



Capacity Building Workshop (CBW1)

“Collaborative, Responsible and Open Science infrastructure development”

OPEN-ASIA: Boosting engagement of HEIs in Open Science in India and Malaysia
(Project 101128493)

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15 April 2024



Welcome to Tampere!

- Presentation of Tampere University
- Outline of the training week:
 - MARIHE students
 - Group picture today
 - Walking tour and get-together dinner (TBC) on Wednesday
 - Institutional presentations with reflections by you on Thursday
 - Certificates on Friday
- Introduction into Open Science in Europe

heal the sick...



Florence Nightingale

Human Potential Unlimited.



Tampere, Finland

- Tampere is the second-largest urban area in Finland and the largest inland city in the Nordic Countries.
- Tampere University is the second largest university in Finland.



The new foundation-based Tampere University was established through the merger of Tampere University of Technology and the University of Tampere in 2019.

Tampere University Foundation, which operates as Tampere University, is the main owner of Tampere University of Applied Sciences (TAMK).

Tampere University at a glance

7

faculties

10

fields of
education

We are spread across three campuses in Tampere...



City centre campus

Hervanta campus

Kauppi campus

...and have a presence at the university consortia
in Pori and Seinäjoki.

**We are a
community of
26,000 people!**

4,200 employees of whom **20%** are international staff

22,000 students of whom **8%** are international students

Tampere Universities at a glance



Tampere University and Tampere University of Applied Sciences (TAMK) comprise the multidisciplinary Tampere Universities community, the second largest higher education community in Finland.



Community

5,000

employees

33,500

degree students



research



academic education



university of applied
sciences



continuous learning

Our University's leadership

- President **Keijo Hämäläinen**
- Vice President for Education **Marja Sutela**
- Vice President for Research **Tapio Visakorpi**
- Vice President for Stakeholder Relations and Partnerships **Jarmo Takala**



President Keijo Hämäläinen

Our University comprises seven faculties

- Faculty of Built Environment
- Faculty of Education and Culture
- Faculty of Engineering and Natural Sciences
- Faculty of Information Technology and Communication Sciences
- **Faculty of Management and Business**
- Faculty of Medicine and Health Technology
- Faculty of Social Sciences





Our research excellence

We coordinate four Research Council of Finland's Centres of Excellence

- Centre of Excellence in Body-on-Chip Research
- Centre of Excellence in Game Culture Studies
- Centre of Excellence in History of Experiences
- Centre of Excellence in Tax Systems Research



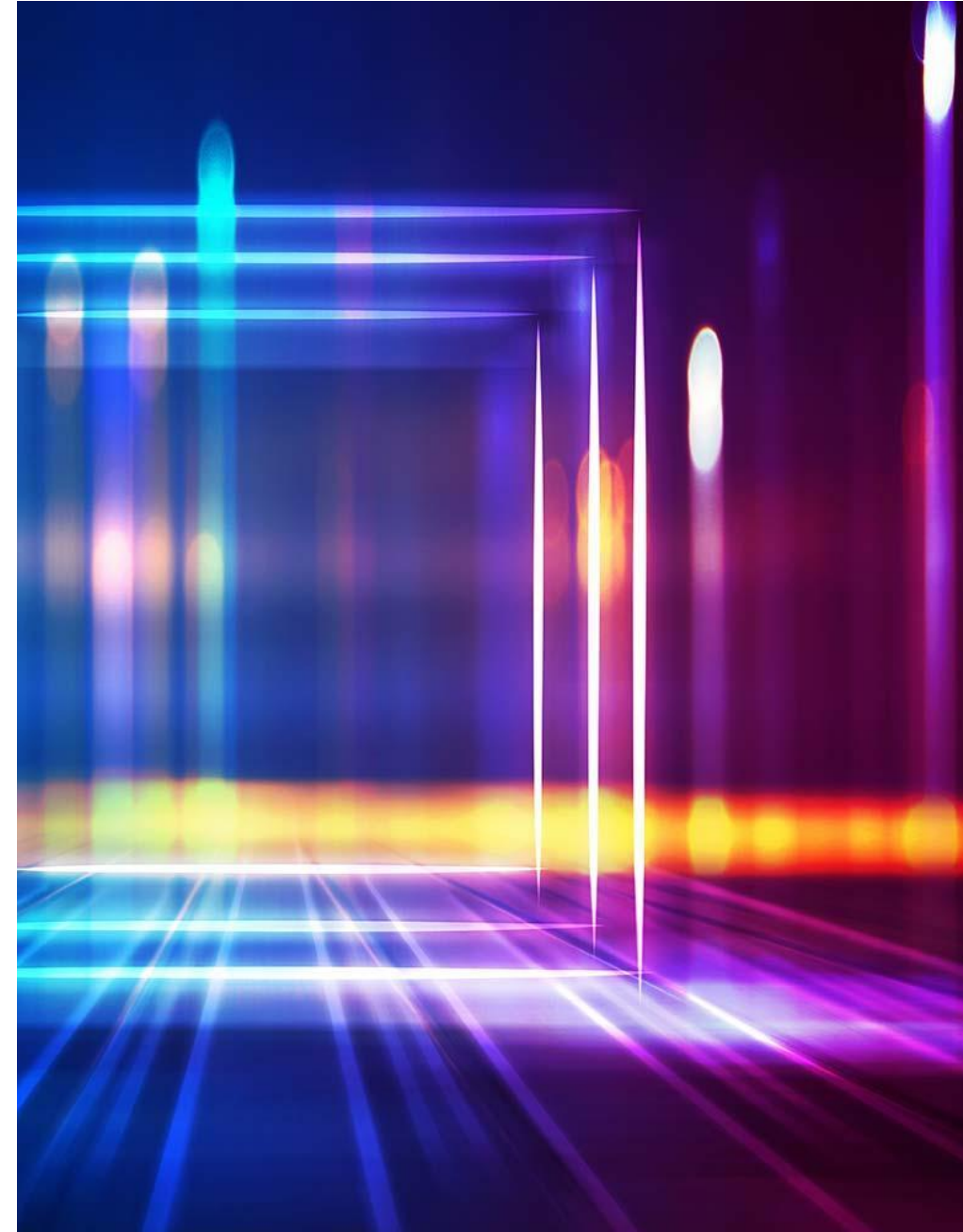
We are part of six Centres of Excellence

- Centre of Excellence in Research on Ageing and Care
- Centre of Excellence in High-Speed Electromechanical Energy Conversion Systems
- Centre of Excellence of Inverse Modelling and Imaging
- Centre of Excellence in Life-inspired Hybrid Materials
- Centre of Excellence in Tumour Genetics Research
- Virtual laboratory for molecular level atmospheric transformations



