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# Scholarly communication: a changing landscape

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OASIS,

Enabling Open Scholarship



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# Plan for this presentation

- Overview of developments in scholarly communication
- Open Access progress report
- Future challenges



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# Scholarly communication developments



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# Big issues

- 🌐 Electronic delivery
- 🌐 Delivery to mobile devices
- 🌐 Costs and sustainability
- 🌐 The shape of journals and articles
- 🌐 Data
- 🌐 Access



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# Open Access

- Immediate
- Free (to use)
- Free (of restrictions)
- Access to the peer-reviewed literature (and data)
- Not vanity publishing
- Not a 'stick anything up on the Web' approach
- Moving scholarly communication into the Web Age



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# Open Access – Why?

- Science moves faster and more efficiently
- Greater visibility and impact
- Better monitoring, assessment and evaluation of research
- Benefits many constituencies
- Enables new semantic technologies (text-mining and data-mining)



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# Some issues

- Infrastructural developments (hard and soft)
- Collection of content
- Policy developments
- Understanding beneficiaries' needs
- Challenges ahead



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# Infrastructure developments



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# Open Access journals

- Content available free of charge online
- In many cases, free of restrictions on use too
- Some charge at the 'front end'
- More than half do not levy a charge at all
- > 7000 of them (674,000 articles)
- Listed in the Directory of Open Access Journals (DOAJ: [www.doaj.org](http://www.doaj.org))



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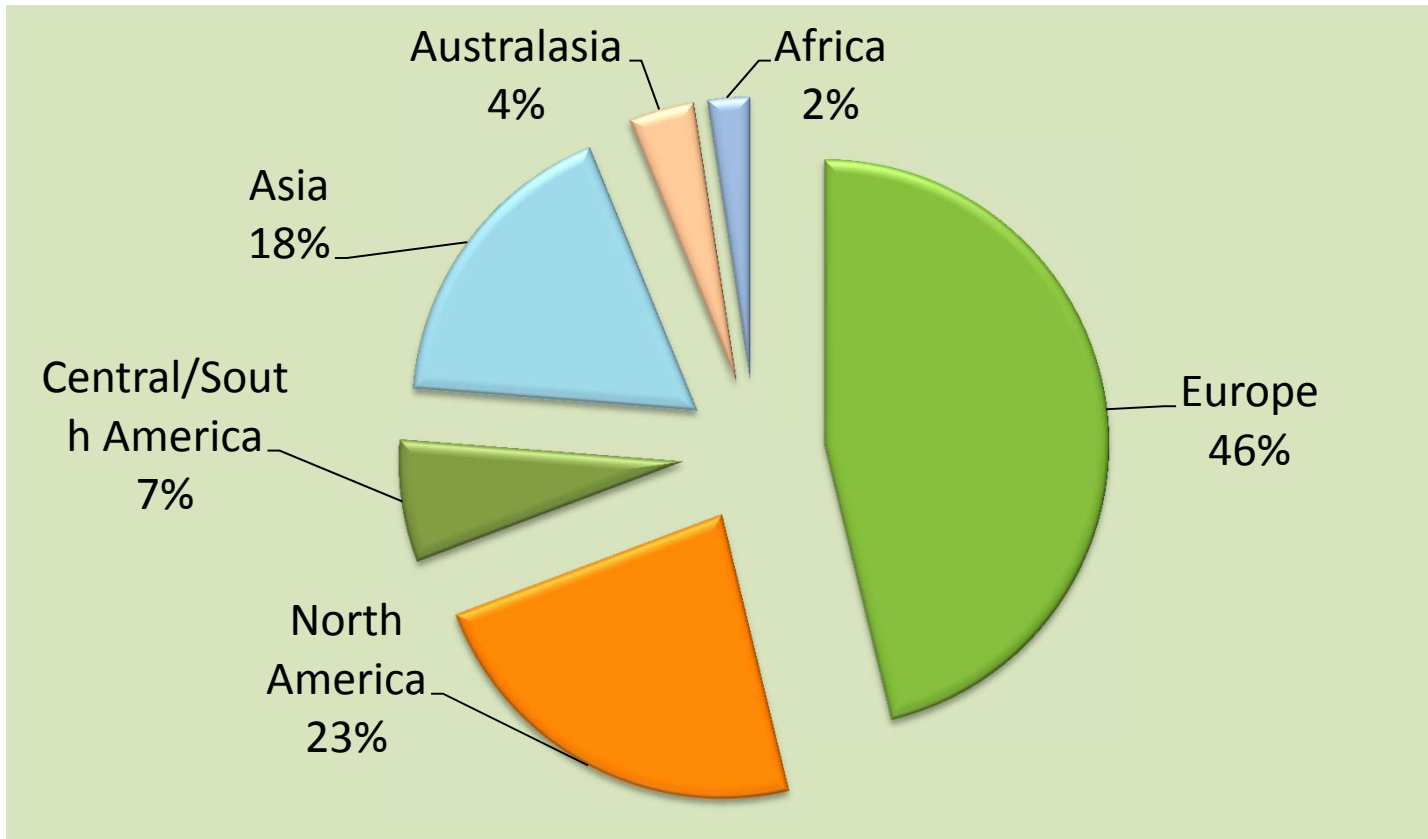
# Open Access repositories

