

reTHINKERSPACES METHODOLOGY

Rethinkerspaces are hubs of science communication aiming at creating communities of inquiry, experiment with new strategies and train actors in the field.

Rethinkerspaces follow a 6-step methodology.



Introduction to Rethinker spaces



Explainer video



Step 1

ESTABLISH the Rethinkerspaces

as part of your institution. Appoint a coordinator and a team to lead the approach.



Step 3

BUILD the Rethinkerspace.

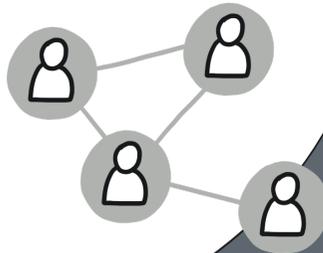
Devise a recruitment process, an engagement plan and create an action plan to be successful in attracting a good group of individuals to carry out the research at the local level.



Step 2

IDENTIFY and map all the local stakeholders.

Once the first step is completed and the Rethinkerspace has a coordinator and a team appointed, you will have to locate and map relevant stakeholders at the local and national levels.



Step 4

UNDERSTAND the landscape

is articulated around three main areas that respond to:

- Mapping the ecosystem
- Investigating sensemaking practices
- Analysing existing trainings and training needs



Step 5

DEVELOP & EXPERIMENT with new approaches.

As part of the strategies' refinement process RETHINK has arranged a set of small-sized experiments that you may wish to explore or replicate.

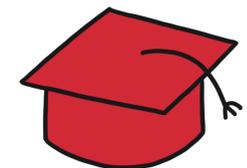


Step 6

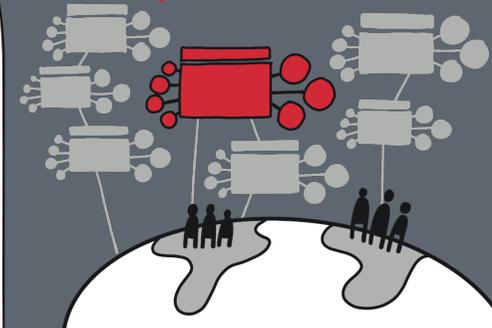
SYNTHESIZE & TRAIN for transformation.

This step is divided into two different activities:

- Synthesizing the project's outcomes and
- Transforming them into guidelines for different stakeholders.



YOUR RETHINKERSPACE HUB



Click to see more details

Introduction to Rethinkerspaces

The role of science communication that is to nurture interactions between science and society in an open and reflexive way. The science communication landscape itself is undergoing deep and fundamental changes due to two interrelated changes. First, the boundaries between science and society have become blurred. Interactions and interfaces between science and other fields in society such as economics, politics, art and culture have become more numerous and diverse. Second, digitalization has revolutionized the science communication landscape. It has fundamentally changed how scientists; other R&I stakeholders and a variety of publics interact and communicate.

In the framework of the RETHINK project, Rethinkerspaces are understood as hubs of science communication in charge of creating communities of inquiry to acquire insights into the emerging science communication landscape, map networks, actors, roles and repertoires, contribute to understand sensemaking practices and test a new quality of interactions framework. They also experiment with new strategies and train other actors in new ways of science communication.

Transdisciplinary approach

The problems that are currently affecting science-society interactions cross the boundaries of several disciplines and communities. Rethinking science communication therefore requires a transdisciplinary approach that connects scientific and non-scientific perspectives in a joint process of inquiry and learning. Transdisciplinarity stands for 'a form of learning and problem-solving in co-operation between different parts of society and science'. Solutions are devised in collaboration, or co-created, by multiple stakeholders of various disciplines.

A transdisciplinary approach not only transcends single or individual disciplines, but also the boundaries of the scientific community, to an approach that includes the incorporation of the view of multiple scientific and nonscientific actors, professionals and amateurs. These individual actors should come from a range of perspectives and backgrounds, for example scientists, science journalists, bloggers, influencers, DIY-ers, artists, public engagement professionals, policymakers at local and national level, science funders. They all bring their own knowledge and expertise to the Rethinkerspaces, of which the other members will learn and subsequently integrate this 'new' knowledge into their own field of expertise.

