Copyright package, European Cloud Initiative and e-Infrastructures work-programme 2016-2017

French Rectors Conference – 10 November 2016

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DG CNECT - European Commission

Agenda

Copyright package and the TDM exception

European Cloud Initiative

E-Infrastructures work-programme 2016-2017

Copyright package – Adopted on 14 Sept.

Focuses on:

1. *More* ***cross-border access*** *for citizens to copyright-protected content online.*

2. Wider opportunities *to use copyrighted material for education, research, cultural heritage and disability (through so-called "exceptions").*

3. Fair rules of the game *for a better functioning copyright marketplace, which stimulates creation of high-quality content.*

Includes an Exception for Text & Data Mining (TDM) for research

What is TDM?

TDM are technologies that allow vast amounts of digital content to be read and analysed, generating new knowledge for the benefit of people and society.

H2020 supports the development of TDM:

openMINTED
Open Mining Infrastructure for Text & Data

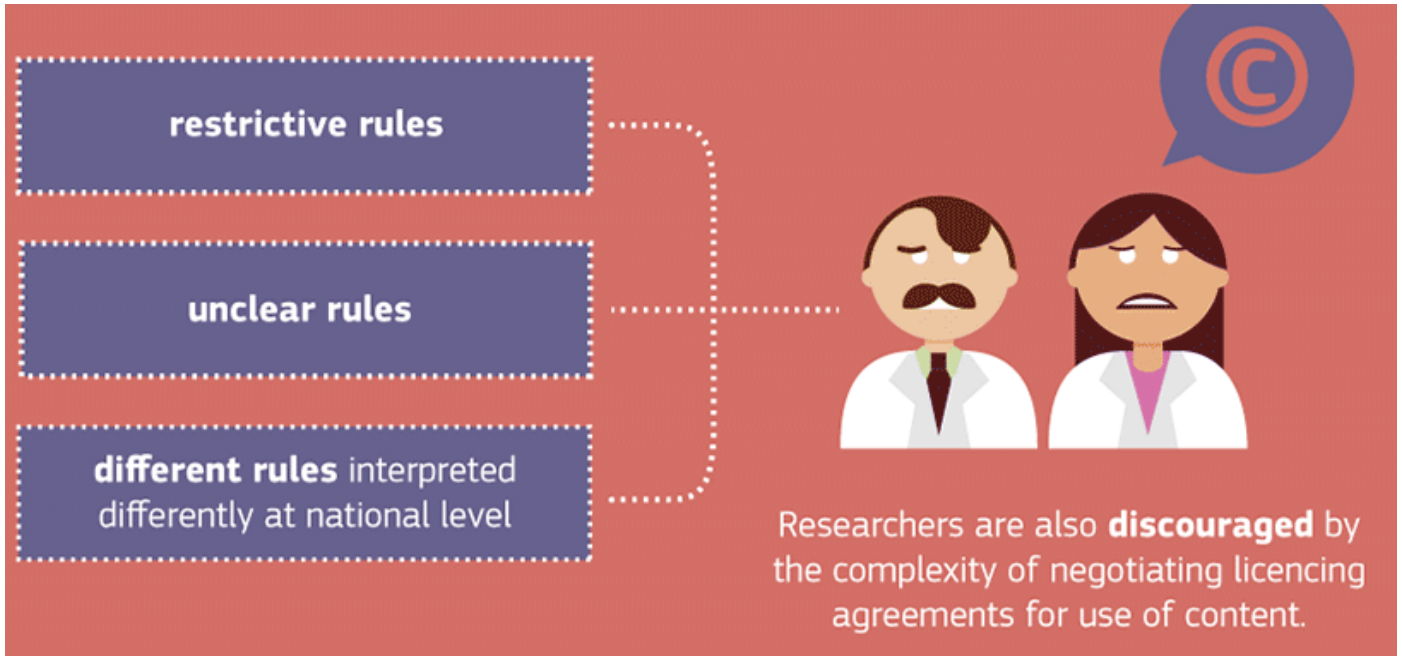
Objective: to create an open, service-oriented e-Infrastructure for TDM of scientific and scholarly content.

Researchers can collaboratively create, discover, share and re-use Knowledge from a wide range of text-based scientific related sources in a seamless way.

Why the exception?

TDM may involve the use of protected content, so may infringe current copyright rules.

Researchers face:



European Commission

T = Text

50 million
scientific articles worldwide

1 research paper
published every
13 seconds

D = Data

44 ZB

mountains
of information produced
by 2020, data will reach
44 zettabytes
(44 trillion gigabytes).

