BUILDING A EUROPEAN DATA ECONOMY: THE ROLE OF RESEARCH DATA

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Industry Forum - RDA Pre-Plenary event
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Outline

The potential of data

European policies on data

- Context: Digital Single Market strategy
- Personal data: Data protection regulation
- Government data / public sector information
- Research data
- Text & datamining (copyright reform)
- Industrial data

Next steps: bringing it all together

Outline: references to research

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Three potential scenarios and alternative 2020 development paths for the European Data Market and Economy

2016 Actual

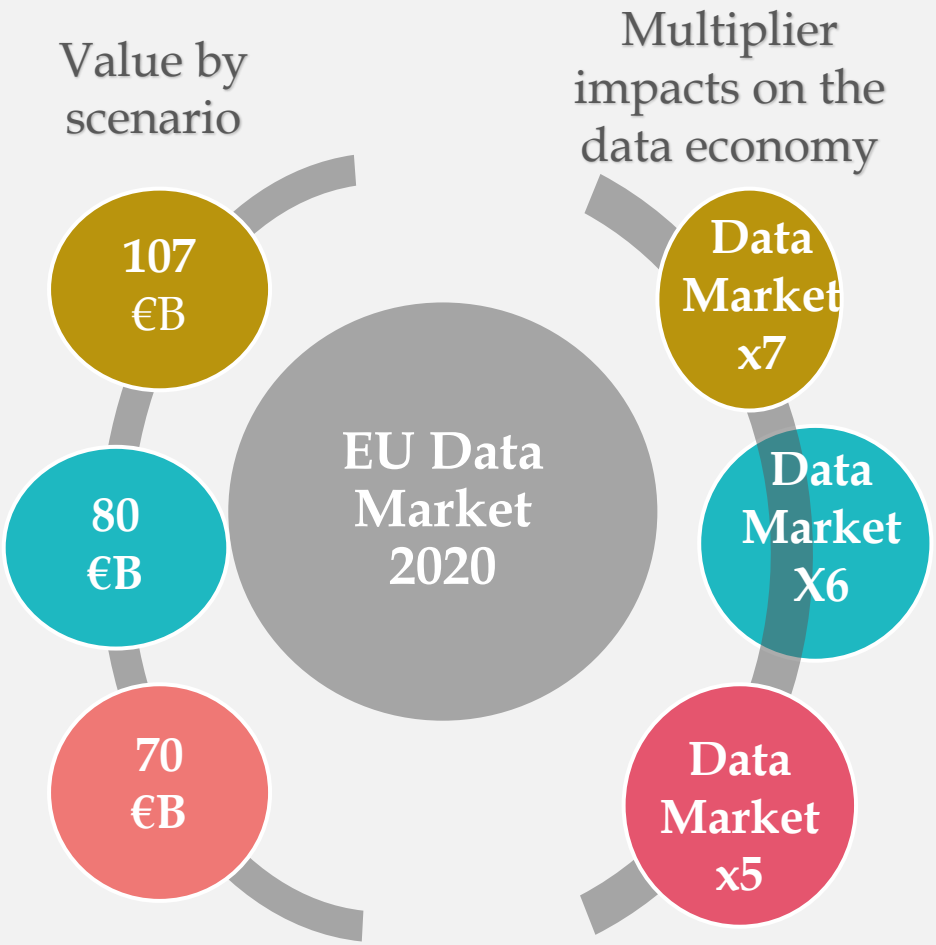
BASELINE SCENARIO
Exploiting Innovation
Continuing on the positive growth path
Strong supply-push by the data industry

High-Growth Scenario
Maximising data users benefits
Hyperconnected society
High data sharing

Challenge Scenario:
Fragmented Market
Weak Demand
Low data sharing

Source: European Data Market Monitoring Tool, IDC 2016
data: www.datalandscape.eu

By 2020 the European Data Economy in the most favourable scenario could contribute up to 4% of EU GDP



EU Data Economy 2020

HIGH GROWTH SCENARIO
Maximising data users benefits
739 €B
4% EU GDP

BASELINE SCENARIO
Exploiting innovation
452 €B
2.6% EU GDP

CHALLENGE SCENARIO
Few growth opportunities
354 €B
2.2% EU GDP

Source: European Data Market Monitoring Tool, IDC 2016
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European Commission

European Commission

Digital Single Market Strategy

Pillar 3

ECONOMY & SOCIETY

Ensuring that Europe's economy, industry and employment take full advantage of what digitalisation offers.