Community of practice

The concept of the Rethinkerspaces is based on the Community of Practice (CoP) approach to social learning. When multiple stakeholders share a passion, interest or a sense of urgency to progress together – often with respect to a specific topic – and form a community around a shared domain of interest this is called a Community of Practice (CoP). Through mutual engagement and by working on challenges in their shared domain of interest, members of a CoP generate innovative and creative solutions, and new practices. The most successful CoPs **(1)** are driven by intrinsically motivated members, **(2)** stimulate the

imagination of participants, that is they promote 'out of the box' thinking, **(3)** are flexible and continuously adapt their activities in relation to the context at the boundaries of the CoP, and **(4)** develop collaborative relationships and mutual norms between its members.

Transformative learning

The challenges identified, the rapidly changing science communication landscape, the implications of digitalization, and the crossing and blurring of boundaries between science and society, require a change of the science communication system. The current system is not arranged and equipped to address these challenges adequately, due to barriers:

- **At the practical level:** motivations and competencies to engage in open dialogue and transdisciplinary research are often lacking.
- **At the structural level:** barriers relate to the (dis)incentive structures that scientists have to obey to, such as metrics, career opportunities and so on.
- **At the cultural level:** conflicting ideologies of science and the role of science in society complicate change.

Indeed, research on socio-technological change has shown that system transformation will only happen if multiple initiatives challenge the "status quo" at all three levels.^{iv} In this project we approach it as a *transformative learning process*. Hence the aim for RETHINK is to co-develop a network of science communicators (and other relevant actors in the science-society landscape) that has transformative capacities in realizing a future proof science communication landscape across Europe. Practically this means that (1) the coordinators and members of the Rethinkerspaces themselves become ambassadors of transformation, and foremost (2) that the Rethinkerspaces each facilitate the emergence of a transformative network(s) as well. Through the trainings and tools provided to the Rethinkerspaces during the life cycle of RETHINK, the coordinators will become equipped to facilitate the emergence of new transformative network in their own science communication environment

In order to facilitate learning, Rethinkerspaces should provide a safe space for discussion and also, be the place to find solutions for existing and upcoming challenges. The activities and events organized by the Rethinkerspaces should enable a form of learning that transforms problematic frames of reference to make them more inclusive, reflective and open to change. This requires delving underneath the 'surface' of observable actions and events and reflect on the underlying level of assumptions, values and beliefs that people adhere to. By setting up a learning environment in which these questions are raised and addressed, a new and shared vision on the science communication landscape will emerge, creating possibilities for reflection-in-action.

In this process, new knowledge is obtained – of which the Rethinkerspace members may, again, learn. In this way, knowledge creation is a continuous and shared process. Members will obtain new knowledge, test it in their own practices or field of expertise, and bring their new experiences back to the Rethinkerspace. They are the incubator of shared learning processes that can bring about new knowledge.

Step 1:

ESTABLISH the Rethinkerspaces as part of your institution

Objective:

Appoint a coordinator and a team to lead the project.

As part of this step, the host institution must appoint a Rethinkerspace coordinator. This person will be the central contact point of the Rethinkerspace host organisation. Once nominated and familiarised with the approach, the coordinator should then present the concept and its objectives to the rest of the team in the institution. Ideally, the coordinator will leverage existing staff meetings and opportunities to expose the project to key members in the institution: all of them should be a priori interested in the advancement of the science communication field and the Rethinkerspace would benefit from this positive predisposition. Establishing a team within the institution will be essential for the following steps of the project.



Step 2:

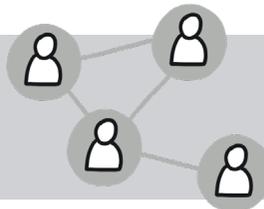
IDENTIFY & MAP all the local stakeholders

Objective:

Create a RETHINKERSPACE STAKEHOLDER MAP

Once the first step is completed and the Rethinkerspace has a coordinator and a team appointed, you will have to locate and map relevant stakeholders at the local and national level, for three purposes:

1. Understand the Rethinkerspace environment
2. Find and recruit Rethinkerspace members
3. Getting started on the research task of mapping the landscape



Carrying out a scoping study of the science communication landscape and the stakeholder mapping may start by focusing on the digital sphere, but should not be limited to that specific area. The mapping should look at the different stakeholder groups and take into consideration the local specificities.

The groups identified by RETHINK are the following:



To do the mapping, consider the type of stakeholders that have been laid out in the figure above and make sure you identify those existing within your local context.

