



**Finding a common ground: Industry, research data and
the EU Data Economy**

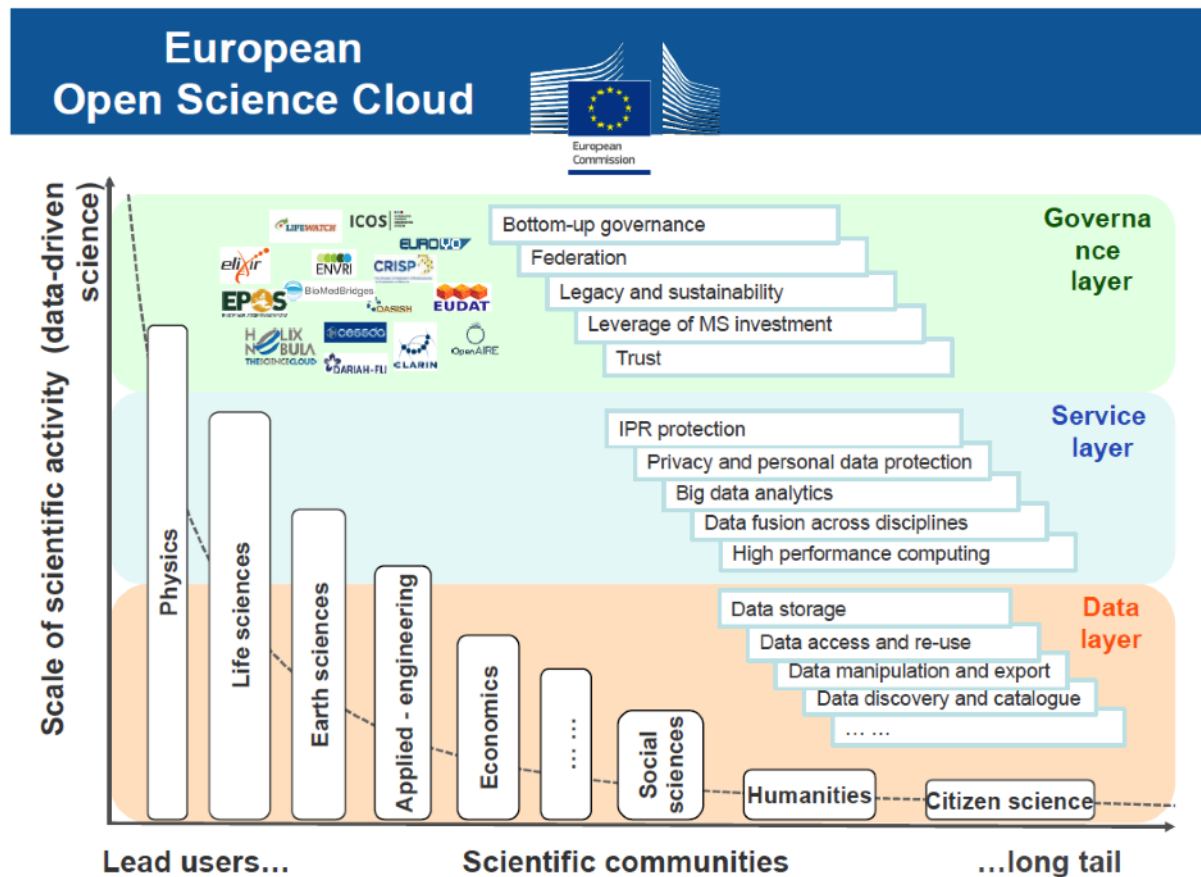
Data Management Policies for SMEs

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Dpt. e-Infrastructures

European Open Science Cloud



Source: "Open Science policy: Results of the consultation on 'Science 2.0: Science in transition' and possible follow up." Presented by J.C. Burgelman, June 3 2015 at e-IRG workshop.

The European Digital Single Market

Andrus Ansip,

Vice-President Digital Single Market

*“If I had to express my views about the digital future – that of Europe or indeed, of the whole world - I could do it with one word: **data**.”*

See: https://ec.europa.eu/commission/2014-2019/ansip/announcements/speech-vice-president-ansip-bruegel-annual-meeting-productivity-innovation-and-digitalisation-which_en

The European Digital Single Market Added Value for All

Compared to other regions across the globe, the European Union (EU) Member States are generally characterized by an **above-average participation of the public sector in the national economies**, with common estimates of the **public sector's stake** in national GDPs ranging from **25% to 50%** of their respective economies, depending on the country and on the metrics used. As a result, European administrations generally invest a significant budget in the creation of **Public Sector Information (PSI), or Open Data**.

This information has a potential economic value that significantly exceeds its strict public sector utility.

