



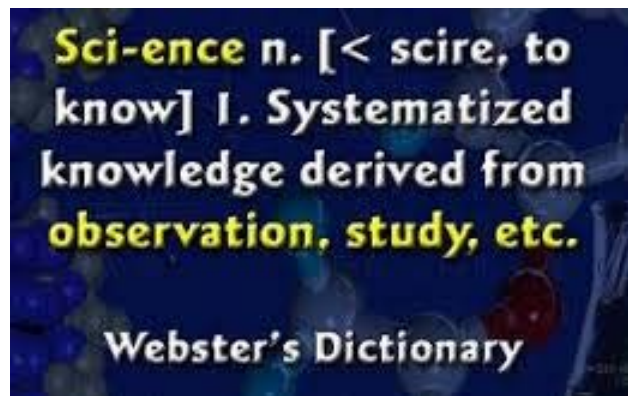
**Open Science:
Public consultation on
"Science 2.0: Science in transition"
Key results, insights and possible follow up**

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S.Luber, R. Von Schomberg, W. Lusoli
European Commission
DG Research & Innovation

Hamburg, 25 March 2015
2nd International Science 2.0 Conference
Keynote
(does not represent an official point of view of the EC)

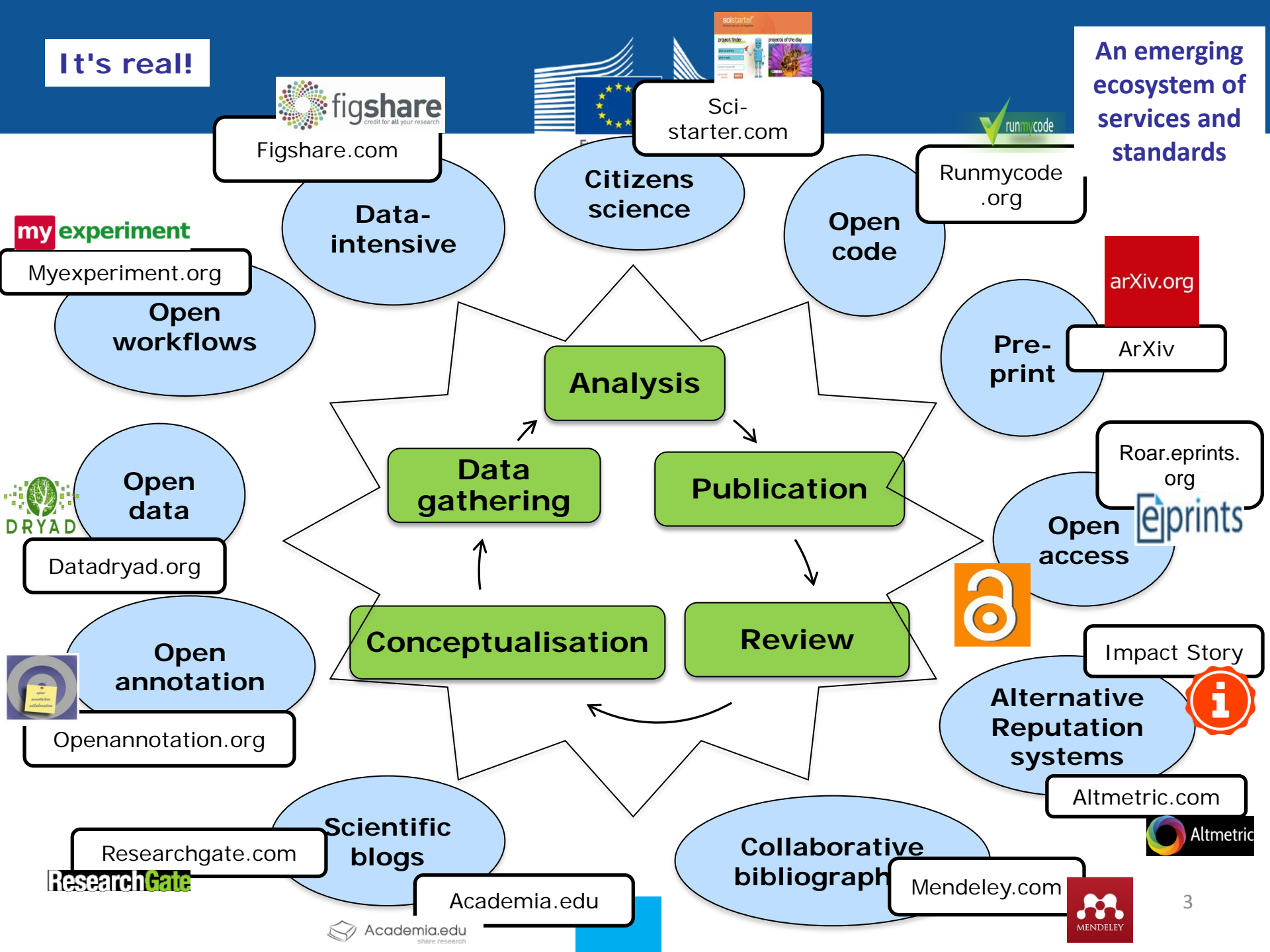
Open Science/Science 2.0

- A systemic change in the modus operandi of science and research
- Affecting the whole research cycle and its stakeholders



It's real!

