



Report on GATE Workshop #2:

GATE Solution Session at the Open Science Conference 2025 Capacity Building in Times of AI: Finding Solutions with the GATE

Milestone

Report on GATE Solution Session
Open Science Conference, Hamburg, October 9, 2025

1/11/2025

Authors:

Anika Müller-Karabil, Marie Alavi, Vanessa Guzek, Tom van Drimmelen

Table of contents

1. Overview: Solution Session at the Open Science Conference 2025
2. Outcome: Targeted actions and identified needs to advance Open Science (at the intersection with AI)
3. Next steps

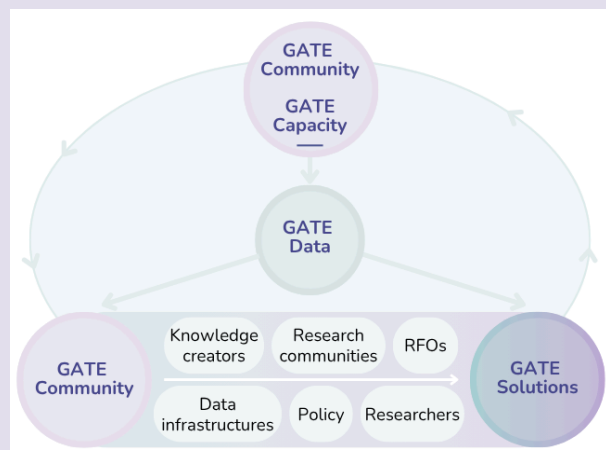
1. Overview: Solution Session at the Open Science Conference 2025

The [Open Science Conference 2025](#), hosted by Leibniz Strategy Forum Open Science and organised under the lead of the ZBW – Leibniz Information Centre for Economics, is an annual event that brings together diverse stakeholders and key actors in the field of Open Science (OS) to exchange ideas on current and emerging trends aimed at advancing OS. This year's event took place from October 8 to 9 in Hamburg and focused on OS in the era of AI, highlighting both the challenges and opportunities shaping this intersection.

The [GATE Solution Session](#) brought together participants from the fields of research, education, data management, library, software development, AI consultation, (OS) science management, scholarly communication, policymaking and law to **explore the needs of various OS target groups and to co-create concrete actions supporting OS development and implementation, including its intersection with AI**. Drawing on data and material from the Open Science Learning GATE (GATE), they designed tailored solutions for their communities and discussed ways to strengthen capacity building in the age of AI.

About the GATE

The GATE Initiative provides an infrastructure for continuous knowledge exchange on OS, connecting diverse stakeholder groups and offering guidance on current developments in OS. Its core service is a structured, survey-based data collection system ([GATE Service](#)) that allows [Knowledge Creators](#) to assess their OS materials against predefined and self-defined guiding thoughts and simultaneously provides guidance for optimisation. This process generates rich and high-quality datasets reflecting evolving community OS practices and guiding thoughts that are shared with the wider community via annual **GATE Reports**. It empowers stakeholders (such as educators, policymakers, funders, (data) infrastructure providers and researchers) in aligning their work with the latest developments, deriving new questions, and shaping targeted actions or policies to advance OS in their fields.



Phases of the Solution Session:

I. Pre-conference:

Before the conference session, a pre-conference phase invited [Open Science Knowledge Creators](#) (speakers, authors, trainers, and developers of materials that foster and reflect OS, including reports, leaflets, training sessions, and articles) to connect their resources to GATE. They provided information about the guiding thoughts in their materials through a

questionnaire called the [GATE Service](#) (which is continuously open to engage with). This data informed the hands-on phase in the session.

II. In-conference:

Over 40 participants attended the on-site session. The meeting began with a brief introduction from [Anika Müller-Karabil](#) to the GATE, outlining the session's focus and objectives ([Müller-Karabil, A. et al., 2025](#)). During the collaborative phase, participants formed seven groups with peers from similar backgrounds. Each group selected one or more **target personas** (e.g., Early Career Researcher, Senior Researcher, University Librarian, Programme Officer at a Research Funding Organisation) and **guiding thoughts** (e.g., Bias Free, Privacy, Factual Accuracy, Data Protection) provided by the GATE to focus their discussion. Groups then developed OS capacity-building actions based on these personas and themes. After a 40-minute working phase, each group presented its solutions. All groups were moderated by GATE members or supporters ([Anika Müller-Karabil](#), [Marie Alavi](#), [Julia Priess-Buchheit](#), [Tom van Drimmelen](#), [Tim Errington](#), [Vanessa Guzek](#)), except one group that worked without a moderator.