M = Mining

The exception could help
speed up research
into breakthrough solutions

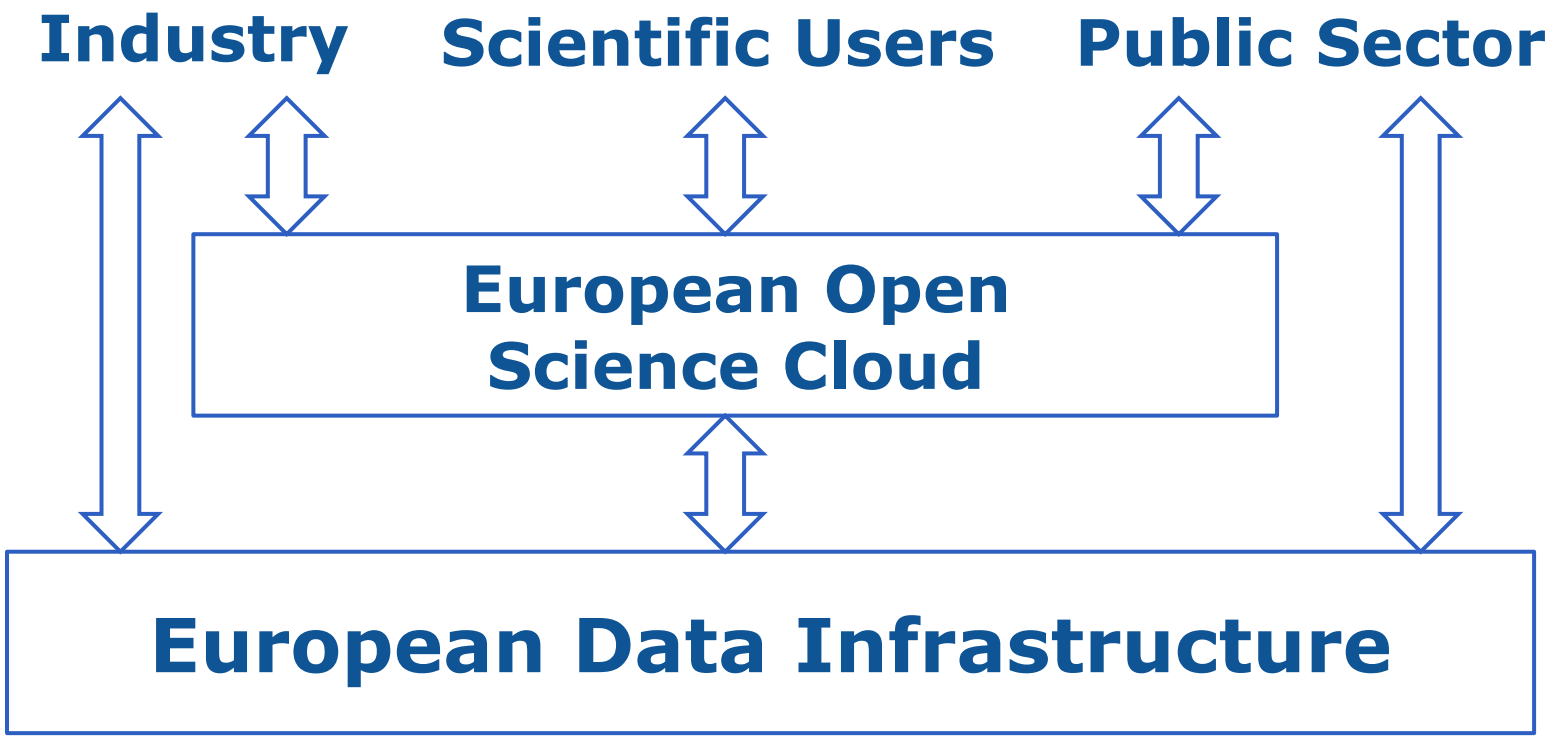
The European Cloud Initiative

- *European Open Science Cloud (EOSC)*
  - **Integration and consolidation of e-infrastructures**
  - **Federation of existing research infrastructures and scientific clouds**
  - **Development of cloud-based services for Open Science**
  - **Connection of ESFRIs to the EOSC**