An emerging ecosystem of services and standards



Its Irreversible

- Digital technologies enable changes similar as Web2.0 to the internet
- Exponential growth of data – data driven science
- Globalisation and growth of the science community
- Pressure on the science system to address faster the Grand Challenges
- Rising expectations of citizens for science to deliver and be transparent
- Demand for accountable, responsive and transparent science
- Digital "natives" entering the research population

It's not happening in isolation

- Open source software
- Collaborative knowledge production
- Creative commons
- Open innovation
- The sharing/collaborative economy ("collaboratism")
- MOOC
- Web 2...
 - what started +/- 15 years ago is deeply affecting ("paradigm shift") commerce, manufacturing, health, government, social relations, media, culture,....
 - and now science and research

It offers great opportunities

- Better value for money by strengthening the productivity of the European science and research system
- More transparency, openness and networked collaboration
- More efficiency, reliability and responsiveness

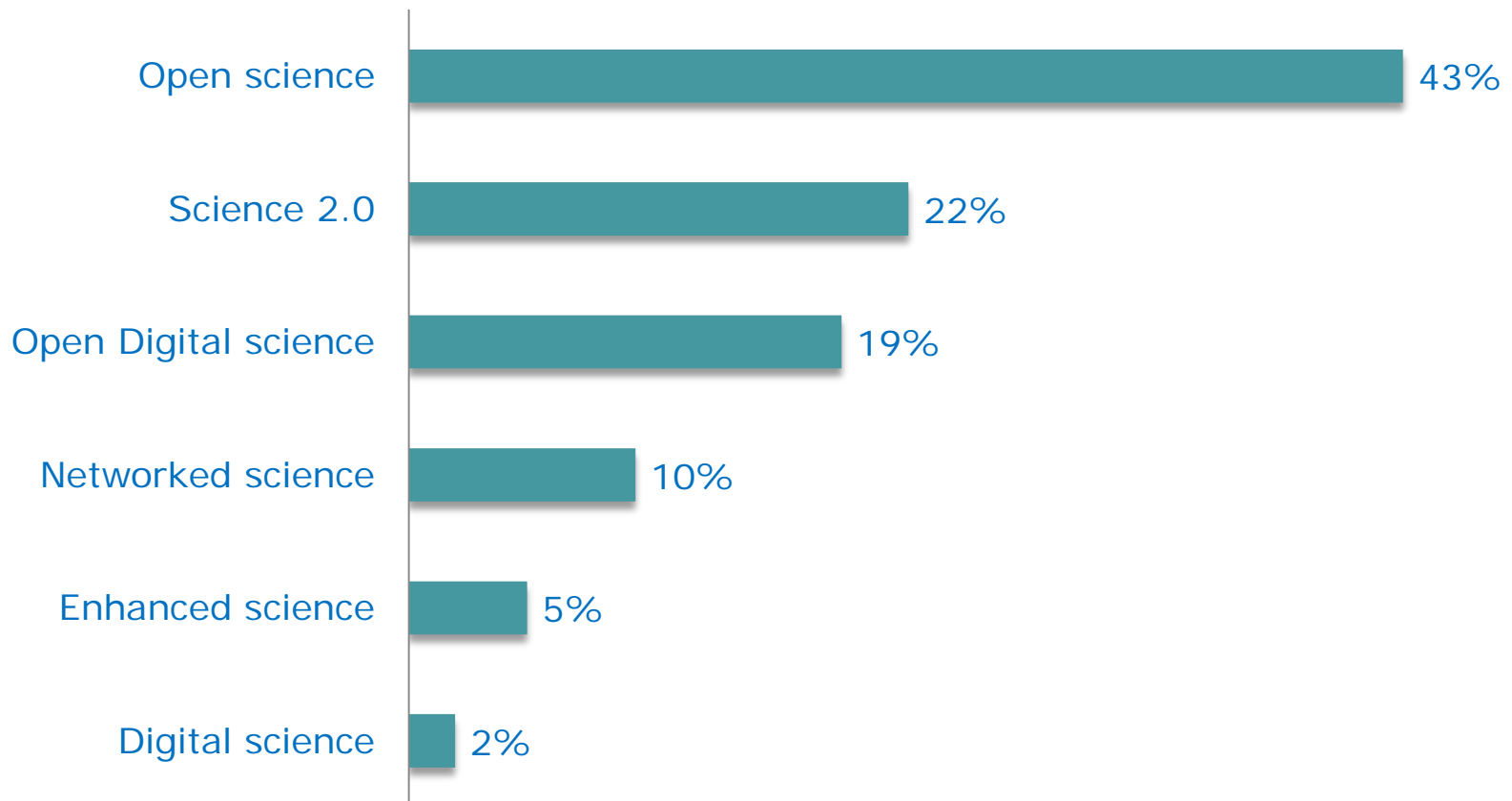
Public consultation: Science 2.0: Science in Transition