The Research Council of Finland's Finnish Flagship Programme

- We coordinate the Flagship on Photonics Research and Innovation (PREIN)
- We are part of two other flagships:
 - ACCC – The Atmosphere and Climate Competence Center
 - UNITE – Forest-Human-Machine Interplay



Studying



We educate future game-changers in ten fields of study

- Arts and culture
- Business, administration and law
- Education
- Engineering and technology
- Health and welfare
- Humanities
- Information and communication technologies
- Medical science
- Natural sciences
- Social sciences

Students (2022)

19,491

bachelor's and master's
students

2,586

doctoral students



We offer our students

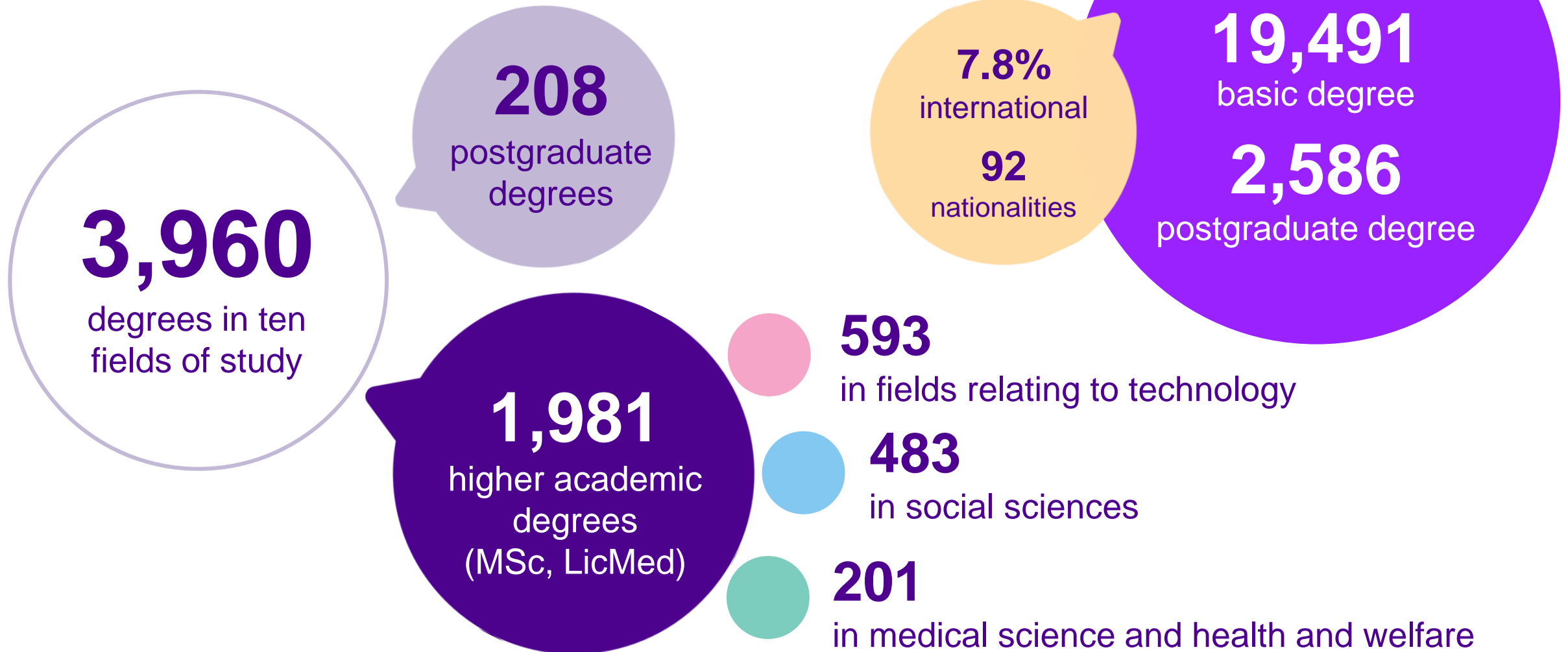
- Finnish- and English-language degree programmes in a wide range of subject areas
- Access to the latest research, high-quality teaching and close links with employers
- Genuinely multidisciplinary courses and modules
- The fundamentals of sustainable development
- An international dimension integrated into all our degree programmes





