



D.3.4: How can institutions promote responsible research to enhance trust in science: An analytical aide memoire towards recommendations for maintaining trust

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Project title: Probing the impact of integrity and integration on societal trust in science

Project acronym: POIESIS

Grant Agreement no.: 101057253



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Project Acronym:	POIESIS
Project Title:	Probing the impact of integrity and integration on societal trust in science
Title of Deliverable:	How can institutions promote responsible research to enhance trust in science: An analytical aide memoire towards recommendations for maintaining trust
Work Package:	WP3
Due date according to contract:	28/02/2025
Actual delivery date:	26/02/2025
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Editor(s):	Michel Dubois (CNRS)

ABSTRACT:	The deliverable reviews the main stages of data collection associated with Work Package 3 of the POIESIS project, but also to specify the nature of the work that remains to be done in 2025 in order to produce policy recommendations.
Keyword List:	Focus group, roundtable, institutions, policy recommendations, trust

1. Introduction

The objective of this report is to review the main stages of data collection associated with Work Package 3 of the POIESIS project, but also to specify the nature of the work that remains to be done in 2025 in order to produce strong and innovative policy recommendations.

1.1. About POIESIS

POIESIS is a three-year project funded by Horizon Europe 2022-2025. This project brings together seven partners: Aarhus University (Denmark), London School of Economics and Political Science (United Kingdom), Wissenschaft im Dialog (Germany), National Technical University of Athens (Greece), Centre National de la Recherche Scientifique (France), Iscte – Instituto Universitário de Lisboa (Portugal), Agencia Estatal Consejo Superior de Investigaciones Científicas (Spain).

POIESIS develops an extensive research programme to systematically examine the interrelatedness of integrity, integration, and trust, exploring also the role of institutions in fostering a research climate that is conducive to societal trust in science. POIESIS aims to do this through (i) analysis of existing data streams on citizen trust, responsible and questionable research practices, and institutional policies to enhance responsible research; (ii) implementation of a portfolio of small scale studies, specifically tailored to capture empirically the relatedness of integrity, integration, and trust, with a focus on the chains of mediation that connect research practices with, ultimately, the interpretation and assessment of these by wider, non-academic publics; and (iii) conducting a set of participatory research actions in which stakeholders actively co-create knowledge.

The POIESIS project can be characterised by the importance given to the empirical survey methods, but also by the conceptual model adopted by the members of the consortium, the so-called 3i4t for “Integrity, Integration, and Institutions for trust”.

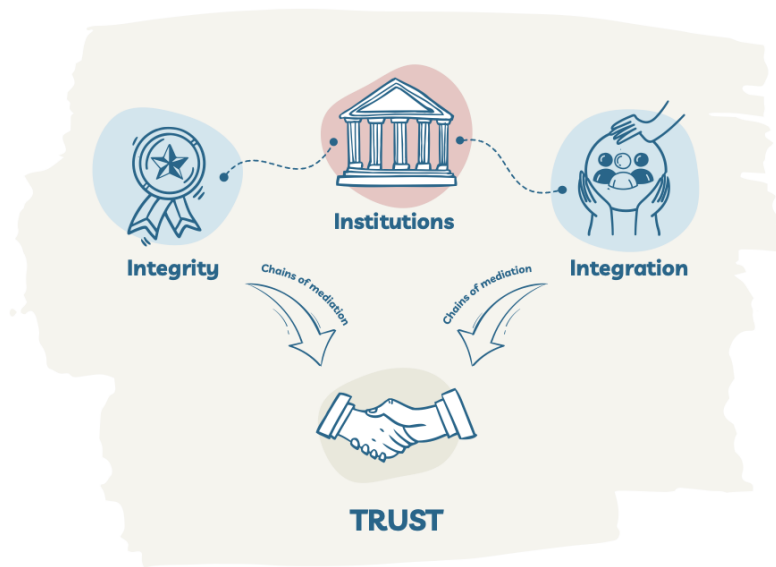


Figure 1 - The 3i4t model

POIESIS considers research integrity and social integration in science as broad concepts facilitated by institutions, which through chains of mediation potentially affect public trust in science. The concept of public trust refers to the confidence individual or social groups may have in the reliability of science and scientists. It is entangled with broader constellations of positive and negative “attitudes” towards science which have been explored in both cross-sectional and longitudinal studies. The concept of integrity is concerned with the extent to which research practices are in accordance with appropriate ethical, legal, and professional frameworks, obligations, and standards (Horbach & Halffman, 2017). The concept of integration relates to the increased inclusion of citizens and societal stakeholders throughout the different phases of research and innovation cycles (Wilsdon & Willis, 2004 ; Stilgoe, Lock & Wilsdon, 2014). The concept of institutions refers to the key actors and core processes involved in the pursuit of delivering robust and relevant research results in the interests of both science and society. Finally, the concept of “chain of mediation” relates to the mechanisms and processes that connect research practices at the work floor with the interpretation and assessment of these by wider publics (Bauer & Schiele, 2023).