- Digital collections
- Most usually institutional
- Sometimes centralised (subject-based)
- Interoperable
- Form a network across the world
- Create a global database of openly-accessible research
- Currently ~2000 in total



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# A network of repositories



Total at October 2011: 2124



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# Interoperability developments

- Deposit (ingest) technologies
- Object exchange
- Metadata development
- Author identification
- Citation analysis
- CRIS-repository interoperability
- Repository-author profiling services
- Repositories for research assessment



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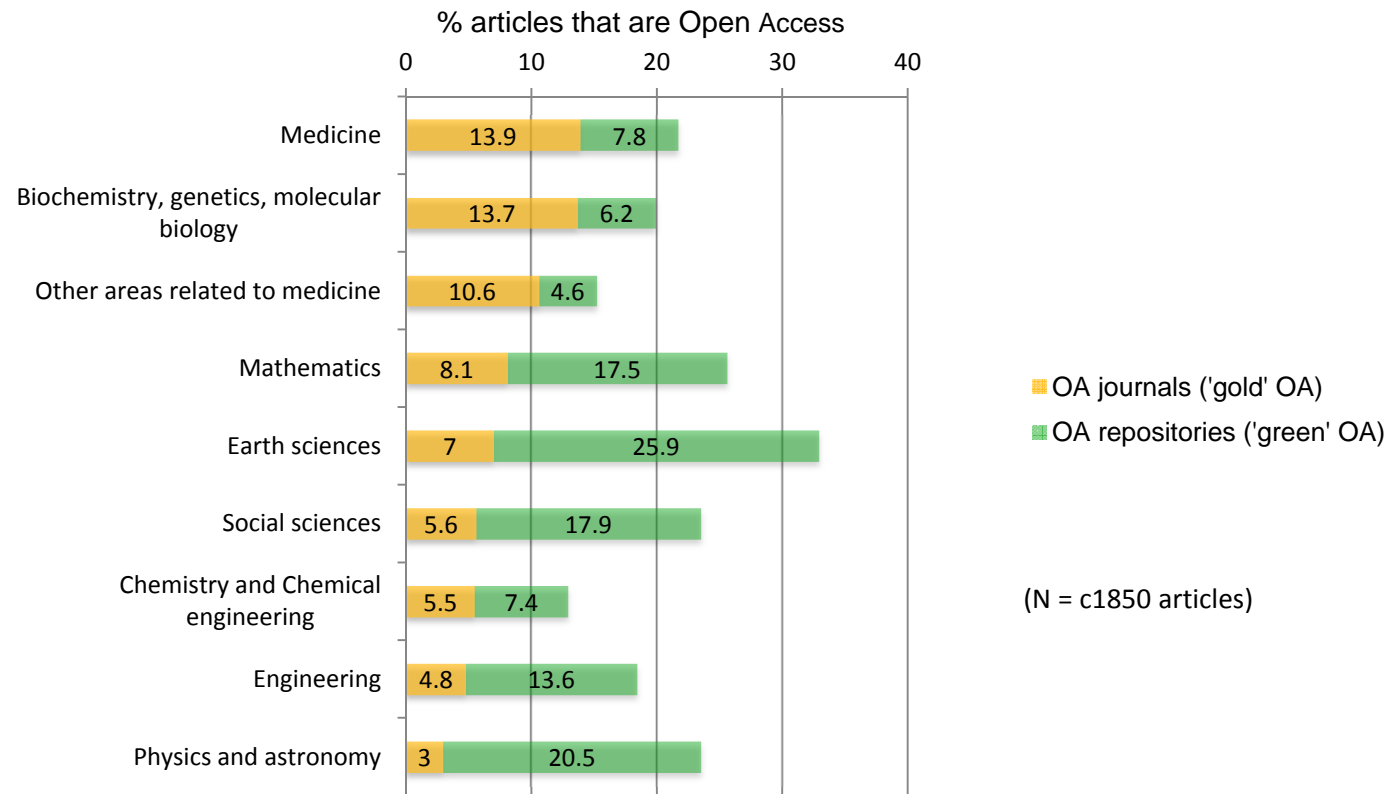
# Service development

