

25 March 2014, Berlin

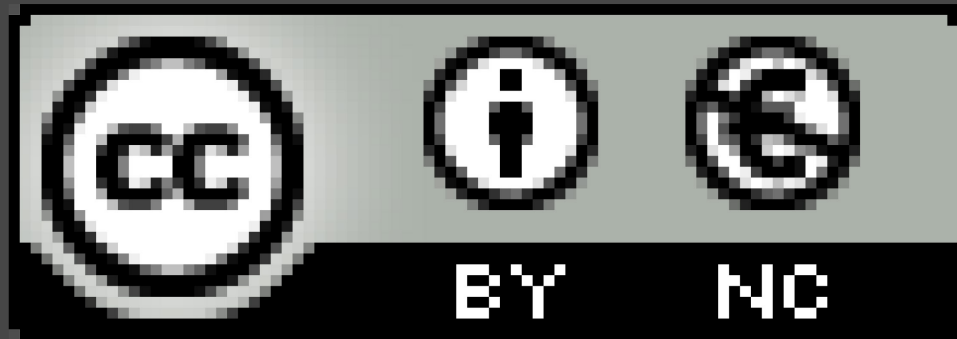


Horizon 2020 and
Research Data
Infrastructure

Carl-Christian Buhr



http://slidesha.re/H2020_RDA



<http://creativecommons.org/licenses/by-nc/3.0/>



(...but I am speaking in a personal capacity.)

Carl-Christian Buhr

@ccbuhr

http://bit.ly/cc_buhr



[@NeelieKroesEU](#)

<http://bit.ly/NeelieKroesEU>

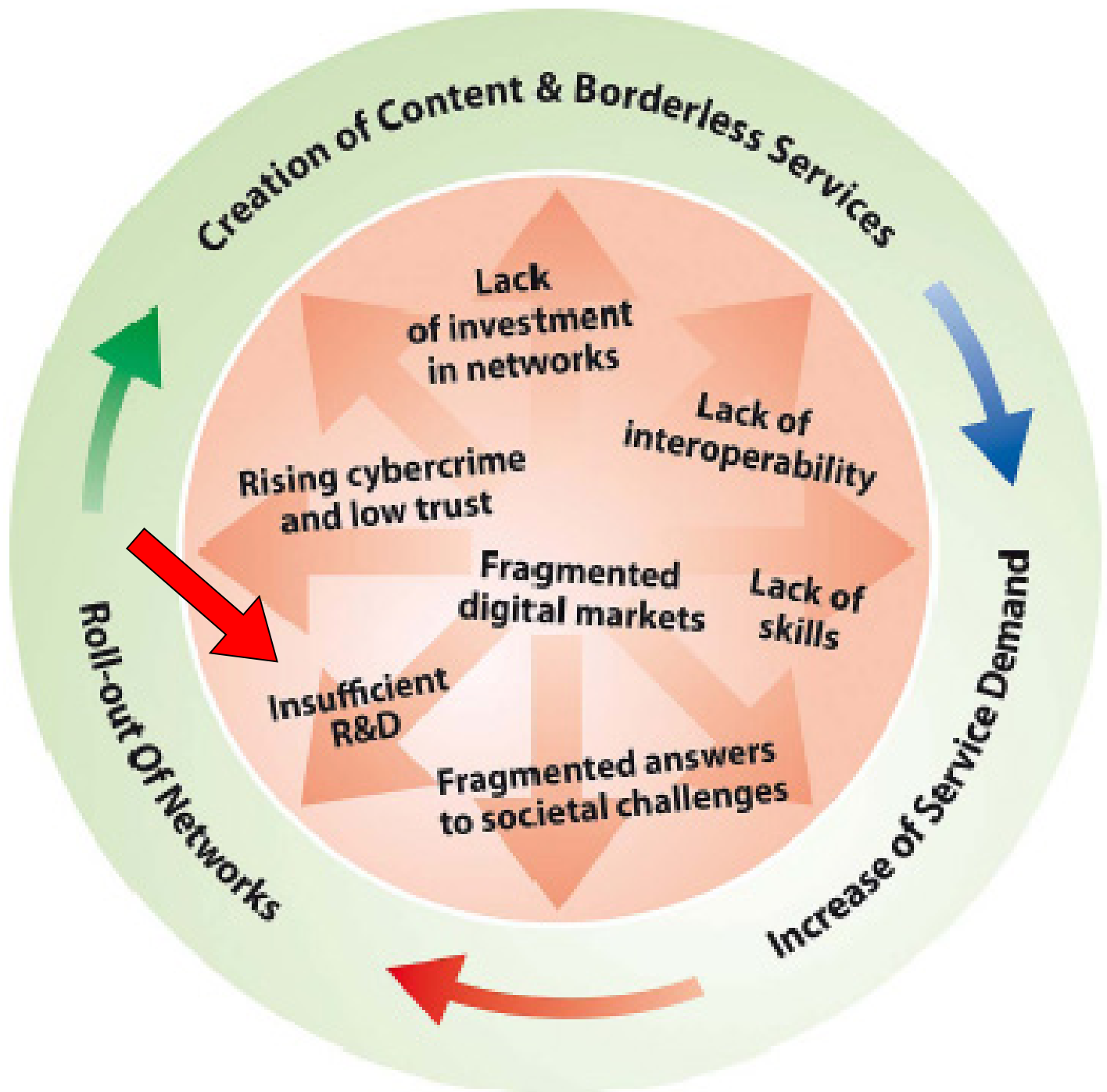
http://ec.europa.eu/commission_2010-2014/