- Digitising industry ✓
- Cloud ✓
- Inclusive digital economy and society ✓
- e-government ✓
- Standardisation & interoperability ✓
- Digital skills ✓
- **Data economy** ✓

Data should be able to flow freely across borders and within a single data space. We need a coordinated and pan-European approach to make the most of data opportunities, building on strong EU rules to protect personal data and privacy.

Andrus Ansip

European Commission | #dataeconomy

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Data protection rules: Foundation of the EU data economy

- From May 2018: single pan-European set of rules for the protection of personal data (esp. General Data Protection Regulation, GDPR)
- Anonymised personal data: treated like non-personal data
- Any transfer of personal data outside the EU is subject to the same level of protection as inside
- Data subjects have a right to personal data portability

→ Personal data rules = baseline (other initiatives build on these)

→ Clear rules for personal data (not the case for all data)

→ Personal data can flow (if consent is given)

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Public sector information / Open data

Public sector:

- major producer of data (e.g. statistics)
- major user of data for policy-making
- increasingly digital (e-Gov, Smart Cities)
- key contributor to the data economy

Innovative products & services

Better policy-making

Public Sector Information Directive Dir. 2003/98/EC & revision 2013/37/EU

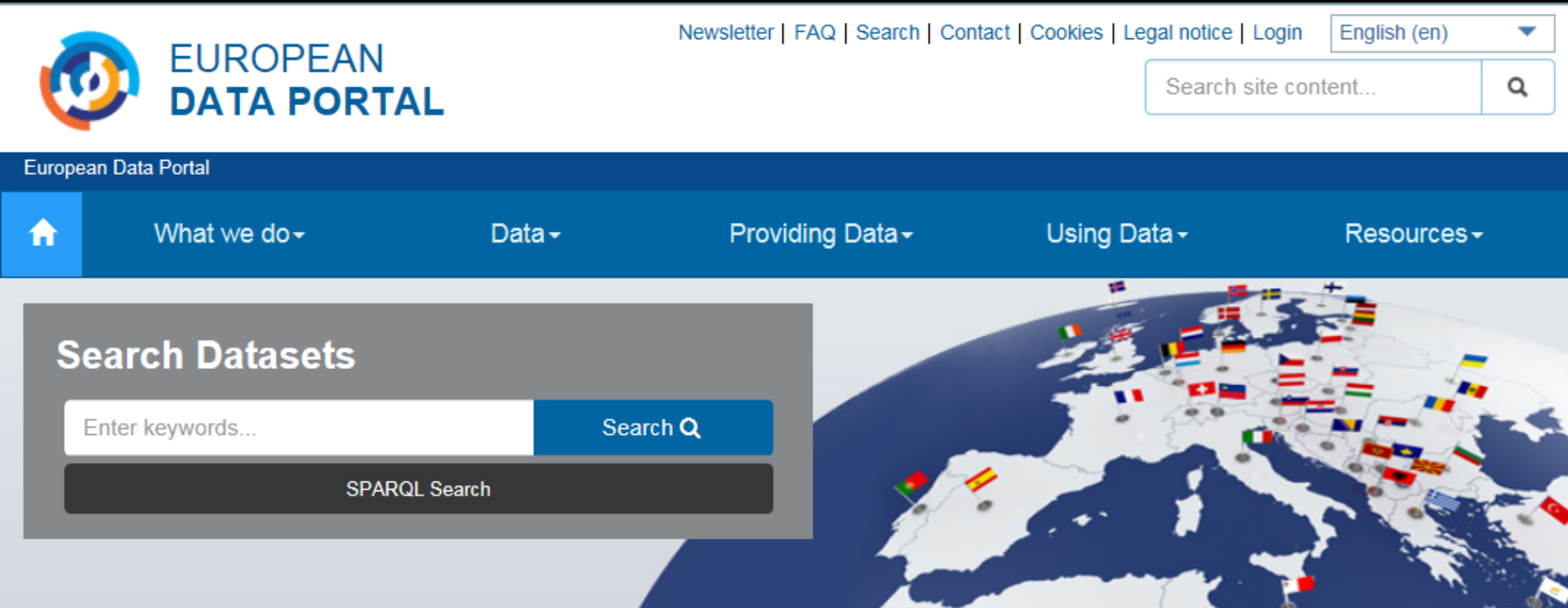
- Information produced & collected by the public sector available to citizens & businesses as open data
- Right to re-use public information
- Charges: marginal costs only
- From competition instrument to open data instrument