You should organise a meeting or a workshop with the rest of the team. The first part of the mapping will start with the identification of stakeholders.

i. Brainstorm and build a list of stakeholders:

You will have to brainstorm together to come up with a list of institutions and people. Write the names in sticky notes and place them on a big sheet of paper. Keep in mind that this list will evolve throughout the project as the different outcomes and activities start happening. At this stage you shouldn't pick but include everyone who currently has an interest in the project and do not forget those that may become interested in the future. Where possible, identify individuals. Revise past and ongoing projects and activities. Are there relevant individuals you should add to the list?

Once you have completed this map, share your results more widely (with the rest of the team) and, if possible, gather input from other staff members that might help you complete the list and identify individuals within the institutions you did not know who to contact.

ii. Analyse the list:

You should analyze all of the stakeholders that you have identified under this lens.

Once you have your initial list, you should further analyse your findings to understand their relevance and the perspective they bring to understand science communication.

Taking into consideration the project's objectives and goals, as well as its methodology RETHINK has identified the following criteria as relevant to the approach. Use them to analyse your stakeholders.

Diversity of stakeholders:

- **Area of activity:** what is the area of activity of your stakeholder?
- **Implicit science communication model:** What model of science communication is the stakeholder using? This will help you understand their underlying assumptions as well.

RETHINK has identified 4 models of science communication:

Model	Direction	Dominant Framework	Communication
Dissemination	1-way/ linear	Science	Transfer
Dialogue	2-way/ linear	Science + public	Exchange
Participation	3-way/ multi-directional	Multiple Frameworks	Interpretation
Co-creation	x-way/ omni-directional	Emergent Frameworks	Meaning-making

Diversity would be the element that you should value greatly. Have as varied and representative a group of stakeholders as possible.

Commitment

- **Open to change:** Are your stakeholders willing to change the way they do science communication? Are they willing to experiment with new approaches and implement them?
- **Engaged in science communication:** Do your stakeholders believe in the importance of science communication? Are they committed to the advancement of the science communication field?

Influence

- **Influence on science communication professionals:** Is your stakeholder a relevant member of the community? Does the person have the capacity to shape the ideas and approaches of other members of the science communication community?
- **Influence on the publics:** Has the person got the capacity to influence the ideas and concerns of the general publics?

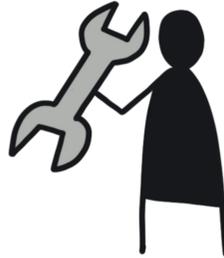
Step 3:

BUILD the Rethinkerspace

Objective:

Select important stakeholders and attract them to your Rethinkerspace

As part of this step, the Rethinkerspace coordinator will start to actually work on recruiting the stakeholders. For that they will have to devise a recruitment process, an engagement plan and create an action plan to be successful in attracting a good group of individuals to carry out the research at the local level.



Recruitment process

The minimum number of stakeholders for any given Rethinkerspace is of 15 participants. Participants need to come from different backgrounds and should ideally cover the full spectrum described in the proposal. The recruitment of the members of your Rethinkerspace should be based on the mapping of the landscape carried out.

Place all the stakeholders according to the importance for the work of your Rethinkerspace and how they have ranked with the criteria identified in the previous step. You should aim to have a mix of stakeholders with those criteria in mind.

Engagement plan:

Creating an Action plan using Personas

Once your stakeholder map is completed and your ideal Rethinkerspace participants have been identified and placed in the map, the coordinator should then establish the type of relationship they have with the persons or institutions they have mapped. Trust will be the central element to understand and analyze. Our recommendation would be to start with your existing network of partners with whom you have an established relationship. But this project should also contribute to extending your network and help you build new relationships. Keep in mind the importance of building a trustworthy relationship with them, you will need to be transparent about the project and its objectives and take time as these new relationships will not thrive overnight. How are you going to approach the stakeholders? When? For that you will need to build an action plan.

The action plan

Once all of these relationships have been mapped, the next activity will be to create a plan of the different actions you have to undertake to involve them including: a timeline, the stakeholder group that needs to be involved and what are the objectives in terms of engagement. A key part will be to identify existing barriers you may encounter when trying to engage the selected stakeholders and then devise actions to overcome them. A good tool to determine the barriers will be to use personas to characterize the different stakeholders.

