IPR and Technology Transfer in an Open Science context

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2nd ASTP-EU Forum

16 November 2021

Why do we need Open Science?

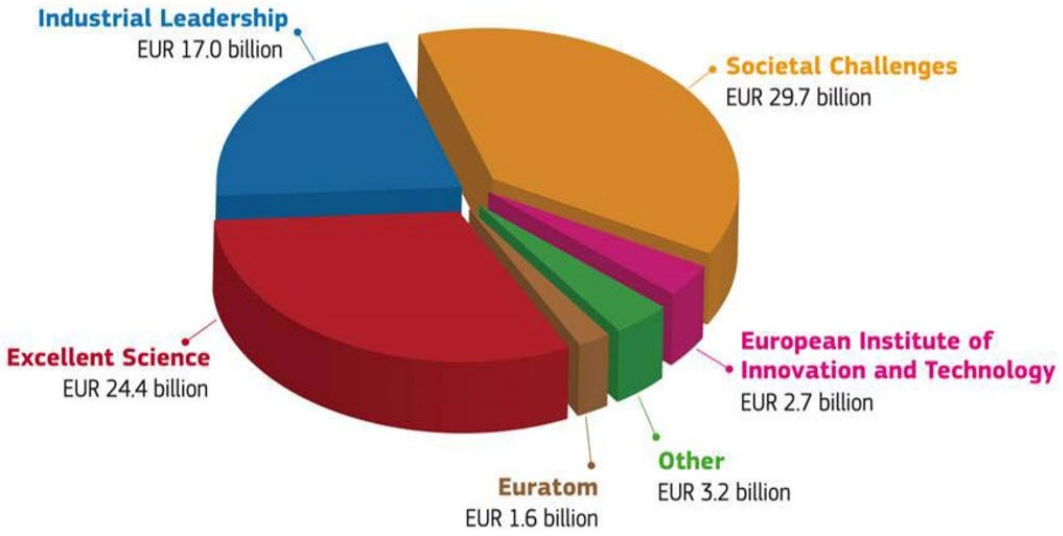
*"**Open Science**" means an approach to the scientific process based on open cooperative work, tools and diffusing knowledge*

(Horizon Europe Regulation and Model Grant Agreement)

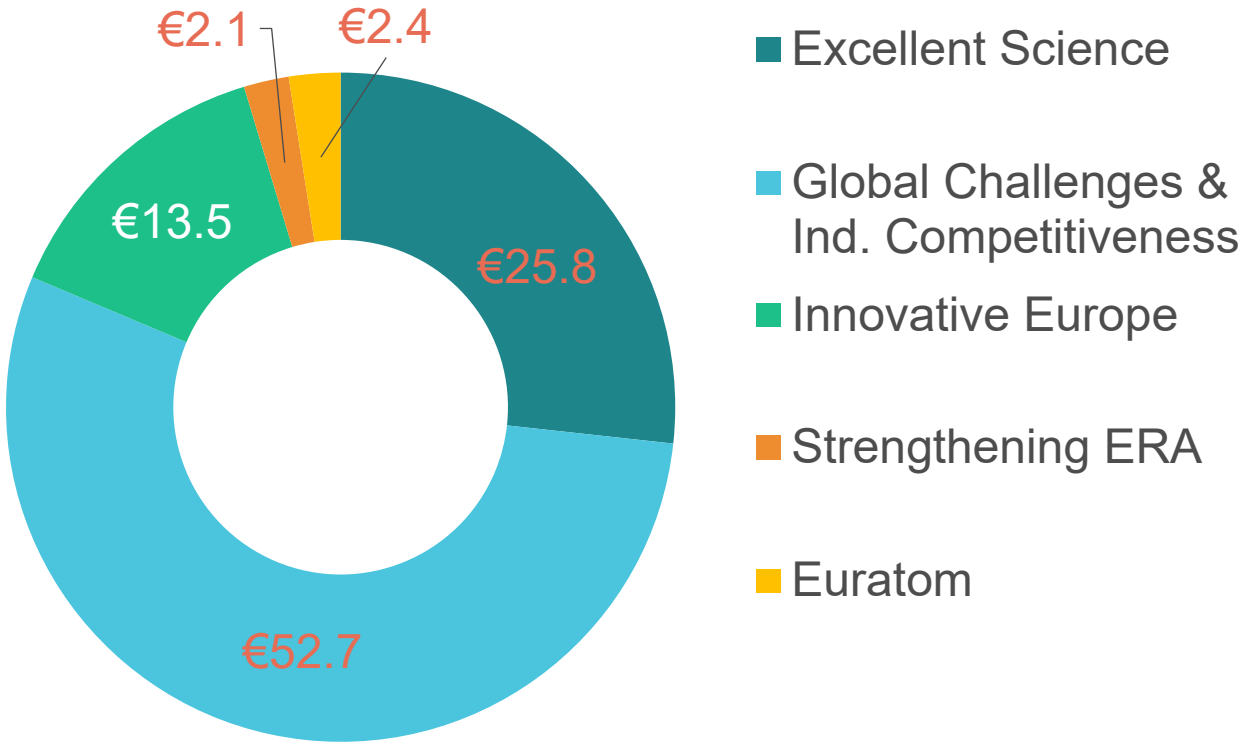
- Open Science has the potential to increase
  - **Quality & efficiency of R&I**, if all the produced results are shared, made reusable, and if their reproducibility is improved
  - **Creativity**, through collective intelligence and cross-disciplinary research that does not require laborious data wrangling
  - **Trust** in the science system, by engaging both researchers & citizens