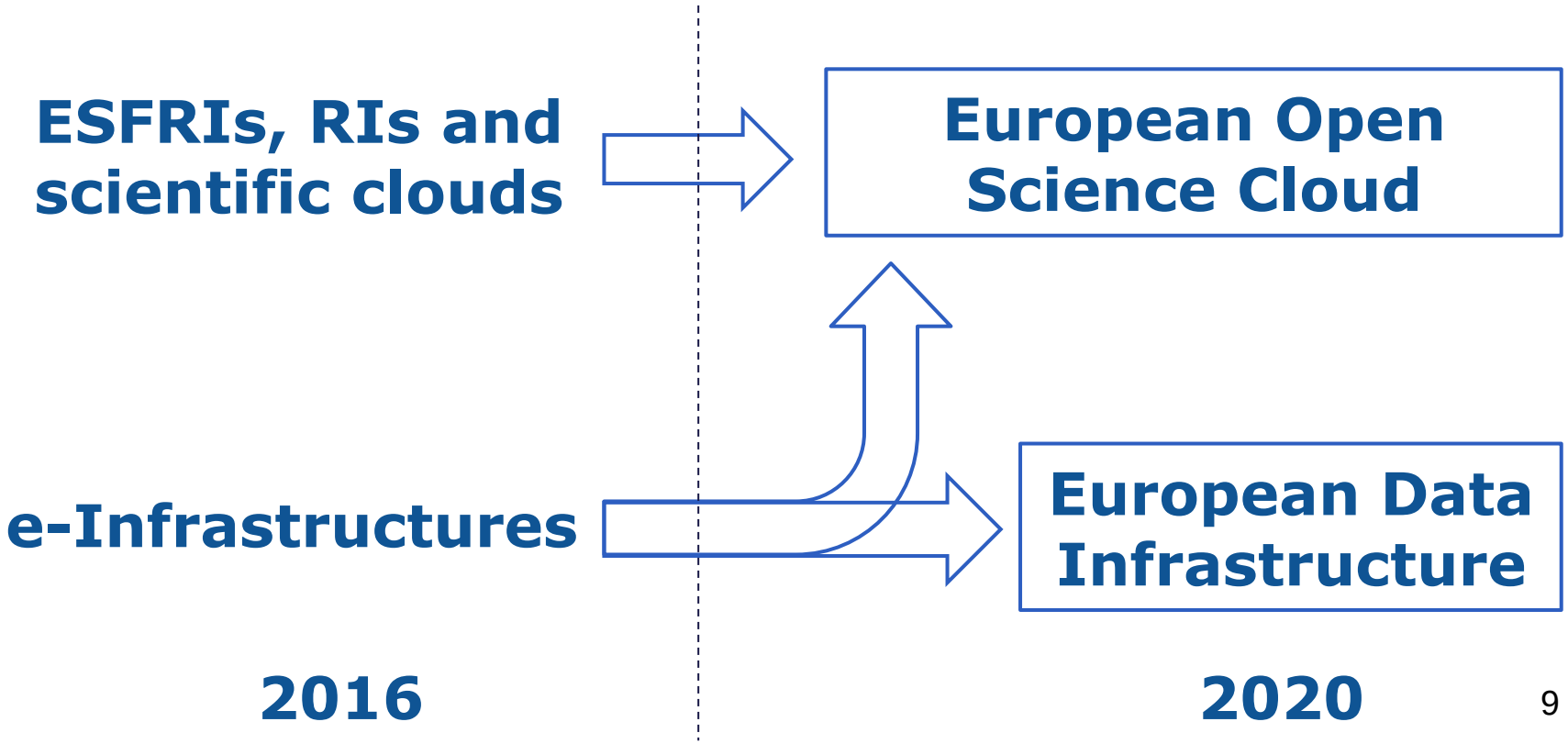
- *European Data Infrastructure (EDI)*
  - **Development and deployment of large-scale European HPC, data and network infrastructure**

