



**JERRI – Joining Efforts for Responsible Research and
Innovation**

**Minutes of
the 1st international mutual learning
workshop**

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Munich

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1 Introduction

The 1st international mutual learning workshop of JERRI took place on 15 December 2016 in Munich, Germany. As a leader of WP9, Fraunhofer ISI carried out the workshop with 19 participants. Two representatives of the JERRI international partner institutions, Chinese Academy of Sciences (CAS) and Arizona State University (ASU), as well as consortium members from Fraunhofer-Gesellschaft (FhG), Netherlands Organisation for Applied Scientific Research (TNO) and Institute for Advanced Studies (IHS), took part.

Within the JERRI project, FhG and TNO have the ambition to further develop their organisational structures and practices towards what is being phrased in Europe “Responsible Research and Innovation (RRI)”. In this context, the work package called “International mutual learning process” (WP 9) carries out in-depth case studies of two outstanding organisations outside Europe. Both, the WP, and in particular its first workshop, are expected to benefit JERRI partners in the following aspects:

1. to be inspired by the international partners.
2. to broaden their understanding of RRI in general.
3. to broaden their understanding of one or more particular RRI themes/fields of action.
4. to get more insight into what it means to make RRI an integral part of the practices of an organization.
5. to share the good practices identified in Europe (in WP 1) and at the first stage of case studies outside Europe (in WP 9) with each other.

The overall objective of this workshop was to enable all participants to take home helpful ideas for further RRI development at their own organisations – in particular Fraunhofer and TNO, whose next steps in JERRI will be to develop ideas and input for RRI related visions and goals.

On this one-day workshop, the participants exchanged with each other in terms of their personal connection to the “RRI”-related topics at first. After that, the four institutions, FhG, TNO, CAS and ASU, introduced their organisations and the RRI-related understanding and practices. By means of a joint session, the RRI-related themes/fields of action were selected, clustered and prioritised. This result served as input for the following discussion in group work (see the agenda in the annex). In order to open up for a global perspective of “RRI”, all of the RRI-related discussion at this workshop was inspired by the RRI defined by the European Commission, but not limited by that.



In order to embrace the full variety of responsibility, societal links and embeddedness of the research organisations FhG, TNO and CAS and Arizona State University, the working definition of RRI introduced at the workshop was: “RRI means to link research and innovation better with society. RRI approaches and practices are designed to increase mutual benefits of research and innovation – and society, both by underpinning better R&I processes and better R&I outcomes.”

2 Main results

2.1 Round of Introductions

The first task in the JERRI workshop was to choose one term that describes best each participant's connection to the topic of the workshop. For this purpose, the project team provided the participants with several fields of action (resp. "themes") and quality criteria of RRI governance (resp. "virtues") regarding RRI to choose from or add to.

The following fields of actions (blue cards in the picture below) were selected by the participants: societal challenges, sustainability, science literacy, inclusion, open science, social change/ transformation, ethics, quality, participation, gender equality, social progress, open data, integrity, open access, social embeddedness, public engagement, RRI in general. Among the RRI virtues (yellow cards) participants selected reflexivity, adaptability, bridging between "silos", conflict moderation, responsiveness, openness, and diversity. **The most frequently mentioned terms were *open access/open science, sustainability, ethics* and *reflexivity*.**



2.2 Joint session

In a second step, a closer look was taken at different fields of actions, which are core to the four institutions' self understanding and mission. In presentations, representatives of the organisations highlighted how selected themes relate implicitly or explicitly to the RRI concept.



With the aim to return at the end of the morning session to a bird's eye view on RRI around the globe, the themes presented in the presentations and a complementary set of themes identified by JERRI research in and outside Europe were assembled together.

er on a brown paper wall (see blue cards). This set was discussed and further amended by some dimensions (compliance with (national) legislation, accountability, independence and trust in S&T). There are strong links between many of these themes/fields of action, and some even mean exactly the same thing while using different terms for it.