Creating Legal Frameworks

On a high level two initiatives with related legal aspects have a huge impact on the architectures proposed by the EOSC initiative and the Open Science movement

1 The **SDGs** (Sustainable Development Goals) of the U.N.

2 The **DIRECTIVE EU 2013/37** *amending Directive 2003/98/EC on the re-use of public sector information*

The DIRECTIVE EU 2013/37

amending Directive 2003/98/EC on the re-use of public sector information

Among all legal instruments, the Directive EU 2013/37 - which amended the Directive 2003/98/EC on the re-use of public sector information has demonstrated to one of the most crucial instruments

According to paragraph (33) the objectives of Directive EU 2013/37 are to

- facilitate the creation of Union-wide information products and services based on public sector documents, and
- to ensure the effective cross-border use of public sector documents.

The Directive includes also the possibility of **PPP models** and resulting business models.

(§3) Open Data Policies *and economic growth*

- (3) Open data policies which encourage the wide availability and re-use of public sector information for private or

technical or financial constraints, and which promote the circulation of information not only for economic operators but also for the public, can play an important role in kick-starting the development of new services based on novel ways to combine and make use of such information, stimulate economic growth and promote social engagement. However, this requires a

Creating Legal Frameworks

These **legal initiatives** contain crucial elements that are relevant.

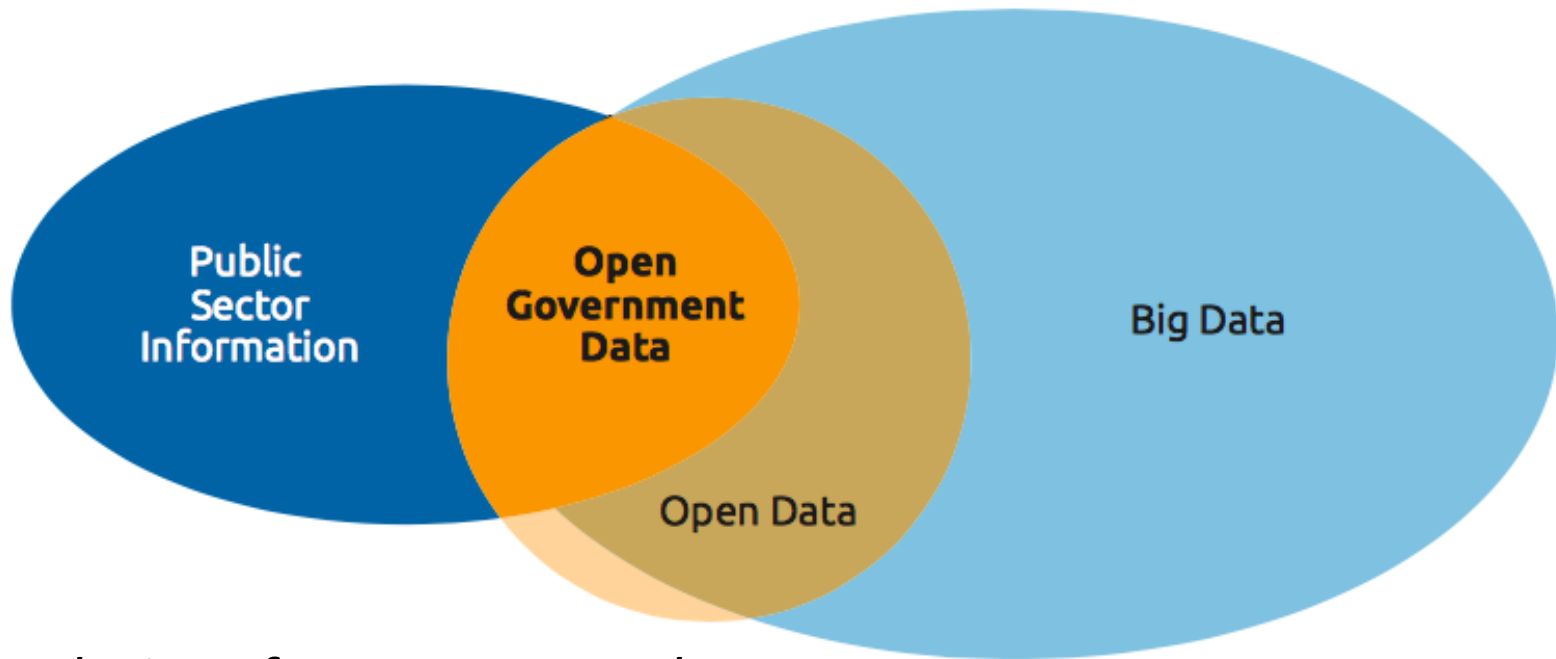
DIRECT IMPACT:

This legal frame contributes to the creation of:

- a common legal space for *FAIR data and FAIR infrastructures*
- *crossborder services and related infrastructures*
- the use of *common terminologies*
- *the alignment of policies*
- the adoption of *good governance models* along the whole data value chain
- the adoption of *funding mechanism* that lead to the distribution of data
- the realization of goals pursued by the *Open Access* movement

Creating Value Through Open Data

Open Data is a sub-set of the commonly used term Big Data



*Boundaries of Open Data and
Public Sector Information*

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources
https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

Creating Value Through Open Data

For 2016 the total market value of Open Data was estimated between 193 bn EUR and 209 bn EUR with an estimated projection of 265-286 bn EUR for 2020, including inflation corrections.

For the period 2016-2020, the cumulative direct market size is estimated at 325 bn EUR. The cumulative total market size for Open Data is forecasted to be between 1,138 and 1,229 bn EUR.

Source: **November 2015** - A study on the Impact of Re-use of Public Data

Resources

https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf



Open Data – Impact on Job Creation

EU 28+ private sector: job creation

→ directly linked to the re-use of Open Data - excluding staff working in government administrations

In 2016 The forecasted total number of direct Open Data jobs **in 2016** has an upper bound of 75,000 jobs.

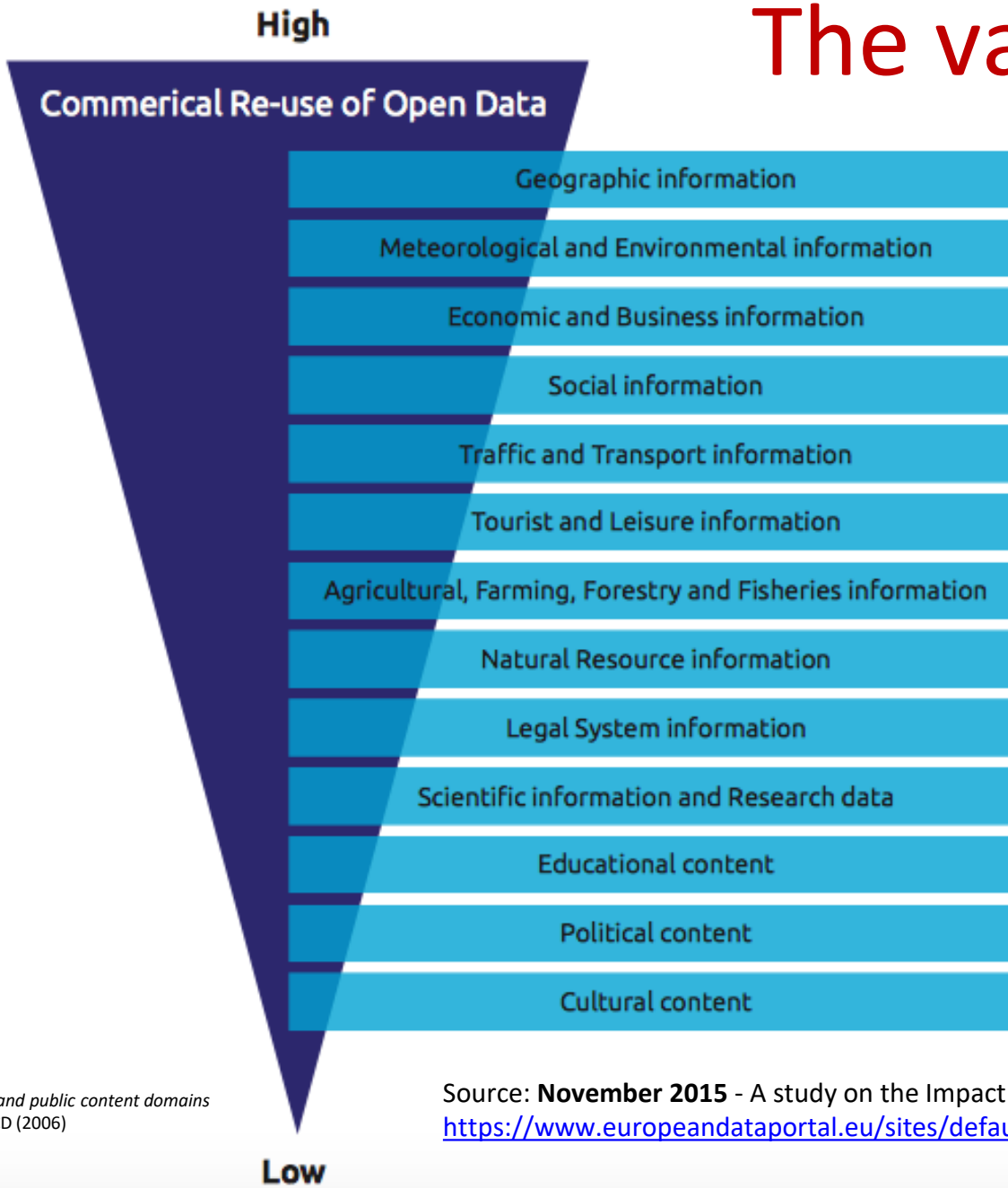
By 2020, the upper bound provides **a forecast of just under 100,000 direct jobs directly related to Open Data jobs**. Thus, in the period 2016-2020, almost 25,000 direct Open Data jobs are created.

