Data Driven Policy Cluster

Co-creating digital tools for better governance

Innovative Tools for Evidence Based Policy

From Digital Disruption to Digital Adoption

Plenary session

10 December 2021

Data Driven Policy Cluster is s group of 5 projects that have received funding from the European Union's Horizon 2020 research and innovation programme. Policy Cloud - GA #870675, Decido - GA #101004605, AI4PublicPolicy -GA #101004480, DUET - GA #870697, Intelcomp - GA #101004870.

Data Driven Policy Cluster
Co-creating digital tools for better governance

Agenda

- **Welcome. Innovative Tools for Evidence Based Policy** – Cecilia Cabello (FECYT, IntelComp)
- Data Spaces as key enabler for a Data Society - Roberto Di Bernardo (Smart governance & smart cities e-gov BDVA/DAIRO)
- MIMs supporting evidence based policy - Micheal Mulquin (OASC)
- EOSC - Suzanne Dumouchel (EOSC Board of Directors & SSHOC)
- Open Data: key for transparent Monitoring & Assessment in STI - Natalia Manola (OpenAIRE)
- **Panel discussion. From Digital Disruption to Digital Adoption**


Co-organised by:
Policy Cloud
Cloud for Data-Driven Policy Management
Decido
AI4PublicPolicy
DUET
intelcomp
9-10 December 2021
EVIDENCE BASED POLICYMAKING IN EUROPE 2021
USE CASES AND DIGITAL TOOLS
FOR IMPROVED DECISIONS

Data Driven Policy Cluster
Co-creating digital tools for better governance

Innovative Tools for Evidence Based Policy
From digital disruption to adoption

The convergence of Cloud, Big Data and AI has already caused considerable transformation across Government.

With citizens demanding better experiences as their expectations shift towards quick, seamless and personalised services, now is the time for Public Sector decision makers to embrace digital disruption and new innovative technologies to make more **sustainable policy based on real-time information, predicted impact and citizen input.**

Data Driven Policy Cluster

Co-creating digital tools for better governance

Evidence Based Policymaking in Europe Summit: 2021

Day 2: from digital disruption to digital adoption

Join us:
10th December 10 am CET

Roberto di Bernardo

Senior Researcher and Head of the Open Government R&D Group.

Michael Mulquin

MiMs Ambassador at Open & Agile Smart Cities (OASC).

Suzanne Dumouchel

Research engineer at the CNRS. EOSC

Natalia Manola

CEO of OpenAIRE.

Data Spaces as key enabler for a Data Society

Roberto Di Bernardo

BDVA - Smart Governance and Smart Cities sub-group

Engineering Ingegneria Informatica SpA - Research & Development Laboratory

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Content

- Engineering SpA at a glance
- BDVA
- Smart Governance & Smart Cities sub-group
- Towards Public Data Spaces
- EU-Governed Data Sharing Spaces
- Digital Capacity Building for Cities and Communities

ENGINEERING AT A GLANCE

A GLOBAL COMPANY

11,600+
Associates

40+
Offices around the world

Global HQ
Rome, Italy

Based in
EUROPE,
NORTH AMERICA,
LATIN AMERICA

Worldwide Delivery

RESEARCH & INNOVATION

6
Development labs

100+
Live Research Projects

300+
Innovation Network members

40 mln €
Investments

450+
Data Scientists & Researchers

TRAINING

IT & Management Academy «Enrico Della Valle»
Our own training academy

15k
Training days

European Network and Initiatives

FIWARE

OPEN & AGILE SMART CITIES

GAIA-X

ECS

INTERNATIONAL DATA SPACES ASSOCIATION

eit Digital

BDV BIG DATA VALUE ASSOCIATION

Industry-driven and fully self-financed international non–for-profit organisation under Belgian law

+220 Members

33 Large companies
59 SMEs
113 Research institutions
16 Others

Present in **29 countries**

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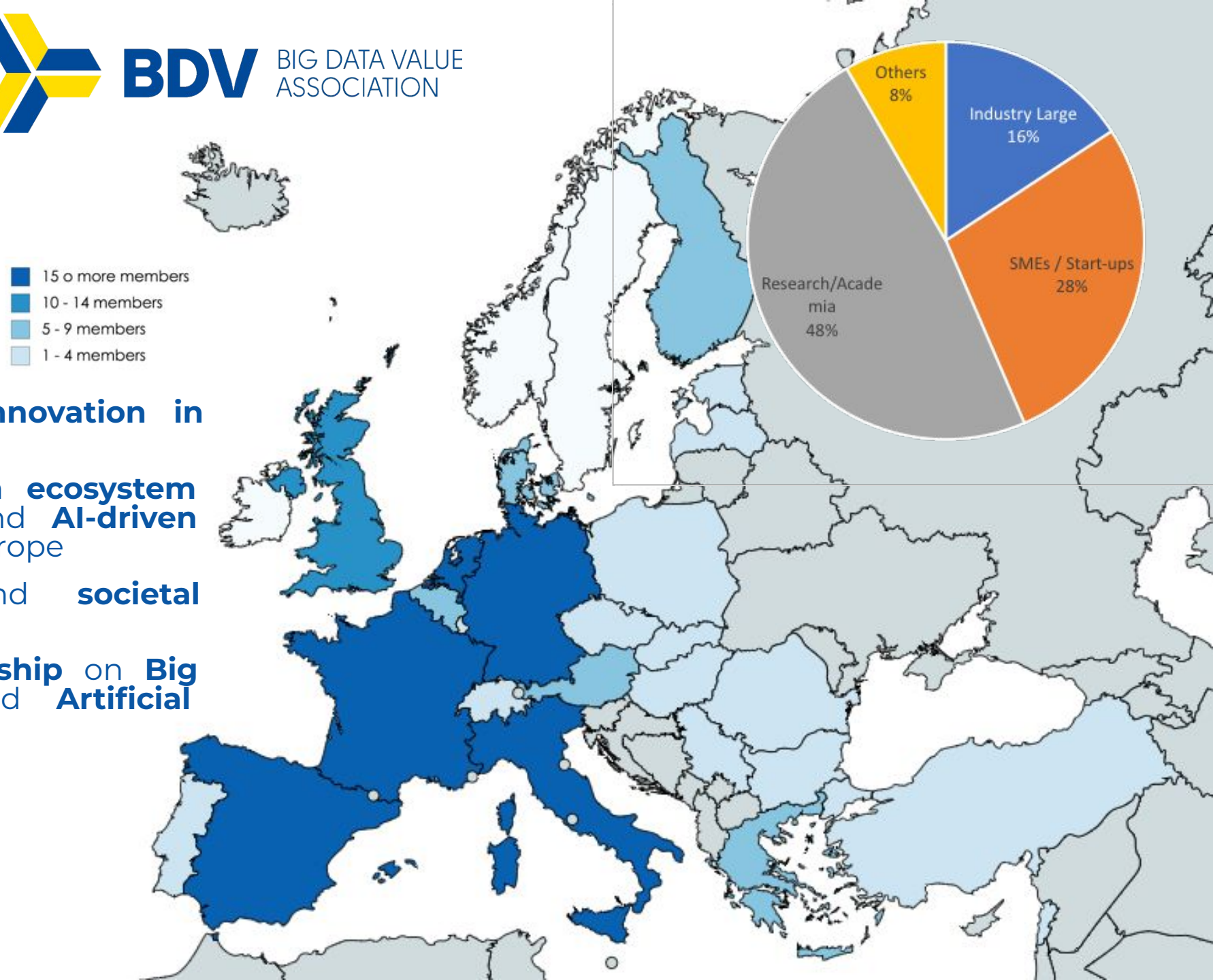