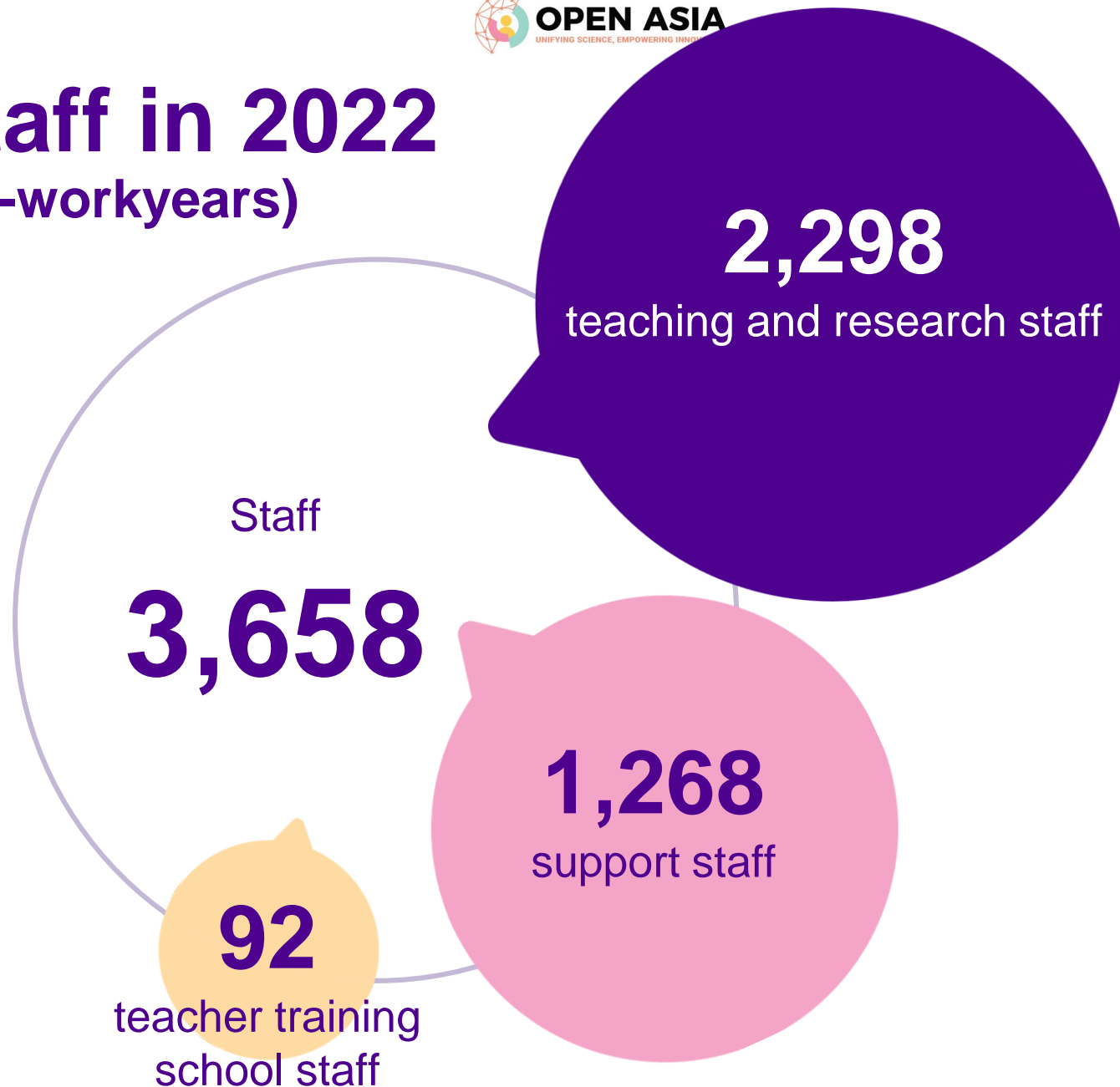
Key figures

Our education in 2022



Our staff in 2022

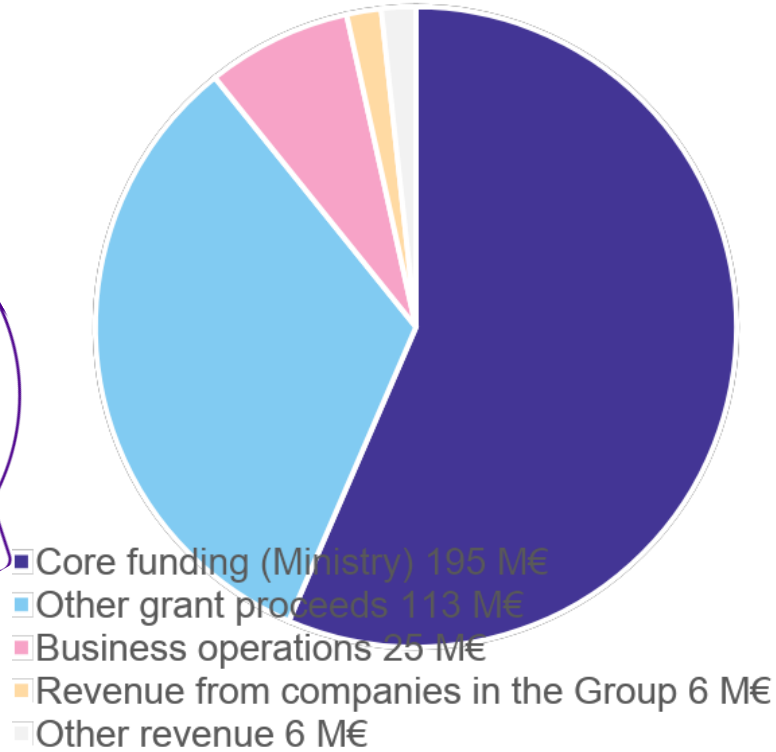
(in person-workyears)



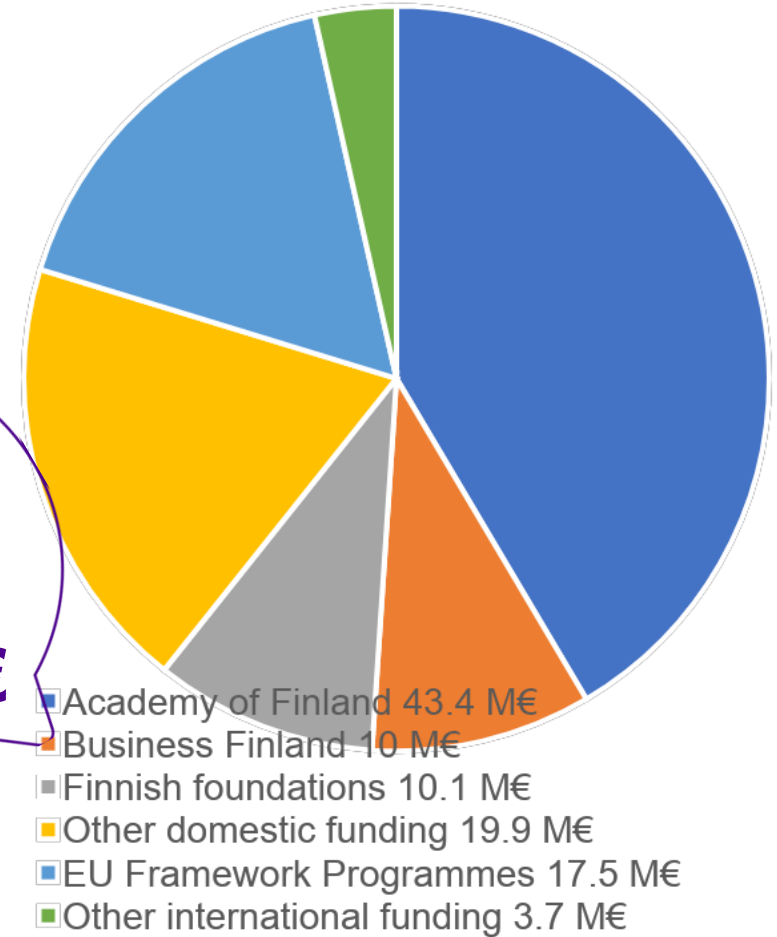
- Professors
249
- Women Men
53% 47%
- International
20%
- Nationalities
84