For this exercise, a persona will describe a stakeholder group in a way that is easy to understand and empathize with. Describe both the person as a human being (background story, personality, interests, etc.) and as a stakeholder in context of the science communication ecosystem (needs, expectations, etc.)

Personas:

This template gives an example of what a persona could look like

STAKEHOLDER PROFILE

The form is titled 'STAKEHOLDER PROFILE' and is divided into several sections:

- Name:** A blank space for the stakeholder's name.
- Type of Stakeholder:** A list of checkboxes for 'Civil Society', 'Researchers & Consultants', 'Policy Makers', and 'Economic Actors'.
- Who am I?:** A section with a person icon and a blank space for a self-description.
- 3 reasons for me to engage with the co-creation Lab:** A section with a signpost icon and a blank space for reasons.
- 3 reasons for me NOT to engage with the co-creation Lab:** A section with a signpost icon and a blank space for reasons.
- My interests:** A section with a gear icon and a blank space for interests.
- My personality:** A section with a person icon and a blank space for personality.
- My skills:** A section with a gear icon and a blank space for skills.
- My dreams:** A section with a person icon and a blank space for dreams.
- My social environment:** A section with a group of people icon and a blank space for social environment.

Action plan:

Once the stakeholder profile is completed, the coordinator and its team will have to create an engagement plan. The following template can serve as a guide. Keep in mind that emails will probably not suffice especially with stakeholders you already don't know. Use a mix of digital and face-to-face contacts.

STAKEHOLDERS ENGAGEMENT PLAN

PHASES	STAKEHOLDERS	OBJECTIVES IN TERMS OF COMMUNICATION	BARRIERS	ACTIONS



- Identify implementation opportunities for the new practices
- Spread these new practices and guidelines within their own networks

This information should be specifically adapted, after the initial contact with the stakeholder has been made, to the degree of involvement and resources (mostly time and expertise) each stakeholder is willing to provide.

Stakeholders will be keen in understanding what are the expectations in terms of their involvement. Stakeholders are expected to do the following work as part of their involvement in the Rethinkerspaces:

- Take part in workshops designed to rethink science communication in the new emerging landscape of science-society interactions
- Support the research carried out by providing input, gathering good practices, responding to questionnaires and being part of interviews and focus groups
- Experiment with new ways of doing science communication within your own daily practice

Step 4:

UNDERSTAND the landscape

Step 4, *Understand the landscape*, will be articulated around three main areas that respond to:

- Mapping the ecosystem
- investigating sensemaking practices
- Analysing existing trainings and training needs



For the first line of research, Rethinkerspaces will have to work in understanding the landscape of the science communication field within their local environment. Local here encompasses both the level of the city, the region and the national level. The process starts by mapping the landscape of digital science communication across Europe, looking at which individuals and institutions are doing the communication and the form this takes. These individuals might be journalists, scientists or bloggers who write in their bedroom. Anyone. The institutions might be science centres, museums, or research centres. Again, anyone. This mapping will be conducted using a rigorous online search. You may prepare a report on the findings and the Rethinkerspaces are expected to look at a draft of this to check that nothing is missing, especially any innovative science communicators and techniques.

RETHINK has developed a questionnaire (see capsule on audiences) that look to find out the practices, motivations, incentives and disincentives that those engaged in digital science communication have. This questionnaire also asks about how science communicators develop connections with their audiences; particularly audiences that don't typically engage with science material. It could be distributed to some of the science communicators identified in the mapping, but may also ask members of the Rethinkerspaces to help distribute the questionnaire among their network (colleagues and associates in their country). Some of the communicators identified may also be invited to take part in interviews to dig a little deeper into what they do. As said, you may produce a written report on their findings.

The collection of data follows a protocol devised by the University of Western England in the framework of RETHINK.

RETHINK has aimed to investigate the sensemaking practices of societies on science. Next, you should explore barriers and opportunities to open-up those sensemaking practices. A part of this is examining ways for scientists and R&I stakeholders to engage in science communication. Lastly, all findings may contribute to the development of strategies for good practices in opening-up science to society, or in other words, to enhance the quality of interactions between science, politics, media and society.

In this step also you may identify relevant experts and coordinate interviews with them.

The third line of investigation deals with issues such as the uncertainty of information and its related quality changes of science communication. The aim is to develop training programs which refer to these challenges.