- *Widening access*
  - **SMEs, Industry at large, Government**

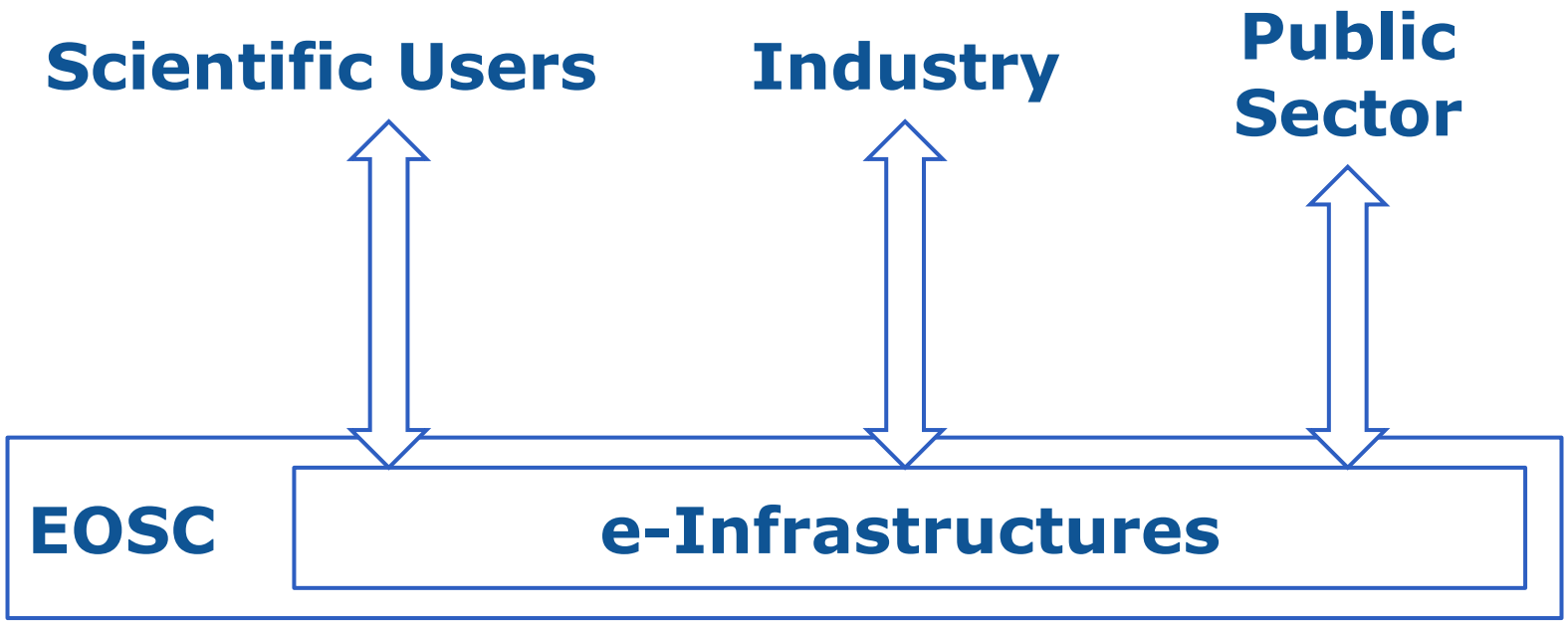
EOSC & EDI: Static View on Year 2020 (over-simplification)



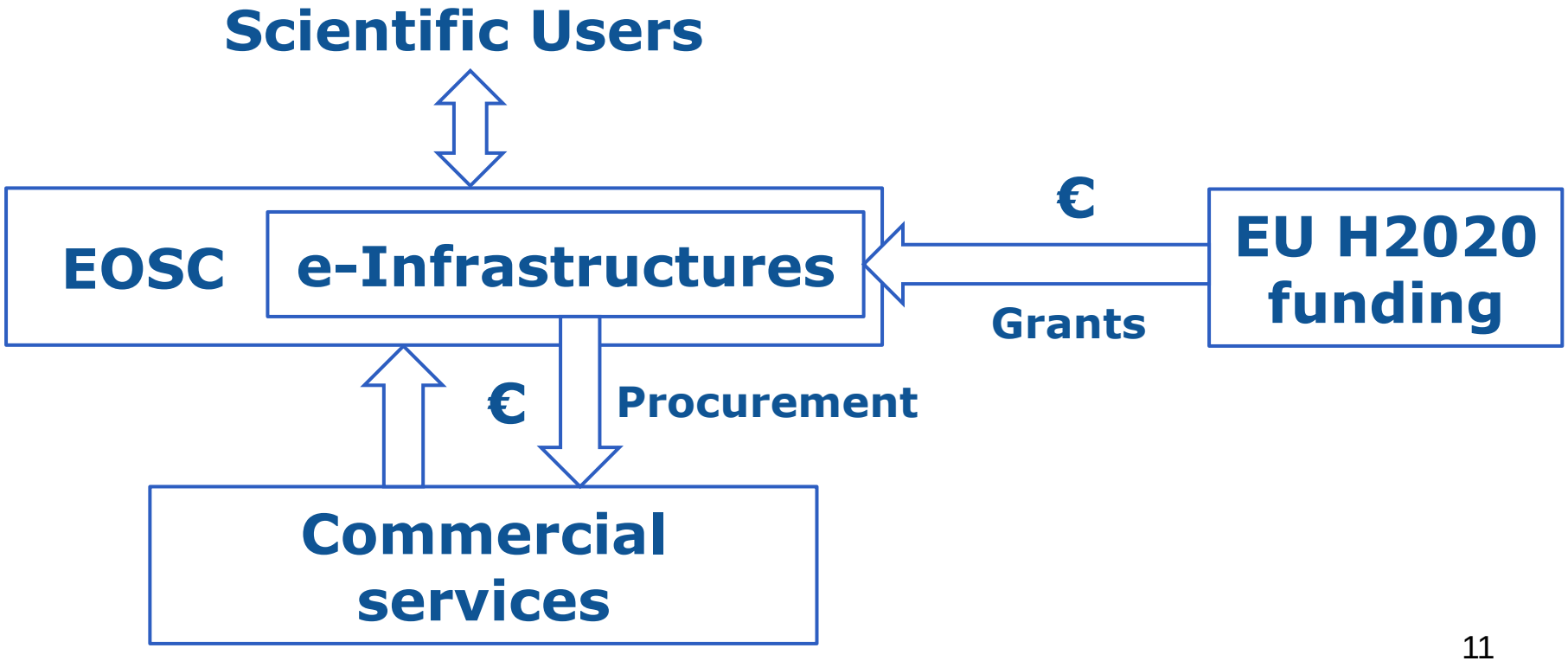
EOSC & EDI: Dynamic View from 2016 to 2020 (over-simplification)