European Commission

The European Data Portal

- facts & figures -

630,000 datasets | Metadata in **24** Languages | **34** countries **77** catalogues



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Open Science

Good for science: limit research duplication, ensure verifiability, ensure replicability,

Good for the economy: uptake of results by businesses, esp. SMEs → innovation potential

Good for society: higher level of citizen and civil society trust in science, open and collaborative research practices lead to high degree of responsiveness and adaptability to societal challenges

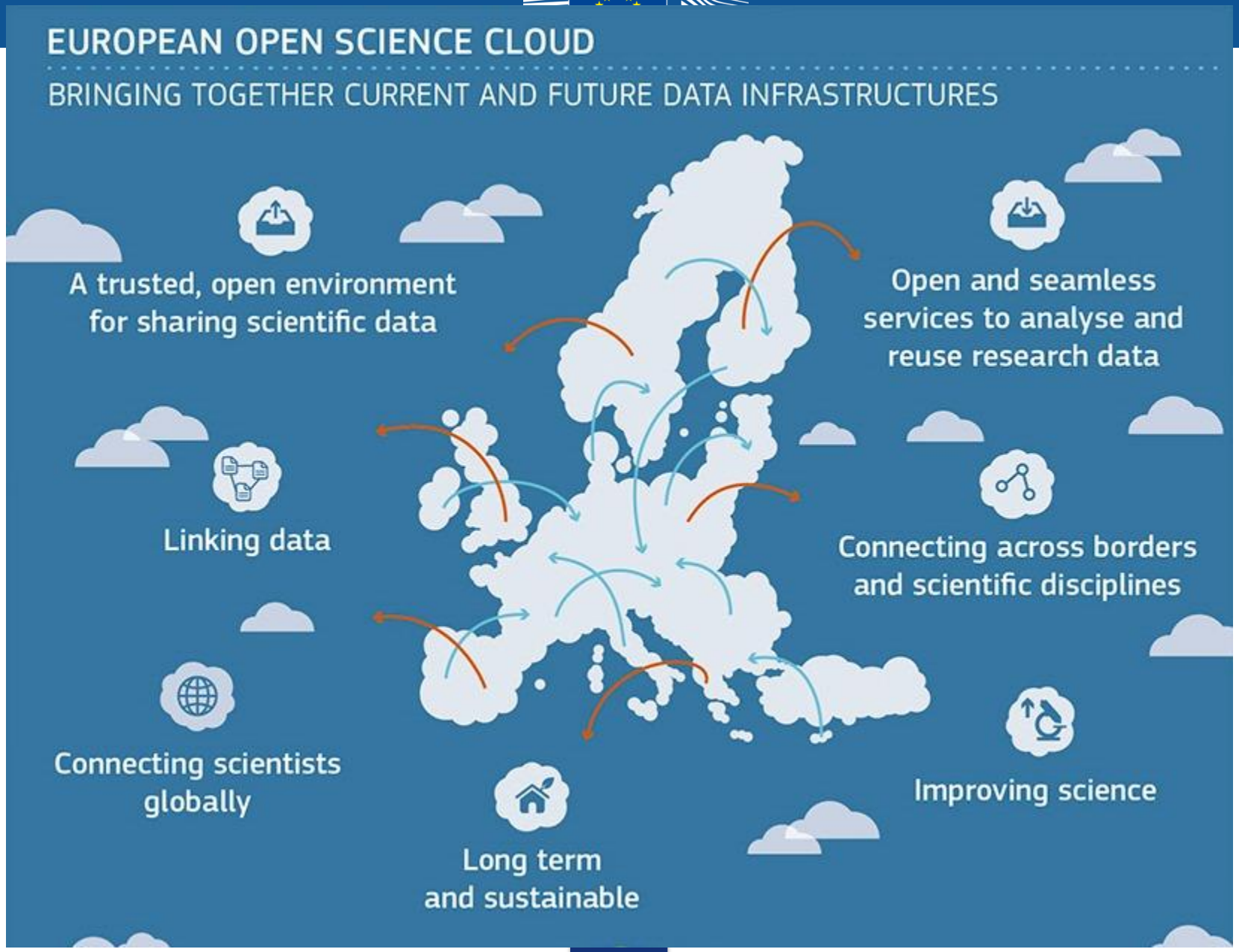
European Commission

OPEN RESEARCH DATA
IN HORIZON 2020

Research and Innovation

Open Research Data Pilot (Horizon 2020)

