

## Baseline and Rationale

**Belspo** is Belgium's federal agency for science policy, supporting 10 **Federal Scientific Institutes (FSIs)**. Together with **Belnet**, the National Research and Education Network (NREN) and Belgium's mandated organisation in the EOSC Association, it provides federal research with **Open Science (OS) policies, guidelines, and the tools** and support to implement them.

Belspo's federal OS mandates on Open Access (2017) and Open Data (2019) now call for an update, driven by two factors: **uneven uptake** across FSIs, as shown by two 2025 surveys (see below), and a **rapidly evolving context**:

- **AI-driven**, data-intensive research is **reshaping** scientific processes and infrastructures (despite austerity pressures), deepening OS across data, software, methods, models, and workflows
- In a shifting **geopolitical** context, growing emphasis on **knowledge security** and strategic autonomy calls for a renewed interpretation of "as open as possible, as closed as necessary"
- **Eroding trust** in science highlights the need for transparency, accountability, and scrutiny, core principles of Open Science
- At EU level, Open Science, AI, and digital and social transitions are aligned into a **unified vision**, enacted through EOSC to drive innovation and equity at scale

-> Call for **update of OS mandates** and **opportunity** to ensure federal research's visibility, trustworthiness, and competitiveness in this new landscape

-> Need to **evolve** the whole system of OS tools, services, guidance, and skills in a **coherent** manner