Accelerating Data-Driven Innovation in Europe

- Developing the **Innovation ecosystem** that enables the **data** and **AI-driven digital transformation** in Europe
- Delivering **economic** and **societal benefits**
- Sustaining Europe's **leadership** on **Big data Value Creation** and **Artificial Intelligence**

Big Data Value Association

How it started … and how it is going

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How it started…

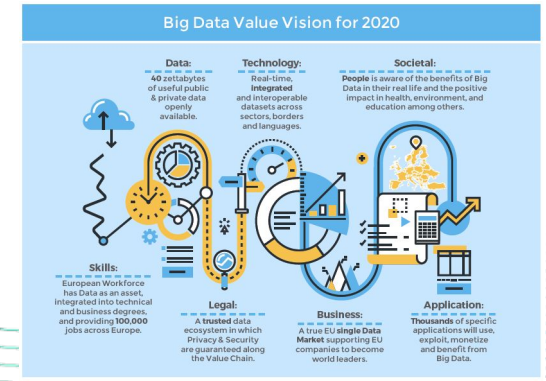
2014

How it is going….

2021+

Launch of the **Big Data Value PPP**

PPP projects start **2017**



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Towards a **European AI, Data and Robotics Partnership**

BDV BIG DATA VALUE ASSOCIATION · CLAIRE · EurAi · ellis European Laboratory for Learning and Intelligent Systems · eu ROBOTICS

65 running projects since 2017

In 2018:

- Over 1,6B€ Private investments mobilized
- 132 innovations of exploitable value by 2018
- 224 experiments/use cases (+108 from BDVA i-Spaces)
- 80 large scale experiments using closed data
- 106,73 Petabytes of data shared for experimentation

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Big Data Value PPP

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EuroHPC Joint Undertaking (PPP)

Shaping Industrial applications

EuroHPC Joint Undertaking

Big Data Value Association

DAIRO's focus for the future

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Through its work on Research, Innovation and Deployment in Europe, DAIRO will take the lead in the implementation of the **European Data Strategy** and will work toward the establishment of a common **European Data Space**.

DAIRO will contribute to the achievement of Europe's ambitions for the Digital and Green economy by:

- Implementing the **AI, Data and Robotics Partnership**
- Supporting the implementation of **Data Strategy and the European Data Spaces through research and innovation activities, knowledge sharing and community building**
- **Industrial AI**
- Setting up a Federation of Data-Driven Digital Innovation Hubs through the **EUHubs4Data project**
- Engaging further with end users and verticals across all industrial sectors (i.e. **new Task Forces on relevant application areas** and topics, including **joint Task Forces** with other organisations…)
- Strengthening efforts on **the energy and environmental applications of Big Data and AI**
- **Building bridges between communities** which are pivotal to reach the European Commission' objectives
- And much more!

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Task forces

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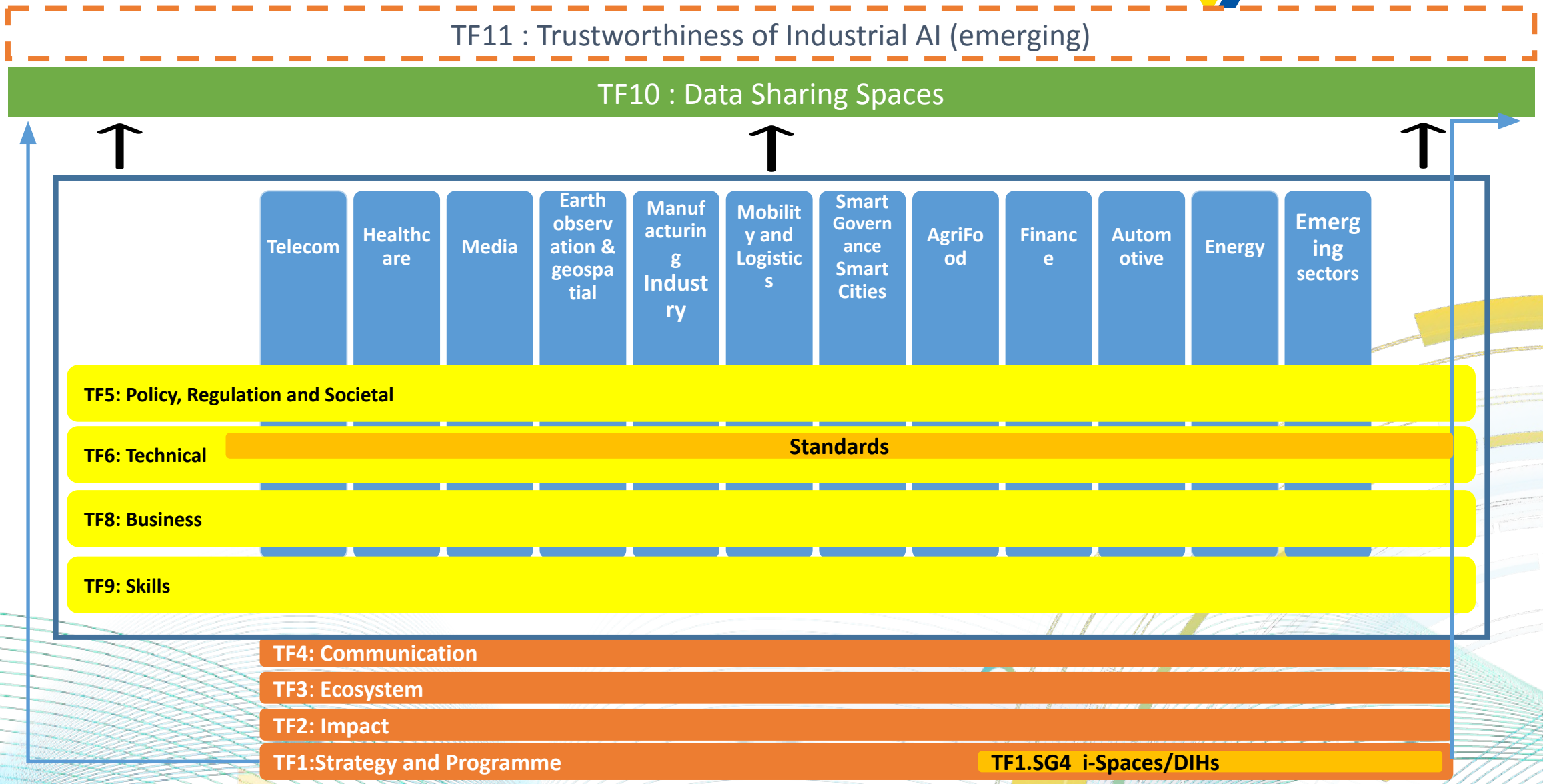