RETHINK also examined the landscape of teaching and training in Europe and run a comparison of programs that address different target groups (scientists, professional communicators) and to which extent these include alternative communicators like bloggers. The leading question for this part of the research is if different programs already teach how to communicate science to diverse parts of the public and at times of uncertainty of information. This could be performed on the basis of analyzing existing documents of the program and could be complemented by a survey directed to the training program lead.

Sensemaking

Sensemaking is the fundamental way by which we develop an understanding of a complex reality. Due to digitalization and blurring boundaries in the science communication ecosystem, scientific facts are more often under public scrutiny. Scientific evidence is more often disregarded as 'just another opinion'. Online, everybody can be a journalist. An overload of information leaves audiences with questions. Although scientific evidence is present, science will not always give answers to important questions like: 'Who can I trust? What information is accurate? And what should we do with this information?'. This indicates that next to scientific facts other considerations are at the basis of finding suitable solutions for complex societal problems. For example, understanding the prerequisites and dimensions of trust and accuracy in facilitating a constructive societal conversation. Complex interactions between science, politics, media and the wider public – or in other words the larger context of societal problems – are of importance here. In RETHINK's objective to improve the quality of the interactions between science, politics, media and the public, it is key to understand how people make sense of science. For example: when a young mother reads articles on brain growth in order to understand what is happening to her prematurely born baby, this information is not interpreted from a scientific perspective, but according to her previous knowledge and understanding of her child. This illustrates that engagement with science is context specific and that the understanding, or sense-making, of science differs in various contexts. Sensemaking is an important dimension of how society shapes its view on science and as such also the way in which we address societal issues.

At the same time, experts will be interviewed to understand the needs from science communication training dealing with this changing science communication landscape. Based on this research you may develop a framework for the assessment of quality in science communication training programs. Criteria will be developed in such a way that they adjust to the specific needs and features of the new landscape (i.e. increased heterogeneity, fragmentation, complexity, uncertainty).

The next step is to decide which training modules could be useful for teaching the "RETHINK perspective".

Rethinkerspaces contribute to the mapping of existing training programmes in various countries, and to the testing of trainings.

Step 5:

DEVELOP & EXPERIMENT with new approaches

The research activities aim at developing new strategies to improve the quality of science communication and for that you may develop new ways of doing science communication.

As part of the strategies' refinement process the project has arranged a set of small-sized experiments.

These experiments are key in testing new strategies that have been developed to respond to the needs identified in the research: a new role typology, new trainings as well as new interaction techniques including conversation and reflection tools among others.

The Rethinkerspaces have been tasked with testing the new approaches developed. The three main lines of research benefit from experimental exercises in the Rethinkerspaces:

- **Role definitions** describe the contributions that actors can make to improve the interactions between science and society. For instance, in the past, science journalist would act as gatekeepers and translators of scientific content. In this new landscape, what could be their new role?
- **Strategies to open-up** are important because discussions about science are about visions and values and not about facts. And this is being discussed implicitly, through the discussion of the facts. The underlying assumption is that conversations would be more meaningful and productive if we were to discuss the values as well. Research will show us how people make sense of science in their everyday environment, knowing the facts we will develop strategies to make the discussions more open.
- **Quality of interactions framework:** The quality of interactions between science and society can no longer be safeguarded or even measured by traditional means; therefore, a new quality of interactions framework will be needed.

Each of the Rethinkerspaces in collaboration with the stakeholders will have to run at least experiment (a small sized exercise for individuals or small groups in which they try out new behavior as part of their science communication practice) that will be designed by the research work packages in each of the areas described above.

WHowever, the exact shape of the experiments will be defined later in the project once the first research exercises have finished.

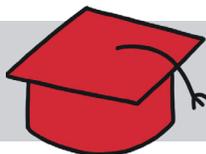


Step 6:

SYNTHESIZE AND TRAIN for transformation

This step is divided into two different activities:

1. Synthesizing the project's outcomes and
2. Transforming them into guidelines for different stakeholders.



Rethinkerspaces are expected to share these guidelines at the local level.

On the other hand, once the research is completed, Rethinkerspaces will be expected to first attend a train-the-trainers workshop. This workshop will equip them to gain practical knowledge about how to conduct trainings to improve science communication activities of other practitioners. Then, you will have to deliver a training workshop to their Rethinkerspace participants and other relevant stakeholders to share the knowledge gained during the project.