1.2. About WP3 – talking with stakeholders

This deliverable is part of the process of producing systematic qualitative data through participatory research actions and recommendations associated with Work Package 3.

WP3 is primarily designed to address the following research question: *To what extent and how can institutions provide policies and procedures that enable researchers to act in ways that are conducive to public trust in science?*

POIESIS' research on institutional processes and actors aims to explore how institutions engage, facilitate, or constrain responsible research practices and how public recognition of such practices in turn influences trust in science. This involves detailed analysis of various actors involved including research performing organizations (RPOs) and research funding organizations (RFOs), and mediating actors such as science journalists, open access repositories, technology transfer offices, scientific publishers, actors in technology assessment, and civil society organisations, that are key to disseminating information, promoting new and improved practices, and mobilising citizens to contribute to research and innovation.

In order to provide effective and robust outcomes, WP3 carries out *participatory research activities involving institutional stakeholders to co-construct knowledge and policy recommendations* about the ways in which institutions can help create fertile conditions for responsible research practices.

2. Lessons from the Focus groups with stakeholders (D.3.2 – Focus Groups: Findings. Exploring Institutional Roles in Fostering Public Trust in Science)

Understanding trust and research integrity requires a clear picture of prevailing attitudes and perceptions. This applies not only to the general public but also to institutional stakeholders. And part of WP3 aimed precisely at collecting original qualitative data on the state of these perceptions and attitudes at the institutional level.

The POIESIS consortium opted for an interview methodology that was both qualitative and participatory: qualitative, with 22 focus groups involving more than 130 participants in seven countries; participatory, with 24 institutional stakeholders working with us as co-investigators. The study revealed several key findings: For a detailed report on the study's results, please refer to Dubois (2024) and Dubois et al. (forthcoming).

- There is no general ‘crisis of trust’, there might be a task for maintaining public trust in science

The research conducted at European level has first of all made it possible to question the observation of a supposed general crisis of trust between science and society. Our focus groups revealed a much more nuanced picture. Participants believe that there may be problems of trust between science and society, but that these problems are mainly limited to specific issues or areas. They felt that the question of trust was at least as much a question for society as for scientists themselves. A major challenge today is to ensure that scientists have full and unreserved confidence in scientific institutions. Finally, it was noted that the prevailing discourse of a generalized crisis of trust between science and society may not only be empirically false, but may also be counterproductive, in particular by artificially creating a growing distance between science and society.

- Scientific misconduct has a limited effect on public trust, which is influenced to other factors

Regarding the link between public trust and scientific integrity, participants acknowledged that scientific misconduct can undermine trust in science. However, this effect is considered to be limited. Partly because cases of fraud or misconduct are considered either rare or difficult to measure. Participants emphasized the importance of the different actors in the mediation chain: the scientists themselves, when they expose their disputes on social media; the traditional media, which develop a sensationalist approach; and institutional communication, which too often cultivates an opaque approach in the name of protecting researchers.

- Given the larger battles over scientific information, shifting from dissemination to solely participation only might be risky

Participants were also relatively divided about social integration and its effects. While participatory mechanisms have been praised for allowing, in principle, an in-depth dialogue between citizens and scientists, in practice this dialogue does not always take place. And when a participatory process fails to deliver on its promises, it can understandably generate public mistrust. More importantly, some actors believe that abandoning a dissemination strategy in favour of a participatory strategy could argue that shifting from a dissemination strategy to a participatory approach could be risky, given the large-scale battle over scientific information.

- Institutions must address conflicting moral imperative of research staff, arising from national and international coordination of imperatives

Participants felt that institutions have an important role to play and they contributed to the list of recommendations presented in section 4 of this document. The idea that each scientific organization should be able to systematically identify the conflicting moral imperatives to which it subjects its staff seems to be an essential task. But it is important to stress that these institutional actions will remain ineffective if they are not coordinated at both national and European levels. In terms of integrity and knowledge of data sharing rights, the problem is not so much the absence of codes, but the proliferation of codes, which leads to increasing confusion.