This equals a growth of 32% over a 5-year period. Per year, the increase in number of jobs is forecasted to grow at an average rate of 7.3%.

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources

https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

The value generated by Open Data

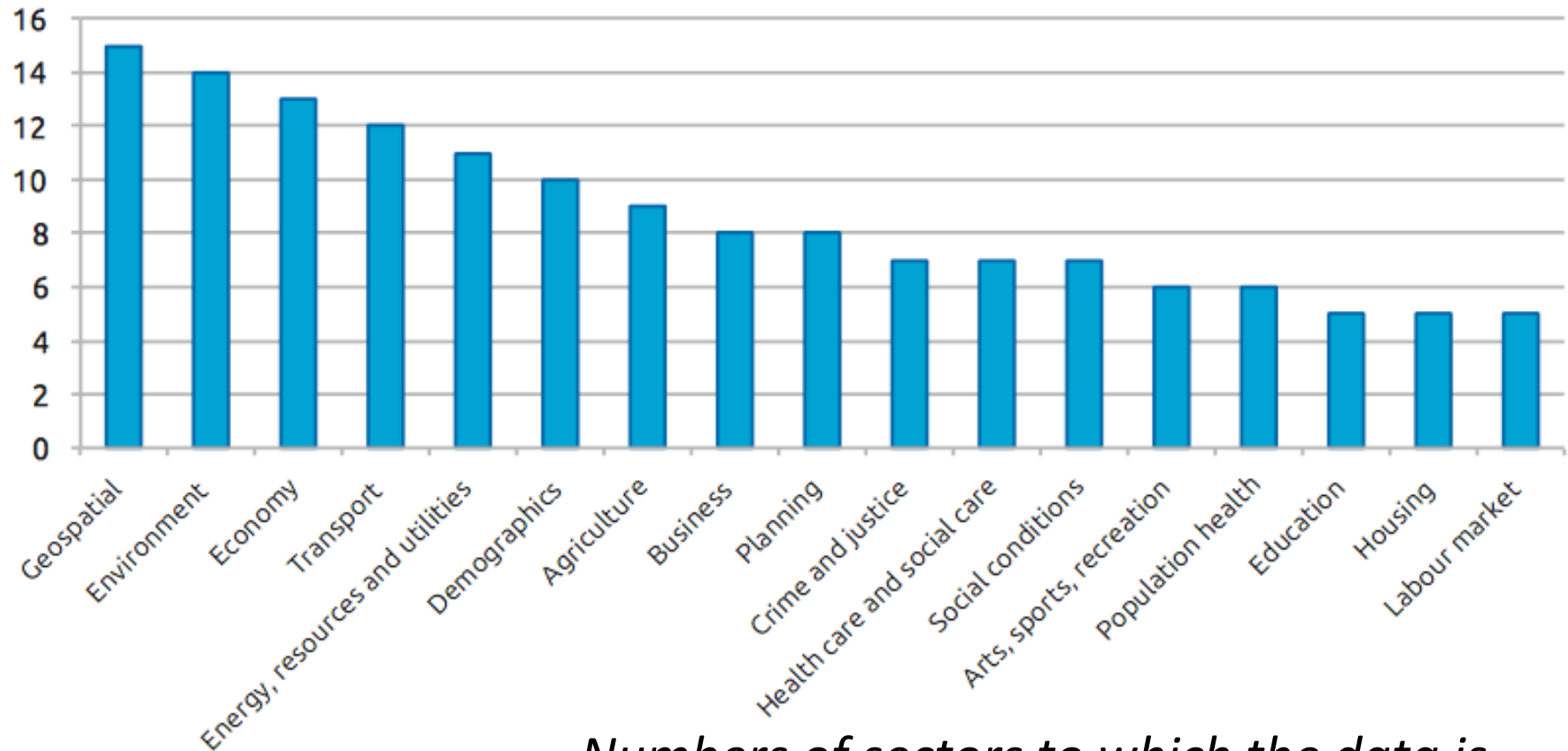


- *Open Data: relevant reuse divided by disciplines and sectors*
- *Data coming out of publicly funded research are to be considered PSI*
- *Foster **Open Access***