Building on the thematic links between the fields of actions, a pattern emerges, which we call a global RRI “cosmos”. Five clusters (orange cards) were suggested:

- Social value
- Moral values
- Openness / Open Science
- Working together
- Empowering citizens

Participants were asked to vote for clusters or individual fields of actions that they wished to be discussed in more depth in the afternoon group work. From this voting the following three clusters were selected: ***empowering citizens, open science and social value.***

2.3 Group Work

The group work focussed on the selected clusters or on relevant selected fields of action within these clusters. Discussions aimed at identifying levers and barriers towards a deep institutionalization of RRI in organisations, in particular at FhG and TNO. Groups were asked to reflect about similarities and differences of levers and barriers in the four organisations. The results reflect the opinions of the workshop participants and these should not be representative for the whole organisations, FhG and TNO, respectively.

A. Empowering Citizens

When discussing the “empowerment of citizens”, participants primarily focused on **public engagement and participation** in the broader sense. It became clear quite quickly that the representatives of the organisations (FhG, TNO, ASU) in this group are confronted with very similar challenges and barriers.

Challenges refer mainly to the interface of science and society, which has been debated since more than thirty years. In the perspective of many researchers, the problem is up to science communication, as it appears that the public does not always understand what scientists, engineers and researchers are doing. The organisations are often con-

fronted with mixed responses to their publications. Therefore, it seems expedient to reflect on how to deal with these issues concerning the different spheres of science and society. The answer must be participation and public engagement. Another justification for the need of public engagement was to renew the “social license to operate”, a term introduced by Arie Rip. The research organisations have to ask themselves what can be done to make sure that society supports their actions and to make convincing claims that the public funds provided to research organizations are well invested.

However, how to perform public engagement in a constructive way is very challenging. This depends on the organisation and the type of research and the phase of the innovation process. Besides, the question which parts of the public should be engaged has to be answered too.

Regarding possible solutions, in general, it was found out that the organisations are in desperate need of capacities at two levels: first, capabilities at the organizational level which enable the organizations to deal with these issues and to show that these matters are welcome, important and needed for the well-being of the organization; second, capabilities and skills at the level of the individual researchers.

Furthermore, it was observed that public engagement has become the “new science communication”. What happens quite often is that public engagement is misused as a uni-directional type of marketing and public-relations strategy, instead of being a science-communication activity. The organisations should be prepared to deal with these kinds of abuses. On the practical side, it can be very helpful to identify already existing processes, procedures and activities in terms of public engagement that already exist in each organisation. Especially in the large organizations a lot is already happening. If the hierarchy of an organization is supportive, this can be a very good starting point to nourish the aim of public engagement.

Another good practice is to make available a pool of experts who are able to organize participation processes and who provide the skills and methodology for procedures that foster public engagement. There is plenty of information about public engagement available, but it has not been taken up by the organisations. The necessary public engagement expertise can be provided in-house or from external sources.

An important governance issue relates to the advisory boards of the research organisations. Increasing the level of diversity in these boards might be a good stepping stone to develop an improved understanding of the value of opening up to different perspec-

tives and different stakeholders, as well as to enhance the openness of an organization in general.

It was also stated that when public engagement is to be improved in the research organisations, funding rules might have to be modified. For instance, public engagement requirements could be part of research proposals. However there is a risk to that. It might remain on a very superficial level, in terms of relabeling the activities which might not change the practice and attitude.



B. Open Science

This group work concentrated on the differences between TNO and Fraunhofer in the context of open science, open access and open data. Although these two organizations share some similar barriers, like typical conditions of contract research, that sometimes don't allow results to be published, it was found that some obstacles are specific to the respective organisations.

Compared to TNO, it seems Fraunhofer researchers are less willing to support open access. An important reason for that is to be seen in the typical career paths of Fraunhofer scientific staff, who after fixed-term contracts often leave for positions in the industry, and some at universities. At TNO, most scientists have positions for life. Thus, Fraunhofer researchers are concerned on the one hand with the classical indicators that still dominate researcher performance measurement, both within Fraunhofer but also in the different scientific disciplines. On the other hand they need to do good project work in order to make their names known among the customers of their studies, who are at the same time potential future employers. Open access is against this background not the only – and often not the best – vehicle for that.