- **Assess the degree of awareness** amongst the stakeholders of the changing *modus operandi*
- Assess the perception of the **opportunities and challenges**
- **Identify possible policy implications** and actions to strengthen the competitiveness of the European science and research system

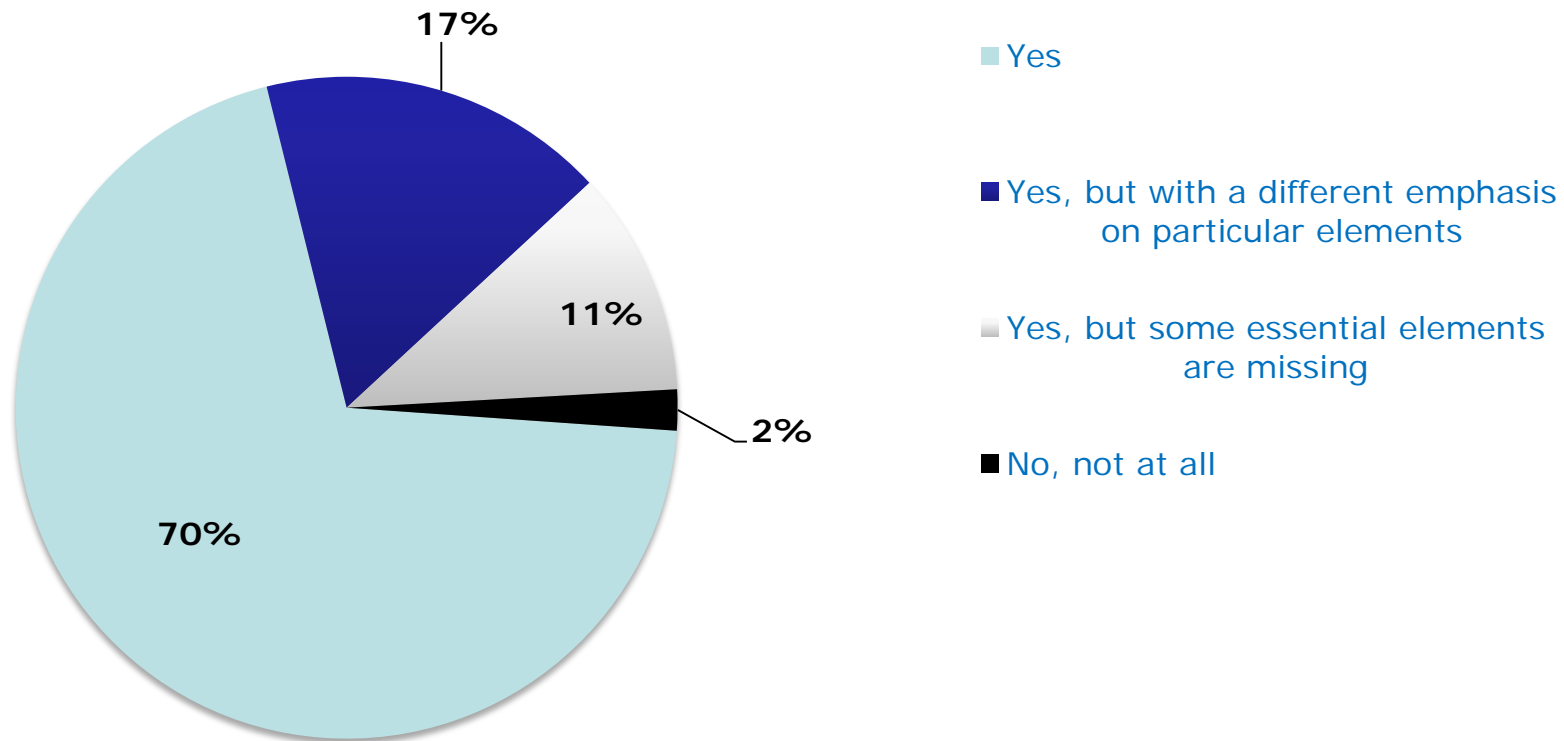
Numbers:

- From 03.07.2014 to 30.09.2014
- 498 submitted responses of which 164 Organisations and 38 Public Authorities
- 28 position papers voluntary submitted in addition to questionnaire