PSI and public content domains
OECD (2006)

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources
https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

Sectors most applicable to Open Data



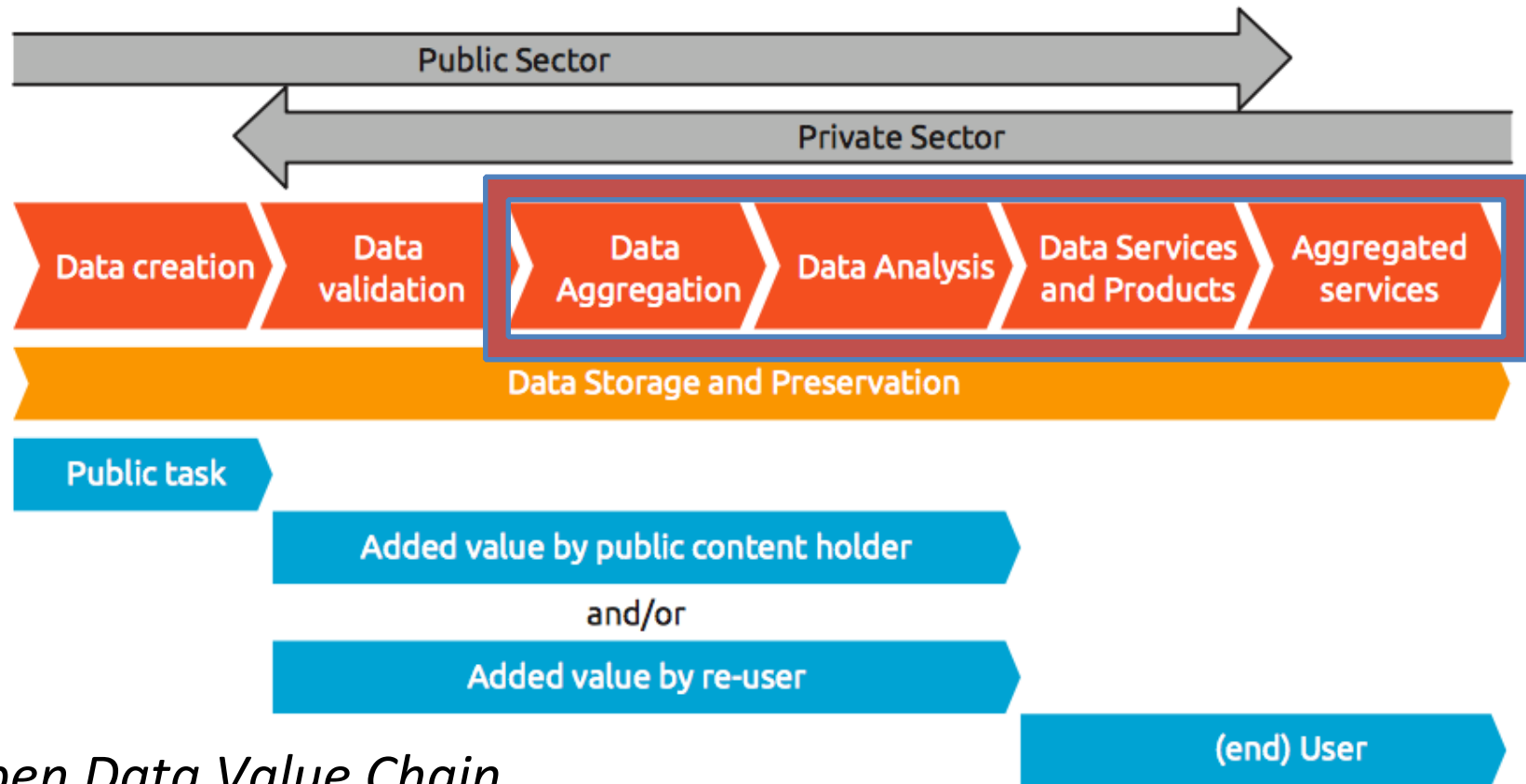
Numbers of sectors to which the data is applicable as identified by Deloitte , (Deloitte 2013)

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources

https://www.europeandataportal.eu/sites/default/files/edp_createing_value_through_open_data_0.pdf

Making Use of Open Data

The Data Value Chain can serve as a basis to understand different types of re-use