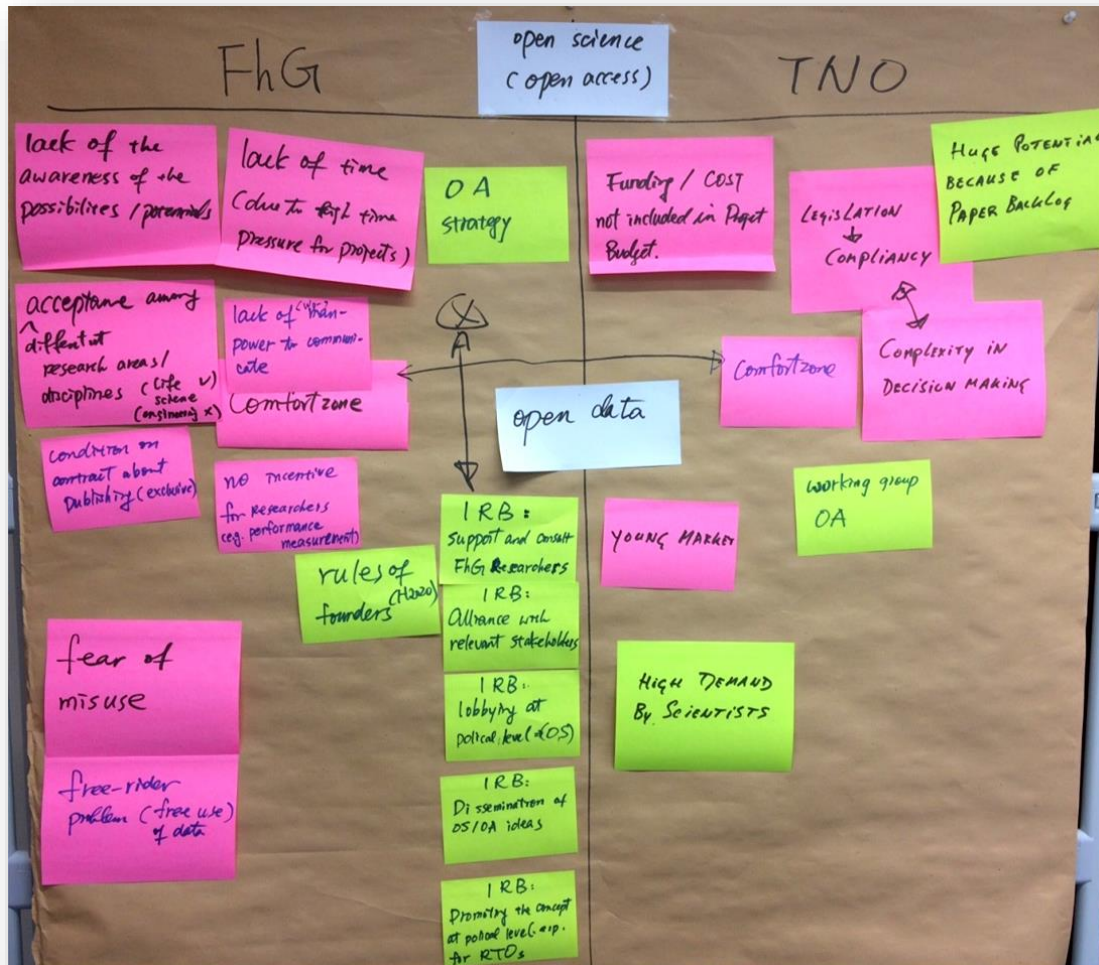
Besides the passive attitude towards OS/OA, some other barriers are for example, lack of the awareness of the possibilities and potentials of OS/OA, lack of time or interest to learn about OS/OA, lack of incentives to change their behaviours etc.

TNO faces as a major barrier the legislation in the Netherlands, because it causes many restrictions on publishing. The main question for them is if everything can be published.

Open data is also dealt with differently by Fraunhofer and TNO. TNO does see one very important lever: high demand by scientists. There are researchers who want to publish their data. They believe very strongly that this cooperation is the science of the future. However, this is a very young development in the Netherlands.

The greatest obstacle at Fraunhofer is the attitude of their scientists toward this issue, who are sceptical about open data. They are afraid that people might take advantage by freely using their data or misuse their work.

