressed – across three KICs and will publish them online in relation to the NewHoRRizon project in RRI Ex. The aim is to elevate RRI on the research agenda in EIT, hopefully inspire new projects, and use it as a first step towards ultimately addressing RRI in future proposals and considering it in the evaluation criteria across KICs. This could boost the image of EIT as an organization whose primary aim it is to tackle societal challenges by considering the RRI dimensions as a supplementary mechanism to support the financial sustainability of the KICs.

RRI Show is a collection of eight RRI stories: examples of projects across EIT Food, Climate KIC, and EIT RawMaterials, that have successfully addressed or somehow included one or more aspects of RRI. They demonstrate that RRI is not only possible but indeed beneficial within the set-up of the KICs, e.g. presenting the added value of public engagement when developing new products or services. If the reader is inspired to work with RRI aspects in their own projects, they can either reach out to the contact person of each story to learn more and get advice just as some of the stories link to additional information and resources they can use. The stories are presented in a short and accessible format and will be published online.

The work with the RRI stories has created internal debate about RRI in EIT and a willingness to mainstream it further. This includes an internal discussion about establishing an RRI working group. Participation in the Social Lab has also inspired individual participants e.g. to develop RRI training for postdocs in EIT Food. The stories are not yet published and may create more awareness and debate in the future.

Searching for RRI examples within one's own context offers a great learning experience about RRI; reflecting on your practices and figuring out what RRI looks like in your particular field or institution and what is especially important in your context. Likewise, an analysis of existing work might pinpoint gaps: aspects of RRI that are under-developed in projects for instance, which would benefit from a greater focus in the future.

The stories are published on the [RRI-Ex](#) and the [NewHoRRizon website](#).



SL 17 JRC

# JRC – RRI AND AUTONOMOUS MOBILITY RESEARCH



The Joint Research Centre (JRC) supports EU policies with scientific evidence throughout the whole policy cycle. Throughout the last decade, the JRC has increasingly opened its research infrastructures to external scientific use and followed an open access policy. It fostered transdisciplinary research, e.g., through the creation of a Community of Practice on Citizen Engagement and the construction of a Makerspace. However, while openness and citizen engagement have been embraced by some parts of the JRC, others do not incorporate these forms of research.

The Pilot Action emerged from challenges of the JRC identified during the first Social Lab workshop. These challenges were mainly entangled with the RRI keys governance, public engagement and ethics. The Pilot Action was tied with an ongoing JRC project on connected and automated vehicles (CAVs) and added aspects of RRI; mainly public engagement and education as well as ethics assessment. This brought together a number of JRC staff members from different units and of different backgrounds, that would otherwise not work together and thus also addresses matters of governance and multidisciplinary.

Throughout the Pilot Action, different narratives and opinions on CAVs were collected and critically reflected. This included a review on established expert discourses through a document analysis, a Eurobarometer survey with European citizens, as well as focus groups with engineers, researchers and citizens. Through a series of inception workshops, the narrative reflection was presented to wider audiences and participants were invited to experiment with automated vehicle mockups to stimulate further discussion.

Inspired by the Pilot Action, citizen engagement has been further implemented at the JRC, for example in the Sustainable Transport unit's (C.4). JRC unit H.1 currently produces two reports titled 'Mobility Imaginaries: The Social & Ethical Issues of Connected and Automated Vehicles' and 'Alternative Imaginaries: Citizen Mobility Futures', which are grounded in the empirical work of the Pilot Action. These reports provide policy recommendations concerning the potential implementation of CAVs in Europe, and aim to go beyond traditional expert debates. A number of scientific publications, based on the empirical material have been developed as well.