Overview of the stakeholders' background in the groups: Researchers (Group 1), Librarians, Data Curators/Stewards, OS Trainers/Educators (Groups 2, 3, 4), Data Infrastructure/Software Professionals, Data Scientists/Data Analysts (Group 5), Policy Makers, Funders (Groups 6, 7)

III. Post-conference:

The outcomes are published in this report and on the conference's community space (DOI: 10.5281/zenodo.17590125) and feed into the open-access GATE Report 2025, a community-based output of the GATE initiative, continuously informing the research ecosystem on OS.

2. Outcomes: Targeted actions and identified needs to advance Open Science (at the intersection with AI)

The session's outcomes represent *directional and conceptual proposals*, highlighting what stakeholders consider necessary to advance OS within their communities, rather than ready-to-implement or yet-to-be-implemented solutions or actions. They identify areas where targeted measures, frameworks, or pilot initiatives could and should be developed or shared in subsequent phases.

Seven groups developed (ideas for) actions—shown as action cards below—to promote OS at the intersection with AI for their communities. Each group represented one of four broad stakeholder communities (see above) and worked with selected personas (examples of target groups pre-defined by GATE) to tailor their solutions to specific needs and challenges.

Because many groups developed actions for personas outside their own community, the synthesis below takes a hybrid approach. It is organised by **stakeholder groups** (who developed the ideas), but specifies which *personas* they targeted and which of the seven groups from the session contributed to the results.

2.1. Action Card 1 from Researchers for Early Career Researchers, PhD Students

Guiding thoughts: Bias, Factual Accuracy, Training

Proposed actions:

- Integrate OS into early-career training and the teaching of good scientific practice, making OS the default.
- Highlight the benefits and relevance of OS (and good scientific practice) in everyday research, use concrete examples (checklists, websites, good-practice cases)
 - Practice example: [Detecting Bad Science website](#) - used in master courses on Responsible Conduct of Research, naturally includes OS and provides checklists and bingo-cards to support students in evaluating research reports.
- Foster exchange between early-career and senior researchers to normalise OS behaviour; trust is key
- Combine bottom-up engagement with institutional incentives and recognition for OS practices.
- Offer templates and monitoring tools for data management to reassure and support new researchers.

Discussion highlights:

The groups agreed that OS should be embedded in the culture of good science rather than treated as an extra task. They saw early-career training as a key leverage point. While some warned against purely top-down enforcement, most agreed that incentives and light regulation are needed to accelerate change. Trust in colleagues, institutions, and infrastructures was identified as the underlying condition for sustainable openness.

Overlap of stakeholder groups: Researchers' focus on training and trust directly connects with the work of librarians and educators (Groups 2–4), who have proposed similar support mechanisms.

2.2. Action Card 2 from Librarians, Data Curators/Stewards, OS Trainers/Educators for Early Career and Senior Researchers, University Librarians

Guiding thoughts: Traceability, Privacy, Factual Accuracy, Trust

Proposed solutions/actions:

- Provide flexible OS guidelines that can be adapted to disciplinary contexts
- Offer training for researchers on licensing (Creative Commons), ethical and responsible data use, and AI integration in (open) research.
- Support for FAIRifying data (clarifying that FAIR does not always require openness), identifying suitable repositories (e.g., with the help of [re3data](#)).
- Promote institutionally validated AI tools for secure data management and metadata generation; use AI to make unpublished data GDPR-compliant while maintaining responsible use.
- Build communities of practice through webinars, networks, and peer exchange; highlight best practices by connecting with OS-experienced institutions/centres/etc. in your field to demonstrate practical OS applications.

Discussion highlights:

Librarians and educators positioned themselves as intermediaries between researchers and

institutional structures. They stressed that OS should remain researcher-driven, but supported by clear and realisable frameworks. Privacy and factual accuracy were recurring concerns, especially regarding AI tools used in data management. Increased data crawling activities are perceived as problematic, particularly by librarians. Participants discussed that while institutional AI systems may be less powerful than commercial tools, they might ensure ethical, compliant practices and foster researcher trust.

Overlap of stakeholder groups: These groups' emphasis on guidance and efficient policy frameworks mirrors the discussions in the policy makers and funder groups (Groups 6 & 7).

2.3. Action Card 3 from Data Infrastructure/Software Professionals, Data Scientists/Data Analysts for Senior Researchers

Guiding thoughts: Reproducibility, Reliability, Data Protection

Proposed solutions/actions:

- Develop trusted, local repositories using anonymised or simulated data and AI-supported search functions to be used for research purposes (query (patient) data, identify cohorts of patients exhibiting similar clinical profiles, and assess suitability for research).
- Create responsible consent mechanisms/pathways that allow data subjects to share data easily and openly.
- Demonstrate reproducible workflows and their added value through practical examples.