- Now covers all thematic areas of Horizon 2020 (as of 2017 WP)
- Horizon 2020 grantees are required to:
  - deposit underlying research data + other research data of their choice in a repository
  - take measures to grant open access to this data
- FAIR research data: Findable + Accessible + Interoperable + Re-usable → Obligatory Data Management Plan (DMP)
- Opt-out is possible (IPR protection, data protection, security, confidentiality)
- Numbers:
  - Calls in core-areas: 65% stay in, opt out 35%
  - Other areas: voluntary opt-in 14%


EUROPEAN OPEN SCIENCE CLOUD
BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES
A trusted, open environment for sharing scientific data
Open and seamless services to analyse and reuse research data
Linking data
Connecting across borders and scientific disciplines
Connecting scientists globally
Improving science
Long term and sustainable

From vision to action: core functions of the EOSC

- **Data stewardship:** framework conditions to share and re-use data
- **Standard setting and certification** - common language/interface (e.g. standards for metadata, specifications for making data FAIR, certifications for data service providers).
- **Cataloguing of research data**, service availability and user needs (i.e. a full catalogue of services needed by scientists to find, store, share and process research data).
- **Provision of core common services**, ensuring affordable and sustainable access to data analytics and computation to EU researchers.
- **Establishing rules of engagement**, terms and conditions for contributing to and benefitting from data services for all stakeholders (e.g. data/service users, data providers, operators of infrastructures, commercial service providers).
- **Agenda setting**, identifying priorities at EU level for new or upgraded research data infrastructures and services.

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Text and Data-Mining exception (EC proposal 2016)

2001 Copyright Directive	2016 proposal	Note
Optional implementation	**Mandatory** implementation	Lawful access required
Subject to **different interpretations**	**Clarified** for TDM	
Applying to 'non-commercial' research	**Open** to any scientific research	
Open to any beneficiary	**Applying** to research organisations acting in public interest/not-for-profit	
Unclear on other contracts	**Not** overridable by contract	
Technical protection measures (TPM)	TPM + security/integrity of networks and databases	

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European Commission

Building a European Data Economy - COM(2017)9

- Need to access and exploit industry-held data better
- Focus on non-personal, machine-generated data
- Contracts as main vehicles to share and re-use
- Data silos, innovation hampered
- Objective: facilitate B2B data sharing and trading
- Chapters on:
  - Free Flow of Data (national data localisation restrictions)
  - Access and transfer
  - Postability, interoperability and standards
  - Liability
  - Experimentation
- Further detail in Staff Working Document

European Commission

Access to and re-use of industry data

Possible actions:

- Guidance on data sharing
- Foster technical solutions to identify and exchange data, e.g. API (Application Programming Interface)
- Model contract rules, e.g. for licensing data
- Access for public interest **and scientific purposes**
- Establish a data producer's right
- Establish access against remuneration mechanisms

Industrial Data Platforms

Concept:

Virtual environments facilitating exchange and connection of data among different companies and organisations and across sectors, through a shared reference architecture, common governance rules and within a secure business ecosystem.

Potential for the Data Economy:

important as technical enablers for access to and re-use of data in industrial contexts, respecting the specific needs of industrial players.

What we do:

- Industrial Data Platforms (context: 'Digitising European Industry')
- Horizon 2020: Open Call for 'iSpaces': cross-sectorial and cross-lingual data integration and experimentation - Budget 27 M€

European Commission

European Commission

Structured Stakeholder Dialogue

- **Dialogue** with Member States and stakeholders
- **Public online consultation (10/01 to 26/04)** on topics of Communication (answer relevant sections)
- **Studies** to gather further evidence
- **Workshops** (May-June)

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The data economy will flourish *if* data is accessible & re-useable:

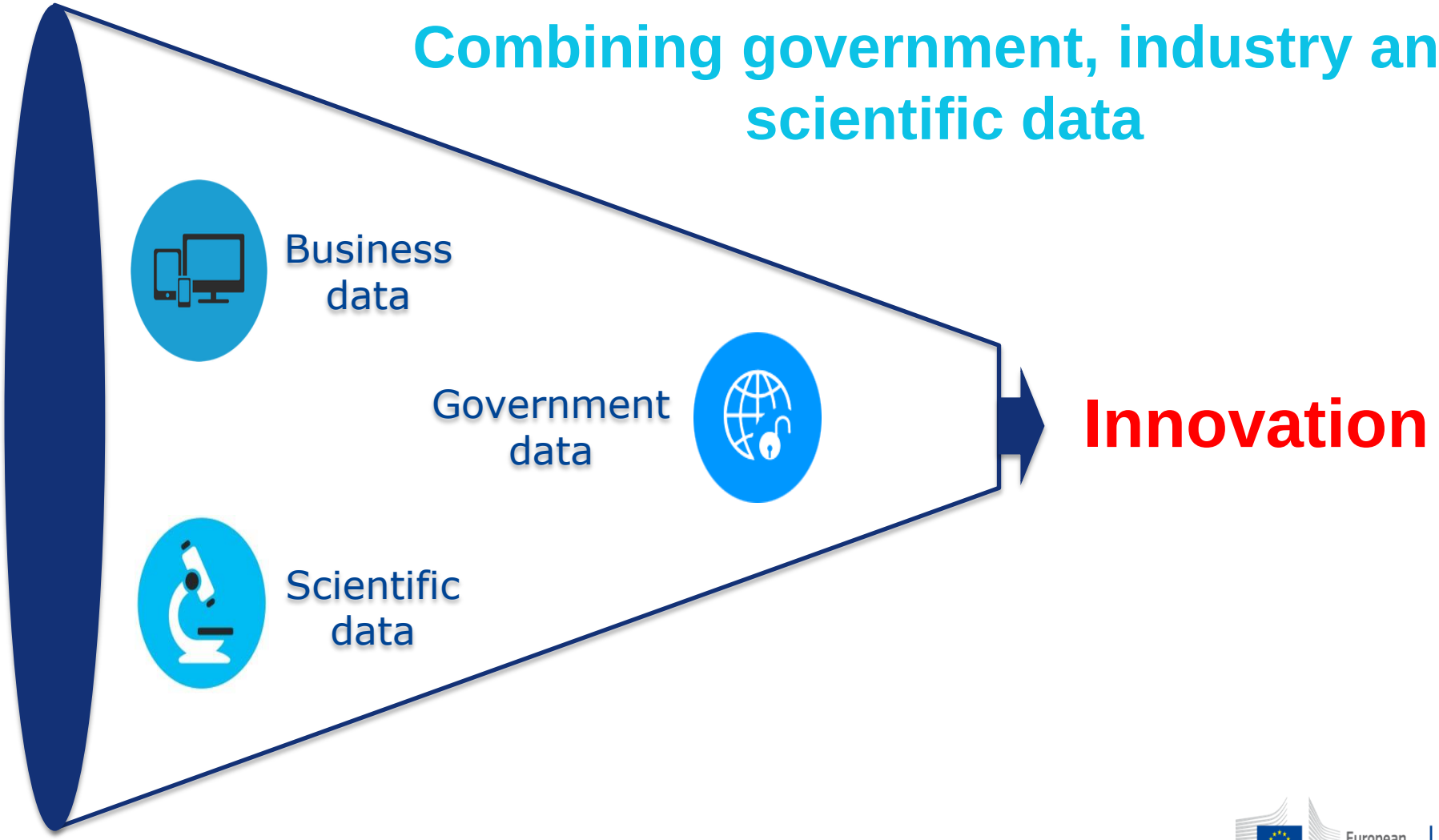
- across borders
- for & by different types of organisations (private, public, research)
- for & by different sectors (e.g. energy, manufacturing, …).

Having a large reservoir of data available for re-use will

- make it possible to build new information services
- allow for searching for correlations and patterns
- enable the emergence of ideas and answers to societal challenges
- e.g. epidemics, smart cities

→ It must be legally & technically possible not only to access and re-use, but also to blend and combine data and tools.

Combining government, industry and scientific data



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→ ***Research data is ubiquitous***

→ ***Research data is key***

Next steps: Bringing it all together

Separate policy streams: time to bring together?

Separate infrastructures: federate, consolitate, co-ordinate (EOCS "Widening" pillar)

Work with existing instruments, e.g. PSI Directive, Open Research Data Policy, Database Directive, etc.

Next milestone: DSM Midterm Review

Thank you!

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