3. Lessons from the roundtables (D.3.3 – Deliberative roundtables: Findings. From priorities to policy recommendations)

While the focus group methodology is well suited to creating interaction and simulating the creativity of participants, the round table methodology is more oriented towards building a shared diagnosis and producing concrete recommendations.

For this deliverable, the POIESIS consortium opted for a methodology that was both qualitative and participatory: qualitative, with 7 roundtables involving more 84 participants; participatory, with a set of institutional stakeholders and co-investigators involved in the previous phase of the project.

- Priorities for maintaining trust will be different in different contexts

Despite multiple cross-national findings and recommendations, each roundtable also highlighted participants' main national priorities and the challenges they face. For example, in Denmark, the focus was on social inclusion and public engagement in research. In France, the independence of science emerged as a critical issue. In Germany, participants emphasized the need for clear national and European guidelines on good scientific practice. In Portugal, discussions focused on innovative ways to engage the public in science. Beyond individual national examples, these priorities and insights reflect the diverse concerns of participants and the multifaceted nature of the challenges ahead.

- Actionable recommendations are linked to objectives, novel, targeted, and adaptable.

But the roundtables were also an opportunity to develop a collective reflection on the criteria likely to be associated with a 'useful recommendation' for maintaining trust on a European scale. Discussions among participants helped to identify several key qualities that any recommendations should illustrate: a) they should be clearly linked to specific objectives; b) they should avoid merely paraphrasing existing recommendations; c) they should be targeted at easily identifiable groups; d) they should be actionable, leading to tangible and concrete results; and e) they should be realistic and adaptable, in line with available resources and the context in which they are to be implemented.

- Consider also the risks of potential misuse of recommendations

More generally, the participants agreed on the need to consider both the potential use and misuse of any recommendation. The final wording of any recommendation will require careful consideration of such ambivalence, ensuring a nuanced formulation that avoids oversimplification and takes full account of its wider implications.

4. An analytical aide memoire towards recommendations for maintaining trust

The work carried out during WP3 enabled a number of priorities to be identified and collectively discussed. For the sake of clarity, these priorities can be divided into four main categories: research integrity; organization of science, social integration, science communication. Table 1 lists the priorities identified in the previous stages of WP3.

These different priorities, which address very different aspects of the conduct of research and the role of scientific organizations in terms of integration and communication, were identified on the basis of the cross-analysis of the discussion groups held in 7 countries. As mentioned in the previous section, these priorities were discussed as potential courses of institutional action, but also from the point of view of their capacity to be transformed into useful recommendations at the European level. And here the diversity of the partners in the POIESIS project makes it possible to reflect European institutional diversity. What seems important in one country is not necessarily perceived in the same way in another. This diversity should encourage us to keep in mind the need to produce recommendations linked to indicators or metrics that allow for continuous and adaptable evaluation.

Topic	Id	Institutional priority
Research integrity	1	Implement clear guidelines, codes of conduct and promote shared research integrity standards across institutions and countries
	2	Continuous, career-long training and education programmes for students, scientists, but also other professionals working in the institution
	3	Ensure a culture of transparency regarding the institutional handling of misconduct
Organization of science	4	Increase administrative support throughout the research process, covering areas such as budget management, external collaboration and relations, and data management
	5	Encourage scientific institutions to address the organizational tensions, conflicting imperatives they contribute to generate
	6	In-depth revision of the performance evaluation system: Towards more qualitative measures
	7	Ensure science independence and develop public conversation about the private funding of universities and research organisations
	8	Protect own members, and particularly scientists, from external attacks

Social integration	9	Provide scientists with the necessary knowledge and resources to engage in a sustainable and meaningful process of social integration
	10	Promote collaborative spaces and buildings: buildings should be designed and built to favour openness
	11	Develop and consider new ways of consulting citizens at local and regional level. For example, by holding citizens' assemblies or other specific groups
	12	Implement the inclusion of scientific knowledge in school curricula – the only moment in life when all societal groups can be reached simultaneously – but also foster life-long learning opportunities in this regard
Science communication	13	Insofar as the battle for scientific information is being waged at both global and local levels, act at both levels, combining comprehensive participation with mass dissemination
	14	Use institutional communicators to make citizens aware of research in the early stages
	15	Avoid assuming a “crisis of trust”, it is a strong and problematic term: talk of crisis can be self-fulfilling and is best avoided

Table 1 - 15 initial priorities based on WP3 focus groups and discussed during the roundtables

The priorities that emerged from the stakeholder discussions should therefore be considered as intermediate material. Some of the priorities may not be retained if they are already the subject of existing recommendations. Others may be reformulated or clarified as the project progresses.