Open Data Value Chain

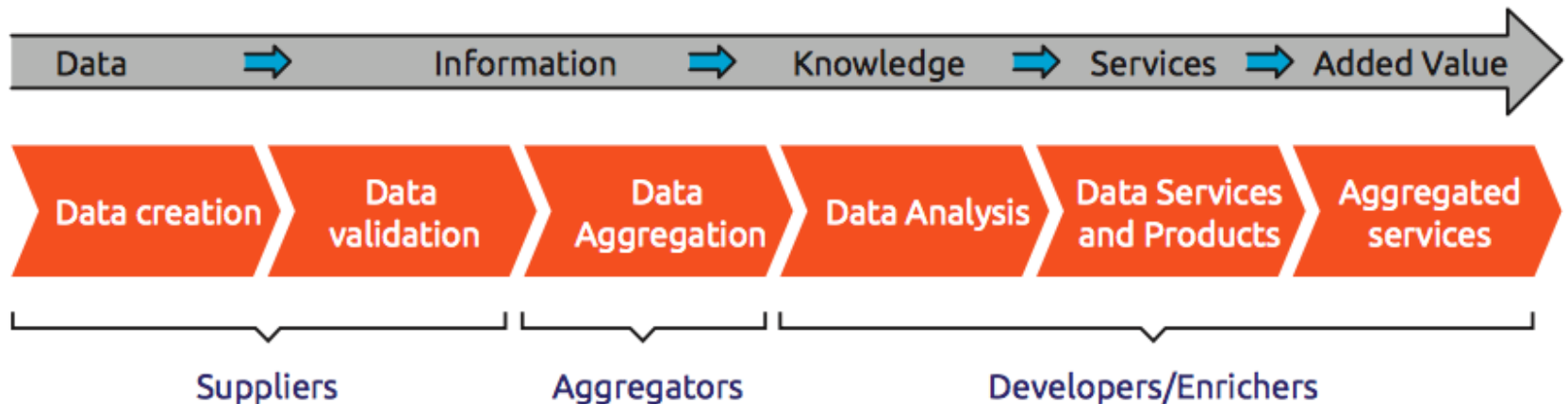
Capgemini Consulting, based on: MEPSIR(2006), p.46 and http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=3488

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources
https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

The Data Value Chain

The creation of data services and products

Data creation is done by the **Suppliers**. The organisations that collect and aggregate the Open Data are called the **Aggregators**. Individuals or companies that analyse the data and create services and products can be divided into **Developers and Enrichers**



Data Value Chain Archetypes

<http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>

Source: **November 2015** - A study on the Impact of Re-use of Public Data Resources

https://www.europeandataportal.eu/sites/default/files/edp_creating_value_through_open_data_0.pdf

The Model Policy

1. Preamble
2. Jurisdiction
3. Intellectual Property Rights
4. Handling Data
5. Responsibilities, Rights, Duties

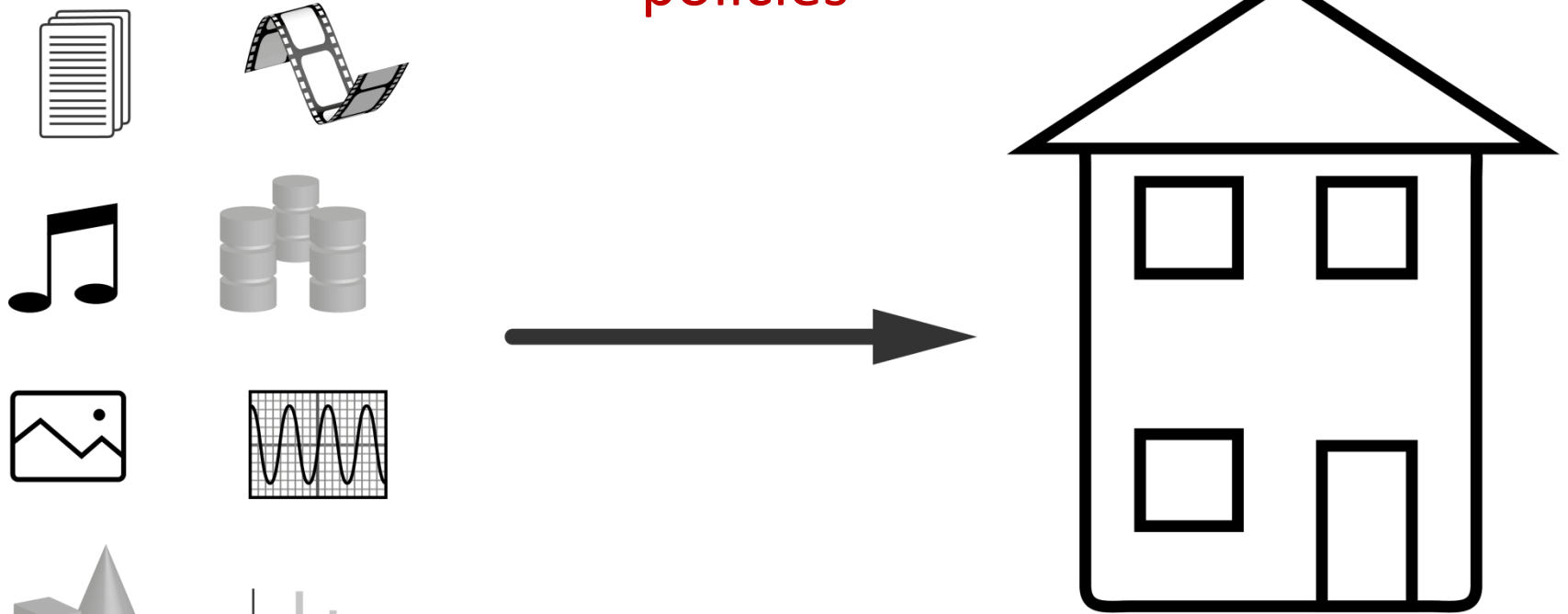
5.1. Producers of data are responsible for:...