## SOCIAL LAB 18 INSTRUMENTS OF RRI

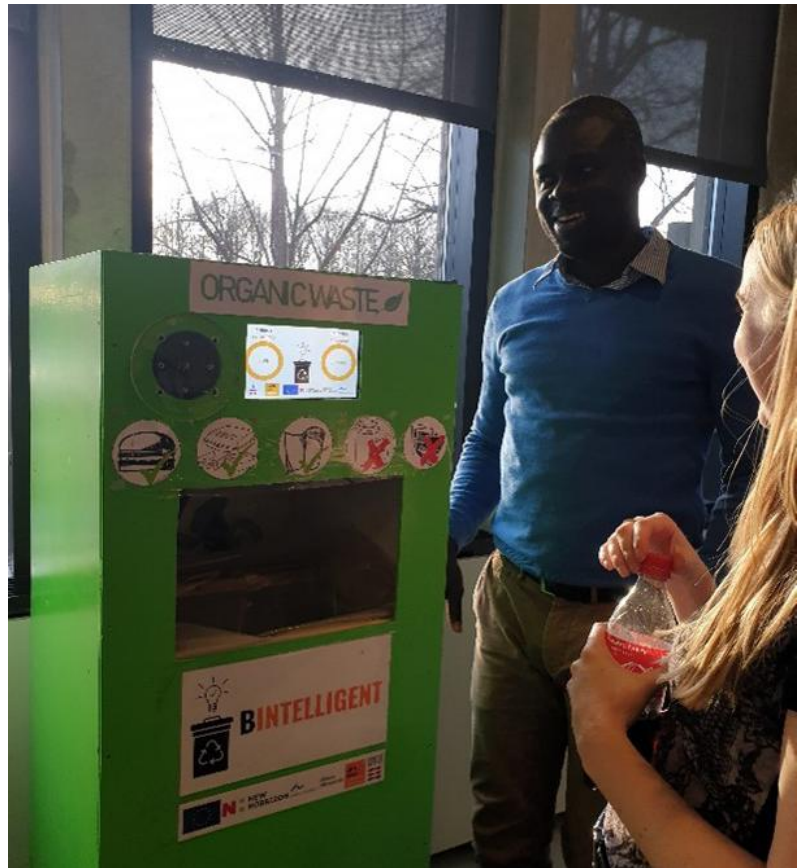
# BINTELLIGENT

BINTELLIGENT is an innovative, interactive waste bin, which tells us how well we sort our waste.

The ultimate goal of a waste sorting system is to obtain cleaner materials that can be recycled and substitute new raw materials. Source-sorted waste often contains impurities that hinder their direct integration in the resource loop. The main purpose has been to design and test innovative waste bins that encourage the user to sort their recyclable waste and help them to do it correctly to ultimately increase both the quantity and quality of recyclable materials. BINTELLIGENT thus primarily addresses issues of sustainability, though, it touches upon several other RRI aspects. First, public engagement. BINTELLIGENT was tested at the Roskilde Festival in 2019, where the Social Lab team engaged with the guests in discussions about waste management and got their views and input on the workings and usefulness of the bins. Secondly, science education has been an important key as the team working on it mainly consisted of students who used their skills to tackle a societal challenge. The work with BINTELLIGENT was integrated in their courses and have resulted in exam reports.

BINTELLIGENT is equipped with sensors that analyse our waste and tell us the reduced CO<sub>2</sub> emissions and energy generated from doing so. There is currently one bin for organic waste and another for non-organic waste (residual waste) but the concept can be extended to other categories. It creates awareness about waste management and sustainability in general and in practice helps obtain a cleaner residual resource from sorted waste that can be recycled. At first, the waste bin was intended for a private kitchen. However, during the first internal piloting at the Danish Technical University (DTU) it became clear that the demo model, which was “talking” to the user, was too distracting and found to be too disturbing by the test persons.

The project-group therefore decided to add a screen with written text instead and to test BINTELLIGENT in a more dynamic environment. In June 2019, the waste bins were tested at the food court of Roskilde Festival – the largest music festival in Scandinavia.



Beside the people who have been involved in developing the intelligent bins, BINTELLIGENT primarily targeted the festival guests visiting the food court. During the festival, the Pilot Action team carried out a survey, interviewed guests about their project, encouraged them to try out BINTELLIGENT, and gathered their feedback

The project is concrete and with the right knowledge it can be further developed and contribute to raising awareness about waste management and sustainability and contribute to better waste sorting in public spaces in Denmark or elsewhere. The debate on climate change and sustainability will certainly not decrease in the near future and a change in our behavior is necessary to reach climate goals. BINTELLIGENT helps us in several ways: It increases awareness of the problem, provide concrete knowledge when sorting our waste, and encourages us to change behavior in a fun and innovative way.

## SOCIAL LAB 18 INSTRUMENTS OF RRI

# RRI LAB

Living Labs, as a user-centered open innovation method emphasizing co-creation between a multitude of stakeholders in a real-life setting, has much in common with principles of RRI. In fact, as one of the Social Lab participants expressed it “Living Labs are already doing RRI - though not all Living Labs are calling it RRI”.

The aim of the RRI Lab was thus to create a physical space for awareness-raising, knowledge-sharing, networking, and public engagement activities around RRI where all interested parties could discuss Living Labs, co-creation, and how RRI can potentially inspire and enrich it. This developed into the interactive conference booth format: RRI Lab.

The RRI Lab engaged the Living Lab community (at the OLLD conference) and the wider community of smart cities (Smart City Expo) in a space where public officials, companies, entrepreneurs, academics, Living Lab representatives, and innovators could join an open discussion on:

- What the biggest obstacles to taking up co-creation in research and innovation practice and policymaking are.
- How to promote real-context co-creation through Living Labs.
- How to promote co-creation and Responsible Research and Innovation in future EU projects and policy initiatives.



The RRI Lab is a format, which can be adapted to many settings and used by diverse stakeholders to create awareness on and discussion about RRI in their particular field.