Digital Agenda

1001100101011101110000100 2010-2020

for Europe

<http://ec.europa.eu/digital-agenda>



DIGITAL AGENDA FOR EUROPE

A Europe 2020 Initiative

Europe > Our Targets > Scoreboard > Progress by Target

Business &
Funding

Science and
Technology

Telecoms & the
Internet

Creativity &
media

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

More pooling of resources

HORIZON 2020



3 pillars:

1. Excellence

2. Competitiveness

3. Societal Challenges

incl. e-Infrastructures,
High Performance
Computing

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

... agreed & first calls published 12/2013

European Parliament



<http://europarl.europa.eu/>

Council of the European Union



<http://consilium.europa.eu/>



~ EUR 80bn
2014-2020

Infrastructure Enablers for Open, Digital Science

1. Data

- Open Access to Research Publications
- Open Research Data Pilot
- Open Data/Public Sector Information

2. Storage: Grid, Cloud etc.

3. Processing: High-performance computing

1A. Open Access to Publications

A large, stylized orange letter 'S' is centered on the page. The 'S' is composed of thick, rounded strokes and serves as a background for the text.

July 2012

Commission Communication
& Recommendation to MS

on Scientific Information
[in H2020 and beyond]

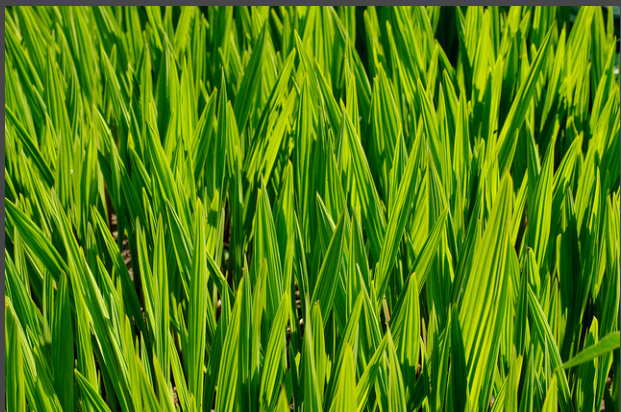
Goals

2014: OA policies in all MS

2016: 60% OA in Europe

2014–2020: H2020 100% OA

Rules in Horizon 2020



(with incurred
gold charges =
eligible costs)

Green
&
Gold

Accepted Embargo
6/12 months



Image Credits

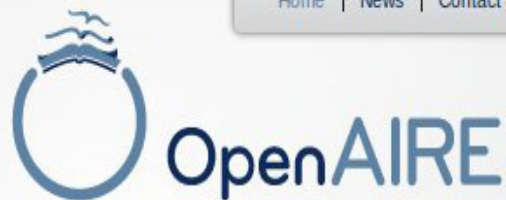
Green: <http://www.flickr.com/photos/spool32/4633177036/>

Gold: <http://www.flickr.com/photos/27117418@N07/2557960827/>

1B. Open Research Data Pilot

- Selection of H2020 areas in by default (e.g. FET, ICT, Climate), making up 3bn EUR in WP 14/15
- Fine-tuning via projects' Data Management Plans
- Free choice of repository
- Opt-out possible (e.g. for reasons of privacy or security)

H2020 fallback OA infrastructure



Open Access Infrastructure for Research in Europe

plus

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Open Access in Europe



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Seizing the Opportunity for Open Access to European Research - Ghent Declaration

13 FEBRUARY 2011

The Ghent Declaration, an initiative of the reviewers of the OpenAIRE project, was submitted to Neelie Kroes, Vice-President of the European



Latest News

Spanish national Thesis mandate

11/02/2011

A Royal Decree-Law has been released in which, according with its article 14.5.: Spanish

OpenAIRE La

<http://www.openaire.eu>

What is Open Data?

