



# EUROPEAN POLICYBRIEF



**CALL: HORIZON-WIDERA-2021-ERA-01-44 -**

**TOPIC: SOCIETAL TRUST IN SCIENCE, RESEARCH  
AND INNOVATION**

**PROJECT: VERITY**

**LINK TO THE WEBSITE:  
[HTTPS://WWW.VERITYPROJECT.EU/](https://www.verityproject.eu/)**

**DATE: 31 AUGUST 2023**

## Introduction

Societal trust in the research system and confidence in its outcomes is vital to ensure the EU's contribution to attain the Sustainable Development Goals and to achieve the European Green Deal targets. It is equally important for the uptake of innovation in society and for making further steps towards engaging citizens in R&I policies.

In recent years, vocal minorities advocating climate change denialism and vaccine scepticism have raised concerns about levels of public trust in scientific institutions and growing resistance to science-based recommendations. Some speculate that the fault lies with the relationships between government, science, and industry, which give the impression that science is no longer independent. In the EU overall, half of respondents (50%) of a survey on perceptions of science and technology agree that 'we can no longer trust scientists to tell the truth about controversial scientific and technological issues because they depend more and more on money from industry.'<sup>1</sup>

At the same time, the **ecosystem of trust is shifting**; authority is moving away from experts and institutions and towards private companies, social media platforms, and influencers, all of whom

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<sup>1</sup> Special Eurobarometer 516 – April-May 2021 "European citizens' knowledge and attitudes towards science and technology".

wield influence and audiences.<sup>2</sup> This transition from institutional trust to distributed trust<sup>3</sup> demarcates the transition from 'science for society' to 'science with and for society.'<sup>4</sup> These changes mean that citizens<sup>5</sup> are increasingly, albeit informally, included in the ecosystem of trust in one of two roles: as communicators of (mis)information or audiences with the power to promote certain messages as valid; as participants in citizen science at 'different stages of the process and at different levels of engagement, from shaping research agendas and policies, to gathering, processing and analysing data, and assessing the outcomes of research.'<sup>6</sup>

As such, the VERITY project recommends **rebuilding the relationship between science and society by redefining the ecosystem of trust** as a conceptual space within which societal trust in science is constructed, negotiated, enhanced, or reduced, as well as science society co-creation and open science are sought. To that end **greater citizen and societal engagement in research and innovation is needed**, via science-society co-creation, improved transparency and scientific communication, and citizen engagement initiatives. Initial findings of the VERITY project reveal a disconnect between citizens' perception of science as an enterprise and scientists as researchers; some trusted individual scientists but were suspicious of conclusions reached via the scientific method, while for others, this trend was reversed. Actively including citizens in the scientific process can boost transparency, understanding, and trust, messages which participants can then disseminate using their role in the ecosystem of trust.

Bringing science closer to citizens through active citizen and societal engagement in research and innovation is one of the priority areas for joint action under *A Pact for Research and Innovation in Europe*<sup>7</sup> and in the ERA Policy Agenda for the period 2022-2024.<sup>8</sup> One of the aims of the Horizon Europe programme is to 'engage and involve citizens, civil society organisations and end-users in co-design and co-creation processes and promote responsible research and innovation.'<sup>9</sup> However, it also brings new challenges to the ecosystem of trust. Therefore, this brief is primarily aimed at **EU institutions including the European Commission, Directorate-General for Research and Innovation and the European Commission's Joint Research Centre, and all actors working on science society co-creation and in the field of citizen engagement. These actors also include EU member states and their communities that initiate such programmes and so-called 'brokers' (moderators, facilitators, communicators) who promote two-way communication and exchange.** This brief seeks to inform EU policymakers and officials involved in the implementation of the European Research Area Policy Agenda 2021-2024 and EU Missions related to citizen engagement activities.<sup>10</sup>

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<sup>2</sup> Van Dijck, J., & Alinejad, D. (2020). Social media and trust in scientific expertise: Debating the Covid-19 pandemic in the Netherlands. *Social Media+ Society*, 6(4), 2056305120981057.