Horizon 2020 & Horizon Europe

Horizon 2020: ~ €80bn



Horizon Europe: ~€95.5bn



- The Commission invests heavily in Research and Innovation.
- Over **30000 H2020 projects**—Projects produce **research outputs**, **data**, **deliverables**, etc.
- It becomes increasingly important to make the **best possible use** of previous work.

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IPR and Open Science

"There are no incompatibilities between IPR and Open Science"

On the contrary the IPR framework, if correctly defined from the onset, becomes an essential tool to enable Open Science and ensure that the efforts from different contributors are correctly rewarded.

Barbarossa, E., Grande, S., Triaille, J.-P., European Commission, & Joint Research Centre. (2017). IPR, technology transfer & open science: Challenges and opportunities. DOI: 10.2760/789864

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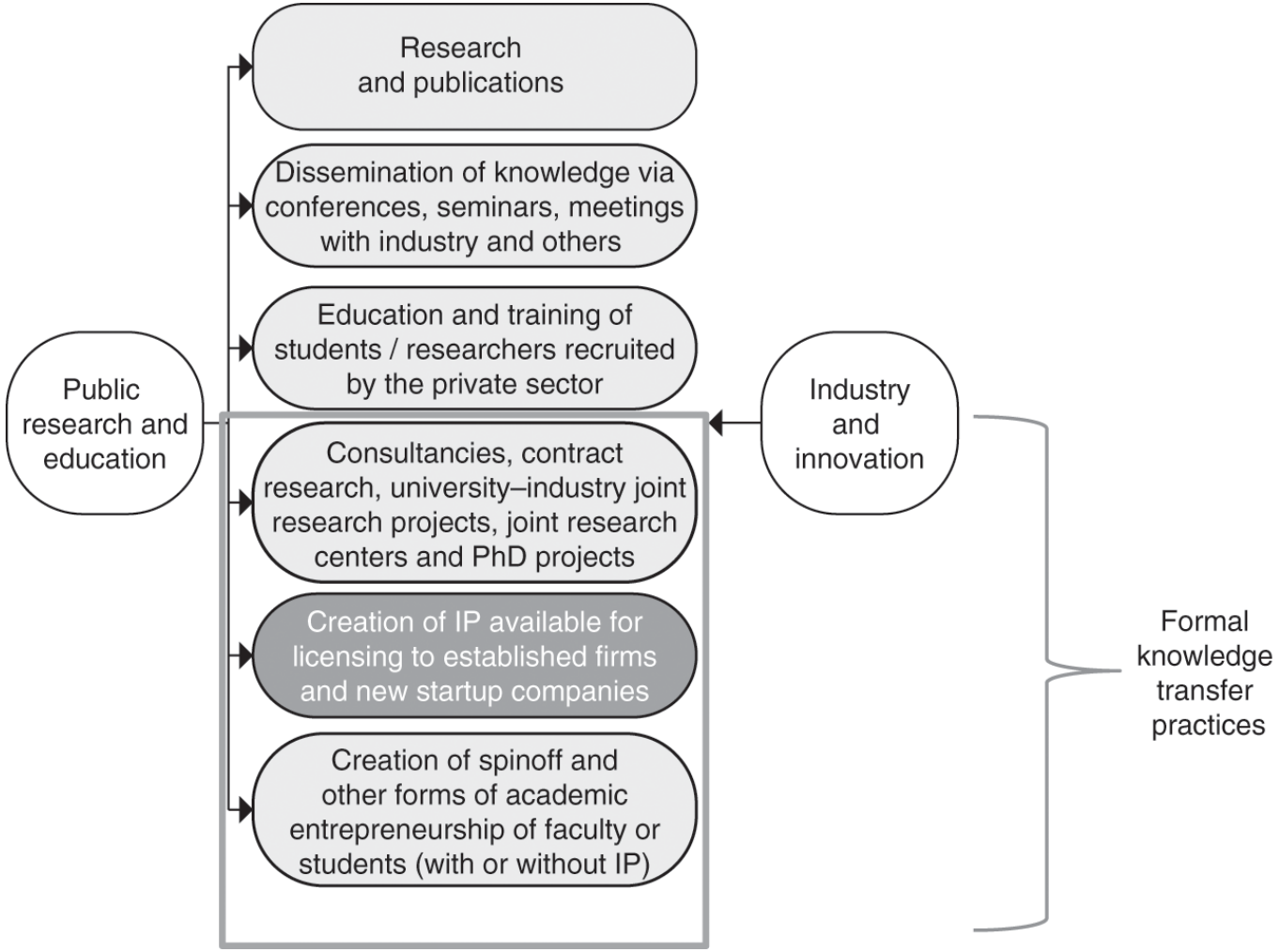
Knowledge transfer channels