- Registries (repositories, journals, policies, permissions, etc)
- Support organisations (e.g. COAR)
- Publishing services (e.g. Open Journal Systems, Open Monograph Press)
- OA monograph initiatives (e.g. OAPEN, Bloomsbury Academic)



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# OA content accumulation



Data: Bjork et al, 2010



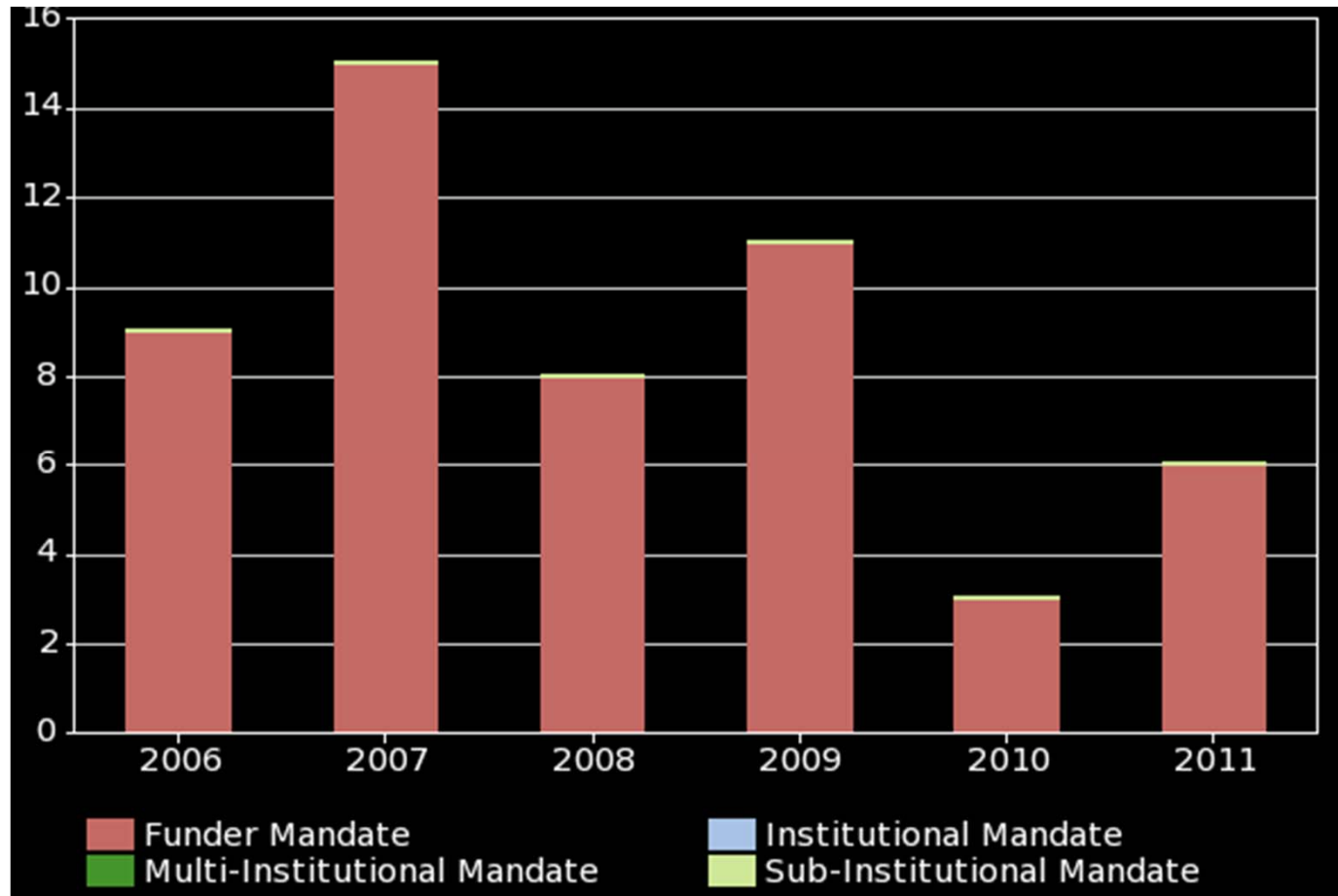
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# Policy developments