<sup>3</sup> Botsman, R. (2017). *Who can you trust?: how technology brought us together—and why it could drive us apart*. Penguin UK.

<sup>4</sup> Owen, R., Macnaghten, P. & Stilgoe, J. (2012). Responsible research and innovation: From science in society to science for society, with society. In *Science and Public Policy*, 39, 6, 751-760.

<sup>5</sup> By 'citizens' we also refer to people who are not citizens in a legal sense, e.g., because they have no (EU) citizenship, like refugees and stateless persons.

<sup>6</sup> European Commission, Citizen Science: Elevating research and innovation through societal engagement <https://op.europa.eu/en/publication-detail/-/publication/d1768147-f17a-11ea-991b-01aa75ed71a1/language-en/format-PDF/source-152465380>

<sup>7</sup> <https://www.horizon-europe.gouv.fr/sites/default/files/2021-12/a-pact-for-r-i-in-europe-5158.pdf>

<sup>8</sup> [https://commission.europa.eu/system/files/2021-11/ec\\_rtd\\_era-policy-agenda-2021.pdf](https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf)

<sup>9</sup> [https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science\\_en](https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science_en)

<sup>10</sup> [https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/eu-missions-citizen-engagement-activities\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/eu-missions-citizen-engagement-activities_en)

## 1. Citizen and societal engagement in research and innovation

The European Union aims to ‘strengthen the trust in the various ways society is influenced by science and, on the other hand, how science is influenced by choices, dilemmas and responsibilities that arise in society.’<sup>11</sup> This goal rests on the assertion that engagement with citizens can improve research outcomes and boost trust in science.<sup>12</sup> The findings of the VERITY project supports this assertion and provide insights into how such engagement can be achieved. The findings are divided into three subgroups, explained below.

### Roles of citizens and society in research and innovation

The VERITY project surveyed the conclusions of 59 EU-funded projects on the subjects of science, trust, and public engagement with research. This literature review found that **making science accessible to citizens, popularising science via outreach activities, and involving citizens in science-related decision-making all positively impact societal trust in science.** These results are supported by the Special Eurobarometer 516 (2021), which reveals correlations between engagement with science and trust. Respondents who reported having a higher interest in science often agreed that policy decisions should be based on expert opinions (77% compared to 62% who were uninterested). These numbers were higher when the respondent or one of their family members had worked in a scientific role (77% who worked in similar fields agreed, while 83% connected to somebody working in the area were in support). The inverse was also true; respondents who were disconnected from science were less likely to agree that expert opinions should influence policymaking, indicating that involving people in the field could have positive impacts on trust.

**“IF CITIZENS BECOME MORE INVOLVED, THEY WILL TRUST THE RESULTS MORE.”**

“Citizens are almost never involved in the research question,” said Marina Tulin, Assistant Professor of education, citizenship, and democracy in a digital world at Amsterdam School of Communication, emphasized the importance of citizen engagement. **“If citizens become more involved, they will trust the results more.** If they trust that what is being studied is important, they will care more about science in general.”

But the VERITY findings include an important caveat: **participation occurs along a spectrum, and more active forms of participation have stronger impacts on trust.** The Eurobarometer Report found that most respondents only engaged with science passively: watching documentaries (59%), discussing the topics with family and friends (55%), visiting museums (33%), and studying in their free time (22%). The VERITY results suggest that these activities have a weaker impact on trust than active participation in the scientific process, such as via citizen science programs. As such, initiatives to provide citizens with opportunities to actively engage with science should be developed, and further research should investigate the links between different types of participation and trust.

