



RESEARCH SUPPORT IN AN OPEN SCIENCE FRAMEWORK

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opinions are my own

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Contents

- What happened during NL Presidency of EU
- What's happening now at EC
- Some personal thoughts

Relation OS/OA/OD



Dutch EU Presidency 2016-I

- ERAC Taskforce on Open Data
European Research Area Committee (member states)
- Open Science Conference Amsterdam
 - Amsterdam Call for Action on Open Science
www.openaccess.nl/en/events/amsterdam-call-for-action-on-open-science
 - Side events, e.g. on IPR-issues for data
 - EC workshop in Feb '17 on IPR
- Competitiveness Council
 - Conclusions on Open Science
www.data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf



ERAC TF on Optimal Reuse of Research Data

TRAINING OF STAKEHOLDERS AND AWARENESS RAISING

1. Promote a better understanding of open research data
2. Establish training and education programs on Open Science
3. Establish a reward system for data sharing activities
4. Ensure sound monitoring

DATA QUALITY AND MANAGEMENT

5. Make data identifiable and citable
6. Promote metadata standardisation and production of metadata
7. Promote innovative models for peer-review and quality assurance
8. Strongly promote the use of data management plans

SUSTAINABILITY AND FUNDING

9. Ensure the existence of FAIR open research data infrastructures
10. Ensure funding for open research data and for data sharing activities

LEGAL ISSUES

11. Make IPR issues insightful

Call for Action: set goals & work out

Two important pan-European goals
for 2020:

1. Full open access for all scientific publications
2. A fundamentally new approach towards optimal reuse of research data

Flanking policy

3. New assessment, reward and evaluation systems
4. Alignment of policies and exchange of best practices



*Amsterdam Call for Action
on Open Science*



EU
2016





Removing barriers to open science

1. Change assessment, evaluation and reward systems in science
2. Facilitate text and data mining of content
3. Improve insight into IPR and issues such as privacy
4. Create transparency on the costs and conditions of academic communication

Developing research infrastructures

5. Introduce FAIR and secure data principles
6. Set up common e-infrastructures

Fostering and creating incentives for open science

7. Adopt open access principles
8. Stimulate new publishing models for knowledge transfer
9. Stimulate evidence-based research on innovations in open science

Mainstreaming and further promoting open science policies

10. Develop, implement, monitor and refine open access plans

Stimulating and embedding open science in science and society

11. Involve researchers and new users in open science
12. Encourage stakeholders to share expertise and information on open science

5. Introduce FAIR and secure data principles

The problem

Research outputs generated with public funding should be accessible for reuse. In the scientific process, many different kinds of output are generated, depending on the scientific discipline, the sources of data and the type of analyses that researchers perform. For sharing and reusing data in the open science environment, it is important to provide clarity about the quality of the data offered and to have effective agreements in place for better reuse of data. If data is to be archived and made suitable for reuse, it must be clear to third parties how the data is structured and what information it contains.

The solution

- Develop Principles & Guidelines for Data Management Plans and data stewardship.
- Create optimal conditions for sharing research output by introducing a quality hallmark for the FAIR principles, data, and data management requirements: research output should be Findable, Accessible, Interoperable and Reusable.

Concrete actions

- **National authorities and the European Commission:** state that research output produced with public funding should, in principle, be accessible for reuse. Promote the FAIR principles. Provide for a bottom-up and discipline-based approach and elaboration.
- **National authorities and Research Performing Organisations:** put in place an institutional data policy which clarifies institutional roles and responsibilities for research data management and data stewardship.
- **Research funders:** implement Data Management Plans (DMPs) as an integral part of the research process, make them a precondition for funding, standardise them and make the costs incurred eligible for funding.
- **Research funders:** introduce positive incentives for FAIR data sharing by valuing data stewardship and efforts to make data available and by acknowledging and rewarding those who compile the data. Require data to be cited according to international standards. Encourage the sharing of expertise that enables disciplines/regions to learn from each other.
- **Research funders:** set the default in data sharing to open access, but allow a choice of access regimes: from open and free downloads to application and registration-based access. Conditions can be dependent on the nature of the data, common practice within a specific academic discipline, legal (privacy) frameworks, and legitimate interests of the parties involved.
- **National authorities and research funders:** educate data stewardship experts, recognise their profession and provide them with career opportunities. They will act as a bridge between IT and science.