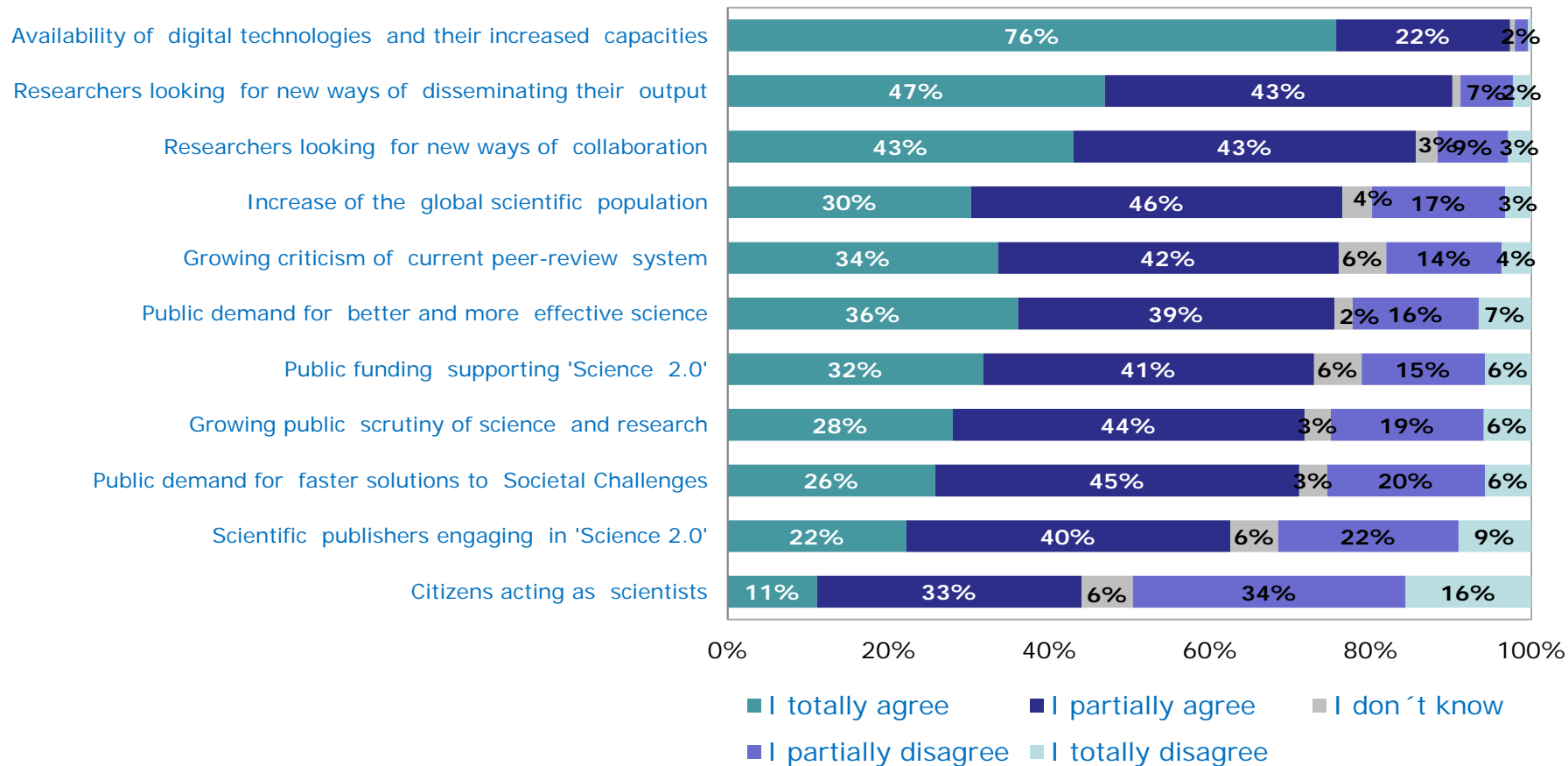
What is the most appropriate term to describe 'Science 2.0'?