Knowledge transfer channels between the public research sector and businesses
Source: WIPO (2011)

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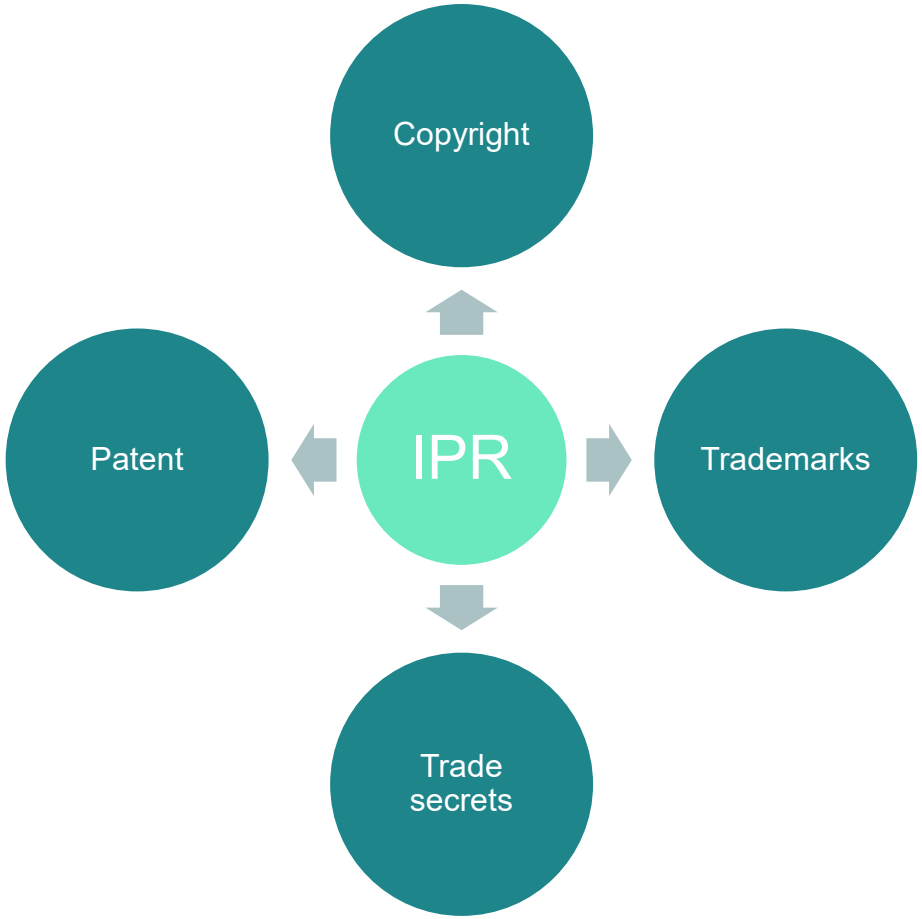
Adequate IP management: the core of open science