### Attitudes of scientists towards engaging the public in science, research, and innovation

Most citizen engagement initiatives are organised from the perspectives of scientists and tend to leave citizens in peripheral roles. As explained in the previous section, VERITY findings indicate that this has a smaller, albeit still positive, impact on trust than more active forms of participation, in which citizens have the power to make decisions. Furthermore, scientists’ reluctance to engage citizens in more active forms of participation may widen the gap between science and society. Addressing this relationship can have several positive effects; collaborations between scientists and citizens may improve study design, and considering citizens’ perspectives can help ensure that scientific outputs

<sup>11</sup> [https://commission.europa.eu/system/files/2021-11/ec\\_rtd\\_era-policy-agenda-2021.pdf](https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf)

<sup>12</sup> European Commission, Citizen Science: Elevating research and innovation through societal engagement <https://op.europa.eu/en/publication-detail/-/publication/d1768147-f17a-11ea-991b-01aa75ed71a1/language-en/format-PDF/source-152465380>

address societal needs and values. As such, efforts to improve this relationship should focus on **enhancing scientists' trust in the public's ability to actively engage in scientific research.**

***“PUBLIC ENGAGEMENT SHOULD BE ABOUT CO-CREATION.”***

“We shouldn't go to the public for validation, for approval at the last stage. **Public engagement should be about co-creation and truly understanding what concerns and values citizens have,**” said Jolita Butkeviciene, the European Commission's Director for Innovation in Science and Policymaking at the Joint Research Centre.

### **Attitudes of citizens about engaging in science, research, and innovation**

Eurobarometer results indicate that the majority of citizens (61%) agree that non-scientists should be involved in research. However, few citizens do participate, beyond the passive ways listed in the previous section. This is caused by many factors; the survey's respondents blamed this on lack of time (41%), lack of knowledge in the fields of science and technology (39%), and lack of interest (34%). But VERITY findings reveal other issues precluding more active participation. The public is usually approached formally, in spaces that may inhibit the representation of certain citizens. Further, given that citizens lack the time and motivation, citizen participation is stratified and often limited to people of higher education with a pre-existing interest in science. Policymakers and scientific institutions, and other actors initiating engagement with the lay public, should consider **initiatives encouraging broader audiences of varying skillsets to participate in active forms of science-society co-creation.**

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## **2. Science communication**

The VERITY literature review shows that citizens perceive scientists and researchers as the most trustworthy sources of scientific information. These results align with findings of the 2021 Eurobarometer on European citizens' knowledge and attitudes towards science and technology. When asked which people and organisations were best qualified to explain the impact of scientific and technological developments on society, the most selected options were scientists working at public (61%) and private (40%) organisations, followed by general practitioners and specialist doctors (29%).

And yet, some people still do not always trust the knowledge, backed by scientific evidence, that is shared by scientific researchers. Why is this? The VERITY literature review indicates that **mistrust in science is an issue of communication, rather than a reflection of the validity of scientific results.** The public is inundated with conflicting information, controversies, and news about the harmful effects of research, as opposed to reports of positive scientific results and processes. The review reveals that communication on high consensus, ethical implications of research, and two-sided messages are positively correlated to higher levels of trust in science, and that the public appreciates messaging on transparency, integrity, benevolence, and expertise. However, it is important that communication is also transparent and does not minimise conflicts for the sake of promoting these values.

***“THE PUBLIC HAS THE RIGHT TO HAVE SCIENTIFIC OUTCOMES EXPLAINED TO THEM IN WAY THAT THEY UNDERSTAND.”***

“The public has the right to have scientific outcomes explained to them in way that they understand—and who better to do that than the people who understand the research most thoroughly,” said Natalie Evans, Assistant Professor of ethics, law, and medical humanities at Amsterdam UMC, and founder of The Embassy of Good Science. “**However, scientists certainly need more training to do this and to do it well...**if institutions say that research need to communicate with the public in a way that the public can understand, they need to support those researchers.”