1. bulk download for free
2. reuse rights (incl. commercial)

Why do we care?

Computers

Internet

Automation

= Open Data possible &
useful

Data is already paid



Transparency

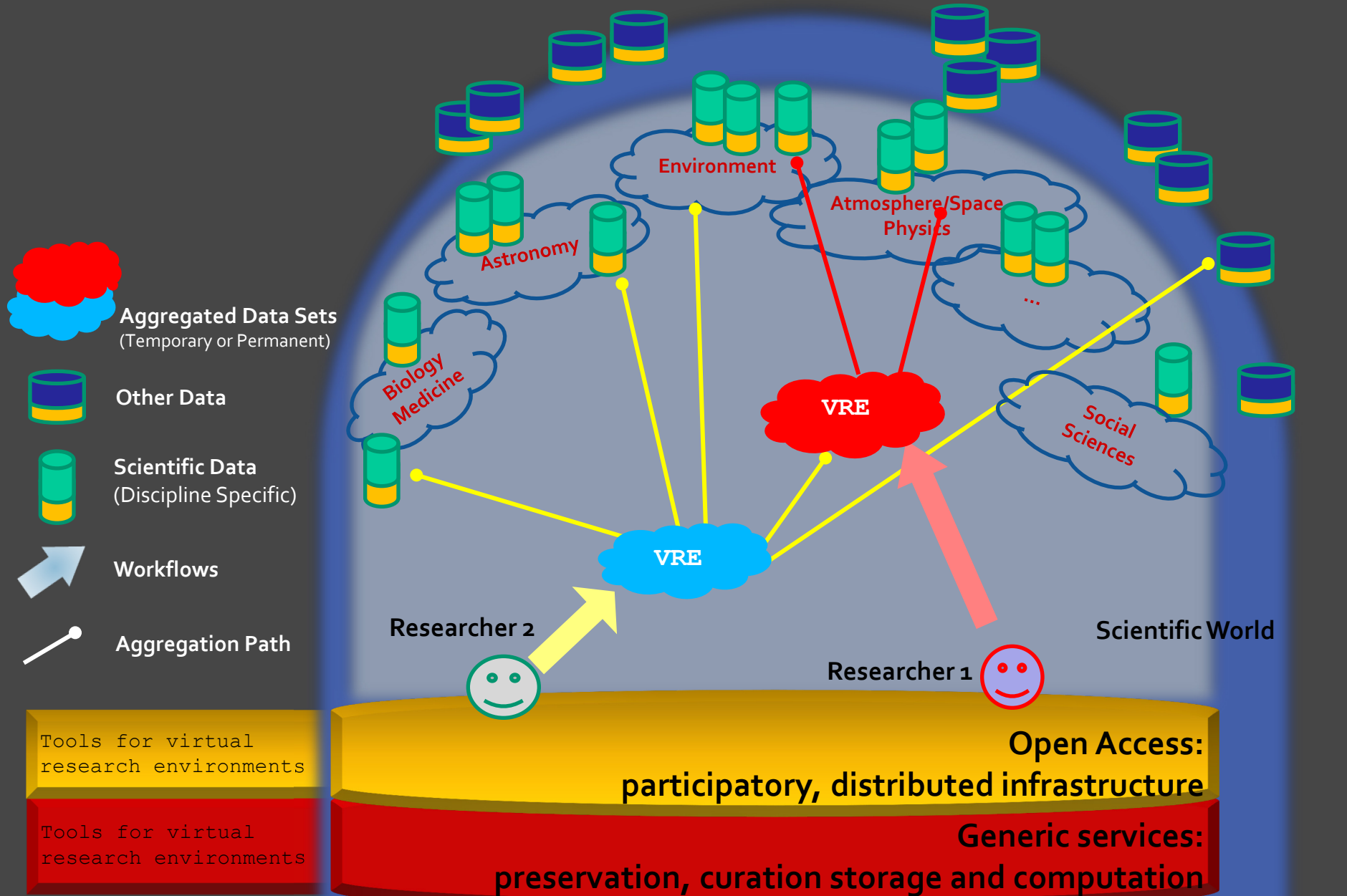


Image credit: <http://archrecord.construction.com/projects/portfolio/archives/0811kanagawa-1.asp>