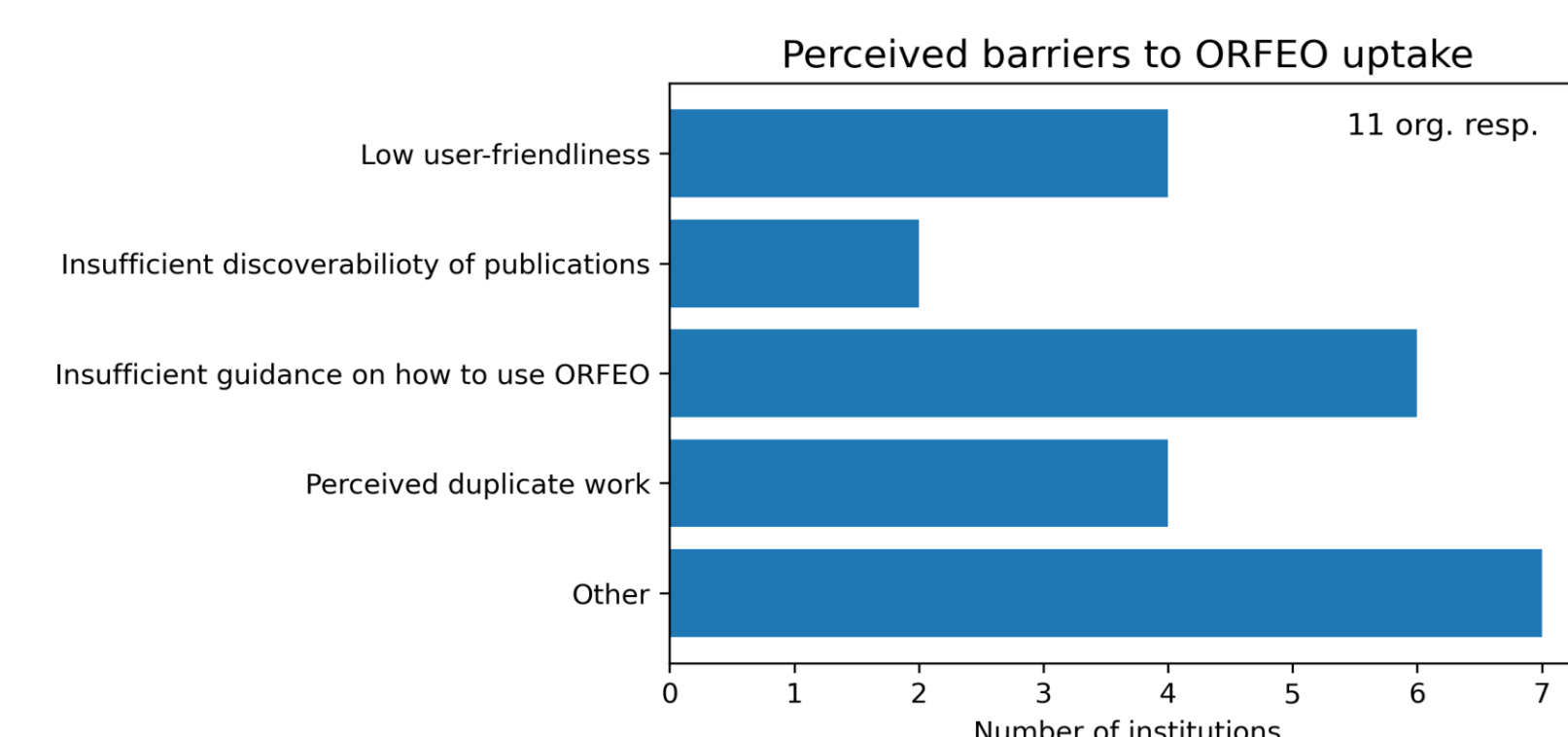
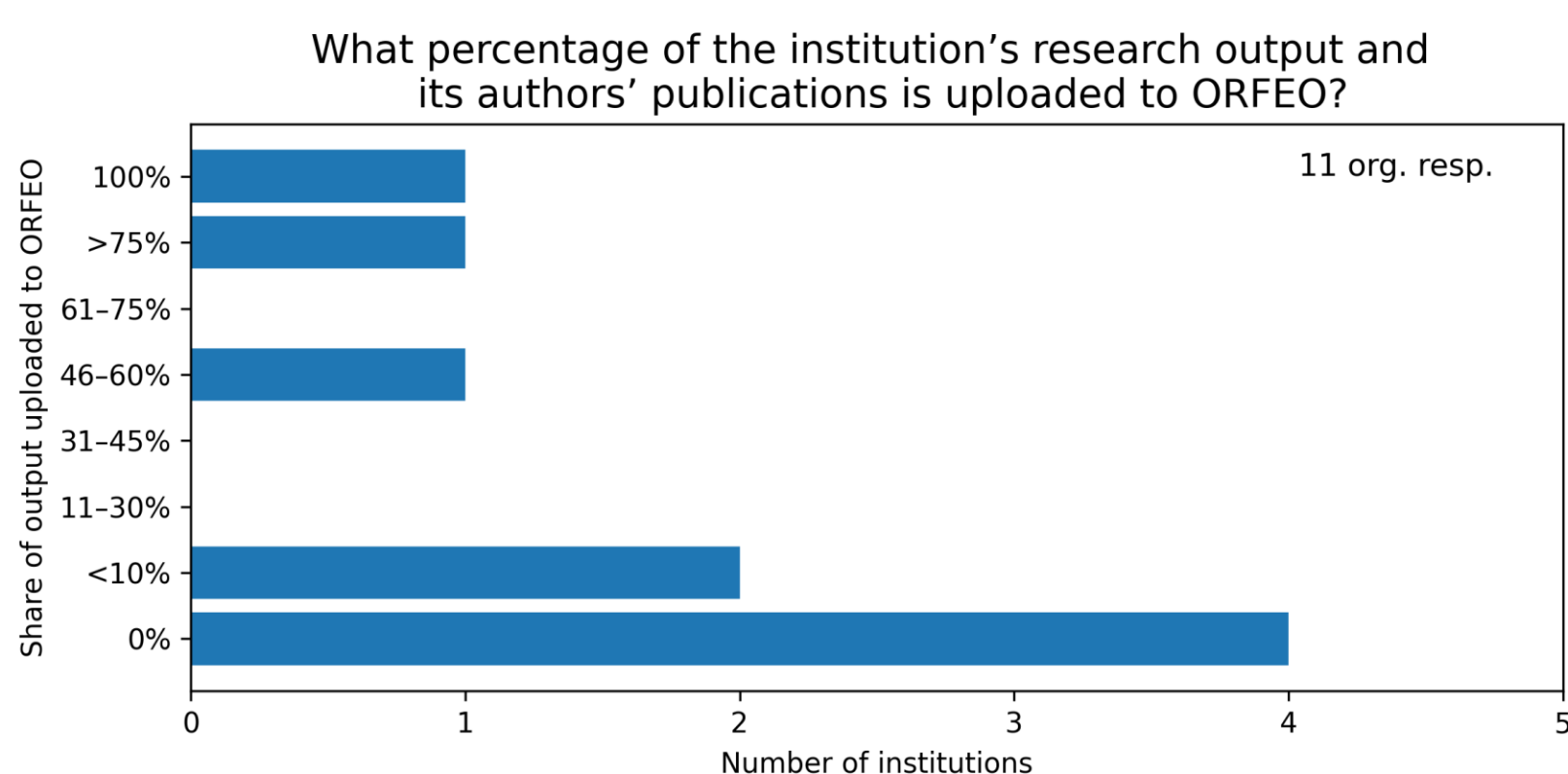
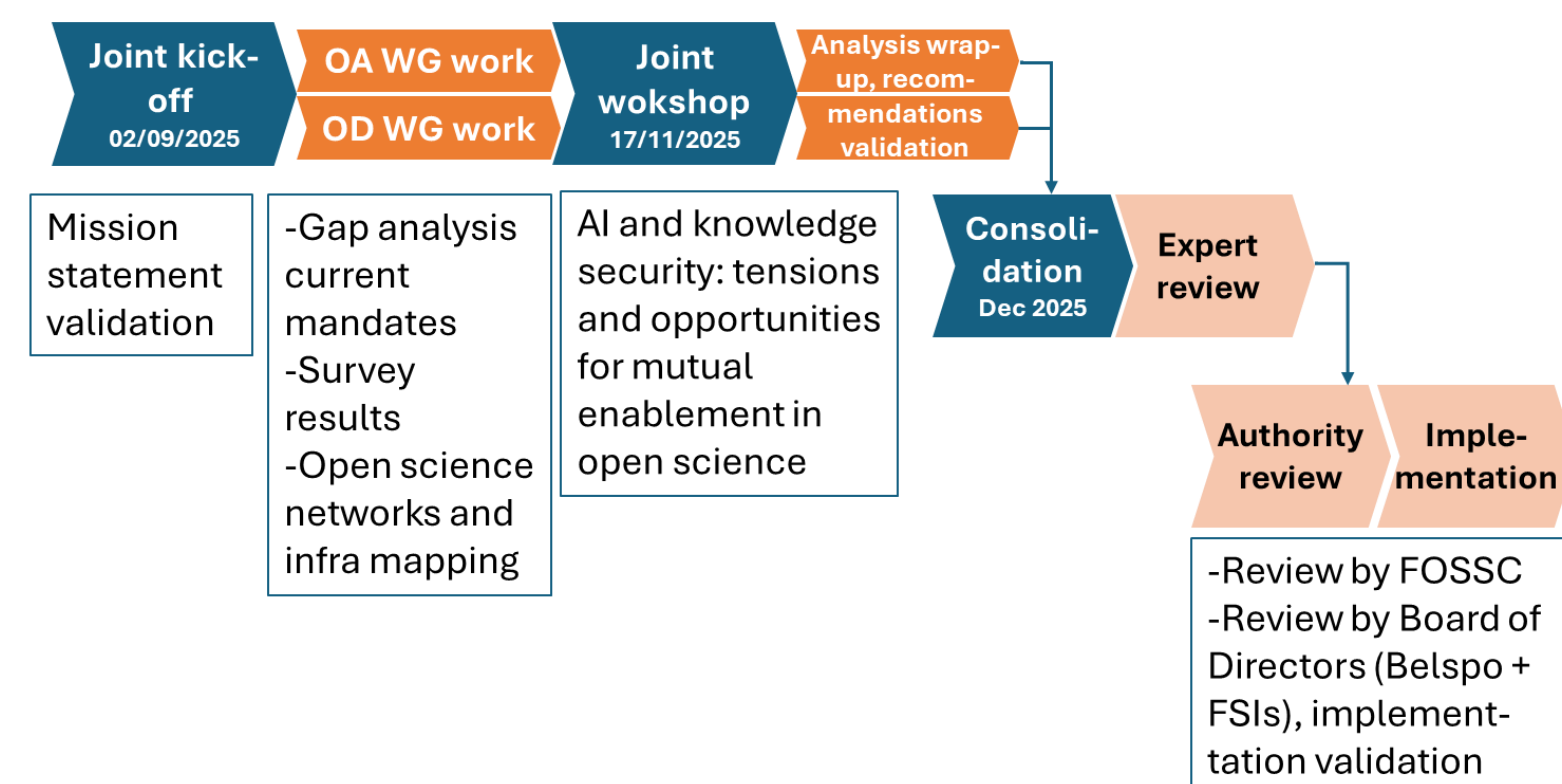
-> **FedOSC** (launched April 2024) is the federal initiative advancing OS and FAIR data practices across the FSIs to **drive this transformation**