Smart Governance & Smart Cities

BDVA FT7.SG8

The availability of data has taken a completely new dimension

> **More sources and more data** are opening new perspectives in management activities and their nature can disrupt the planning and implementation of policy and decision making measures.

Big Data analytics represent one of the main instruments for business decision-making worldwide, to be leveraged for boosting productivity and improve the efficiency and effectiveness of governments at all levels

Besides, the advancement in computer power has led to relevant breakthroughs in **AI** field and it is clear the relevant potential of this technologies to transform the societies and the economic systems.

Smart City ecosystems provides the right environment for the **complete data chain** by including a variegated set of stakeholders such as universities, private companies, public bodies, citizens.

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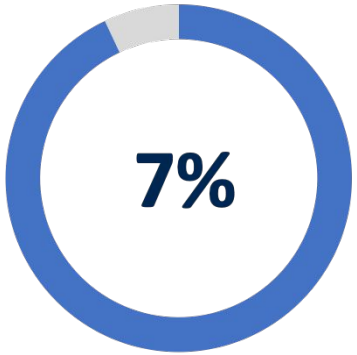
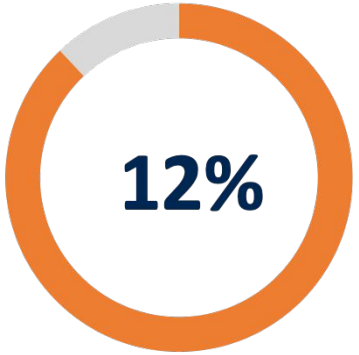
Towards Public Data Spaces

Data Challenges

- Data cities need is often not open data; difficult to access public, but sensitive (for analytics/AI)*
- Difficulty to access and reuse of private data with public interest (B2G data sharing); current operational models do not scale up**
- European cities recognise citizen data as a public asset, while they need to ensure citizens' digital rights (personal data management)
- Smart cities strive for portable and affordable, innovative cross-sector services (+ city-to-city & cross- border)



Government Data open for public access in most of the countries worldwide***



City data analysed and used for decision making***

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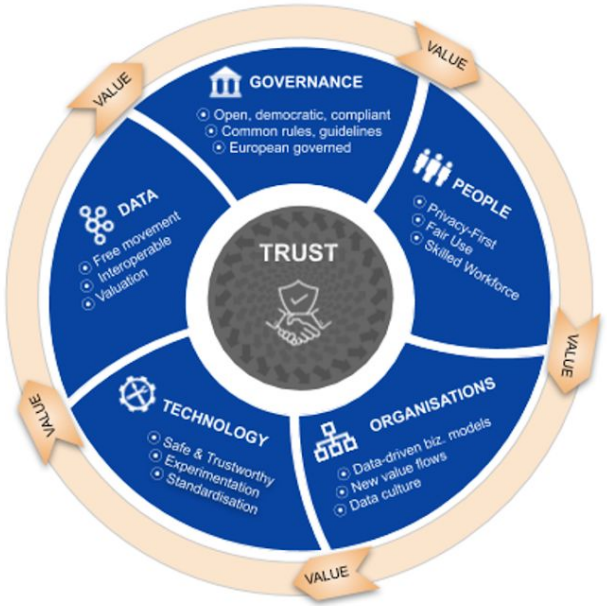
* Data Governance Act ** High-Level Expert Group on B2G Data Sharing & upcoming Data Act *** *https://doi.org/10.1007/978-3-030-14446-3_5*

Towards Public Data Spaces

The European Data Strategy

Promoting the availability of data for re-use, strengthening sharing mechanisms in the EU, the establishment of **European data spaces** is envisaged.

- To consult and use the data of the public sector, of the enterprises and of the citizens in the most effective and responsible way possible
- To facilitating the creation of new products and services and favouring projects of innovation and scientific development of the EU.