5.2. The *[name of Company]* is responsible for:...

6. Validity



A digital eco-system of connected services is needed.
Common understandable rules, good governance models,
policies

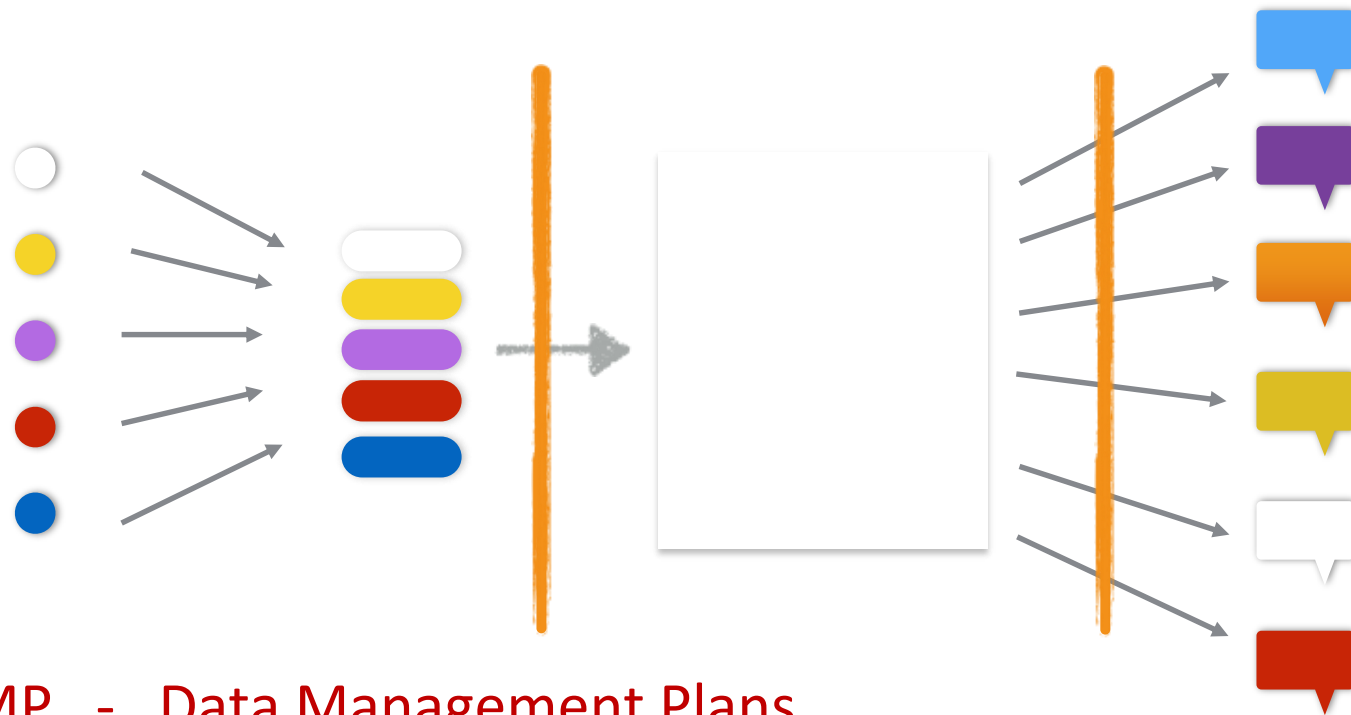


Graphic: Raman Ganguly, University of Vienna

Create to regenerate
→ **Regenerative by design**
Design to distribute
→ **Distributive by design**