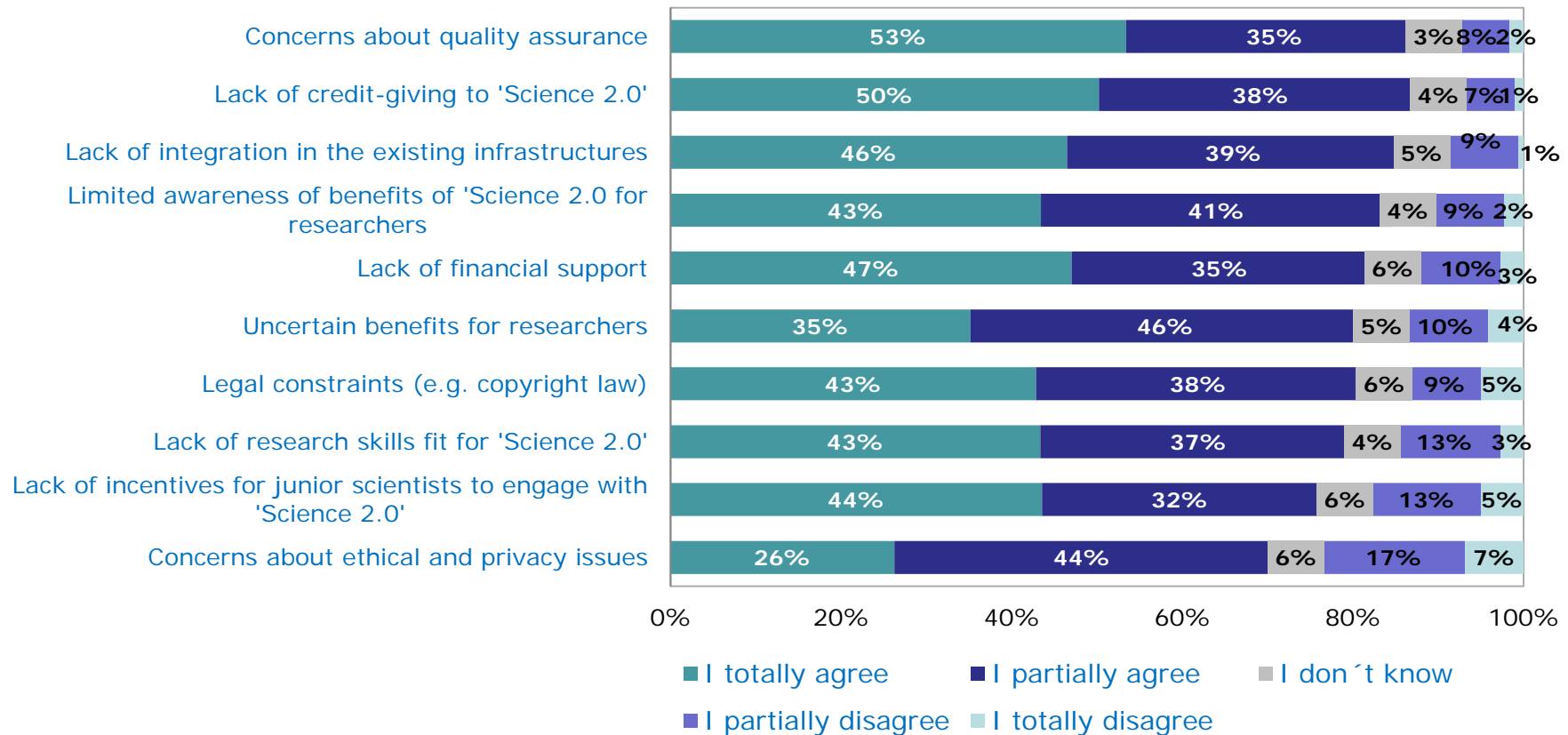
Do you recognise the trends described in the consultation paper as 'Science 2.0'?



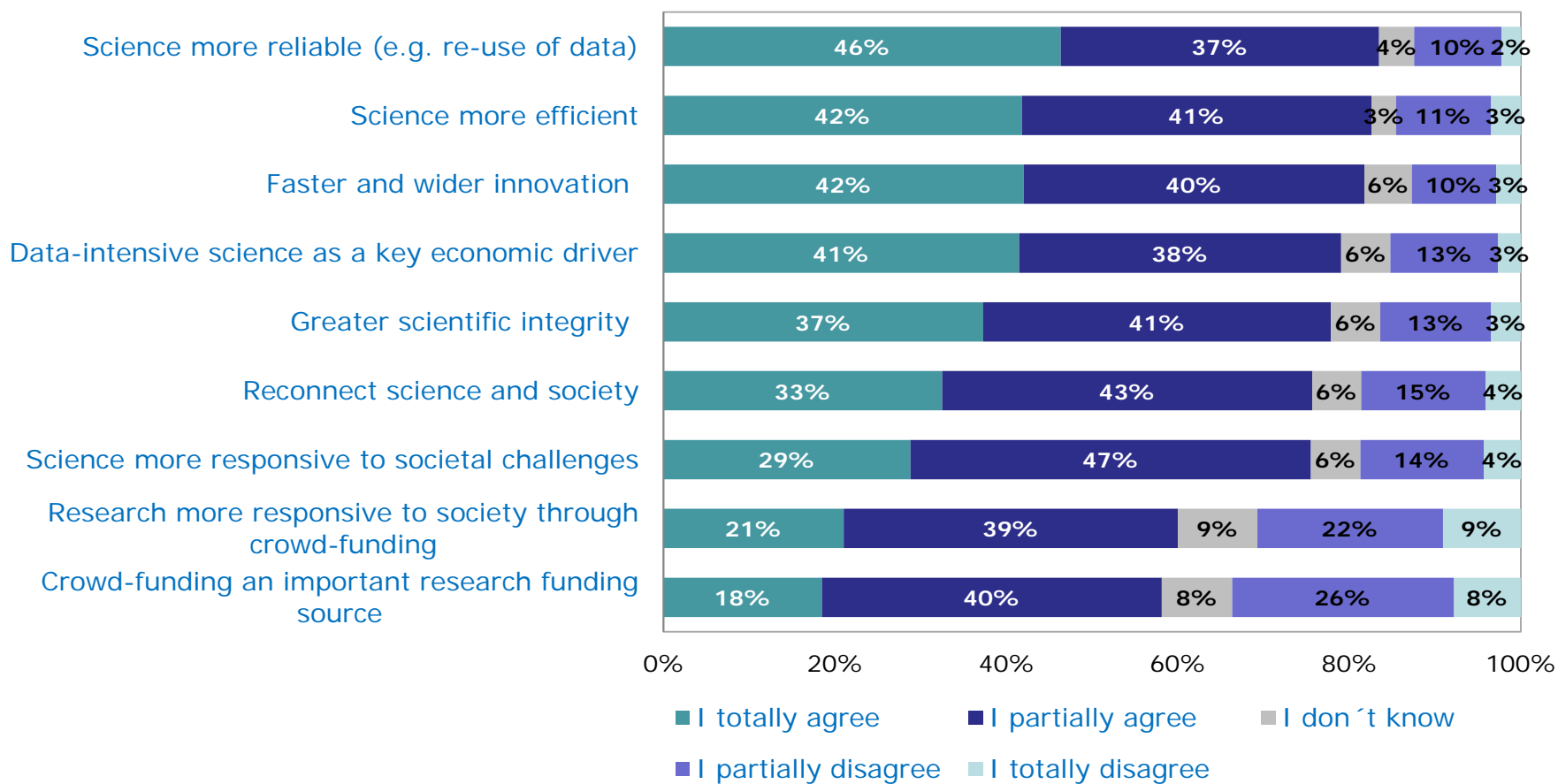
What are the key drivers of 'Science 2.0'?