Expected positive effects

- Increased quality of research;
- Better adherence to the principles of good scientific research and conduct to foster research integrity;
- Increased impact of publicly funded research;
- Secure sharing and reuse of research outputs, which will foster science and innovation.

Council Conclusions

Council Conclusions aligned with

- A'dam Call for Action
- EC Open Science Agenda
- Stress the importance of Open Science
- Open Science Policy Platform and European Open Science Agenda
- Removing barriers and fostering incentives
- Open access to scientific publications
- Optimal reuse of research data
- Follow-up



Council of the
European Union

Brussels, 27 May 2016
(OR. en)

9526/16

RECH 208
TELECOM 100

OUTCOME OF PROCEEDINGS

From:	General Secretariat of the Council
To:	Delegations
No. prev. doc.:	8791/16 RECH 133 TELECOM 74
Subject:	The transition towards an Open Science system - Council conclusions (adopted on 27/05/2016)

Delegations will find in the annex the Council conclusions on the transition towards an Open Science system, adopted by the Council at its 3470th meeting held on 27 May 2016.

Council Conclusions

- **Stress the importance of Open Science**
 - **1. Open Science as an ongoing transformation**
 - **2. Potential to increase benefits of science**
 - **3. Focus on Publications & Data**
- **Open Science Policy Platform and European Open Science Agenda**
 - **4. Open Science Policy Platform; Start initiatives; Inform each other**
 - **5. Further develop the European Open Science Agenda**
- **Removing barriers and fostering incentives**
 - **6. Results open ASAP; Remove legal barriers**
 - **7. Impact to Science and Society; QA; Reward Systems; Data Citation**
 - **8. TDM for All**
 - **9. Retain Copyright, use Licensing Models**

Council Conclusions (c'tnd)

- Open access to scientific publications
 - 10. Open Access as point of departure; common principles
 - 11. Compliance on Open Access
 - **12. Open Access in 2020; Funding of new Models; Common Principles**
 - 13. Set Milestones; Monitoring; Facilitate Information Sharing
- Optimal reuse of research data
 - 14. Optimal reuse as point of departure; data as public good
 - **15. Open by default; promote data stewardship; implement DMP's**
 - **16. FAIR & Safe Data**
 - **17. European Open Science Cloud**
- Follow-up
 - 18. Advocate Open Science; Coordinate Activities & Information

EC Open Science Agenda

- **Fostering and creating incentives for Open Science**

Open Science in education programmes and best practices

Extending the input of knowledge producers in an open environment (citizen science).

It is also about the quality, impact and research integrity of science

- **Removing barriers for Open Science**

includes a review of researchers' careers with a view on creating incentives and awarding researchers for engagement with Open Science

- **Developing research infrastructures for Open Science**

Improve data hosting, access and governance

- **Mainstreaming and further promoting**

Open Access policies to research data and publications

- **Embedding Open Science in society as a soc-ec driver**


Open Science becomes instrumental in making science more responsive to societal and economic expectations.



8 Priorities in the OS Agenda

1. Reward system
2. Measuring quality and impact: altmetrics
3. Changing business models for publishing
4. FAIR open data
5. Open Science Cloud
6. Research integrity
7. Citizen Science
8. Open education and skills