HVDs from Public Sector

Driven by stakeholders | Sectorial Data Governance | Rich of data of different degree of openness | Data sharing and pooling tools

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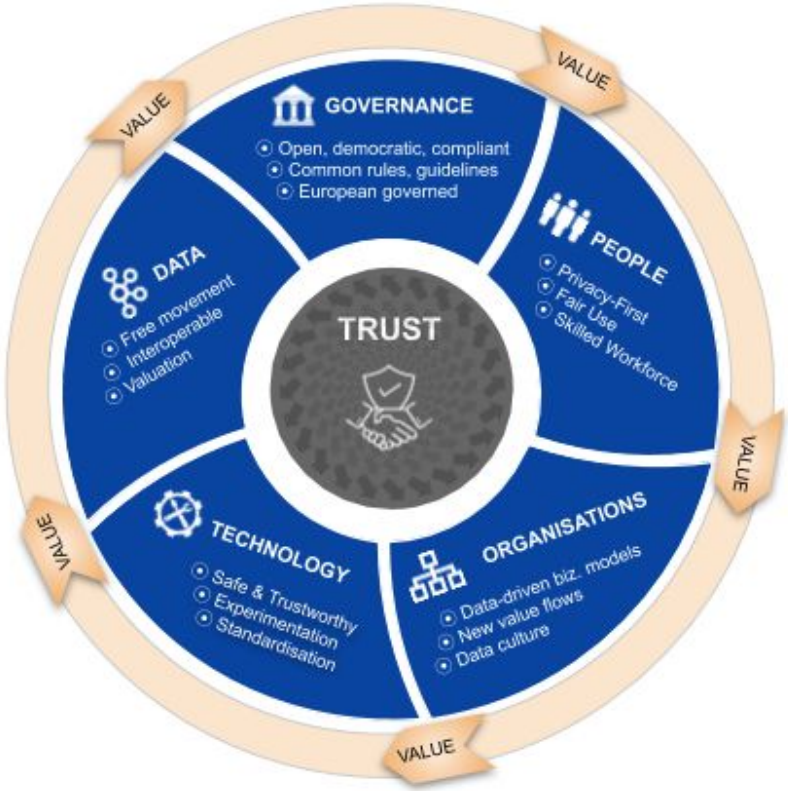
European-Governed Data Sharing Spaces

The realisation of a functioning and frictionless European-governed data sharing space (BDVA Position Paper)

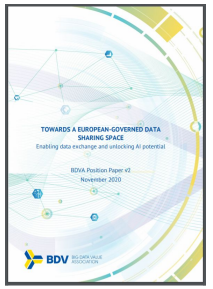
Key elements

- Planned **iterative** implementation strategies
- The success of data sharing activities revolves around the key concept of **trust**



Main Pillars

- **Data** - free movement of data by strategies that embed methodologies for data sharing by-design (e.g., interoperability) and clear standard guidelines to determine market value of data assets.
- **Governance** - A European-governed data sharing space can inspire trust by adhering to the more advanced European rules, guidelines and regulations and promote European values.
- **People** -Data sharing needs to guarantee individual privacy and offer fair value or compensation of shared personal data. Reskilling and upskilling are needed to meet the evolving labour market's needs.
- **Organisations** - More organisations (including business, research and governmental) need to rethink their strategy to fully embrace a data culture that places data at the centre of their value proposition.
- **Technology** - Safer experimentation environments are needed to catalyse the maturation of relevant technology behind trustworthy data, data access and algorithms (privacy, interoperability, security, and quality), together with standardisation activities



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https://bdva.eu/sites/default/files/BDVA%20DataSharingSpaces%20PositionPaper%20V2_2020_Final.pdf

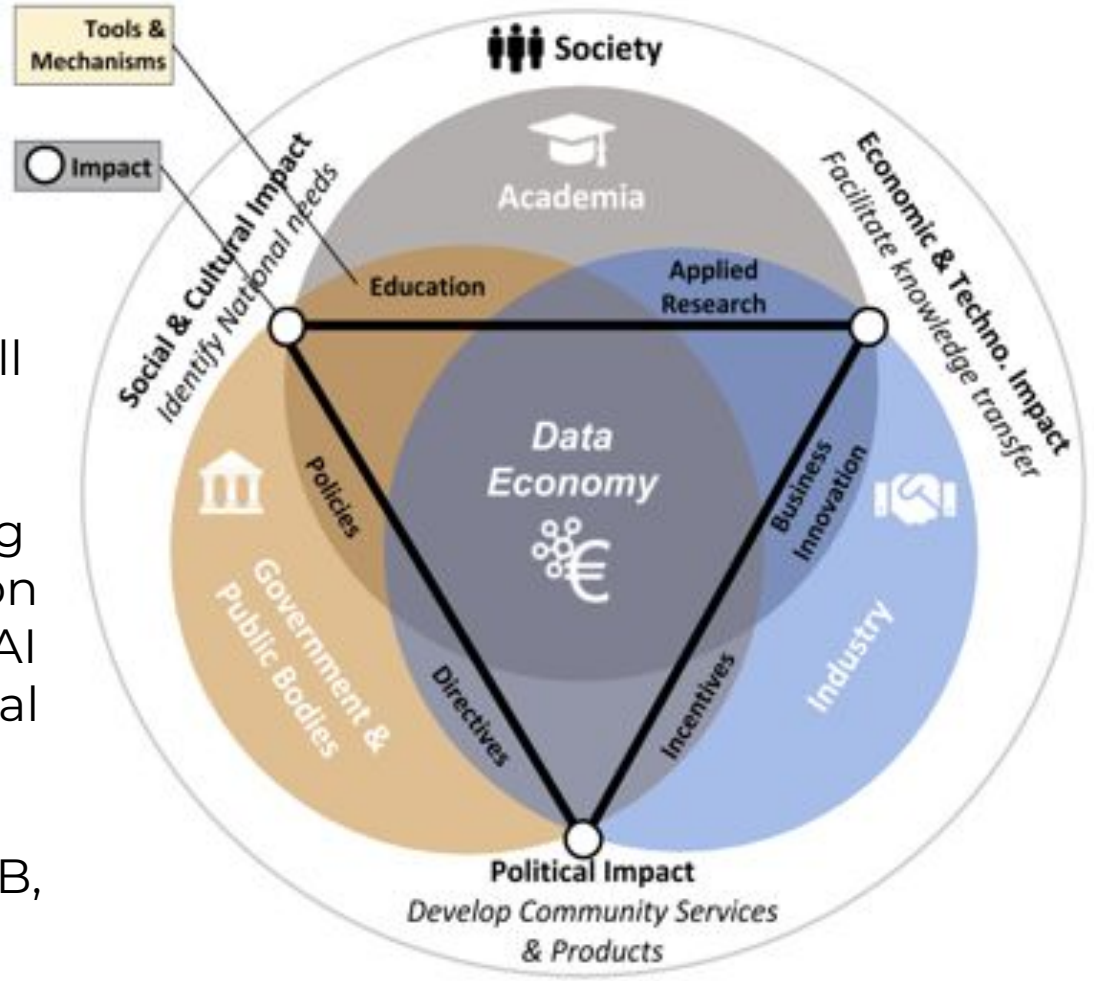
Opportunities (1/2)

by converging data sharing initiatives in EU

Achieve ***wider access to data*** to realise the full potential of emerging AI technology

Achieve a ***European-governed data space***, giving Europe the possibility to assume a prominent position steering international efforts to develop data and AI solutions that reflect and respect European ethical values

All actors must be inclued: B2B, B2G, G2B, B2S, S2B, C2B.