In total, there are some mechanisms set up already for the institutionalisation at both organisations: for instance, OA Strategy at Fraunhofer, OA Working group at TNO, different approaches of Fraunhofer IRB in promoting OS/OA.



C. Social Value

The third group concentrated on social value as a field of action. Members of Fraunhofer, TNO, ASU and CAS were involved in this group work.

Social value is a cross-cutting issue. First of all, the group came across the issue of empowerment. These four research organizations face various external pressures. They asked themselves about the room for manoeuvres and the degrees of freedom to

live up to their own, individual values, which may be opposed to some of these pressures. The issue how to foster the empowerment of researchers was raised.



Some levers they identified were to allow for some discretion and to enhance the freedom of expression within organisations. A practice that resolved from this point is creating space for reflexive discussion and argumentation, where people can detach and deliberate themselves from their initial roles and reflect on restrictions. This might break up exiting power-structures and increases the empowerment.

When it comes to CAS, the organisation is much more linked to the political executive functions. However there is less ambiguity about the value system, because there are

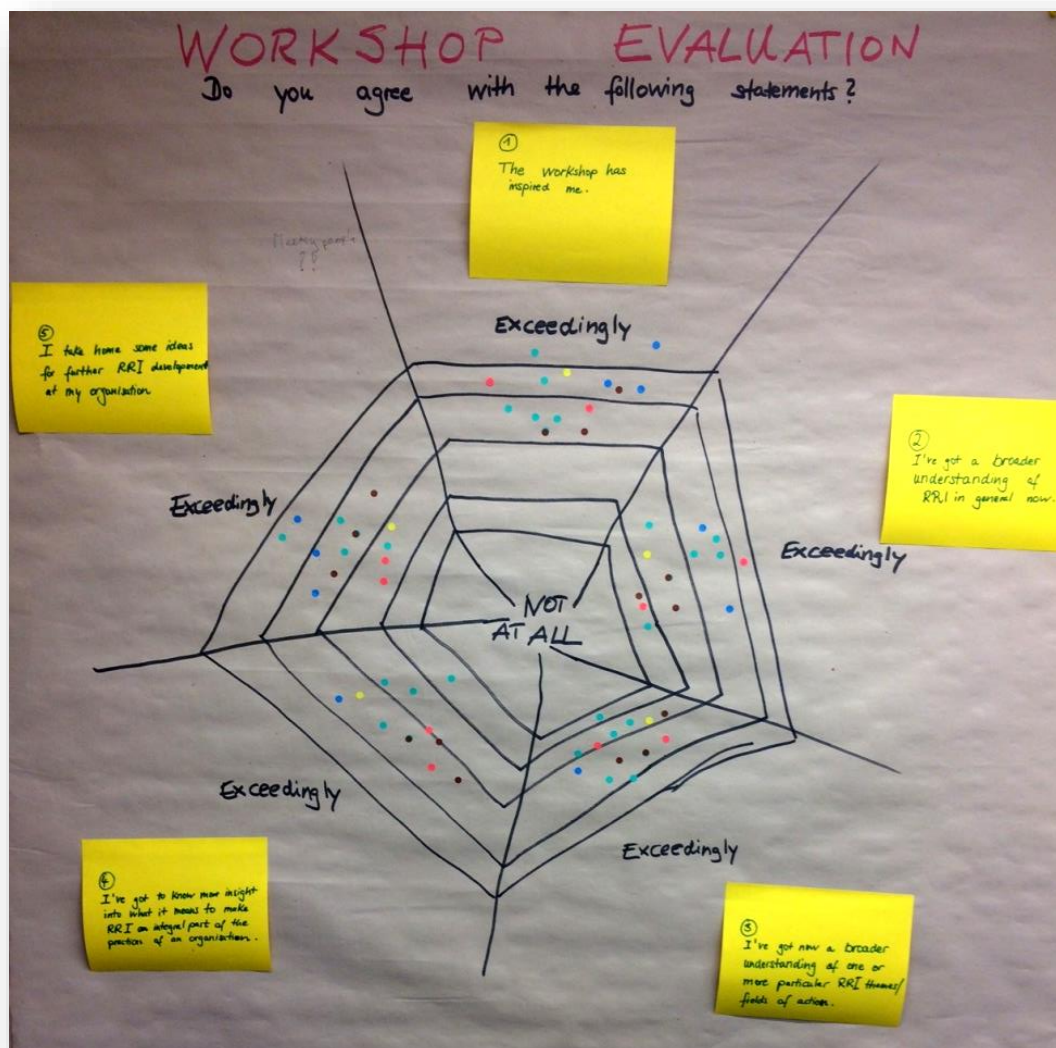
strong norms. Value systems are provided mostly top-down. On the other hand, due to the political executive functions of CAS there is the possibility to influence STI-policy. This brought the group to the question of how institutions like Fraunhofer and TNO can and must engage and the level of STI policy to empower their own researchers towards their institutional environment, so that they can live up to certain values.