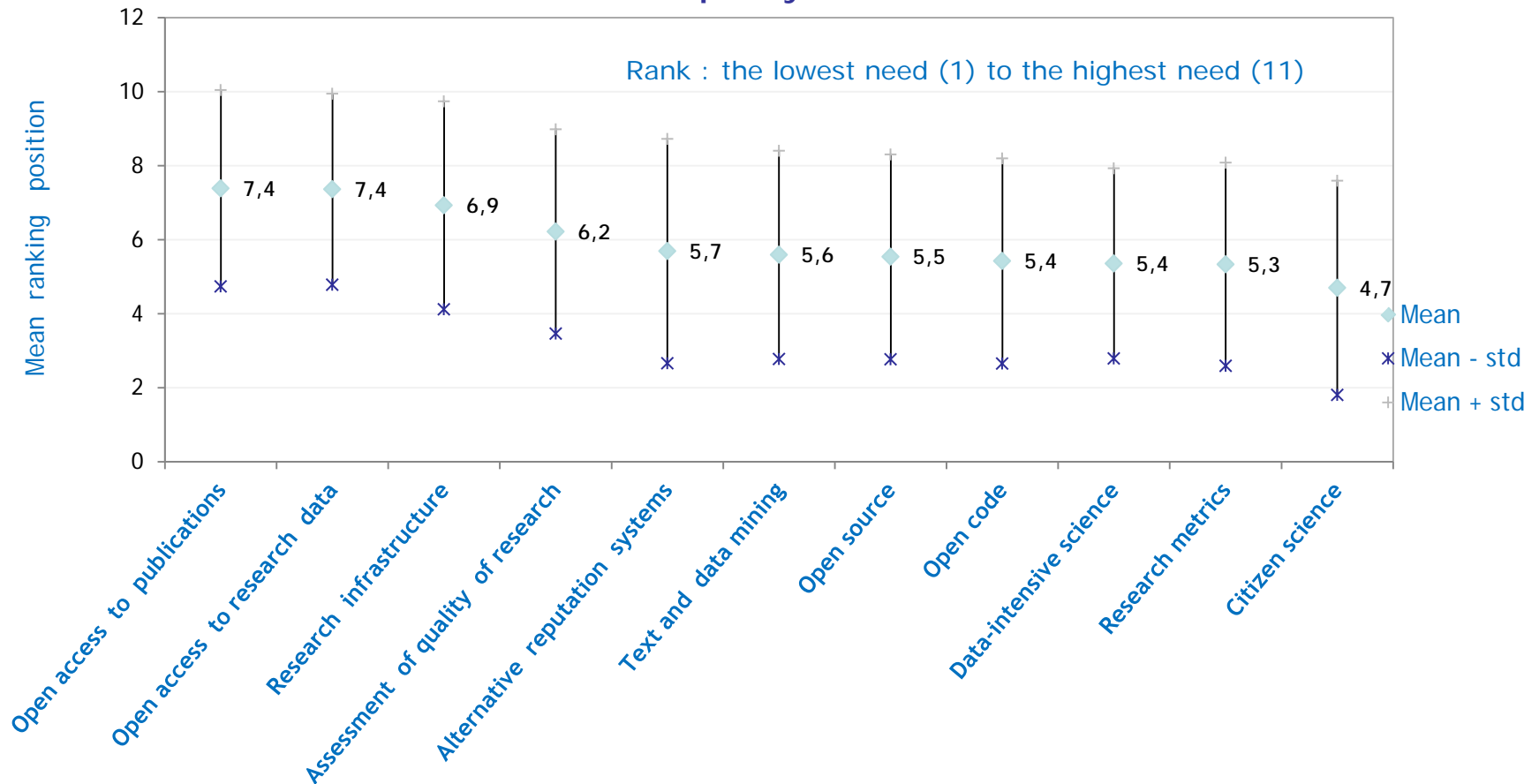
What are the barriers for 'Science 2.0' at the level of individual scientist?



What are the implications of 'Science 2.0' for society, the economy and the research system?