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Opportunities (2/2)

by converging data sharing initiatives in EU

Opportunities for Business

- Open data marketplaces that level the playing field for industrial data sharing.
- Increased availability of vast and heterogeneous data ecosystems for AI.
- Innovative data-driven business models enabled by new value ecosystems.
- Opportunities to tap into ‘safe’ personal data.

Opportunities for Government and Public Bodies

- Data commons for better government services.
- AI-enhanced digital services.
- Real-time European statistics.
- Lean business environment enabled by access to government services.
- Evidence-based policy making.
- Data as evidence of Policy compliance.

Opportunities for Science

- Increasing socio-economic impact of research data across domains and borders.
- Advancing science and open innovation through data availability.
- Monetisation opportunities brought about by emerging data-driven business models.

Opportunities for Citizens

- Full control over personal data.
- Well-being and Quality of Life benefits from personal data sharing in key sectors.
- Access to personalised and cross-sectoral B2C services.
- Increased opportunities of personal data monetisation.
- New professional opportunities.

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Biggest Challenges (1/2)

in implementing common data sharing spaces

Inter-organisational concerns (lack of suitable data sharing ecosystems):

- the lack of functional and trustworthy **data sharing ecosystems** that inspire immediate large-scale participation.
    - lack of robust legal and **ethical frameworks**, as well as **governance models** and **trusted intermediaries** that guarantee data quality, reliability, and its fair use.
    - lack of widespread adherence to **emerging best practices and standards** (e.g., interoperability, provenance and quality assurance standards)
- From a technical point of view
    - to better address European concerns like **ethics-by-design** for democratic AI
    - to better address **scalability challenges** posed by the rapid shift towards decentralized mixed-mode data sharing and processing architectures

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Biggest Challenges (2/2)

in implementing common data sharing spaces

In terms of **intra-organisational** concerns (issues faced by data producers and consumers, as data sharing participants):

- the difficulty to determine the **value of data**, due to a lack of data valuation standards and assessment tools
- the difficulty faced by data producers **balancing** their data's **perceived value** (after sharing) **against risks exposed** (upon its sharing) despite adhering to standard guidelines.
    - the perceived loss of control over data
    - the loss of trade secrets due to unintentional exposure or malicious reverse-engineering
    - the risk of navigating around legal constraint in view of potential data policies breaches (including GDPR and exposure of private identities).

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Data Sharing Practices Survey

Who should drive the effort and how?

INDUSTRY: Let the market identify the most successful emerging solutions (including emerging Data Markets) without much political interference

POLICY MAKERS: Political intervention (at national, regional levels) to support the scale-up of the most successful solutions from industry

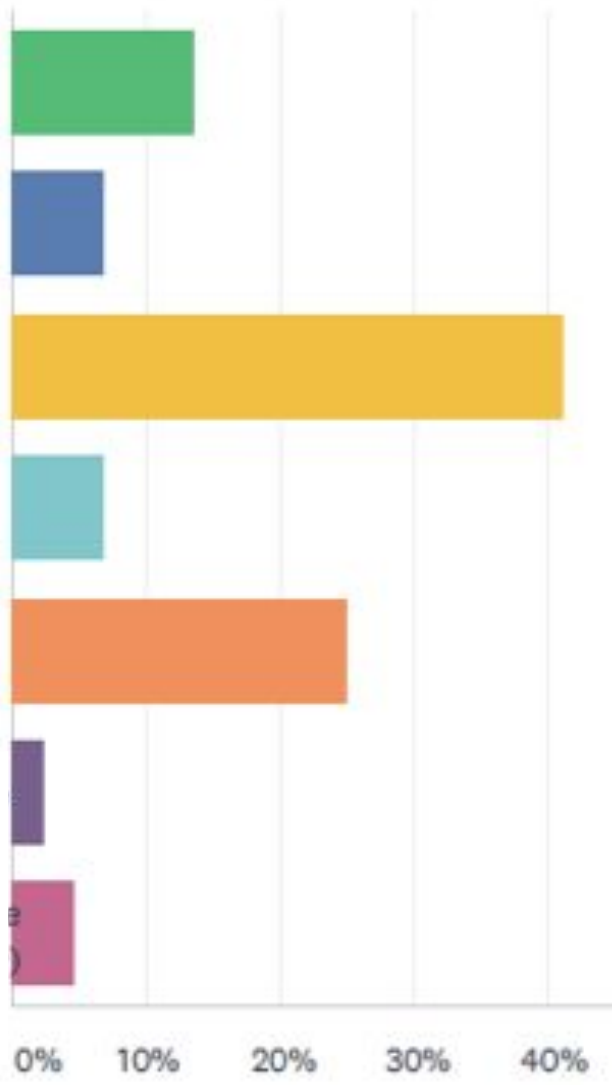
POLICY MAKERS & INDUSTRY: Political intervention to bring together different stakeholders with an interest in setting up a space and guide the convergence of efforts by promoting emerging standards

POLICY MAKERS: Provide training (e.g., GDPR-compliance, quality assurance, interoperability), technology (including regulatory sandboxes) and guidance (data valuation,
ethics, etc.) to businesses and individuals wishing to consider data sharing but lacking the skills and resources

MULTIPLE: Multiple efforts or a combination of the above will increase chances of success

Not sure

Other (please specify)



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Data Sharing Practices Survey

Urgency and Time Frame

44/58 believe in □ this vision

Do you believe that European stakeholders have all that it takes to drive this effort and establish a 'Made In Europe' International Data Sharing Space?