Our funding in 2022

Revenue from
ordinary
operations
345 M€



Competitive
research
funding
104.6 M€





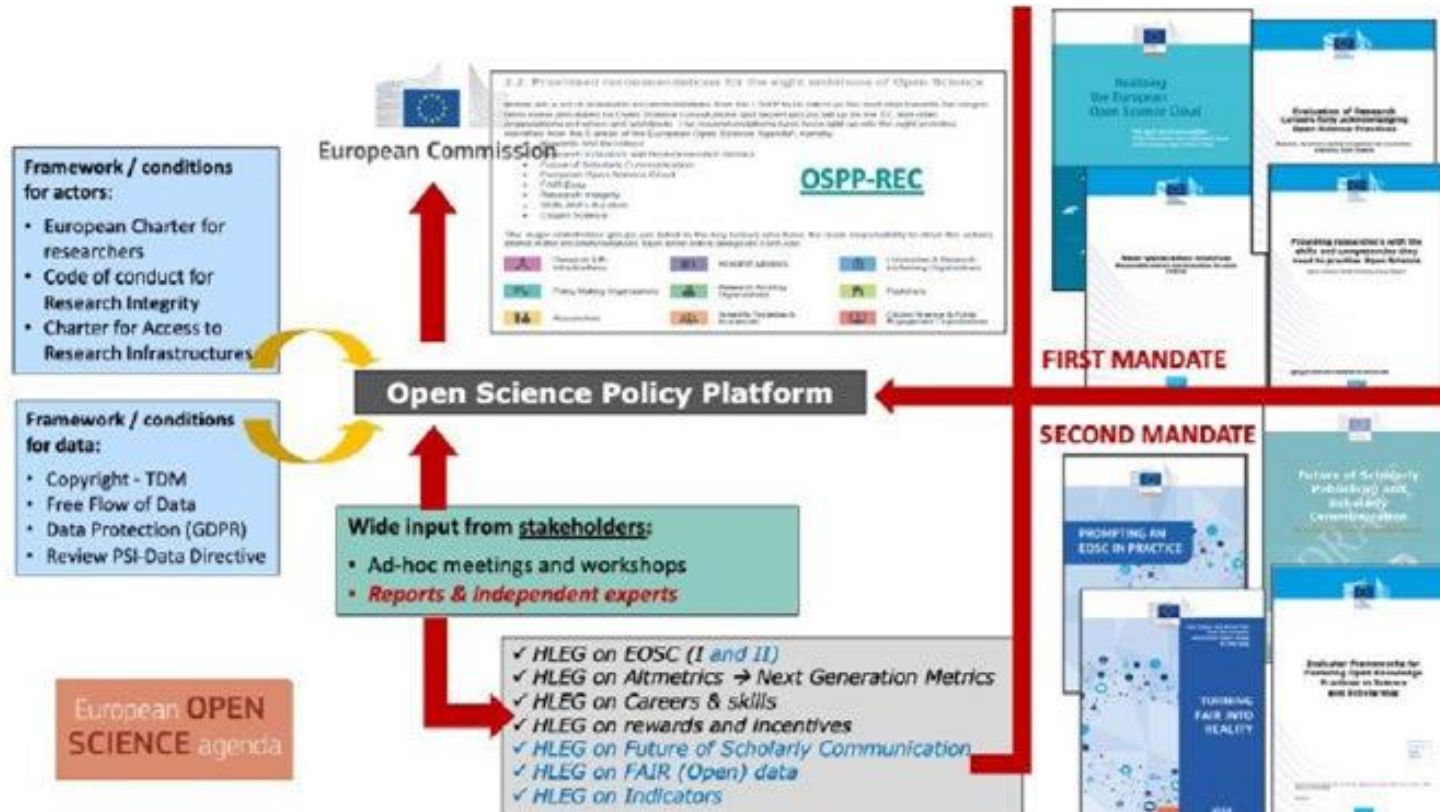
**Human
Potential
Unlimited.**



Co-funded by the
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of the European Union

Open Science in Europe

Open Science Policy Platform (2016-2020)



Priorities for the research system based on shared knowledge to be built by 2030:

- An academic career structure that fosters outputs, practices and behaviours to maximise contributions to a shared research knowledge system.
- A research system that is reliable, transparent and trustworthy.
- A research system that enables innovation.
- A research culture that facilitates diversity and equity of opportunity.
- A research system that is built on evidence- based policy and practice.

ERA Policy Agenda: 20 actions along four priority areas

DEEPENING A TRULY FUNCTIONING INTERNAL MARKET FOR KNOWLEDGE

1. Open sharing of knowledge, incl. EOSC
2. Data legislation fit for research
3. Reform of research assessment
4. Strengthen research careers
5. Gender equality and inclusiveness
6. Protect academic freedom
7. Better knowledge valorisation
8. Research infrastructures
9. International cooperation, reciprocity



TOGETHER FOR TWIN GREEN AND DIGITAL TRANSITION, AND INCREASING SOCIETY'S PARTICIPATION IN THE ERA

10. R&I Missions and Partnerships for ERA
11. Green energy transformation
12. Transition of industrial ecosystems
13. Empower higher education institutions
14. Bring science closer to society



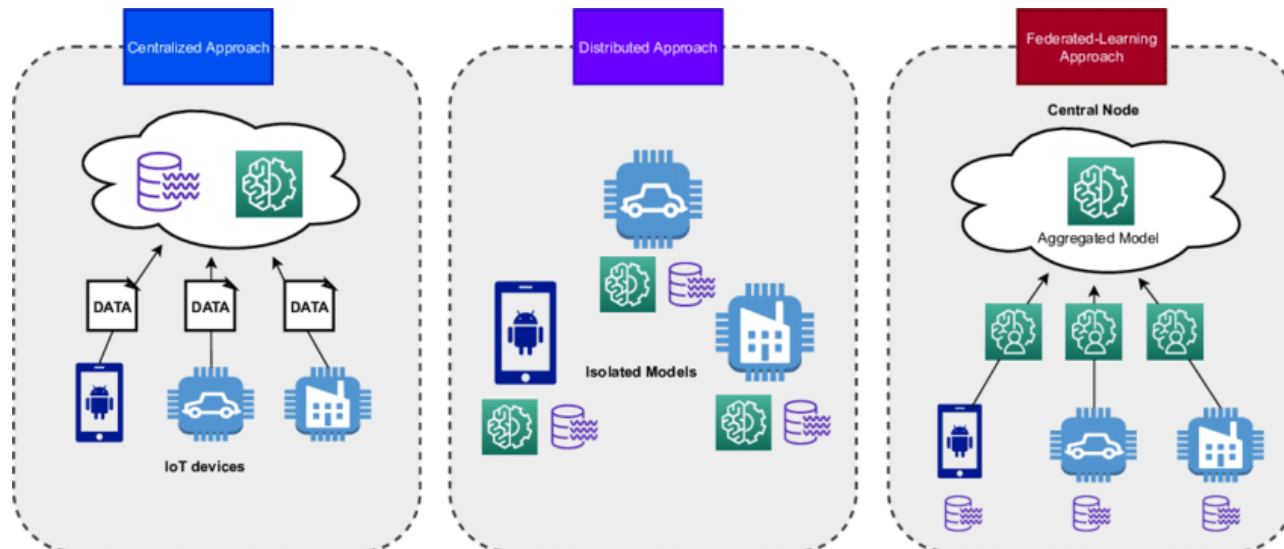
AMPLIFYING ACCESS TO RESEARCH AND INNOVATION EXCELLENCE ACROSS THE UNION

15. Regional and national R&I ecosystems
16. EU-wide access to excellence
17. Strategic capacity of public RPOs

ADVANCING CONCERTED R&I INVESTMENTS AND REFORMS

18. Coordination national support for ERA
19. ERA monitoring mechanism
20. Prioritisation and coordination of R&I investments and reforms