Widening access (1/2): e-Infrastructures as service providers



Widening access (2/2): e-Infras as aggregators of demand



In short …

The European Open Science Cloud will encompass data, computing and networking services for the benefit of the whole scientific community and beyond

… and Horizon 2020 is accelerating the implementation of the European Open Science Cloud and widening policy by supporting European e-Infrastructure platforms and projects to become European Open Science Cloud service providers and demand aggregators

e-infrastructures are the foundation of the European Open Science Cloud

https://ec.europa.eu/futurium/en/content/e-infrastructures-making-europe-best-place-research-and-innovation

e-Infrastructure work-programme 2016-2017

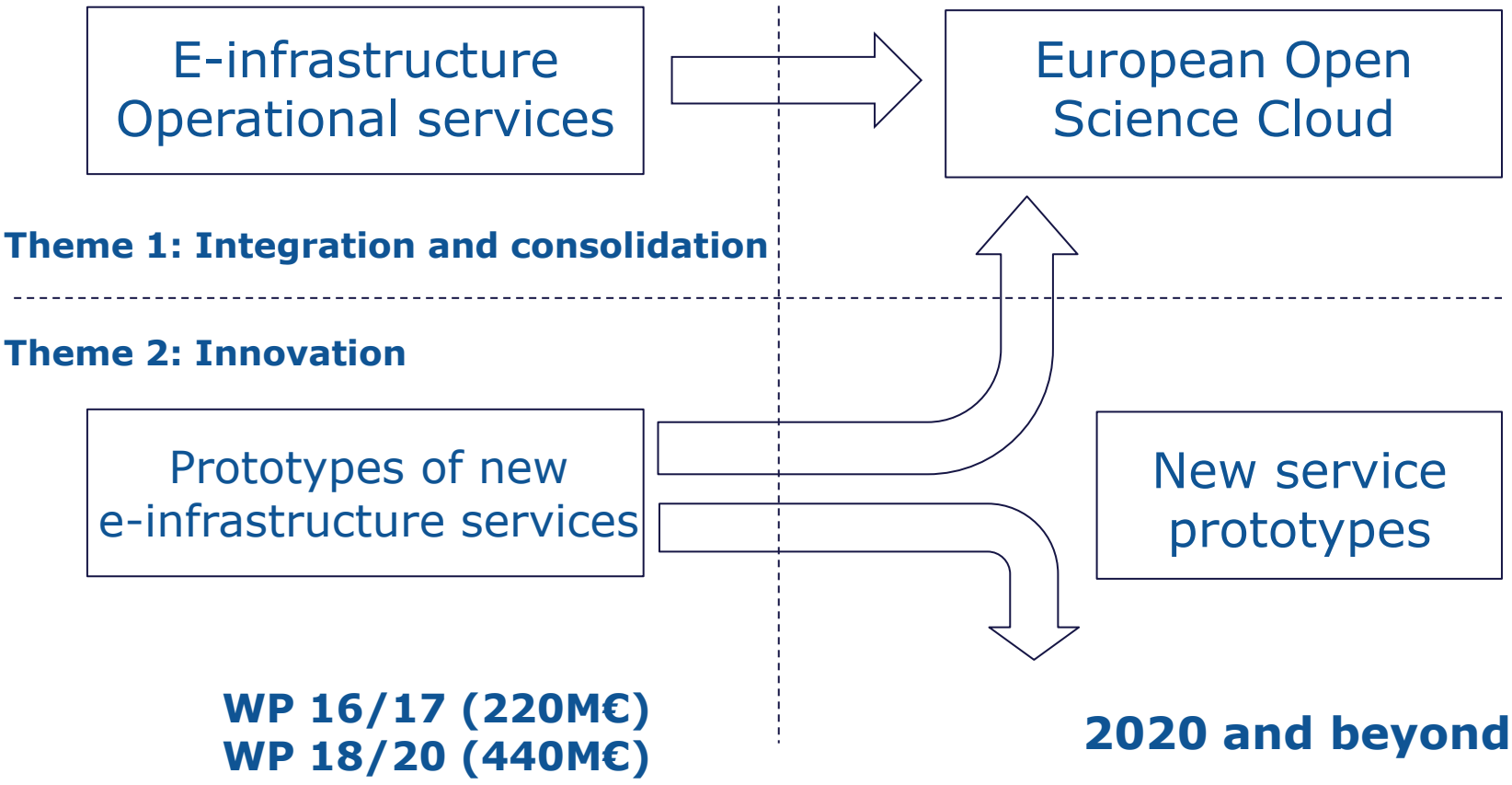
Theme 1:

Integration and consolidation of e-infrastructures services

Theme 2:

Prototyping of innovative e-infrastructure services

Interplay between Theme 1 and Theme 2: a dynamic view



Concrete steps

- *Theme 1 – EINFRA-12-2017 – Data and distributed computing e-infrastructures for Open Science (€40 M€)*
  - **Integration and consolidation of e-infrastructure services**

- *Theme 2 – EINFRA-21-2017 – Platform-driven e-infrastruct. innovation (€20 M€)*
  - **Service development**

- *INFRASUPP-02-2017(3) – Support to the **Research Data Alliance (RDA)** (€3.5M€)*

Closing date: 29/3/2017

EINFRA-12-2017(a) Secure and agile data and distributed computing e-infrastructures

- ***Integration*** *of resources exposing them through a dynamic registry and* ***catalogue of services***
- *Engagement with* ***user communities***
- *Promoting* ***interoperability*** *with similar infrastructures and exploiting economies of scale*
- *Interoperability of pan-European* ***thematic e-Infrastructures***

Expected EU contribution: EUR 10 to 15 million
Maximum: EUR 30 million

EINFRA-12-2017(b) Access and preservation platforms for scientific information

- *Support of publishing platforms and services for scientific information linking institutional and thematic repositories across Europe*
- *Collection of bibliometric data on publications, citations etc. on all Horizon 2020 scientific output. Delivery of standard and on-demand statistics.*

Expected EU contribution: EUR 8 to 10 million
Maximum: EUR 10 million

Evaluation criteria for EINFRA-12-2017

- *Excellence*
  - **TRL8 required before the start of the project**
  - **Quality of the catalogue of services**
  - **Key Performance Indicators (measurements and baseline)**
- *Impact*
  - **Potential to enhance capacity for innovation and production of new knowledge**

Implementation mechanism for EINFRA-12-2017

- *All proposals responding to this call will be evaluated by the same expert evaluators*
- *Additional experts (**external board**) will help the Commission to identify potential synergies, overlaps and gaps in the overall service offering of retained proposals (amendment in WP)*
- *Successful proposals will conclude **complementary grants** with the Commission, which requires them to sign **collaboration agreements** among themselves*
- *The Commission will encourage projects to take into consideration the findings on synergies, overlaps and gaps when concluding their collaboration agreements*
- *After six months of grant agreement signature, the Commission will convene the external board to assess the collaboration agreements*
- *Reviews for these projects will be run jointly*

EINFRA-21-2017(b.1) e-Infrastructure prototypes for universal discoverability of data objects and provenance

- *Service prototype for the uptake of a Digital Identifier for digital objects across disciplines and geographical areas*
- *Promote federation of locally operated systems to ensure interoperability*
- *Address requirements from all relevant stakeholder groups*

Expected EU contribution: EUR 4 to 5 million

EINFRA-21-2017(b.2) Computing e-infrastructure prototypes with extreme large datasets

- *Service prototyping for dealing with very large data resources*
- *Support by robust mathematical methods and tools following an open source approach and aiming at common interfaces*
- *New model approaches to HPC and data management are encouraged*

Expected EU contribution: EUR 2.5 to 3 million

Evaluation criteria for EINFRA-21-2017

- *Excellence*
  - **TRL 6 (min.) required before the start of the project and achieving at least TRL 8 by the end**
  - **The extent to which the proposed activities will improve, in quality and/or quantity, the services provided by state of the art e-infrastructures**
- *Impact*
  - **Potential to enhance capacity for innovation and production of new knowledge**