The RRI Lab was present at the Open Living Lab Days (OLLD) in Thessaloniki, Greece in September 2019 and at the Smart City Expo World Congress in Barcelona, Spain in November 2019. It was realized through a collaboration between the European Network of Living Labs (ENOLL), their own projects; iSCAPE, SISCODE, and UNaLab and ENOLL members; Krakow Technology Park (KTP), Genevelab, Thess-Ahall, Bristol Living Lab and PA4ALL. At OLLD19, they invited relevant speakers, based on expertise and field of work, to share their knowledge and thoughts. GeneveLab spoke about public sector Living Labs, KTP about the Krakow air pollution policy plan as well as bottom-up and top-down co-creation initiatives ongoing locally, and SISCODE asked attendees to present their labs working on policy making on a map. At the Smart City Expo, UNaLab brought a game (The ULL playground) and iSCAPE together with Bristol Living Lab brought Tips&Tricks discussion cards about public engagement, which were all very helpful in engaging people at the booth and start discussions about RRI aspects.

The interactive formats: The ULL game workshop (UNaLab) and the Tips & Tricks card deck (KWMC+iSCAPE) continue to be utilized at events in the future.

The interactive tools are extremely useful to create discussion at conference, workshops and meetings. Based on the experience from the RRI Lab, the Social Lab team decided to develop Tips&Tricks cards specifically on RRI to continue to facilitate the discussion around RRI in an engaging format, this is described on the following page.



## SOCIAL LAB 18 INSTRUMENTS OF RRI

# TIPS & TRICKS FOR RRI

A deck of 24 cards: 20 cards containing one thought provocation each, organized according to five main categories: ethics, societal engagement, gender equality, openness, science education. The cards can be used without paying attention to the background colours and groupings of the cards, or they can be played with these groupings in mind. The remaining 4 cards in the deck introduce the Tips & Tricks (what they are), provide three different methodologies to follow in their use (how to use) and link to an online padlet board facilitating virtual collaboration of the same.

The Tips & Tricks are not intended as a recipe or series of rules to follow: we encourage you to use them as prompts to spark discussion and reflection. The cards create a low-barrier, fun activity to follow with others to insight valuable discussion on RRI.

Living Labs, as a user-centered open innovation method emphasizing co-creation between a multitude of stakeholders in a real-life setting, has much in common with principles of RRI. In fact, as one of the Social Lab participants expressed it "Living Labs are already doing RRI - though not all Living Labs are calling it RRI". The aim of the Tips & Tricks for Responsible Research & Innovation was thus to facilitate engaged, insightful and effortless discussion on topics surrounding RRI – such as ethics, societal engagement, gender equality, openness and science education. This has culminated in the creation of a deck of 20 cards with thought provocations to inspire and to challenge their users to reflect on what it means to practice Responsible Research & Innovation: from the theories that underpin it to the way you carry it out in your work.

The development process of these 20 cards has been a complex and collaborative one. First, ENOLL has gathered interested stakeholders from its community. Starting with KWMC (Bristol Living Lab) as the developer, the original brains behind the Tips & Tricks methodology to Thess-Ahall Living Lab as integral support and helping hand in running the overall development process together, dating back to the original RRI Lab initiative from where the Tips & Tricks originated from. Throwing in a mix of very motivated and engaged project partners from the SISCODE project, a wide base of knowledge, support, and networks were reached. KWMC led the desk research behind the cards, which in turn was based on desk research done by SISCODE and NewHoRRIzon projects: having reviewed several deliverables and websites in the background, an initial idea for what the cards could become was developed. Simultaneously workshops held together with the SISCODE project gathered thoughts, ideas, and even concerns on the topics at hand – contributing to the development of the initial pack of 52 draft cards for the Tips & Tricks. Many workshops, several rounds of selection, iteration, and redesigns later, the final result - 20 Tips & Tricks for Responsible Research & Innovation – was reached.





## SOCIAL LAB 19 EURATOM

# TEACH THE TEACHER

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The aim of this pilot is an increase of and supplement physics teachers' qualifications and competences by bringing innovation to physics education, especially in the field of nuclear and atomic physics, by employing and developing new methods and tools. This includes hands-on exercises in order to make the teachers' work more creative and innovative. Moreover, these approaches aim at encouraging students to define research problems in physics. It can be assumed that this can result in an increase of students' interest in nuclear knowledge and can also deepen their interest in general science. The pilot aimed at the decrease of an inequality in an access to knowledge, and an increase of the public engagement in education.

The project addresses commonly encountered problems such as insufficient equipment for experiments in most of the schools that makes the lessons highly theoretical as well as pupils' low interest in physics (i.e. the low attractiveness of physics leads them to dislike physics). Also, the lack of training in physics & pedagogical content knowledge of teachers for teaching new reformed curricula, and difficulties in the interaction with young people were tackled by the pilot.