DM - Policies

Generic Digital Workflow Model



DMP - Data Management Plans

Production and
Preingest

Ingest

Data and Services
Management

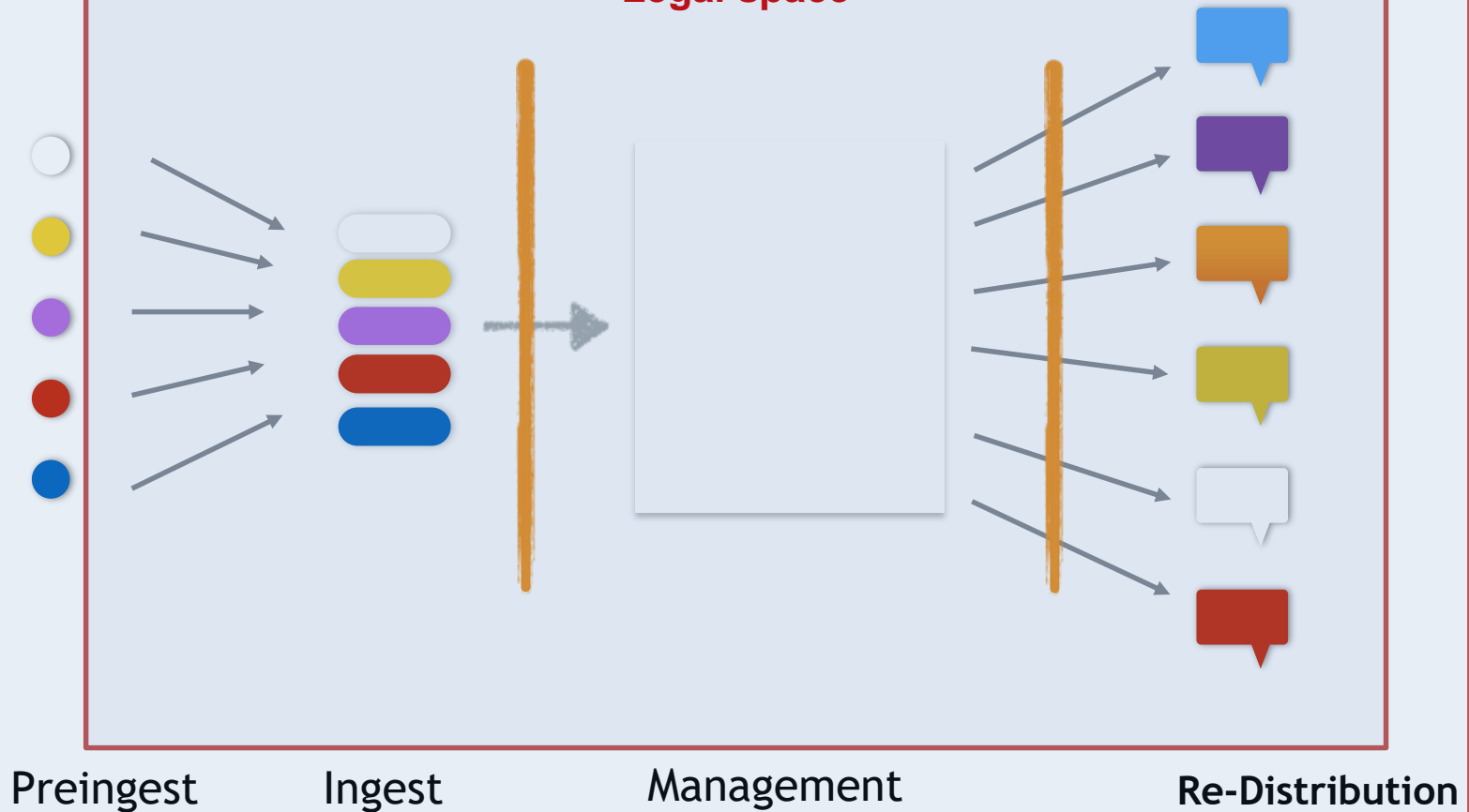
Distribution
Scenarios

DM-Policies

Good Governance Models and DM- Policies

Common terminologies

Legal space



Conclusions

In this context:

- SMEs are relevant, as stakeholders in Open Science and relevant players in the European economy
- Linkage to research data is relevant
- Use of data is relevant for the economic growth and social development
- Policies help to create a more efficient working environment
- Policies harmonize the efforts of all involved stakeholders
- Policies foster alignment with current developments in the European Digital Single Market
- Policies reduce barriers for data sharing

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Recommendations for RDA in order to provide guidance on policy development within companies

- Act as an incubator for policy development
- Organize workshops and know how transfer on policy development
- Organize workshops and know how transfer on policy alignment
- Entice companies to get further engaged with RDA
- Set up a global Working Interest Group or /and a Working Group concerning policy development for companies with special focus on SMEs

THANKS!

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