Discussion highlights:

Technical experts emphasised reproducibility and ethical data use as cornerstones of responsible AI integration. They emphasised that AI tools must be built on solid data management workflows, and that researchers need to understand these workflows before adopting automation. The integration of AI in data-intensive fields, such as medicine, should follow staged, long-term strategies.

Overlap of stakeholder groups: This focus on responsible AI connects with both librarians' attention to data ethics and funders' interest in reliable infrastructures.

2.4. Action Card 4 from Policy Makers and Funders for Senior Researchers, University Librarians, Programme Officers at Funding Organisation

Guiding thoughts: Reliability, Consistency, Data Protection, Interpretability

Proposed solutions/actions:

- Formulate clear, practical OS guidelines and model data management plans (DMP; [example](#)).
- Ensure coherence and consistency in OS requirements across funding schemes and the research lifecycle.
- Stress Researcher-driven approach: define minimal mandatory requirements and offer further support based on resources and disciplinary culture; allow disciplinary adaptation and academic freedom instead of rigid SOPs.
- Provide targeted funding for OS infrastructures, tools, and training.

- Promote transparent and ethical use of AI in research governance.

Discussion highlights:

Policy-oriented groups discussed how to translate OS principles into workable, consistent frameworks. Participants agreed that OS policies must be specific and feasible rather than aspirational. The narrative around OS should emphasise empowerment, not compliance, to ensure genuine participation.

Overlap of stakeholder groups: Policy and funding actors share common ground with technical professionals (on infrastructure reliability) and educators (on the need for clarity and flexibility in implementation).

2.5. Overall Insights

Across all groups, three consistent messages emerged:

- **Trust and transparency** form the basis for OS adoption, linking all stakeholder perspectives.
- **Education and early integration** of OS principles are crucial for sustainable cultural change.
- **Flexibility and contextual sensitivity** must guide the design of policies, infrastructures, and incentives—uniform standards alone are insufficient.

These shared priorities indicate that advancing OS necessitates coordinated action across stakeholder communities, with librarians and educators playing a crucial role as connectors among researchers, technical experts, and policy actors.

3. Next steps

By connecting practitioners across the research landscape, GATE brings together valuable insights into OS guiding thoughts, practices, and needs to reflectively and strategically shape the research community's path towards more open and collaborative science. Many institutions have already developed exemplary approaches (as highlighted in this Report and the [GATE Workshop #1 - Implementing Open Science for Communities Report](#)). Yet, it has also become clear that while the vision of OS is widely shared, concrete and context-specific capacity-building solutions are still missing. These include educational formats that translate principles into practice; agile, modular infrastructures that adapt to the pace of contemporary research; and supportive frameworks from funders and policymakers.

Moving forward, GATE will continue to gather and synthesise knowledge on OS developments (through the GATE Service) and reflect this knowledge back to the community (via the GATE Report). At the same time, GATE will further expand its collaborative approach - engaging practitioners not only as contributors but as co-creators of solutions. In doing so, the GATE seeks not only to consolidate knowledge, but also to spark new momentum and ignite the Open Science flame in communities that have not yet fully embraced it.

In May 2026, GATE will release the first draft of the GATE Report 2025, providing a comprehensive overview of current guiding thoughts and practices - and setting the stage for

the next chapter in advancing OS together.

Calls for contributions

1. [Knowledge Creators](#) are invited to share their insights through the [GATE Service](#) and, in doing so, receive guidance to optimise their materials.
2. GATE continues offering workshops at conferences and institutions, enabling participants to strengthen and practice OS within their organisations. Interested institutions can reach out to us directly: Marie Alavi (marie.gate@miller.international) or Anika Müller-Karabil (anika.gate@miller.international).
3. Umbrella organisations interested in taking formal patronage of the [GATE Report 2025](#) are also being sought.

References

Müller-Karabil, A., & Alavi, M. (2025, Oktober 2). Open Science Capacity Building in times of AI: Finding Solutions with the GATE. Open Science Conference 2025 (OSC25), Hamburg. Zenodo. <https://doi.org/10.5281/zenodo.17252563>

Alavi, M., Müller-Karabil, A., van Drimmelen, T., & Fischer, R. (2025). GATE Workshop #1 - Implementing Open Science for Communities. Metascience Conference 2025 - Unconference, London. Zenodo. <https://doi.org/10.5281/zenodo.15878607>