European Open Science Cloud (EOSC)



- Pan-European infrastructure for OS: platform and infrastructure aimed at integrating and making accessible various research data across disciplines and borders. The EOSC operates with governance structures that involve stakeholders from all EU countries, ensuring that policies and practices are aligned and that resources are pooled effectively.
- Open sharing, seamless access and reliable re-use of data and all other digital objects produced along the research life cycle, e.g. methods, software and publications
- EUR 1 billion (2021-2027)
- Federated environment that allows different organizational units to work together through a defined contract (ability to invoke and share public services)

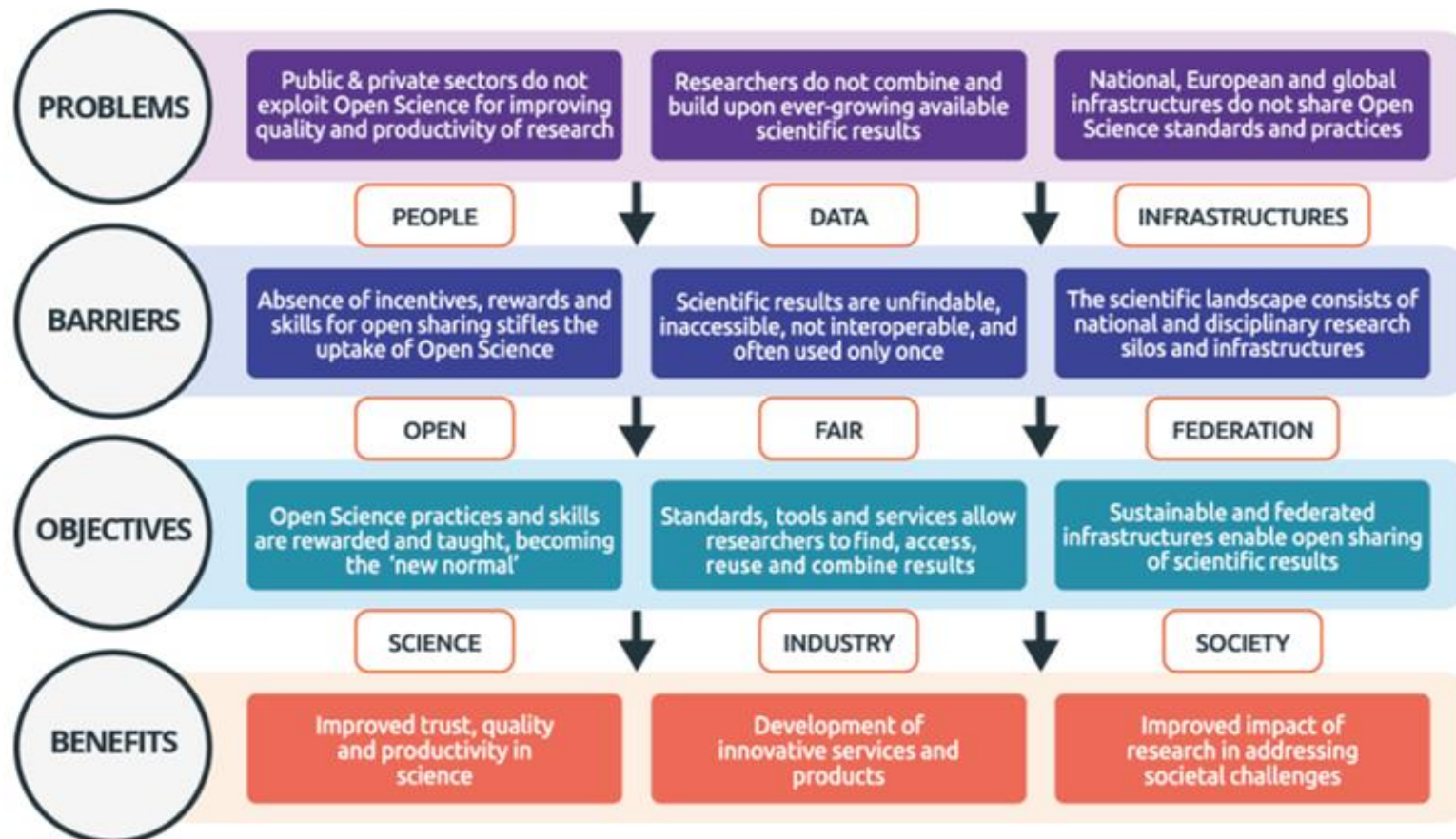
EOSC: implementation ‘gaps’

	EOSC readiness					
	Open Science	Open Access	Open Data	Research Evaluation	Open Learning	Mentions EOSC
EU Member States	Majority in planning stage	Majority have policies in place	Majority in planning stage	Majority have policies in place	Majority do not have policy in place	Majority in planning stage
Associated Countries	Majority in planning stage	Majority have policies in place	Majority in planning stage	Majority have policies in place	Majority do not have policy in place	Majority in planning stage
Other Countries	Majority in planning stage	Majority have policies in place	Majority in planning stage	Majority have policies in place	Majority do not have policy in place	Majority in planning stage

DG RTD. European Commission. [Report from the EOSC Executive Board Working Group \(WG\) Landscape \(2020\).](#)

