

Open Science & Open Scholarship Conference

**To keep knowledge
creation and sharing as
open and global as
possible!**

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A quick eye on the history of science

In ancient Greece

Plato's idea about "science" → **Pure & disinterested**

(e.g. geometry)

University of Bologna (11th century)

Initiated by students and teachers → **Co-production**

(grammar, rhetoric and logic → Law)

Rise of "modern science" (17th century)

Idea of "mastering the nature" → Foundation of **scientific method**

(e.g. hypothesis, experimentation, empirical verification,...)

Karl Popper's "Falsifiability" (20th century) → **Everyone can challenge!**

CHANGING LANDSCAPE OF SCIENCE ECOSYSTEM

From an **individual**
to a more **organized** & **collective** enterprise

Ongoing technological & organisational transformation

← Power of digital, enhanced computational power & **AI**

+ In an **unpredictable** environment

Scientists
challenged by
"AI Scientist"?

SECTION
01

**Towards
openness &
global collaboration**

SECTION
02

**Entering a
turbulent period?**

SECTION
03

**How to
address these
challenges?**

SECTION

01

Towards openness & global collaboration

Emergence of “Open Science”

History of Science

- Paul David's view (2003)
- As a practice (e.g. Astronomy)
- Backed by the development of information management systems
- Advocated & supported by the **global organizations**
- As a **policy** priority