Valuable economic raw material



2. Grid, Cloud etc.



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

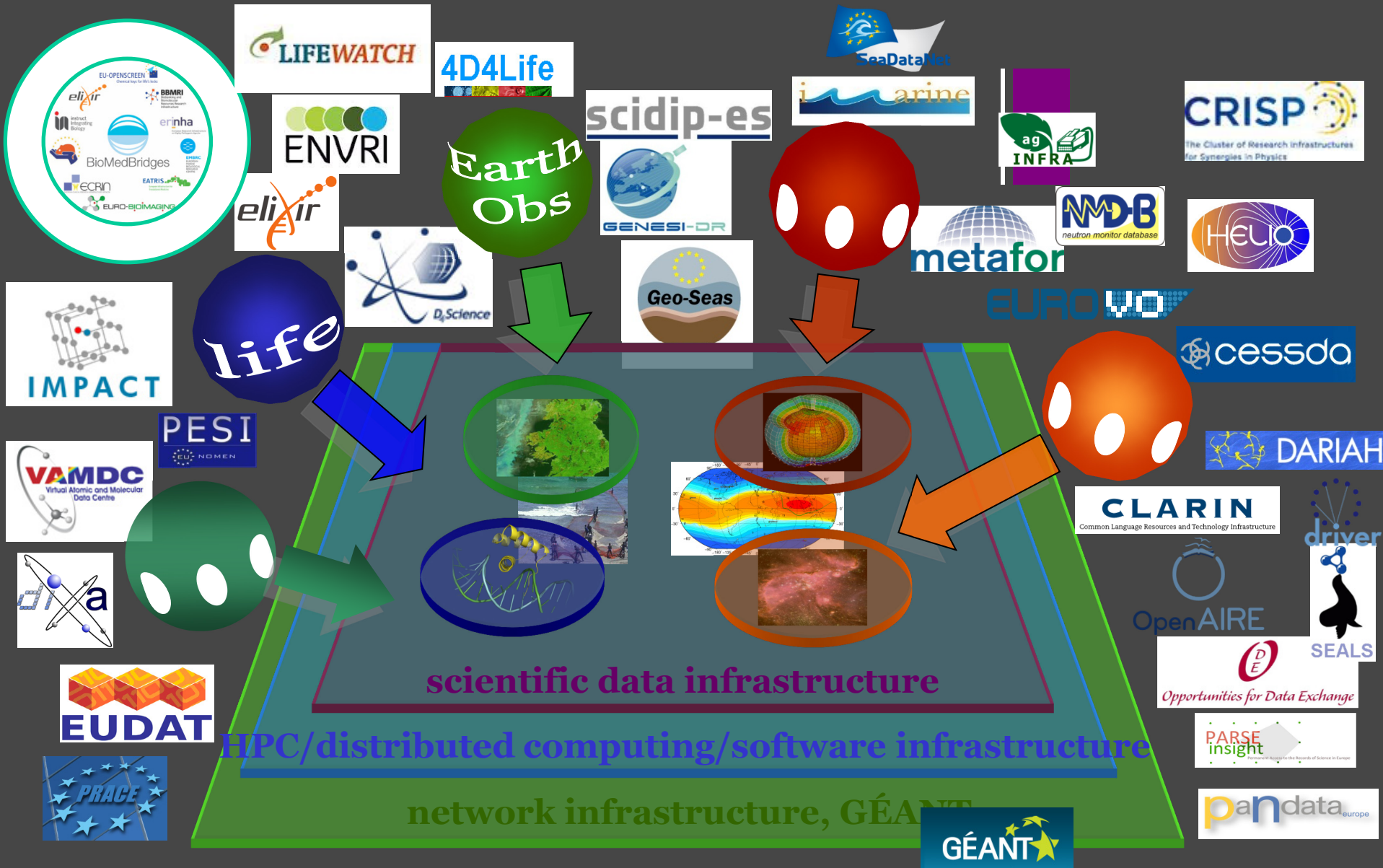
"the data themselves become the infrastructure".