INFRASUPP-02-2017(3): European support to RDA

- *Support the emergence of a data infrastructure fostering interoperability*
- *Support the RDA secretariat for*
  - **Logistics**
  - **Open access to RDA documents**
  - **Dissemination activities**
- *Financial support for European stakeholders to engage in RDA processes*
  - **In particular, support to ESFRI infras and other communities**

Expected EU contribution: EUR 3 to 3.5 million
Maximum: EUR 3.5 million

Future: WP18-20

More European Open Science Cloud

More European Data Infrastructure

More widening

More service provision and development

More agregation of demand

More integration

More consolidation

Thanks!

Back-up

Digital Single Market Technologies and Public Service Modernisation Package

- *Digitising European Industry*
  - **SWD on Advancing the Internet of Things**
- *European Cloud Initiative*
  - **SWD on High-Performance Computing**
  - **SWD on Quantum Technologies**
- *Priorities for ICT Standardisation*
- *E-Government Action Plan*

Adopted on 19 April 2016

Why Europe is not yet fully tapping into the potential of data?

- *Data coming from publicly funded research is not always **open** due to lack of clear incentives*
- *Lack of general framework for the **reuse** of data*
- *Lack of data **interoperability***
- ***Fragmentation** of data infrastructures (geographic, thematic, technological, governance)*
- *Offer does not match demand in world-class High Performance Computing (**HPC**) infrastructures*

European Commission

AARC: Authentication and Authorisation for Research and Collaboration

www.aarc-project.eu

BlueBRIDGE: Building Research environments fostering Innovation, Decision making, Governance and Education to support blue growth

www.bluebridge-vres.eu

EarthServer2: Big Earth Data at your fingertips

www. earthserver.eu

EDISON: Building the data science profession

www. edison-project.eu

EGI-Engage: Engaging the Research Community towards an Open Science Commons

go.egi.euengage

e-IRG: Paving the way towards a general purpose European e-Infrastructure

www. e-irg.eu

EUDAT: European Data Infrastructure

www.eudat.eu

EVER-EST: A Virtual Research Environment for the Earth Sciences

www.everest-eu.eu

GÉANT Project (GN4-1): Accelerating research, driving innovation and enriching education

INDIGO-DataCloud: INtegrating Distributed data Infrastructures for Global ExplOitation

LEARN: LEaders Activating Research Networks

MuG: Multi-scale complex Genomics

European Commission

OpenAIRE: Science set free

www.openaire.eu

OpenDreamKit: Open Digital Research Environment Toolkit for the Advancement of Mathematics

www.opendreamkit.org

OpenMinTed- Open Mining Infrastructure for Text and Data

www.openminted.eu

PhenoMeNal: Phenome and Metabolome aNalysis

www.phenomenal-h2020.eu

PRACE: Partnership for Advanced Computing in Europe

www.prace-ri.eu

RDA: Research Data Alliance

www.rd-alliance.org

READ: Recognition and Enrichment of Archival Documents

read.transkribus.eu

SESAME Net: Supercomputing Expertise for Small And Medium Enterprises

www.sesamenetwork.eu

THOR: Technical and Human infrastructure for Open Research

VI-SEEM: Virtual Research Environment (VRE) for regional Interdisciplinary communities in Southeast Europe and the Eastern Mediterranean

VRE4EIC: A Europe-wide Interoperable Virtual Research Environment to Empower Multidisciplinary Research Communities and Accelerate Innovation and Collaboration