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# Funder mandates



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# The last 18 months: European funders

- EuroHORCs: mandatory requirements in all grant agreements
- European Research Council (cross-disciplinary): mandate on all funded projects
- Swedish Research Council Formas
- Telethon Italy
- Congreso de los Diputados, Spain
- Spanish General State Administration
- EUR-OCEANs Consortium (ocean ecosystems)
- EPSRC (UK)



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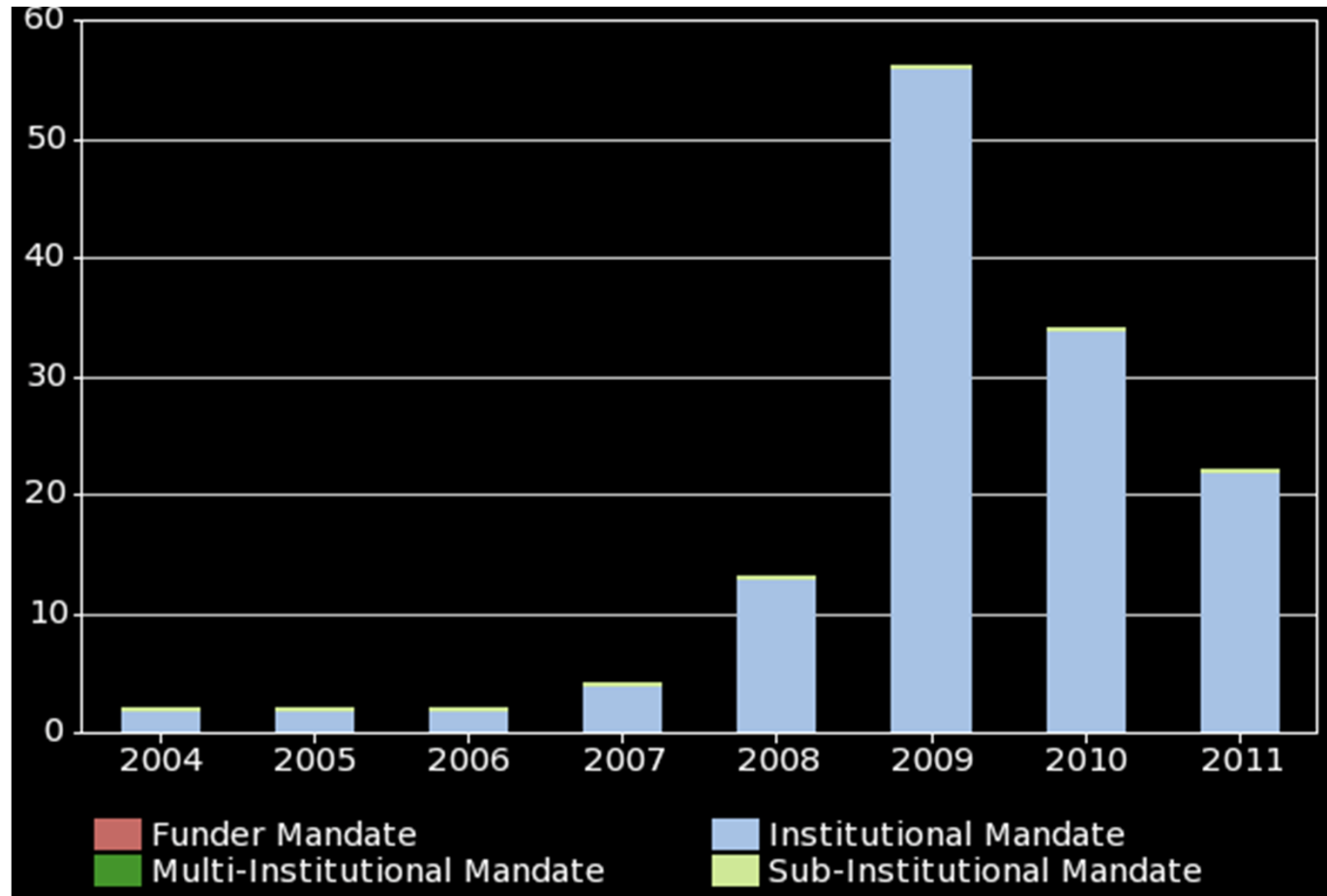
# The last 18 months: Other funders worldwide