Where to start in order to effect the sytem change

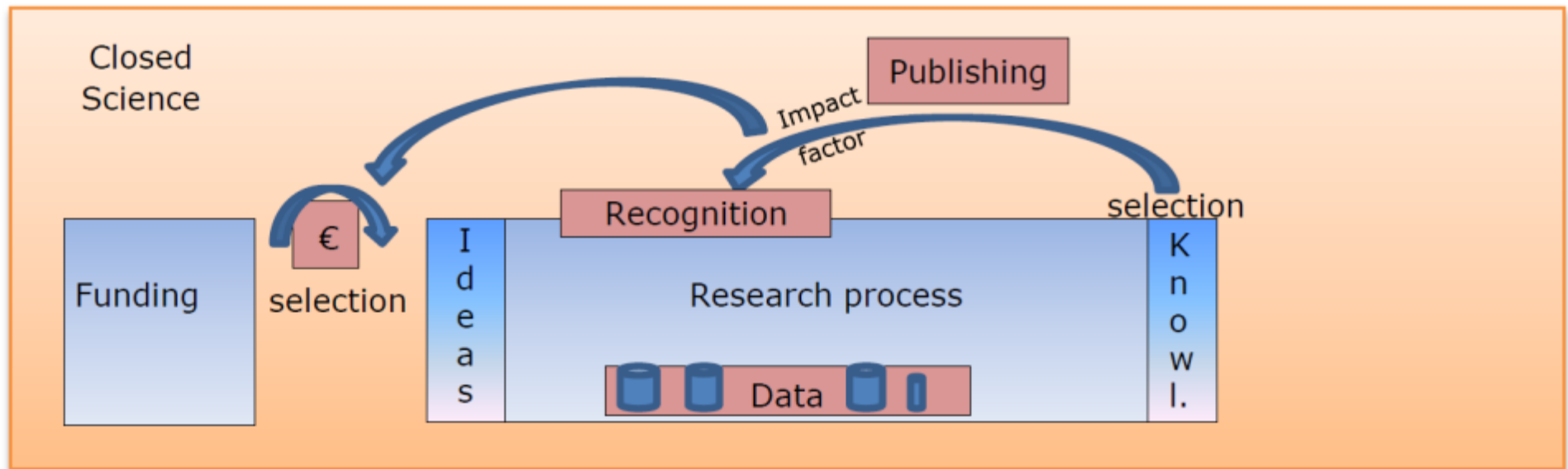


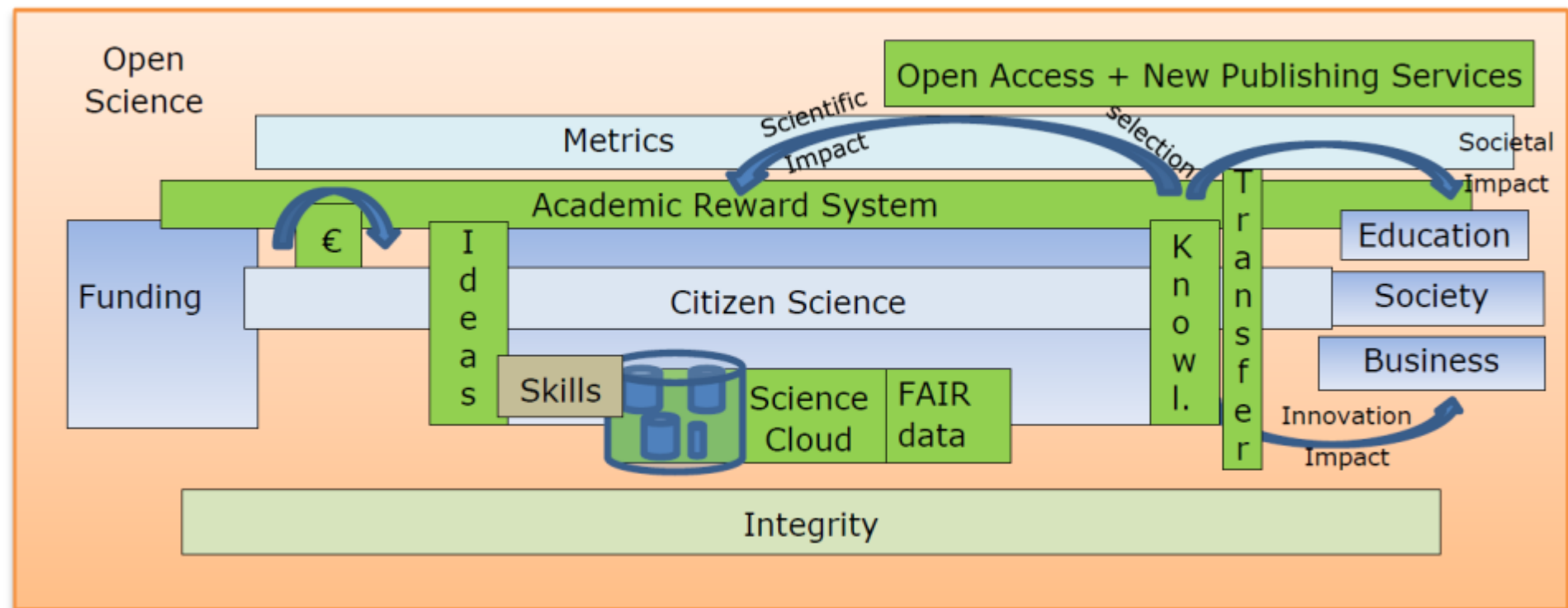
Intermezzo: System Change on Science

The way we do science will change, because of

- Digitization
- Data availability
- Need for transparency and reproducibility
- Need to better connect with society at large
- Need to tackle grand challenges