- Adequate management needs a **comprehensive view and understanding of IP**, that includes not only patents but other IPRs including copyright.
- Enablers for this:
  - Training and raising awareness and understanding of IPRs among researchers;
  - Open Science policies jointly developed together with IPR policies to ensure a working framework for all actors of the European research knowledge system.

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Open ≠ unprotected

- Making **open** does not mean leaving **unprotected**
  - A work available open access **can** be protected by copyright and related rights (e.g. a dataset is made available open access, under a CC BY license)
  - By assigning open licenses to their work, **copyright holders set the conditions** under which **their work can be re-used**
- An **early** and **adequate IP management** (with patents and other IPRs including copyrights) is at the core of open science
  - It is crucial to determine how the work or invention will be protected, shared, and further exploited

Open science and copyright

- Copyright is a bundle of rights that protect authors on their creations & allow copyright holders to determine who, when and how, will access and reuse works
  - Protects and sets the conditions for “dissemination”
- **An adequate copyright legislative framework and copyright management are key for open science**
  - The transposition of the Copyright in the Digital Single Market Directive was due on 7 June 2021 (articles 3 & 4 on Text and Data Mining)
  - The review of the Database Directive will be part of the upcoming ‘Data Act’
  - Under the ERA, the Commission will “analyse authors’ rights to enable sharing of publicly funded peer-reviewed articles without restriction” but also data legislative/regulatory frameworks and their implications for research

Open science and patent protection

- **Open science** does not prevent **commercial exploitation via patent**
- IP management is best defined from the outset of a research project. What matters is timing. Those willing to patent their inventions should first file the patent application and then publish.
- Publishing patents contributes to disseminating knowledge too.

Open science in Horizon Europe

IP related grant rules

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Am I forced to publish?

The open access obligation is not an obligation to publish. Simply, if/when grantees publish a scientific article, it will have to be in open access.

- Open Science obligations in Horizon Europe are not a general obligation to disseminate. **They are even less an obligation to surrender IP rights, and for this reason should not be construed in opposition to IP protection**.
- The dissemination of Horizon results can be postponed to allow the appropriate protection of results beforehand.
- This is something that can be explained in the proposal: that the strategy is, first, to secure IP protection, and that once this is completed, dissemination obligations will be fulfilled, including via open access if publications are foreseen.

https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/open-science-vs-ipr-horizon-europe-which-one-wins-2021-09-17_en

1. Open access to publications

Beneficiaries (or authors) **must retain sufficient intellectual property rights** to comply with the OA requirements

At the latest upon publication, **deposition** of the AAM or VoR in a **trusted repository** + ensure **open access via the repository** under **CC BY** or equivalent

2. Research data management

Beneficiaries **must manage the digital research data** generated in the action responsibly, **in line with the FAIR** principles and:

- establish + regularly update a **data management plan** ('DMP') for generated (and/or collected) data
- as soon as possible and within the deadlines set out in the DMP, **deposit** the data in a trusted repository (federated in the EOSC if required in the call conditions) **+ ensure open access under CC BY, CC 0 or equivalent, following the principle 'as open as possible as closed as necessary'**
- provide information via the repository about any research output/tools/instruments needed to **re-use or validate the data**

Metadata must be open under CC 0 or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles **and provide information about the licensing terms**, amongst others.

“As open as possible, as closed as necessary”

Data may be kept closed if:

- providing open access is against the **beneficiary’s legitimate interests**, including regarding **commercial exploitation**;
- it is contrary to **any other constraints**, such **as data protection rules**, **privacy**, **confidentiality**, **trade secrets**, **Union competitive interests**, **security rules**, **intellectual property rights** or would be **against other obligations** under the Grant Agreement.

Thank you!

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