West-Life: World-wide E-infrastructure for structural biology

Successful governance and funding mechanisms are already in place …

Pan-European e-infrastructures with specific governance and funding models

GÉANT
Networks · Services · People

EGI-Engage: Engaging the Research Community towards an Open Science Commons

PRACE: Partnership for Advanced Computing in Europe

OpenAIRE

RDA: Research Data Alliance

EUDAT: European Data Infrastructure

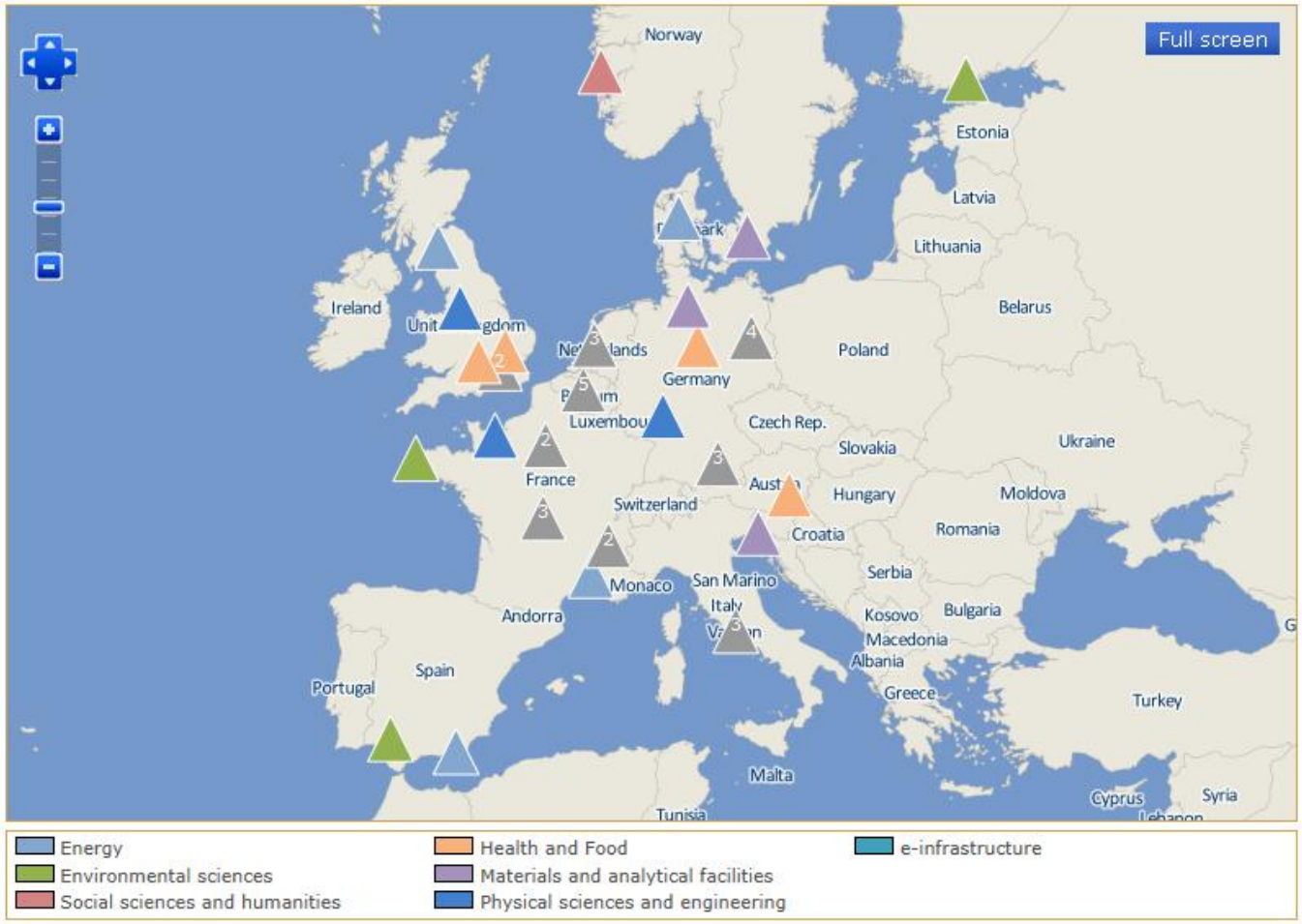
European Commission

Europe's Leading Public-Private Partnership for Cloud

The Helix Nebula Initiative is a partnership between industry, space and science to establish a dynamic ecosystem, benefiting from open cloud services for the seamless integration of science into a business environment. Today, the partnership counts over 40 public and private partners.

European Commission

Pan-European Research Infrastructures



And to complete the picture consider also international, national, regional, local, institutional, commercial and other research infrastructures and e-infrastructures

So, with all that in mind, how should the current governance and funding mechanisms be adapted to support the:

- Integration and consolidation of e-infrastructures
- Federation of existing research infrastructures and scientific clouds
- Development of cloud-based services for Open Science
- Connection of ESFRIs to the European Open Science Cloud

Introducing the new C1 team ☺

Head of Unit	Augusto Burgueño Arjona
Deputy Head of Unit	Cristina Martinez
Research Data Policy Sector	Georgeta Serafim
Administrative Support	Gaëlle Velge
	Patricia Heindryckx
	Amel Ayatellah
Financial Officers	Rudi Gschnitzer
	David Belle
Communication Officer	Stéphanie Matt
Project Officers	*Enrique Gomez Martinez*
	Martin Majek
	Pilar Ocon-Garces

The Digital4Science platform

www.ec.europa.eu/d4science

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@FETflagships
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