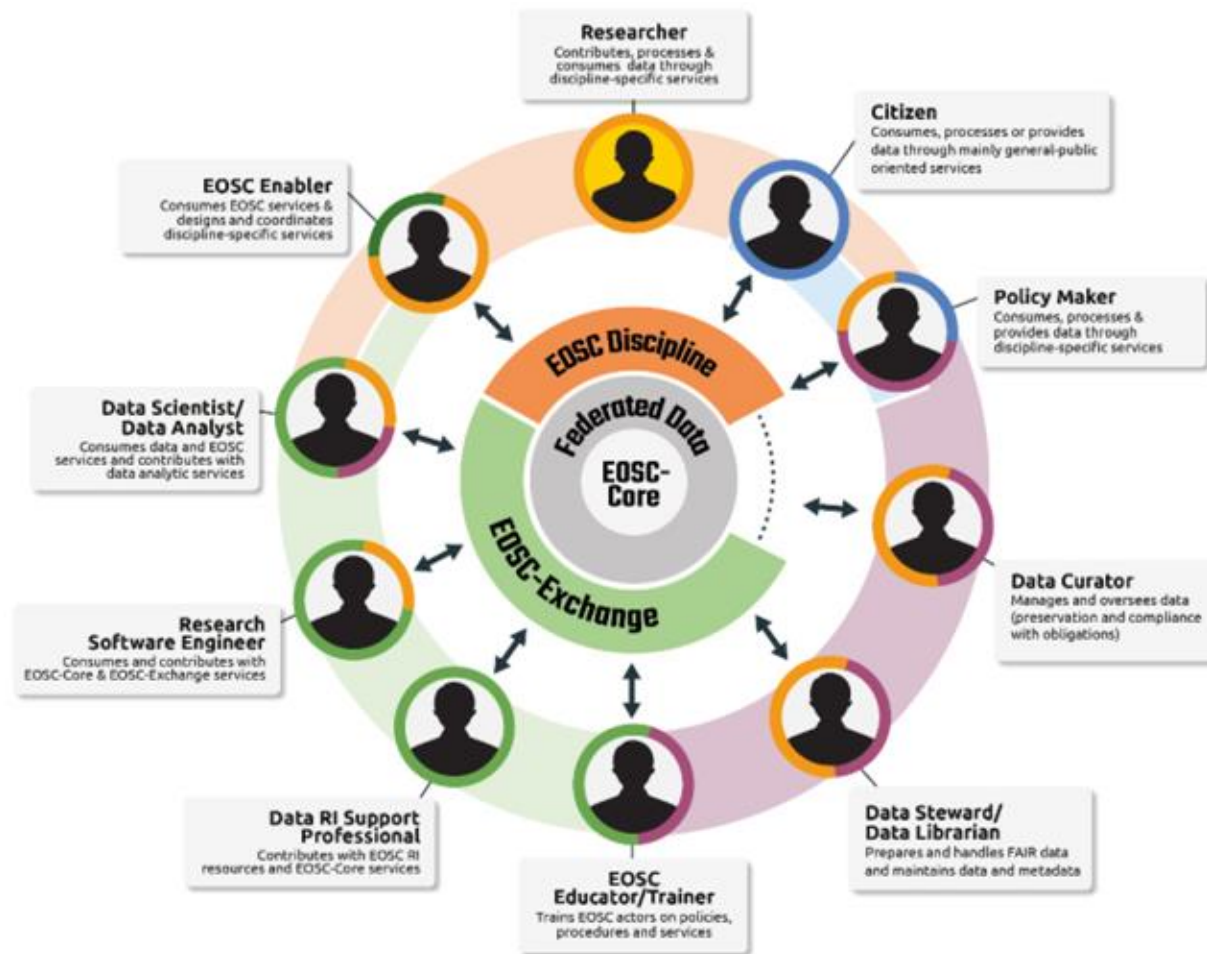
Strategic Research and Innovation Agenda (SRIA)- roadmap for EOSC

European Open Science Cloud Objectives Tree



DG RTD. European Commission. [Strategic Research and Innovation Agenda \(SRIA\) of the European Open Science Cloud \(EOSC\) \(2022\).](#)

Focus on stakeholders: EOSC ecosystem actors



DG RTD. European Commission. [Strategic Research and Innovation Agenda \(SRIA\) of the European Open Science Cloud \(EOSC\) \(2022\).](#)

Research infrastructures



European Strategy Forum on Research Infrastructure

63 RIs of pan-European relevance

Periodic updates to the roadmap since 2006



European Research Infrastructure Consortium (ERIC) Legal Framework

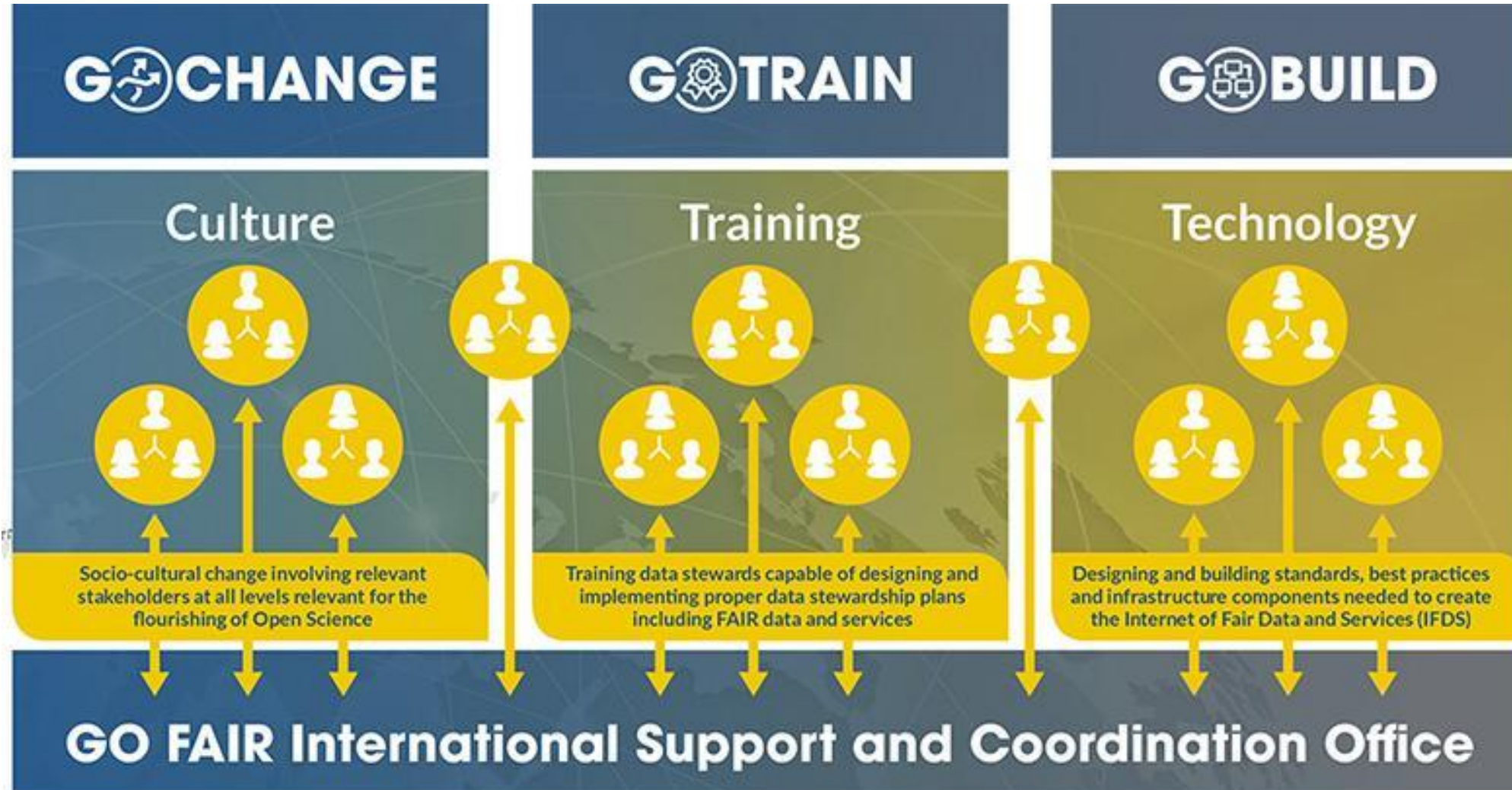
Legal entity set by the EC decision

International organisation for EU procurement

Existing, single-sited or distributed research infrastructures

22 ERICs (most are ESFRI priorities)

FAIR (Findable, Accessible, Interoperable, and Reusable)



OS in the EU: strengths and weaknesses

+

Comprehensive Frameworks: integrate open science principles as core elements, fund research but also enforce policies that promote open access to publications and data.