- International Development Research Center (Canada)
- Dunhill Medical Trust (UK)
- Heart & Stroke Foundation of Canada
- World Bank



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# Institutional mandates



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# Beneficiaries



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# University Open Access repositories

Repository	Full-text items	Downloads per month
ORBi (Univ Liege, Belgium)	40,000	45,000
USIR (Univ Salford, UK))	1,500	25,000
School of Electronics & Computer Science (Univ Southampton, UK)	6,000	30,000



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# PubMed Central

- 2 million full-text articles
- 420,000 unique users per day:
  - 25% universities
  - 17% companies
  - 18% government and others
  - 40% citizens



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# Businesses:

## “There’s no access problem”

- Access to all research needed: 2% \*
- Difficulties in access: 73% \*
- Difficulties in access (R&D-based small businesses) 79% \*\*

\* Ware, 2009

\*\* Houghton, Swan & Brown, 2010



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# What kinds of businesses?

- Healthcare services
- Civil engineers
- Construction firms
- Dentists
- Accountancy firms
- Archaeology services
- Horticulturalists
- Social services firms
- Legal practices
- Consultancies, etc



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# Small/medium companies in Denmark

- Access to research articles is very/extremely important (48%): 79% have access difficulties
- Difficulties in searching/accessing articles cost €73m per year to researchers in Danish firms
- Product development would be delayed or abandoned without access to research articles
  - Value of academic research to sales is around €2.1m per firm per year
  - Value of delays, in lost sales of new products, is around €4.8m per firm per year



