Open, Digital Science in Europe

Carl-Christian Buhr
(...but I am speaking in a personal capacity.)
The European Commission is...

...Policy Maker
Launched policy debates
Invites Member States to take action
Proposes EU legislation

...Funding Agency
e.g. Research & Innovation
Driving policies through funding

...Infrastructure Builder
Funds research infrastructures
Funds related research
Supports networking activities
Partners

Parliament

http://europarl.europa.eu/

Council

http://consilium.europa.eu/
http://ec.europa.eu/commission_2010-2014/
“[...] the Commission will propose a European Research Area framework and [...] **open access to publications and data** from publicly funded research”.

“[...] publicly funded research should be widely disseminated through Open Access publication of scientific data and papers”

Digital Agenda for Europe 2010-2020

http://ec.europa.eu/digital-agenda
Pillar 5: Research and innovation

Europe continues to under-invest in ICT research and development, investing less than other industrialised economies.

Main Actions:

More ICT R&D&I, including infrastructures
More pooling of resources
Plus: Digital Science Policy
3 pillars:

1. Excellence
2. Competitiveness
3. Societal Challenges

Health, Transport, Energy, Food, Climate, Innovation & Reflection & Inclusion, Security

incl. E-Infrastructures for ODS, High Performance Computing
H2020 agreed & first calls published 12/2013

~ EUR 80bn
2014-2020
The Open Science Package

Towards better access to scientific information: boosting the benefits of public investments in research, COM(2012) 401

Commission, Recommendation on access and preservation of scientific information, C(2012) 4890 final

A Reinforced European Research Area Partnership for Excellence and Growth, COM(2012) 392
Amid Broad Discussions

Open Science for the 21st century

A declaration of ALL European Academies

presented at a special session
with Mme Neelie Kroes, Vice-President of the European Commission, and Commissioner in charge of the Digital Agenda

on occasion of the ALLEA General Assembly held at Accademia Nazionale dei Lincei, Rome, on 11-12 April 2012

http://www.allea.org/Pages/ALL/33/144.bGFuZz1FTkc.html
Science as an open enterprise

June 2012

Wider Digital Policy Context

Data Protection Reform 2012–?
High Performance Computing Strategy 2012–?
Cloud Computing Strategy 2012–?
Telecom Single Market Package 2013–?
European Council on Big Data & Cloud 2013
Digital Single Market 2014/2015–?
Better Tools
Infrastructures (e.g. net, cloud, HPC)

Better Data
Open Access to Research Publications
Open Access to Research Data
Open Data/Public Sector Information

Better Uses
Altmetrics for evaluating research

All together
Citizen science

and more...!?
Riding the wave
How Europe can gain from the rising tide of scientific data

Final report of the High Level Expert Group on Scientific Data
A submission to the European Commission
October 2010

http://bit.ly/riding_the_wave

"the data themselves become the infrastructure".

Knowledge without Borders

GÉANT 2020 as the European Communications Commons

Open, Digital Science in Action

Tools for virtual research environments

Generic services: preservation, curation storage and computation

Open Access: participatory, distributed infrastructure

Aggregation Path

Workflows

Scientific Data (Discipline Specific)

Other Data

Aggregated Data Sets (Temporary or Permanent)
Building Bridges for ODS

scientific data infrastructure

HPC/distributed computing/software infrastructure

network infrastructure, GÉANT

network infrastructure, GÉANT
Open Access to Publications & Data
Goals

2014: OA policies in all MS

2016: 60% OA in Europe

2014–2020: H2020 100% OA
OA in Horizon 2020

Publications

OA Mandate
(Green/Gold, Embargo 6/12m)

&

OA to Data Pilot

Image Credits
Green: http://www.flickr.com/photos/spool32/4633177036/
Gold: http://www.flickr.com/photos/27117418@N07/2557960827/
What does the EU do?

- Make EU data available
- New PSI re-use directive
- Push EU Members
- Build Data Portals

http://open-data.europa.eu/
Altmetrics & Co.

Measuring use & impact
For publications and data
More granular metrics
New Journals or no journals?

Evaluating Researchers
Measure more and better
Data publications, teaching etc. to count

New Models for Publishing
Baking OA in
Data publications
Citizen Science

Everybody influences research directions
Input to goal setting increases acceptance
Anchoring Science in Society: for the long term

Everybody collects data
We are sensors: Smartphone Science
We have many eyes: Crowdscience
We are a data source: Quantified Self

Everybody is a scientist
Commercial Big Data IS still science
Experiments as business models
Some questions & Way ahead

Infrastructures for ODS
Who will run data infrastructures?
Will there be a common approach in Europe?
Will the Research Data Alliance deliver?

Altmetrics & Co
Is research into tools & methods enough?
How to anchor a movement?
Will the ERA help?

Citizen Science?
Link to “Big Politics”?
To push or to accompany?

What do Stakeholders think?
Pointers

The EC and open access
http://ec.europa.eu/research/science-society/open_access
Communication & Recommendation on Scientific Information

Relevant Speeches by Neelie Kroes

Data Expert Group Report: “Riding the wave”
http://bit.ly/riding_the_wave

GÉANT Expert Group: “Knowledge without Borders”

Horizon 2020 proposal
http://ec.europa.eu/research/horizon2020/index_en.cfm

Budapest Open Access Initiative
http://www.opensocietyfoundations.org/openaccess/read
http://www.soros.org/openaccess/boai-10-recommendations

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Thank you!

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http://slidesha.re/H2020_ODS