### Objective

- **Increased, uniform uptake of OS practices**
- **Unified, future-ready OS vision**

### Methodology

- **Inspiration**: benchmark of 20 national and institutional OS policies
- **Co-design**: two working groups mobilized by the Federal Open Science Strategy Committee (FOSSC) with 18 volunteering high-level professionals in research data and publication
- **Expert review**: **FAIR-enabling checklist** and local experts feedback

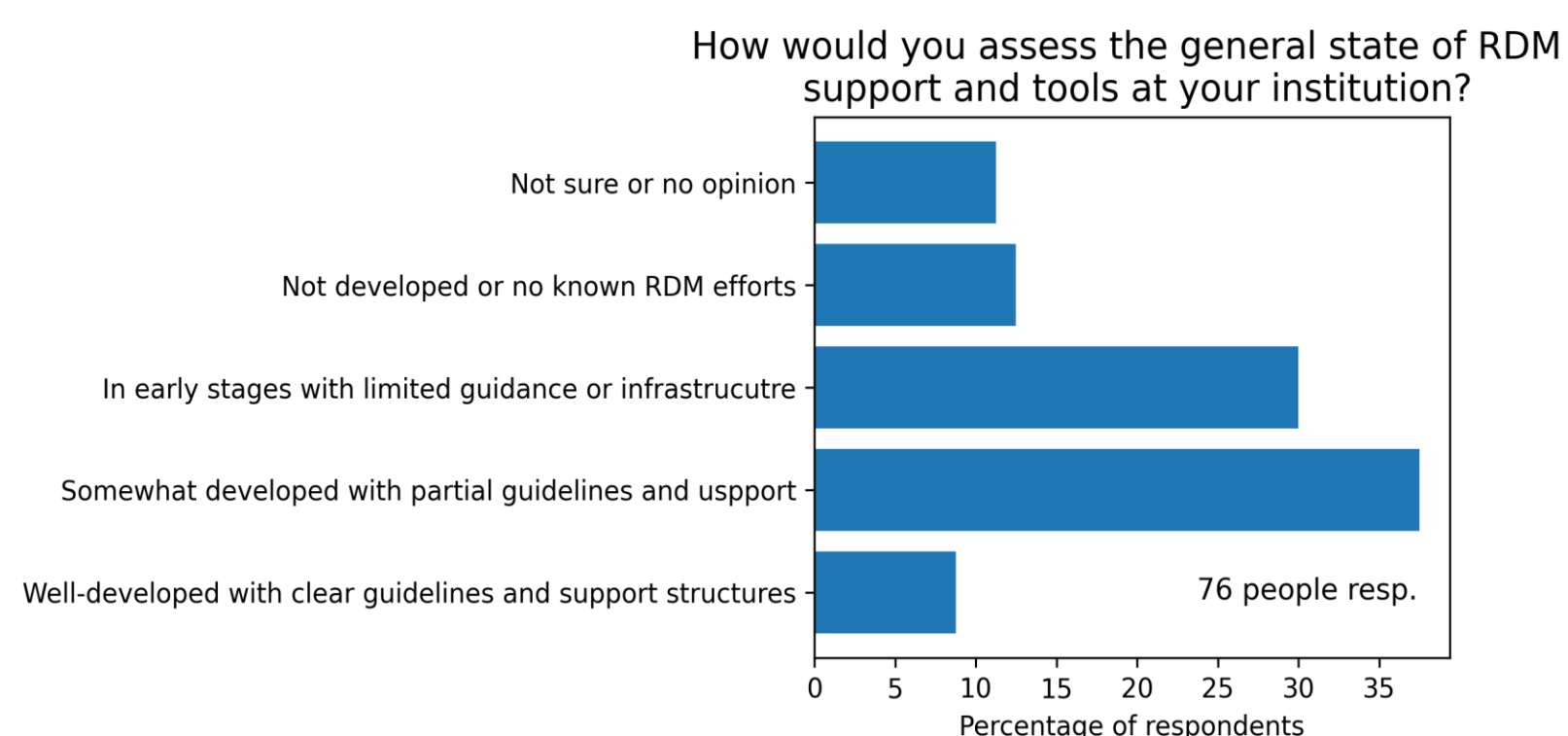
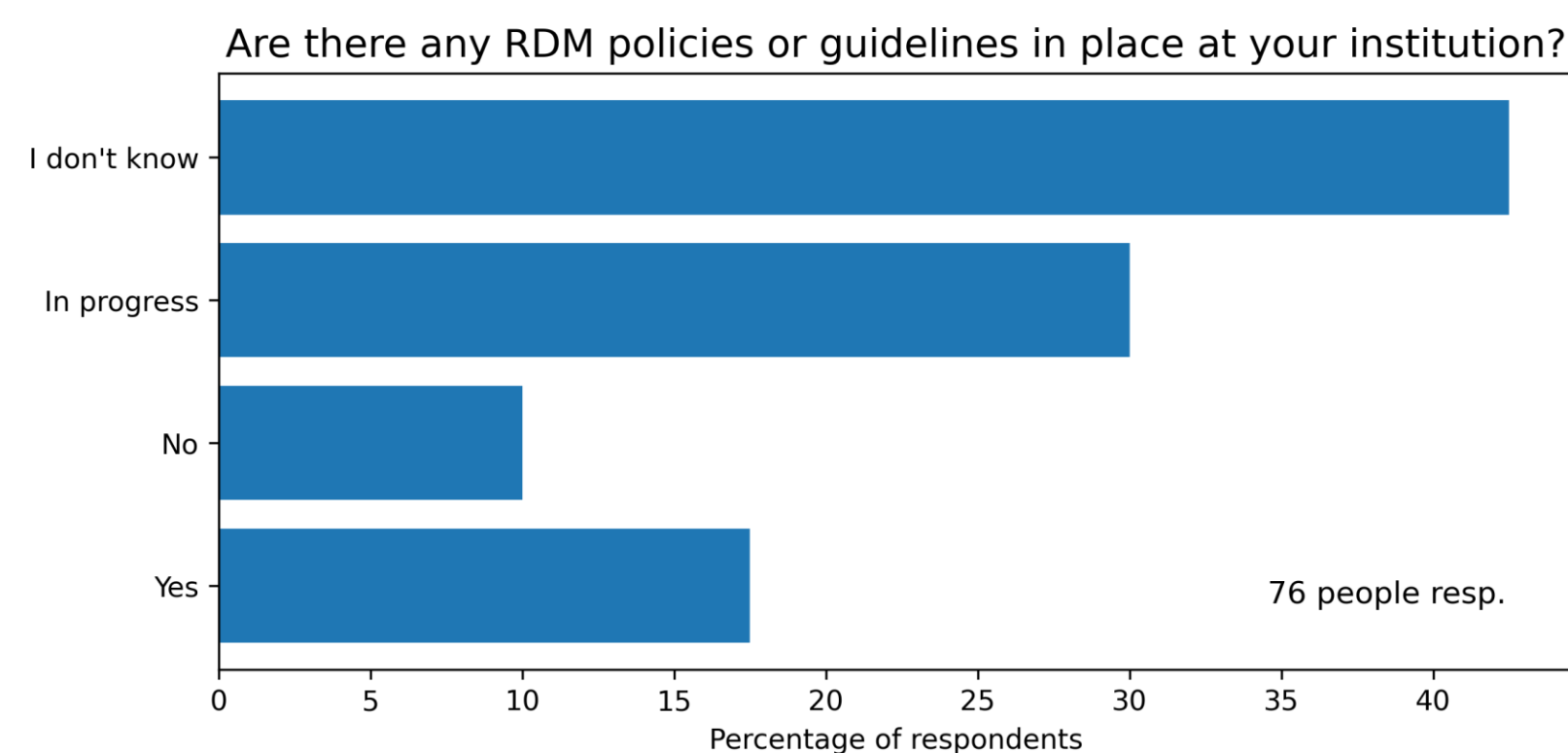