Infrastructure Support: robust infrastructures for storing, sharing, and analyzing research data across borders.

Collaboration Across Borders: standardization of open science practices globally and leveraging a broader range of expertise and resources.

Policy Leadership: leader in open science policy, influencing other regions and promoting global standards in open access and open data.

Funding and Incentives: drives compliance and innovation in how research is conducted and shared.

-

Implementation Variability: differences in national policies, funding mechanisms, and institutional support in various EU MS.

Economic and Resource Disparities: Smaller institutions or those in economically disadvantaged regions might struggle with the resources required to fully participate in open science.

Data Management Challenges: practical aspects of managing, curating, and ensuring the quality and security of massive amounts of data.

Intellectual Property Issues & Privacy and Ethical Concerns: commercial potential of research findings and ensuring compliance with regulations like GDPR.

Cultural Resistance: changing entrenched practices and perceptions takes time and effort.

European perspective

eua EUROPEAN
UNIVERSITY
ASSOCIATION

From principles to practices: Open Science at Europe's universities

2020-2021 EUA Open Science Survey
results

Rita Morais, Bregt Saenen, Federica Garbuglia, Stephane
Berghmans and Vinciane Gaillard

July 2021

Morais, R., Saenen, B., Garbuglia, F., Berghmans, S. & Gaillard, V. (2021). From principles to practices: Open Science at Europe's universities 2020-2021 EUA Open Science Survey results. European University Association absI

Figure 17 – Drivers of the institutional transition to Open Science

Number of respondents: 270/272. Multiple-choice question.

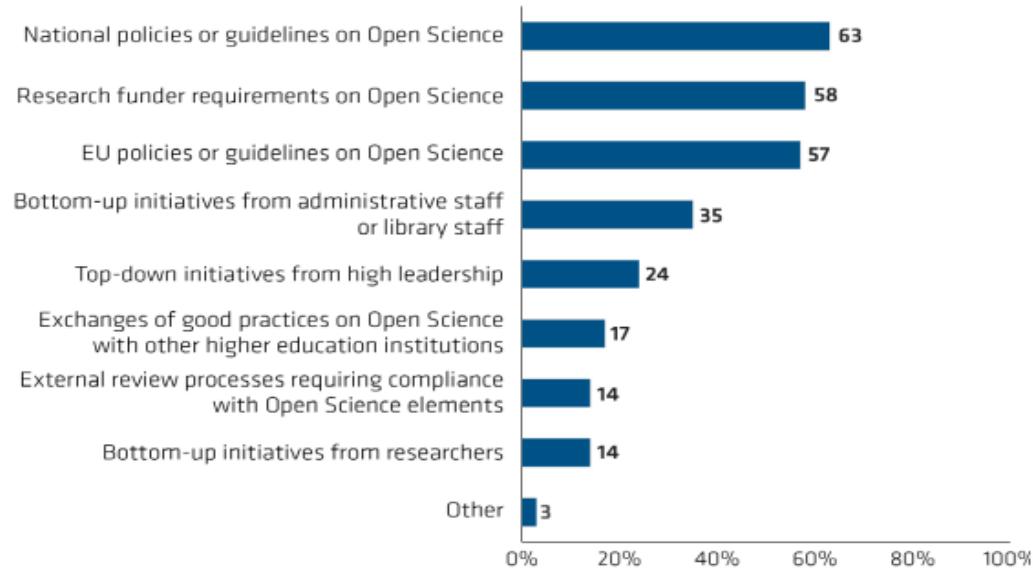


Figure 18 – Hurdles to the institutional transition to Open Science

Number of respondents: 267/272. Multiple-choice question.

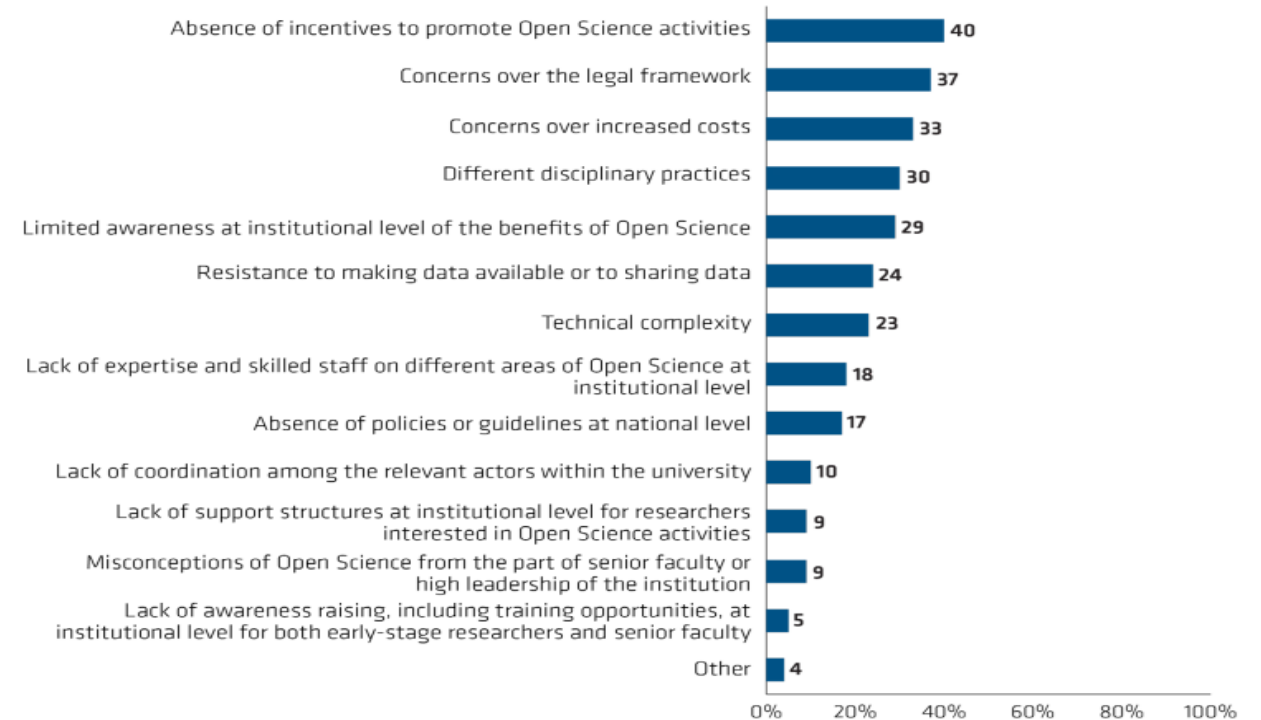
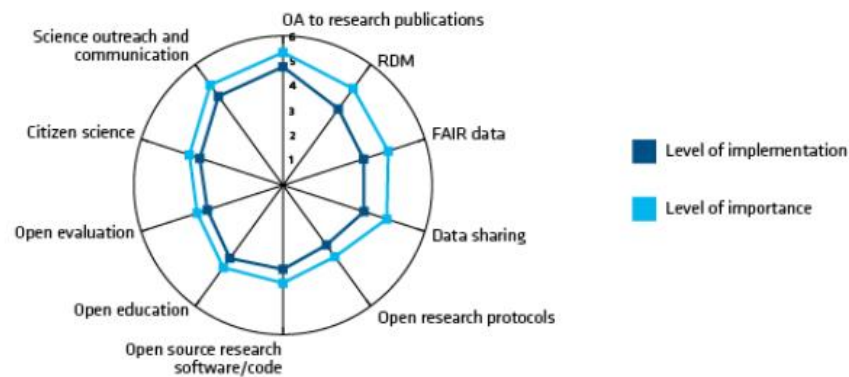