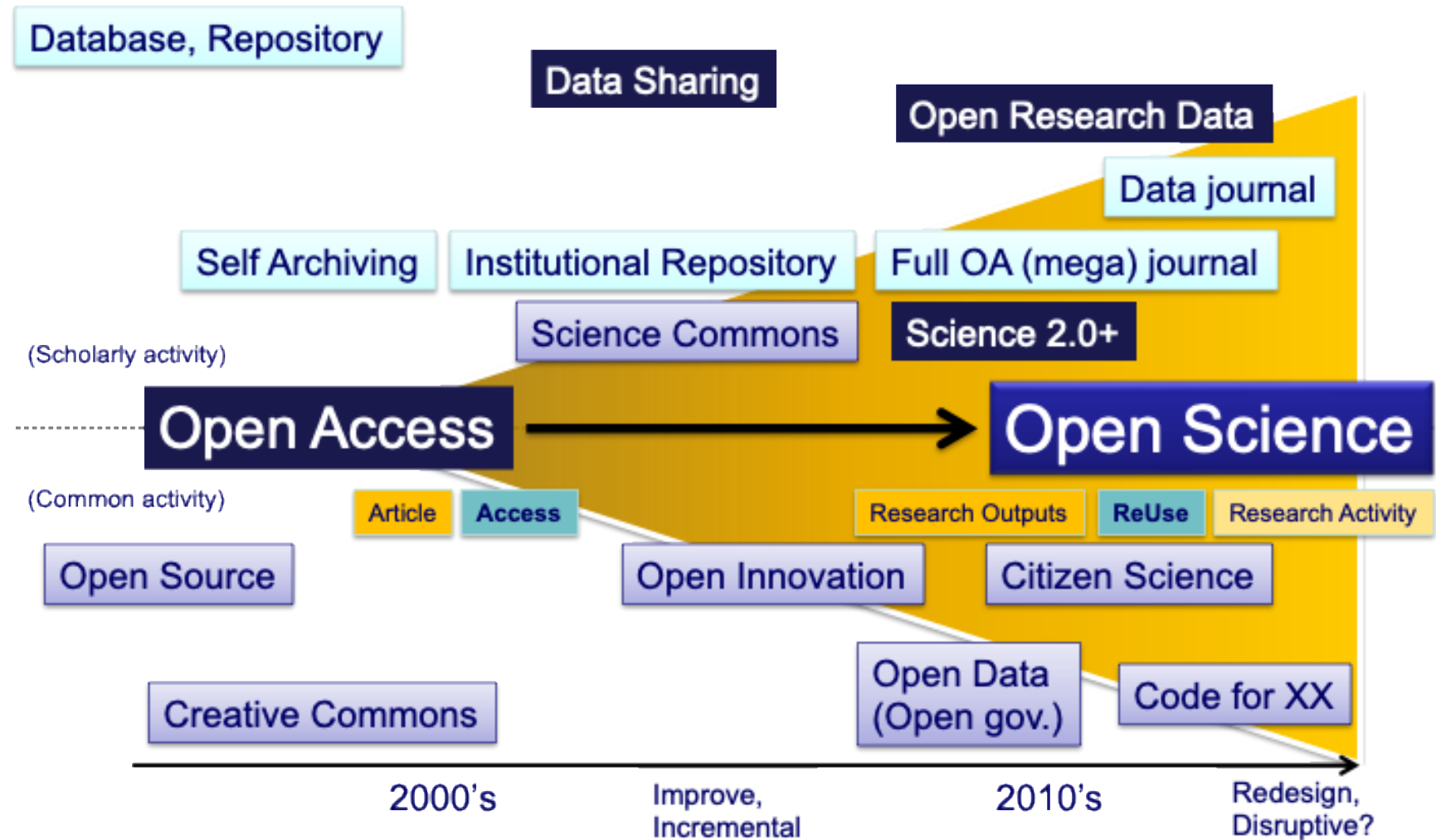


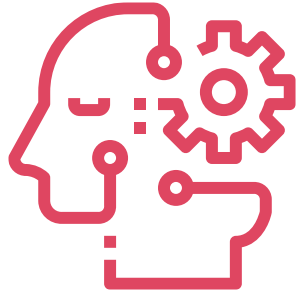
“Open innovation, Open
Science, Open to the World”
(Carlos Moedas, 2015)

G7 Science and Technology Ministers' Meeting in Tsukuba (2016)

Open Science - Entering into a New Era for Science

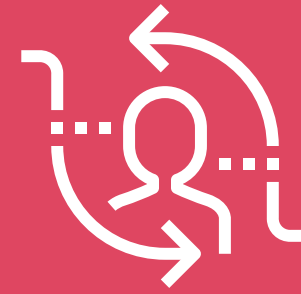
Putting into practice new framework of research and knowledge discovery, sharing, and utilization through openness





Open Science implies

- Opening the door to the global science community
- Connecting people
- Nurturing collaboration



Global collaboration

Key criteria
= **Scientific excellence**

- ← New funding mechanisms
- Global co-authorship ↑

In the 2010s,
the trend towards
openness & global collaboration
seemed **irreversible** ...

Entering in the 2020s
seems to mark a **turning point**
← Emergence of national concerns
& geo-political challenges

SECTION

02

Entering a
turbulent
period?

Political discourses

- Data & technology **sovereignty**
- Strategic **autonomy**
- Strategic **independence**
- Economic and national **security**

EU: "Key enabling technologies for Europe's technological Sovereignty" (2021)

US: "Critical and Emerging Technologies List Update" (2024)

EU: "Update of the EU Control List of Dual-Use Items" (2025)



Advancing science

- As a global public good
- For SDGs
- For society
- For humanity



Additional considerations

- Geopolitical dimensions
- Economic leadership
- National security



Balancing
« Centrality of **scientific excellence** »
and « **Security concerns** »

Implications

- Technology export controls strengthened
- Research grants with additional conditions
- International partnership scrutinized
- DARPA-type funding programs ↑

Cross-border **collaboration**
& **exchange of people**
under threat!

SECTION 03

**How to
address these
challenges?**

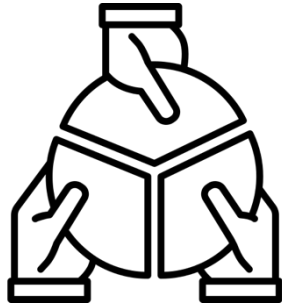
Reactions of research institutions?

Obligation to respond to the new requirements



- Some institutions are
- Reviewing the list of international collaborations
 - Revisiting their partnership strategy

Over-reactions?
Self-restriction?



Open by default

Except CETs or KETs

Alliance or Partnership with
« **Like-minded** » countries

Possible **discretionary** interventions



Towards self-censorship?

The presence of **gray zone**

Evolving **geopolitical** environment

To prevent:

Additional administrative burdens

Unpleasant surprises

Coordinated actions among
all stakeholders of science
ecosystem needed more than ever!

- Recognizing science as a **global public good**
- Based on **mutual trust**
- In view of keeping **knowledge creation & sharing** as **open** and **global** as possible!

The **voice** of **science community**
should be
expressed and **heard**