Science has to open up





European Open Science Agenda: 8 priorities

1. Reward system
2. Altmetrics on quality and impact
3. Changing publishing models
4. FAIR open data
5. Open Science Cloud
6. Research integrity
7. Citizen Science
8. Open education and skills

Open Science Policy Platform

- **25 members**

<https://ec.europa.eu/research/openscience/>

NL: Karel Luyben TUDelft; Jan van den Biesen Business Europe

- **Develop the Open Science Policy Agenda**

- **Mandate**

- 1. function as a dynamic, stakeholder-driven mechanism***

identify the issues to be addressed; bring up and address issues of concern for the science and research community

- 2. advise the Commission***

on how to further develop and practically implement open science policy; recommendations on the policy actions required and any cross-cutting issue affecting Open Science

- 3. support policy implementation***

contribute to reviewing best practices, drawing policy guidelines and encouraging their active uptake by stakeholders



Other, related EC activities

- Digital Single Market Strategy
 - European Cloud
- High Level Expert Groups
 - Open Science Cloud report end 2016
 - Altmetrics
 - FAIR data and Rewards are starting up
- Data Management Plans in Horizon 2020
- Open Science Policy Platform
- Directive on Copyright
 - Text and Data Mining

Some thoughts

- **Data might become the new oil**

(but are not scarce – in fact can be re-used over and over again)

Yochai Benkler Wealth of Networks

- **Infrastructures as facilities; but it's the data that count**

→ you need expertise and trained data scientists **SCARCE!**

- **Don't confuse "open" with re-use → FAIR & secure**

Some data might need protection, rules for access, and some might need explanation, help in analysis.

Data **sharing**: Ensure FAIR & data security and have a clear IP policy (on apps, value added)