	UNDER 12 MONTHS	UNDER 2 YEARS	2-5 YEARS	NOT SURE	TOTAL
Startup, SME	16.67% 3	44.44% 8	38.89% 7	0.00% 0	18
Large Industry	0.00% 0	42.86% 3	57.14% 4	0.00% 0	7
Science, Research & Academia	10.00% 1	40.00% 4	50.00% 5	0.00% 0	10
Nonprofit Organisation, Public Body	0.00% 0	28.57% 2	71.43% 5	0.00% 0	7
Policy Maker	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0
Answering as a Private Citizen	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0
[Insert text from Other]	0.00% 0	0.00% 0	100.00% 2	0.00% 0	2

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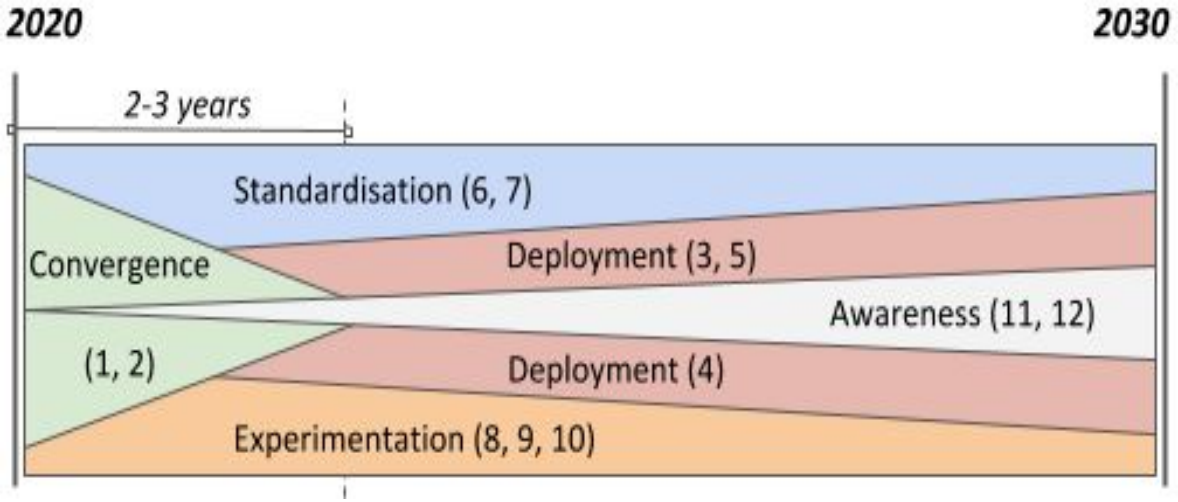
Call to Action

- **Convergence:** *Urgent!*
  1. Alignment across initiatives, countries regions
  2. European-wide Skills Strategy
- **Deployment**
  3. Rules and Guidelines to Merge spaces
  4. Further investment in R&D and relevant technology
  5. EU-wide data governance practices and conformity assessment
- **Standardisation**
  6. Engagement with ICT Standardisation bodies to speed up processes and identify common building blocks
  7. Promote widespread adherence to standards, rules and guidelines
- **Experimentation**
  8. Investment to test-drive cross-sectoral, cross-border use-cases
  9. Experimentation for joint exploration of market capabilities
  10. European regulatory sandboxes for de-risking



- **Awareness**
  11. Campaign for organisations to place data sharing at the centre of their data strategy
  12. Campaign to ensure take-up and understanding value by all including citizens

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Digital Capacity Building for Cities & Communities

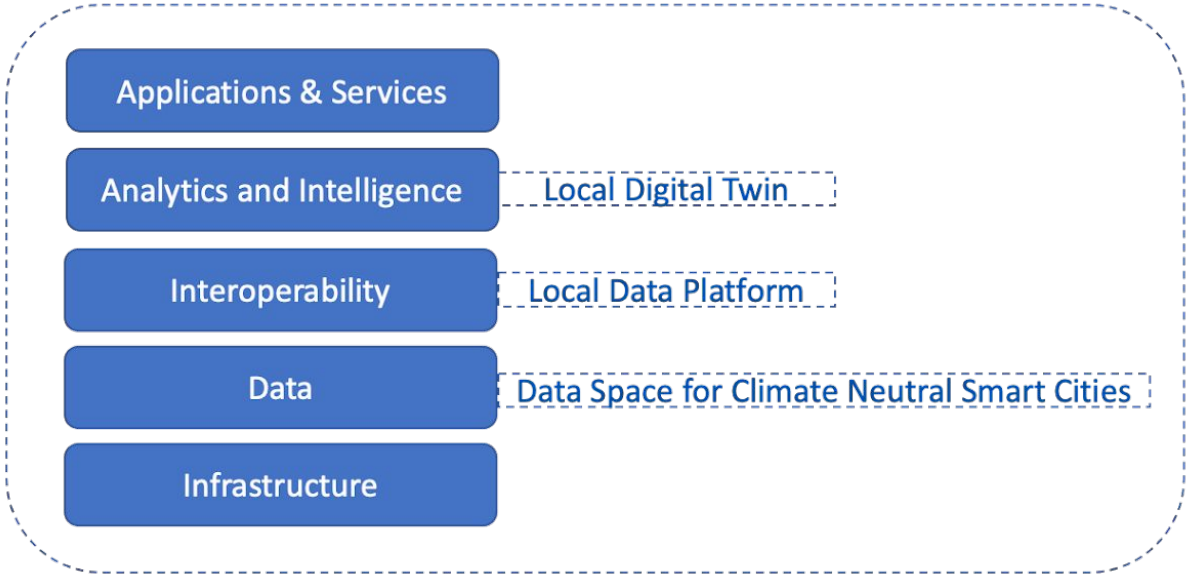
https://www.living-in.eu/

Political Declaration: over 90 signatories, 40 supporters, 5 subgroups, several concrete iconic projects

Among principles:

- Citizen-centric approach
- A city-led approach at EU level
- ethical and socially responsible access, use, sharing and management of data
- interoperable digital platforms based on open standards and technical specifications, APIs and shared data models

Sustainability Goals ←→ Digital Transformation



Programmes and Instruments

AI EDIHs for smart cities

AI TEFs for smart cities

- Digital European Programme
- Horizon Europe
- Connecting Europe Facilities

Roberto Di Bernardo

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TF7.SG8 Leader

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www.bdva.eu

MIMs supporting evidence based policy

Communities often find it difficult to achieve their goals

The typical goals of any **c**ommunity include improving citizens' lives, increasing the ease of doing business and guaranteeing sustainable change.