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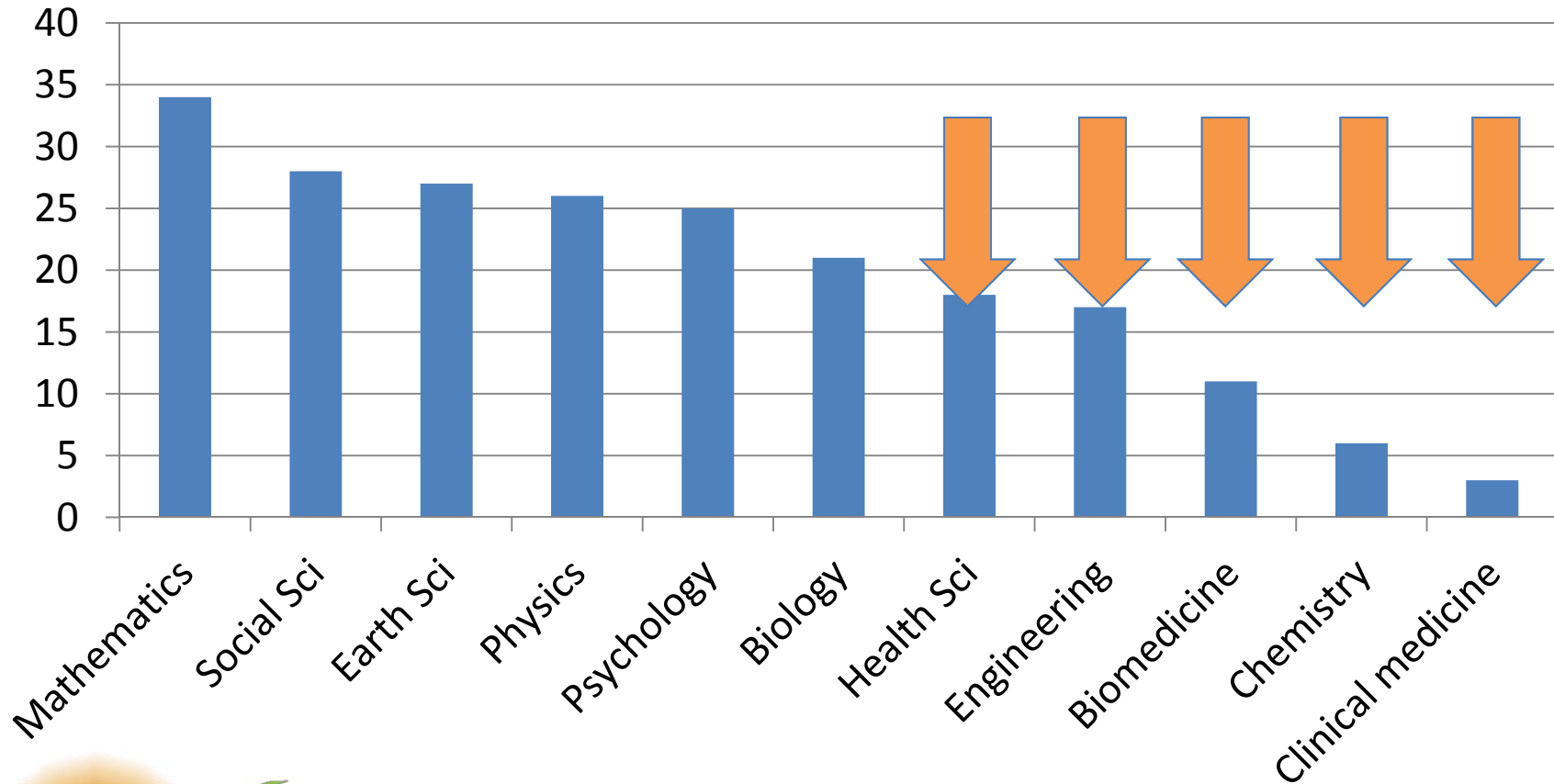
# Challenges



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# Levels of OA in repositories by subject

% literature that is OA



Data: Yassine Gargouri and Stevan Harnad



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# Other challenges

- 🌐 Getting more policies
- 🌐 Getting rid of embargoes
- 🌐 Rights:
  - Right to access
  - Right to re-use
- 🌐 Data



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Commissioner Neelie Kroes  
DG Information Society



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# Scientific data

- 🌐 “Our vision is a scientific e-infrastructure that supports seamless access, use, re-use and trust of data. In a sense ... the data themselves become an infrastructure – a valuable asset on which science, technology, the economy and society can advance.” (Neelie Kroes)



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Thank you for listening

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[www.keyperspectives.co.uk](http://www.keyperspectives.co.uk)

[www.openscholarship.org](http://www.openscholarship.org)



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# Resources

1. General, comprehensive resource on Open Access:

OASIS

(Open Access Scholarly Information Sourcebook)

[www.openoasis.org](http://www.openoasis.org)

2. Resource for policymakers, institutional managers:

EOS

(Enabling Open Scholarship)

[www.openscholarship.org](http://www.openscholarship.org)



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