- **Platforms (cf. Facebook, Twitter, Google, ...)**

- **For data**

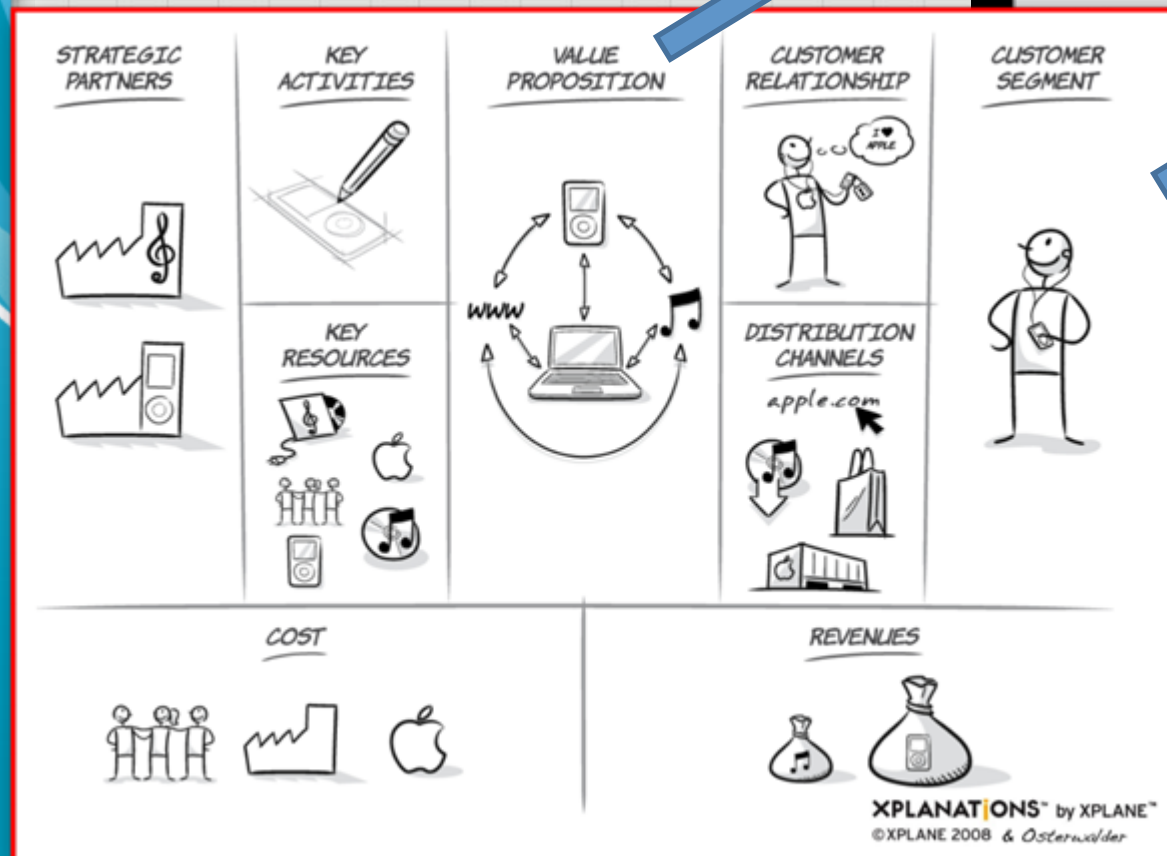
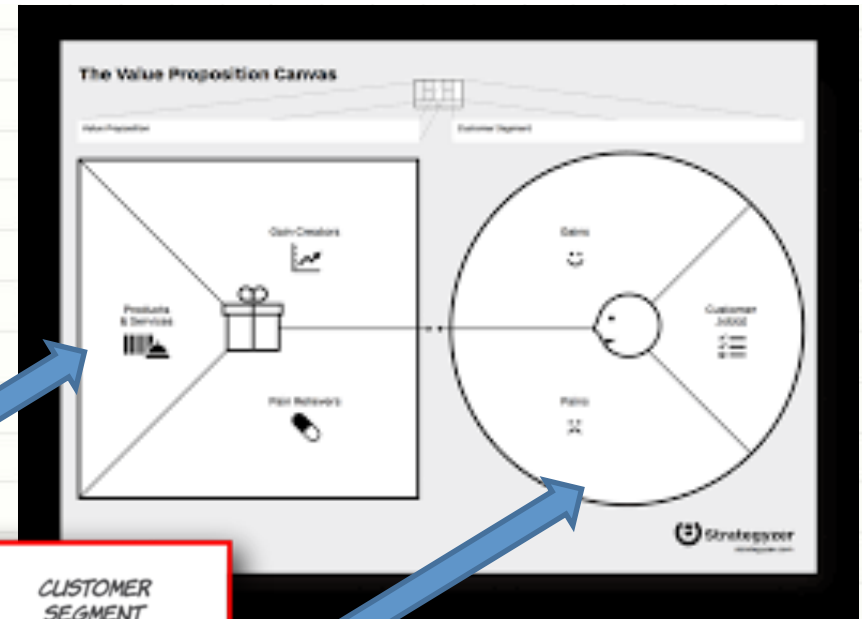
- **For publications**

Some thoughts

- **Inclusive approach**
 - Alignment and Concerted Actions
 - Get the researchers involved!
- **Find ambassadors or champions**
 - **Prof. Frédéric Kaplan: The Venice Time Machine → A'dam**
https://www.ted.com/talks/frederic_kaplan_how_i_built_an_information_time_machine
- **Find new users**
 - cf. disruptive innovation** (Clayton Christensen)
 - **European Citizens Science Association** <http://ecsa.citizen-science.net/>
 - **zooniverse** (<https://www.zooniverse.org/>)
- **H2020 Work Programme 2016/17**
 - 16. Science with and for society**
 - 10-2017: Putting Open Science into action

Some thoughts

- Get organized
Have a Value Proposition
And an Audience



Become a Brand – or
get a Reputation

Get ready for the
Information Economy

Alex Osterwalder
CANVAS
STRATEGYZER
[based on his PhD]

Time for Action is now!

With respect to Open Access and Re-use of Data

- **Pick ≥ 3 items from the Amsterdam Call for Action**
 - Use an inclusive approach,
 - Have political support
- **Realise them within two years**
- **Come to Amsterdam conference in 2018 to present**
 - Follow up of the Presidency conference



Thank you!

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