Knowledge without Borders

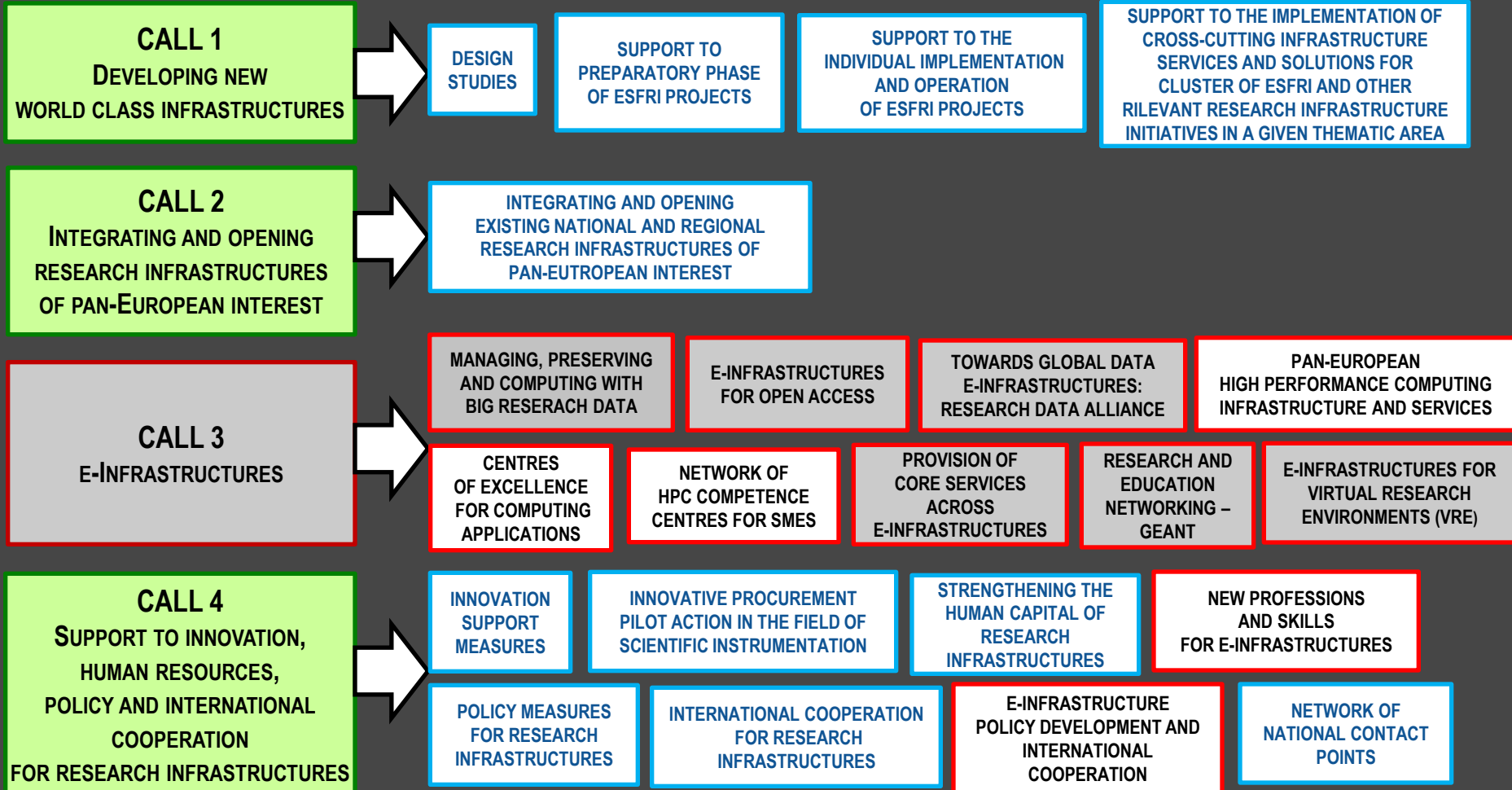
GÉANT 2020 as the
European Communications Commons

<http://bit.ly/geantEG>

e-infrastructures: Building Bridges



Research Infrastructures Work Programme 2014/2015



3. High-Performance Computing



EUROPEAN COMMISSION

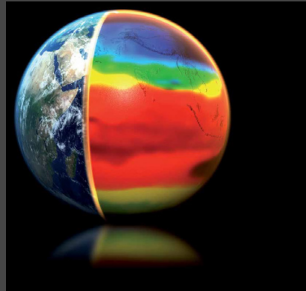
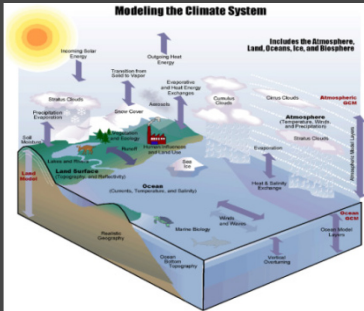
Brussels, 15.2.2012
COM(2012) 45 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