The pilot was aimed at physics teachers who want to raise their qualifications, working in high schools in the area of Poland, with preference for teachers working in small towns and in small villages.

Science teachers' learning needs are shaped by their preparation, the grades and content areas they teach. Through the action taken holistic picture of physics will be passed to the pupils in order to develop a comprehensive understanding and a meaningful picture of the physical world. Applied methodologies and actions should cause a future increase of the number of technically oriented students, the general scientific interest in science, and the public engagement in the understanding of physic processes.

Tangible outputs included a concept of the workshop to teach teachers in the field of nuclear sciences, a report by the pilot sponsors and the implementation of the method to the AI ENEN+ proposal.

## SOCIAL LAB 19 EURATOM

## NUCLEAR DATING

Academia is often confronted with critique of 'silo thinking' of experts in a specific research area. This pilot addresses the lack of interdisciplinary understanding in order to promote the uptakes of Science Education and reflexivity. In a creative format, academics should be encouraged to exchange knowledge with colleagues from other disciplines and in the best, come up with new, interdisciplinary ideas to tackle problems across the disciplines.

The pilot action was organized in September 2019 in a relaxed surrounding at the Hard Rock Cafe in Brussels at the city-centre. It tackled these problems by first providing input about the individual researcher's work by presentations in a Pecha Kucha format to the audience. This ensured a common knowledge about the research of every researcher and should foster the curiosity amongst participants. Once each of the participants presented their work, they were given an input on the concept of Responsible Research and Innovation (RRI) along the six keys by an expert of the NewHoRRIzon Consortium. After this, the participants were asked to meet in groups and brainstorm on possible projects highlighting the RRI keys being used. These ideas were followed up on the second day and cumulated in a conference like presentation of the research project.

The main target group of this pilot were early stage researchers. Most of them either recently finished their PhDs or are currently working on it. The aim was to foster transdisciplinary awareness and thinking among the participants. The rationale behind this is that more impact can be reached at early stage researchers and that those who participated will more likely engage in transdisciplinary research. Further on this event enables attendees to communicate about their research to a wider audience outside of their usual peer group.

The pilot provides many different benefits to early stage researchers. Besides having the opportunity to network with colleagues from other disciplines and overcome silo thinking, this event also provides a change to engage with a public outside the own world. Therefore, skills in presenting one's own research to an audience that is not part of the own bubble can increase the ability to engage with regular citizens. During the workshop it turned out that the use of this format in an institution can help getting to know the projects of colleagues and fostering mutual understanding.

Participants took with them insights about the concept of Responsible Research and Innovation (RRI), reflection on how their research can benefit from RRI and they have been efficiently exploring ways to collaborate with researchers outside their discipline. One of them published her experiences in the newsletter of her faculty.

The pilot sponsor SCK-CEN plans to pick up the method for use in their institution. The method was also featured in the EURATOM proposal as a new, innovative teaching method. Furthermore, a publication on the method is submitted in Q4 2020.



## SOCIAL LAB 19 EURATOM

## EURATOM PROPOSAL AI ENEN+

During the EURATOM Social Lab, participants outlined several challenges for the nuclear world. First, they were stressing that less young talent is opting for a career in their field which would lead to a shortage of qualified personnel in the near future. Second, they stated that only dedicated funds raise the chance to implement RRI in their research environment. Over the course of the first two workshops the idea emerged to use RRI to support the uptake of innovative new teaching methods and to apply for a call at the EURATOM funding scheme.

In order to make nuclear education more attractive to young people, the proposal included several new and innovative teaching methods aiming at different target groups and involving all different kind of stakeholder groups. To support this, RRI and its benefits was introduced. The proposal stated: "Stakeholder involvement and Science Education are essential cornerstones of this concept. As numbers prove there are still more men than women pursuing careers in nuclear sciences. Using RRI and its emphasis on gender equality is an appropriate way to ensure that more female professionals will enter the field of nuclear and less potential is wasted. Guiding young researchers towards Open Access and applying Research Ethics will be beneficial not only for the European Commission but for all stakeholders in the field of nuclear (Open Access made possible to publicly funded research, Science for and with the Society, thereby achieving wider acceptance of the research)."

Target groups for the proposal were students on different levels ranging from high school students to MsC students. Also affected from this pilot are stakeholders from industry and education who are involved in the design and implementation of these nouvelle methods.

As the initial idea was to get funding for the implementation of RRI to EURATOM, still many of the large number of consortium partners (23) were not aware of the concept of RRI. Through the work on the proposal the partners did get familiar with the idea of RRI and its potential benefits. Although the proposal met the threshold, it did not receive funding.

The visible output is the proposal for the H2020 call NFRP – 2019-2020-11. One Work package was dedicated to outlining the importance and benefits

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