To complete the remaining work before the end of the project, several key elements need to be linked:

- the priorities identified during the fieldwork
- their translation into a clear final objective in line with the conceptual 3i4t model of the POIESIS project
- the specific activities designed to achieve this objective
- the target population(s) for these activities, including mediating actors, researchers, research leaders and managers in research performing organizations, research integrity officers, research and innovation policy makers, research funding organizations, and the general public
- the expected short- and long-term results of the implementation of these activities
- the indicators needed to measure their short- and long-term impact and sustainability.

Table 2 below sets out the broad categories for each priority identified in the focus group study. These categories are as follows:

- Priority: Identifies the main focus or issue to be addressed based on the analysis of the empirical material.

- **Activities:** Describes the specific actions, initiatives or programmes that should be implemented to address the identified priority. These activities should be concrete, feasible and measurable.
- **Target audience:** Indicates the groups or institutions directly involved in or affected by the activities. This may include researchers, universities, funding agencies, scientific journals or policy makers.
- **Short-term outcomes:** Refers to the immediate or short-term results expected from the implementation of activities. These results indicate the initial progress made towards achieving the main objective.
- **STO Expected changes:** Describes the specific changes, improvements or developments expected in the short term as a result of the activities
- **STO Metrics:** Defines the indicators or measures that will be used to assess progress in the short term. These metrics help to track the success and impact of activities at an early stage.
- **Medium-term outcomes:** represent the more sustainable and structured results expected after an intermediate period of implementation. These results reflect broader institutional or systemic changes.
- **MTO Expected changes:** Describes the specific changes, improvements or developments expected in the mid-term as a sustainable result of the activities
- **MTO Metrics:** Defines the indicators or measures that will be used to assess progress in the mid term. These metrics help to track the success and impact of activities at an advanced stage
- **Objective:** States the overall goal or purpose of the priority. It defines the broader impact or change that the activities and outcomes are intended to achieve.

Let's take an example with priority 1 "Implement clear guidelines, codes of conduct and promote shared research integrity standards across institutions and countries". The general objective of this priority can be defined as the creation of a common institutional culture of research integrity at European level. Among the activities that could contribute to this objective is the development of a model institutional Charter on Integrity that could be adopted by organizations. The target audience is mainly institutional actors. The expected short-term result is the integration of elements of this charter into the internal rules of the organizations, and the expected medium- or long-term result is the standardization of the practices covered by these rules. The short-term result can be measured by the number of institutions or organizations that officially use the Charter. The medium or long-term result can be measured by the change in the number of practices that deviate from the Charter in each institution concerned.

Let's consider another example, Priority 5, which is dedicated to the conflicting imperatives of organizations. The general objective associated with this priority is to enable institutions to better manage organizational tensions, thereby improving the perceived quality of the working environment for researchers. A related activity could be the creation of diagnostic tools or survey instruments dedicated to these organizational tensions. The target audience is essentially the

managers of the organizations concerned. The expected short-term result is the identification of tensions between organizational requirements and scientific requirements, which could be measured by counting the number of dedicated reports. The expected medium to long term result is the adjustment of the internal policies of the scientific organizations to reduce or even eliminate these tensions. This outcome could be measured by the number of reforms implemented in response to the initial diagnosis.

These are merely a few examples. With the POIESIS project set to conclude in August 2025, our team must carry out meticulous work to fully utilize the research material accumulated since the project's inception and develop a final set of policy recommendations on how institutions can foster conditions that support responsible research practices and strengthen a research culture conducive to trust in science.

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Priority	Activities	Population	Short term outcomes		Mid-term outcome		Objective
			Changes to occur	Metrics STO	Changes to occur	Metrics MTO	
RESEARCH INTEGRITY							
1							
2							
3							
ORGANIZATION OF SCIENCE							
4							
5							
6							
7							
8							
SOCIAL INTEGRATION							
9							
10							
11							
12							
SCIENCE COMMUNICATION							
13							
14							
15							

Table 2 – a grid for translating raw priorities into actionable recommendations