2.4 Feedback

In the end of the workshop, all of the participants evaluated the workshop regarding the following five statements:

- This workshop has inspired me
- I've got a broader understanding of RRI in general
- I've got a broader understanding of one or more particular RRI themes / fields of action
- I've got to know more insight into what it means to institutionalize RRI within an organisation
- I can take home some ideas for further RRI development at my organisation

By means of placing dots in a spider web with five degrees from “not at all” to “exceedingly”, participants shared their high satisfaction with this workshop. It is remarkable to note that most of the participants highly agreed this workshop has inspired them.



We asked participants to share with us some thoughts about what they learned at the workshop. Here is a summary of the answers:

Generally speaking, it is very appealing for them to learn what other countries or institutions have been undertaking in the context of RRI or responsible organisations. The exchanges of relevant aspects such as understanding, concepts, dimensions, measures for implementation as well as barriers and levers are very inspiring. Mutual learning was especially strengthened by the detailed presentations, discussion in the group work and informal conversations.

A sense of change could be recognised at the workshop. Research and innovation organisations around the world are caught up in a combination of both pressures and aspirations to perform in a more socially transparent, accountable and responsible manner. These four organisations are responding to these changes, albeit in unique and different ways. Also, within the project team, there is a broad understanding of responsibility, accountability and openness, naturally with slightly different key aspects.

In addition, culture might be an important dimension to consider when examining RRI. For example, it seems that ASU (perhaps American culture more generally) has an unusual appetite for disruption for the sake of innovation, a tolerance for challenging the status quo, almost romanticizing grassroots innovation from those with less authority/experience, while hierarchy in other cultures might play an essential role to push new concepts. However, sustainability and responsibility are still often an afterthought in ASU's corporate cultures, while this appears to be more fundamental in the efforts rooted in German and Dutch cultures. Therefore, the environments necessary to achieve efficiency, responsibility, and innovation might be very different.

3 Annex

3.1 Agenda

December 15th, 2016

Venue: Design Offices Highlight Towers, Munich

Mies-van-der-Rohe-Strasse 8

09:00 – 09:30	Arrival and Coffee	
09:30 – 09:40	Welcome	Fraunhofer ISI
09:40 – 10:00	Round of introductions	all
10:00 – 10:30	Presentation of Fraunhofer and TNO: introducing the organizations and state of the art in RRI	Fraunhofer ISI and TNO
10:30 – 11:10	Chinese Academy of Sciences (CAS): Organization, Appraisal of RRI and selected good practices (presentation & discussion)	CAS, Fraunhofer ISI
11:10 – 11:20	Break	
11:20 – 12:00	Arizona State University (ASU): Organization, Appraisal of RRI and selected good practices (presentation & discussion)	ASU, Fraunhofer ISI
12:00 – 12:30	Joint session: Mapping of a global RRI “cosmos”: themes and fields of action	all
12:30 – 13:30	Lunch break	
13:30 – 15:00	Group work: Good practice in selected fields of action: towards deep institutionalization of RRI	all
15:00 – 15:10	Break	
15:10 – 15:45	Wrap-up of group work	Group moderators
15:45 – 16:00	Conclusion and feedback round	all
16:00	End of the workshop	