However, it is difficult to achieve these goals comprehensively.

One reason – the challenges they face

Partly this is due to the current situation and environment of communities, where they

- have limited resources
- while facing many new challenges such as climate, extreme weather conditions, aging population, rapid technological change etc.

These are factors that are generally outside the ability of communities to influence proactively.

Another reason – the complexity of communities

It is difficult to set appropriate policies to help manage communities due to their inherent complexity:

1. The challenge of aligning the many different, and often contradictory, aims of local stakeholders
2. The lack of
   - comprehensive:
   - accurate
   - up to date information

   About the different city systems - particularly information that shows the links between city systems

The result

It is difficult to identify optimal policies and solutions. Management often has to be largely by trial-and-error.

As the result, policies set to achieve the goals of the city are not effective and not aligned between different agencies.

Evidence based policy development

The need for comprehensive and accurate information

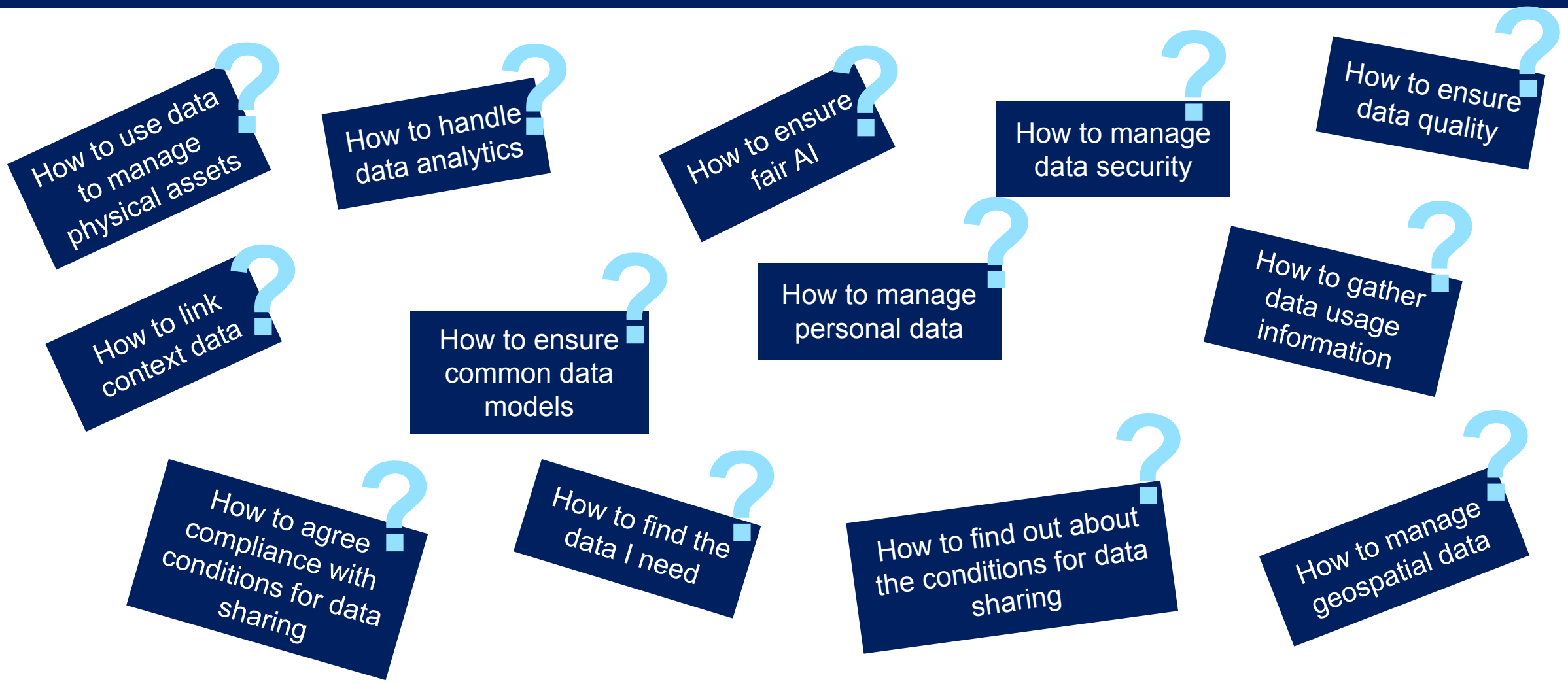
Smart Community

A smart community is one where increasing amounts of useful data are collected and used by the public administration, by business, and by the citizen to help the city work better

Cities everywhere are setting up local data ecosystems – but this is not easy!

Managing the data ecosystem

There are many challenges to solve!