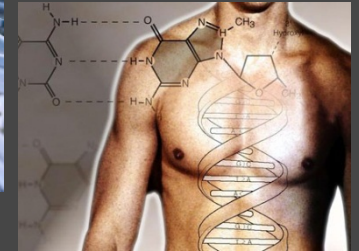
High-Performance Computing: Europe's place in a Global Race

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/12/139>

Why 's HPC on the Agenda ?

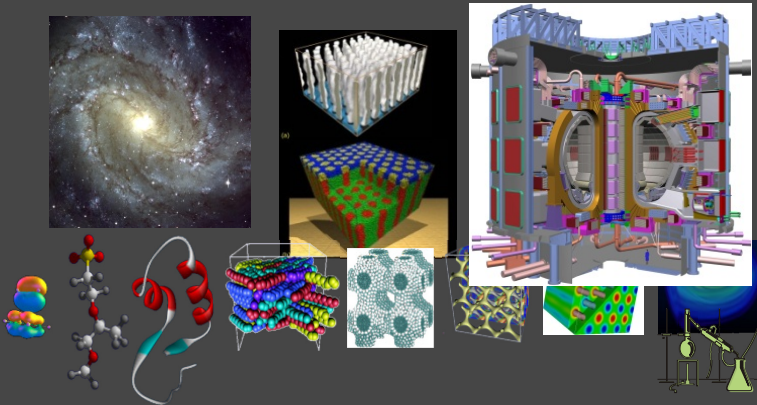


Weather, Climate & Earth Sciences

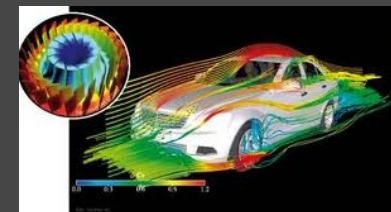
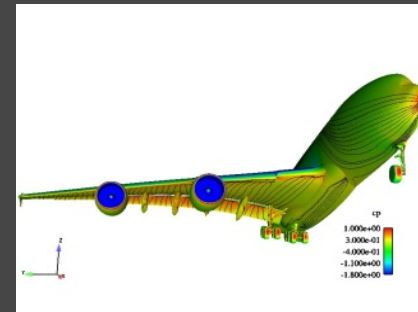
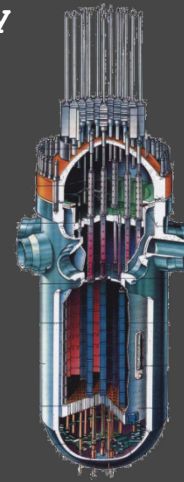


Life Sciences and Health

Industrial & Engineering
Application for
transport
and energy



Fundamental sciences: Physics,
Chemistry, Material Sciences,
Astrophysics Applications.



HPC in Europe: Potentials

- Applications and codes
- Deep, diverse HPC user experience and leading capabilities in
power-efficient microelectronics
processor designs
interconnects and mass storage systems
(sub)system integration software tools
- Potential openness and knowledge transfer to industry not yet exploited

HPC in Europe: Problems

- EU lost 10% HPC capabilities 2007-2009
- Japan overtook EU-27 in capacity
- Fragmentation of EU efforts across MS
- High reliance on foreign components
- European IPR benefiting others

HPC: Key Policy Actions

- Governance at EU level: Industrial Technology Platform, PRACE and centres of excellence
- Double HPC investment (MS, EU, industry)
- Tools: Resource pooling and pre-commercial procurement



Pointers

The Digital Agenda for Europe

<http://ec.europa.eu/digital-agenda>

Neelie Kroes ICT Innovation Speech (15/02/2012)

http://europa.eu/rapid/press-release_SPEECH-12-636_en.htm

Riding the wave – Final report of the High Level Expert Group on Scientific Data, October 2010

http://bit.ly/riding_the_wave

GÉANT Expert Group, Report “Knowledge without Borders”

<http://bit.ly/geantEG>

Open Data

<http://ec.europa.eu/digital-agenda/en/open-data-0>

Horizon 2020

<http://ec.europa.eu/research/horizon2020/>

Contacts

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