On what issues within 'Science 2.0' do you see a need for policy intervention?



Objectives of possible future policy initiative (results from validation workshops)

- Support big data infrastructure needs (also governance)
- Improving Framework Conditions (Removing barriers, creating incentives) for fostering Open Science
- Making science more efficient (better use of and sharing of resources), reliable (replicability/re-use of data) and more responsive to societal challenges

Stakeholders share these expectations of 'Open Science' with large majority, on "condition":

- Bottom up
 - Stakeholder driven
- 
- A solid blue square located at the bottom center of the slide.

Roadmap

- Open Science as horizontal priority action under the **Digital Single Market initiative** of the European Commission (March-May 2015)
- Discussions @Competitiveness Councils (3 & 5/2015)
- Launch of a **European Open Science Agenda**. 22/23 June 2015: Open Science/European Research Area/ Innovation Conference: "A new start for Europe: Opening up to an ERA of Innovation"

European Open Science Agenda – potential actions (under discussion)

Fostering Open Science: Creating incentives and removing barriers, e.g.

- Establish a **stakeholders forum** at European Level and a **self-regulation/ clearinghouse mechanism** for addressing Open Science issues
- Propose a **European "code of conduct"** setting out the general principles and requirements of how Open Science should affect the roles, responsibilities and entitlements of researchers and of their employers



European Open Science Agenda – potential actions (under discussion)

Mainstream Open Access to publications and data, e.g.

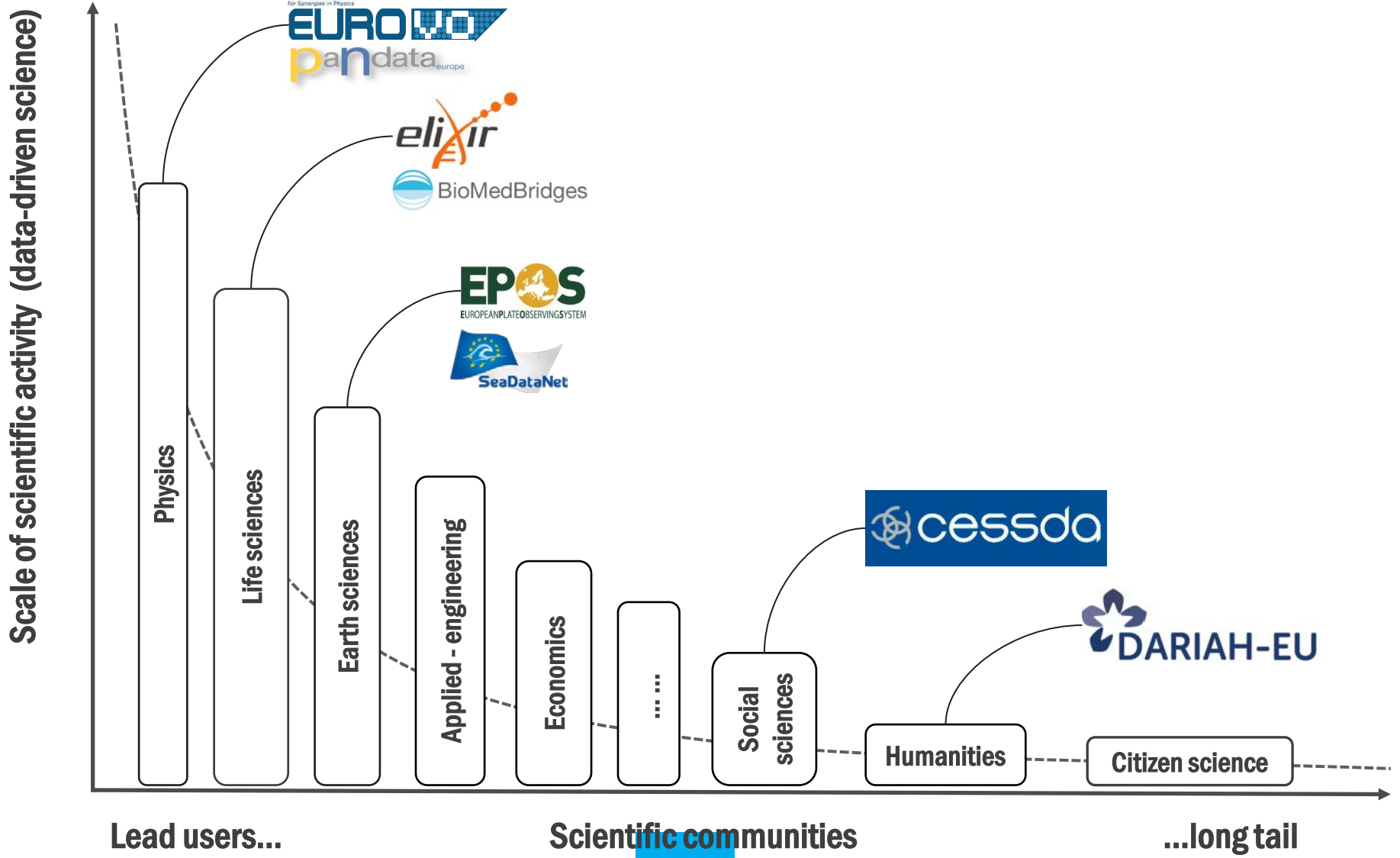
- Consider extending the **Horizon 2020 pilot** on Open Access to data
- Develop **EU guidelines** for addressing IPR issues and the funding of data-management

European Open Science Agenda – potential actions (under discussion)

Develop research infrastructures for Open Science, e.g.