Figure 7 – Level of importance and implementation of Open Science areas

Number of respondents: 265-270/272



Note: scores represent mean values. Higher values indicate a higher level of importance or implementation.

Figure 23 – Level of engagement and practice of Open Access to research publications
Number of respondents: 240-251/272.

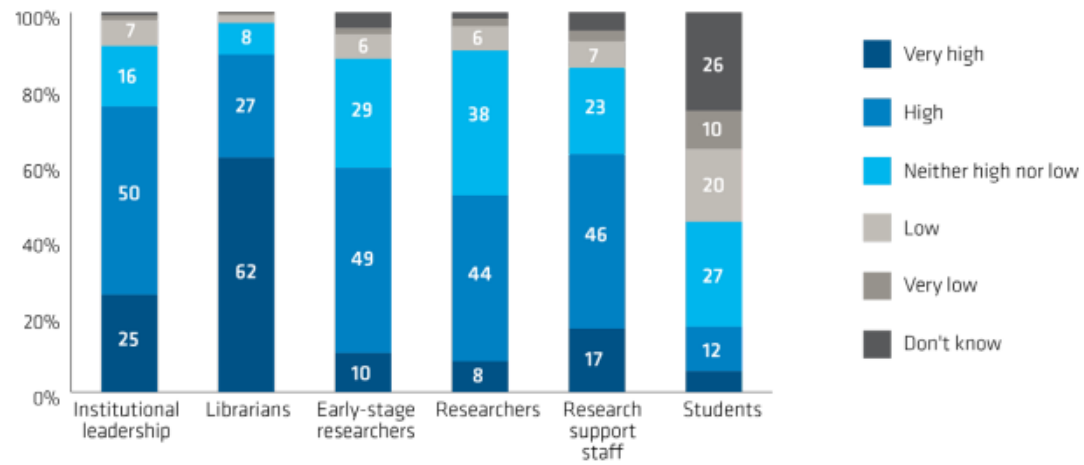


Figure 30 – Levels of engagement with and implementation of data sharing/FAIR data
Number of respondents: 233-244/272.

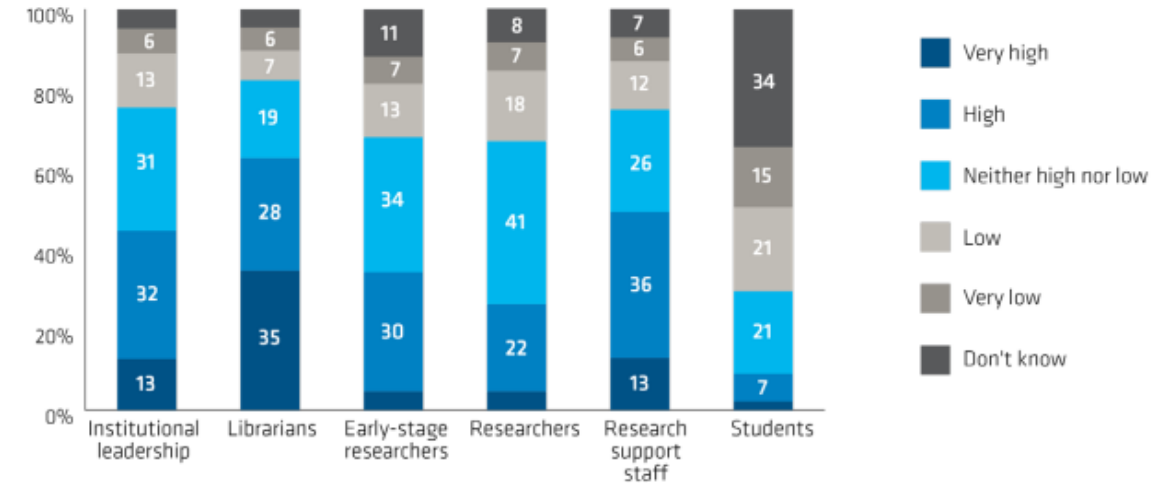
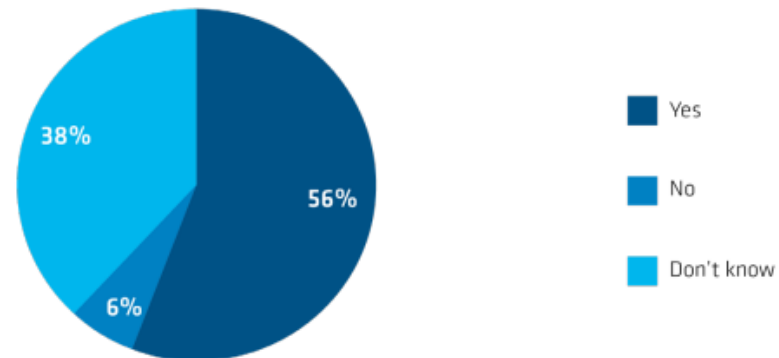


Figure 45 –Likelihood that the range of Open Science elements considered in academic assessments will be expanded
Number of respondents: 271/272.





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Thank you and let's get started!