## Survey results

Two surveys were conducted in 2025 across FSIs to assess publication and research data management (RDM) practices. Results show:

- **Fragmented practices** in publications and in PID adoption (DOIs, ORCIDs)
- **Low compliance** with OS mandates linked to weak policy awareness and blurred policy-tool boundaries
- **ORFEO\*** (*Belspo's inter-FSI Green Open Access repository, which is made mandatory in the 2017 mandate*) underused, yielding a **lack of monitoring**
- Key barriers: **time constraints**, low prioritizing, weak **incentives**, low **user-friendliness of ORFEO\***
- **Missing a solid foundation** of shared tools and vision on cross-FSI issues (metadata, security, storage, publication, ...)

\*ORFEO = Open Access Repository of Federal Organisations



## Recommendations and lessons learned

### FRAGMENTATION

#### Disseminated initial states:

- Different tools and practices
- Initiatives
- Room for improvement of digital services (incl. ORFEO)
- Risk of cost duplication
- Reduced visibility and impact
- Reduced traceability (no monitoring capabilities)
- Reduced reusability
- Risk of commercial monopolies
- Contemporary challenges
- Evolving open science culture and research methods – lag in adoption levels

### CO-DESIGN

#### Engagement and community-building processes

- Initial call for volunteers
- Multiple modes of engagement: meetings, surveys, co-writing, presenting use case(s), reviews, cross-group linking/federating
- Autonomy balanced with centralized coordination (deadlines and scope maintained)

#### Observations and lessons learned:

- Leveraging existing experts reduces work duplication and recognises "invisible" skills
- Cross-disciplinary focus groups landed on shared concerns: impact, recognition, sustainable infrastructure, operational relevance ("making sense")
- Collective design reduces resistance to policy adoption by embedding ownership

**Diversity of practices not challenged; but mobilised to reveal common needs and build an emerging MVP policy.**

### COMMON VISION

**Field-driven proposal for an open, sovereign and resilient research ecosystem, grounded in a unifying vision, enabled by community-owned tools, infrastructure, and governance processes**

- Create a **single Open Science mandate** covering the **entire federal research ecosystem** with **expanded definitions** of research output
- Compliance with a **common, minimal set of technical requirements** (PIDs, FAIR) and a common licensing & preservation strategy, in a common repository, **ORFEO**
- Developing an **overarching CRIS** and a common Open Science Observatory
- Integrate Open Science practices **into career assessment and project evaluation**, in particular through DMPs
- Align initiatives and pool resources** to provide consolidated tools, guidance, and data stewardship (competence hubs)

From there:

- Establishment of change pilot groups and stakeholders' forum (not dissolving the groups)
- Evolving the whole ecosystem in accordance with this vision: tools, services, training, governance processes (other FedOSC deliverables)