Further research investigating **the link between different levels of participation – from more passive to more active - in scientific research and differing levels of trust** should be conducted as part of the JRC Competence Centre on Participatory and Deliberative Democracy's objective of 'enrich[ing] the EU knowledge base on participatory and deliberative practices'.<sup>13</sup>



Specific mechanisms should be developed – through such concrete measures as the ERA-supported 'European City for Science' programme – to **reinforce the appropriate communication of scientific processes and results to lay people**. These mechanisms should aim to provide scientists with the skills and incentive to improve their communication practice, to foster science 'translation' services, and to increase transparency in science communication.



**Incentivise citizen engagement programmes**, with the dual goal of providing diverse publics the opportunities and capacities to take an active role in scientific research and reinforcing the connections between citizen engagement communities and research institutions. These initiatives should build on and extend such programmes as the ERA-supported 'Plastic Pirates', which focuses on engaging youth in citizen science and science education.



Efforts are needed to **improve the relationship between citizens and scientists in the context of collaboration**, through such initiatives as the ERA's Action 14 for 2022-24, 'Bring science closer to citizens', whose main goal is 'strengthen the trust in the various ways society is influenced by society'.<sup>14</sup> This should include actions to enhance the trust researchers place in the public's ability to participate in scientific research actively and effectively and to lower the barriers scientists face in engaging with diverse publics.

<sup>13</sup> [https://knowledge4policy.ec.europa.eu/participatory-democracy/about\\_en](https://knowledge4policy.ec.europa.eu/participatory-democracy/about_en)

<sup>14</sup> [https://commission.europa.eu/system/files/2021-11/ec\\_rtd\\_era-policy-agenda-2021.pdf](https://commission.europa.eu/system/files/2021-11/ec_rtd_era-policy-agenda-2021.pdf)

## Project Identity

<b>PROJECT NAME</b>	VERITY (developing scientific Research with ethics and integrity)
<b>COORDINATOR</b>	TRILATERAL RESEARCH LIMITED (TRI IE) Fdw House, Blackthorn Business Park Coes road, Dundalk Louth, Ireland
<b>CONSORTIUM</b>	EUREC OFFICE GUG (EUREC) Werdstr. 31, Bonn 53225, Germany PANEPISTIMIO DYTIKIS ATTIKIS (UniWA) Petrou Ralli Kai Thivon, Aigaleo 12244, Greece SRL SCIENCE BUSINESS PUBLISHING INTERNATIONAL (SB Int) Avenue des Nerviens 79, Bruxelles 1040, Belgium UCLAN CYPRUS LIMITED (UCLAN CY) University Avenue 12-14 Pyla, Larnaka 7080, Cyprus ZENTRUM FUR SOZIALE INNOVATION GMBH (ZSI) Linke Wienzeile 246, Wien 1150, Austria
<b>FUNDING SCHEME</b>	Call: HORIZON-WIDERA-2021-ERA-01 Topic: HORIZON-WIDERA-2021-ERA-01-44 Type of action: HORIZON Research and Innovation Actions
<b>DURATION</b>	Project starting date: fixed date: 1 September 2022 Project end date: 31 August 2025 Project duration: 36 months
<b>BUDGET</b>	EU contribution: 1 847 562 €
<b>WEBSITE</b>	<a href="https://www.verityproject.eu/">https://www.verityproject.eu/</a>
<b>FOR MORE INFORMATION</b>	Contact: Agata Gurzawska, VERITY project coordinator, <a href="mailto:Agata.Gurzawska@trilateralresearch.com">Agata.Gurzawska@trilateralresearch.com</a>
<b>FURTHER READING</b>	Antoniou, Josephina, and Antonis Antoniou. (2023). "D1.1 Review Paper of Previous EU Projects' Result and Recommendations." Publication on Zenodo forthcoming. Antoniou, Antonis, and Kalypso Iordanou. (2023). "D1.2 Summary of Systematic Literature Review." Publication on Zenodo forthcoming. Häberlein, Lisa and Philipp Hövel. (2023). "D2.1 Report on Stakeholder Mapping and Engagement Strategy." Publication on Zenodo forthcoming.



**Funded by  
the European Union**

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