- Mandate the development of common interfaces and data standards
- Coordinate at European Level the funding/ maintenance and interoperability of research infrastructures
- Support the development of a **European Research Cloud** for data, protocols and methodologies

European Research Cloud

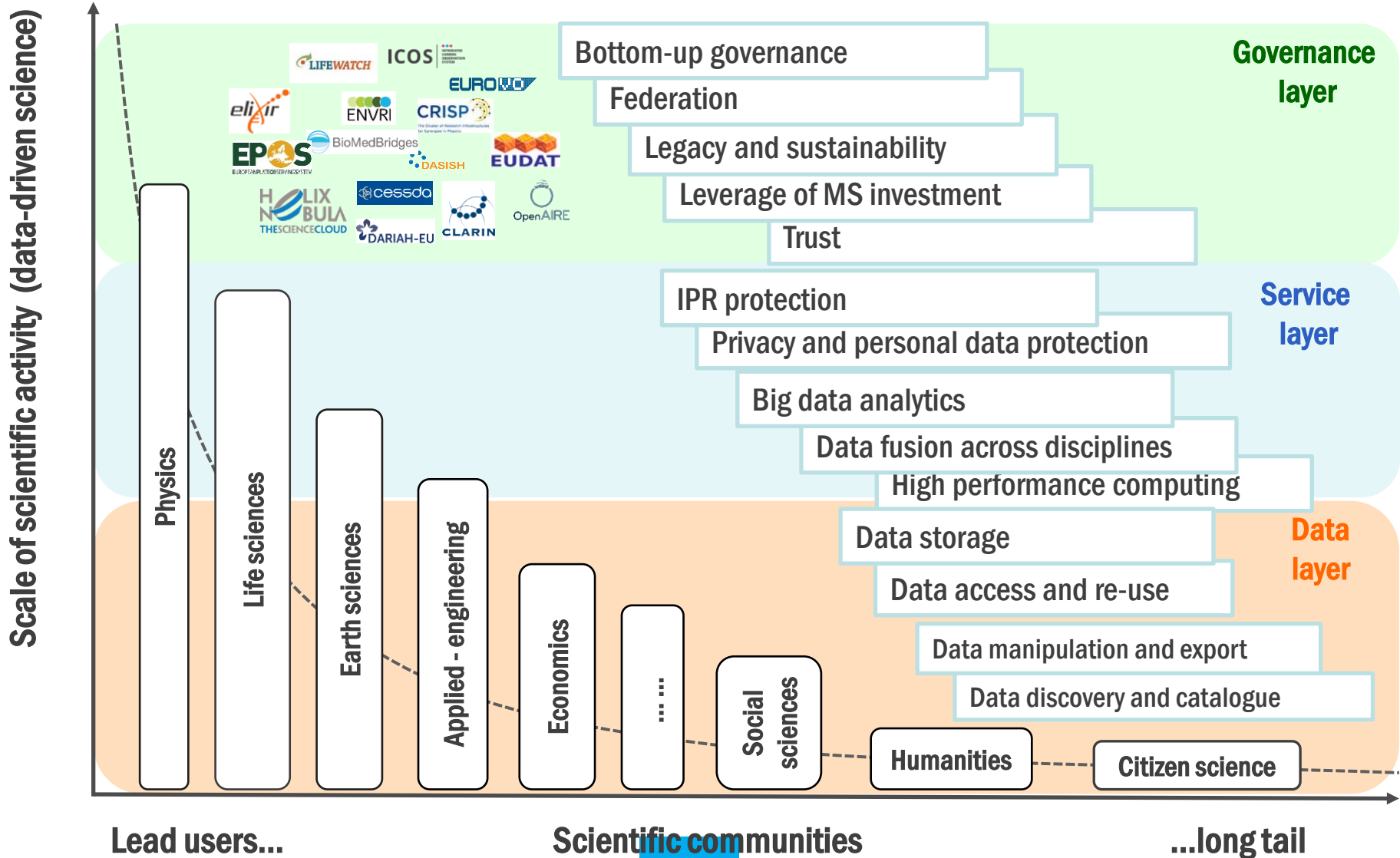


Lead users...

Scientific communities

...long tail

European Research Cloud



European Open Science Agenda – potential actions (under discussion)

- Mainstreaming Open Science in the WP to **address common societal challenges** under the European Research Area
- Better network societal, entrepreneurial and scientific actors through e.g. **'knowledge coalitions'**



**This is a common endeavor.
Contribute!**

<http://scienceintransition.eu/>