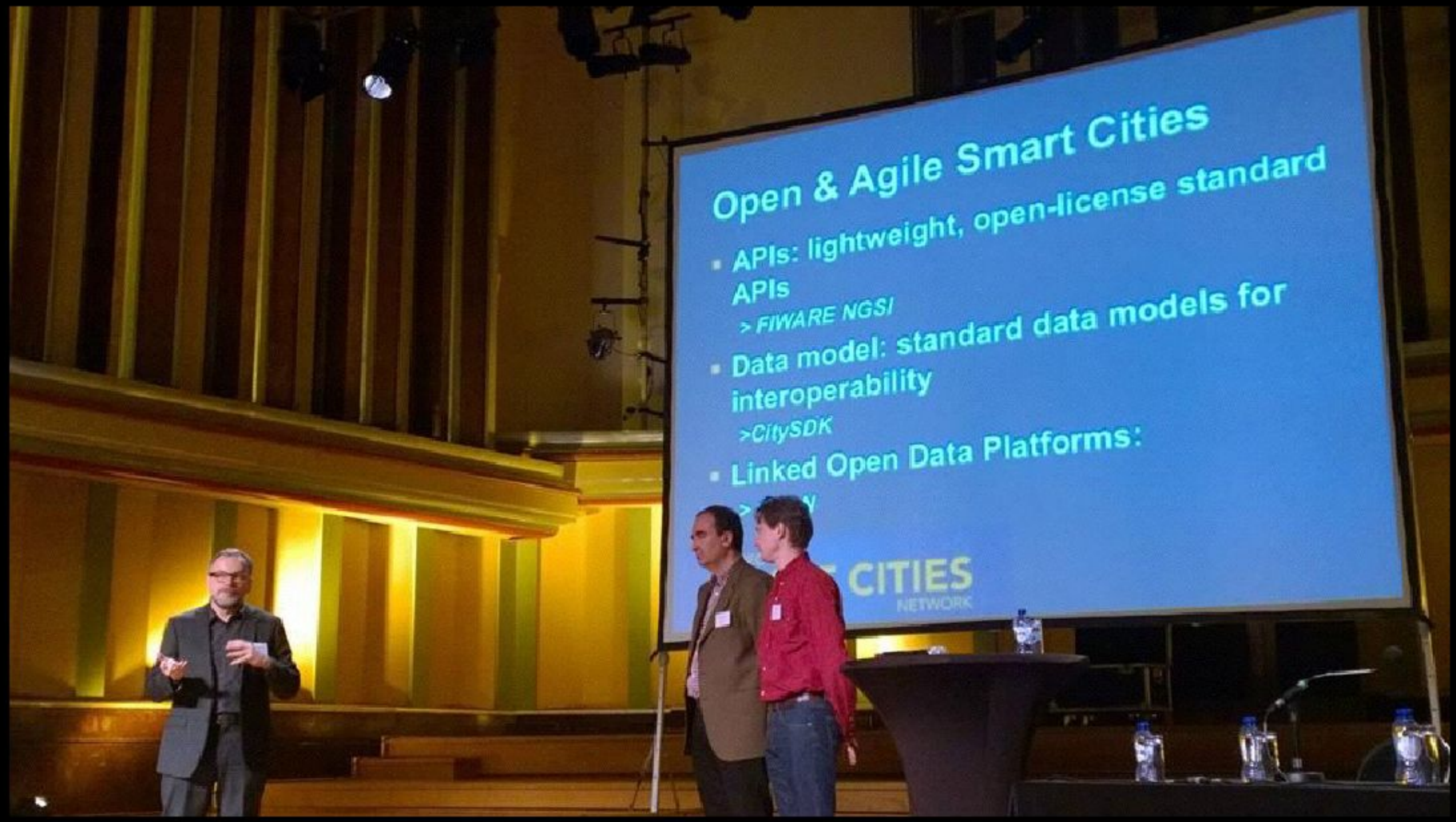


Open and Agile Smart Cities

168 cities in over 30 countries

OASC launch Brussels

Based on MIMs - a set of basic interoperability tools to support data sharing



Minimal Interoperability Mechanisms (MIMs)

the minimal but sufficient capabilities needed to achieve interoperability of data, systems, and services

The question answered by the MIMs is:

"What are all the basic building blocks needed to enable a city to set up an effective data-sharing ecosystem?"

Minimal Interoperability Mechanisms

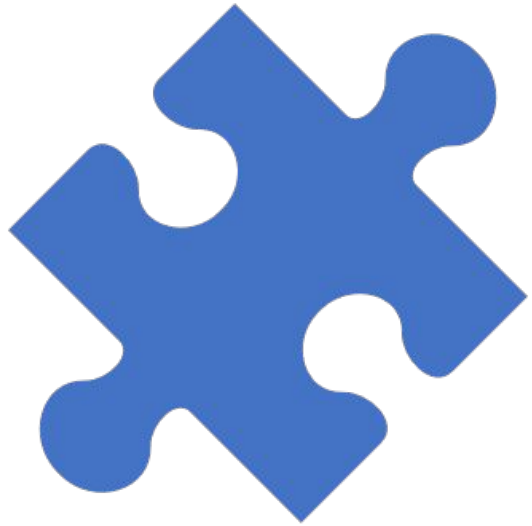
Sufficient interoperability to allow:	Minimal to ensure:	Clearly defined mechanism so that:
• "Good enough" integration of systems • Development of a viable market – cutting costs, minimising risk and preventing vendor lock-in	• no unnecessary complexity or time-to-implement • Aim for cost for cities to implement (staff time, software, hardware) to be less than, say, $50,000	• It is easy to determine if a product or service is compliant • It is easy to determine the steps to implement

The MIMs so far – tackling the requirements of a local data ecosystem

MIM	Subject	Name
MIM1	Context	Context Information Management
MIM2	Data Models	Shared Data Models
MIM3	Contracts	Ecosystem Transactions Management
MIM4	Trust	Personal Data Management
MIM5	Transparency	Fair Artificial Intelligence
MIM6	Security	Security management
MIM7	Places	Geospatial information management
MIM8	Indicators	Ecosystem indicator management
MIM9	Analytics	Data Analytics Management
MIM10	Resources	Resource Impact Assessment

Remember we are building on existing work

1. Where there are existing authoritative standards, the MIM will work with cities and standards bodies to identify the core requirements of those standards that a city could put in place as a first step to start to see immediate benefit in developing the local data ecosystem.
2. Where there are several standards initiatives that cover the same ground, the aim will be to identify the lowest common denominator (or the NIST Pivotal Points of Interoperability) that will make it easy to link products and services that comply with those different sets of standards.
3. Where policy or procurement requirements are being agreed, but with no technical specifications to support these, then we may fill this gap.



The state of the MIMs

MIMs 1. 2 & 3 are already being specified by cities in procurements. They are being updated to take account of new deveopmentrs

3 Working Groups are busy developing MIMs 4, 5 & 7

The aim is to get these to the stage where they can be tested within 6 months and then ready for roll out in another 6 months

So – in 6 months we start work on the next three MIMs

We continue to refine our architectural framework and review what other MIMs might be needed

Setting the MIMs in the Policy context

MIMs Plus = MIMs for EU Governed by the Living-in.EU Steering Board

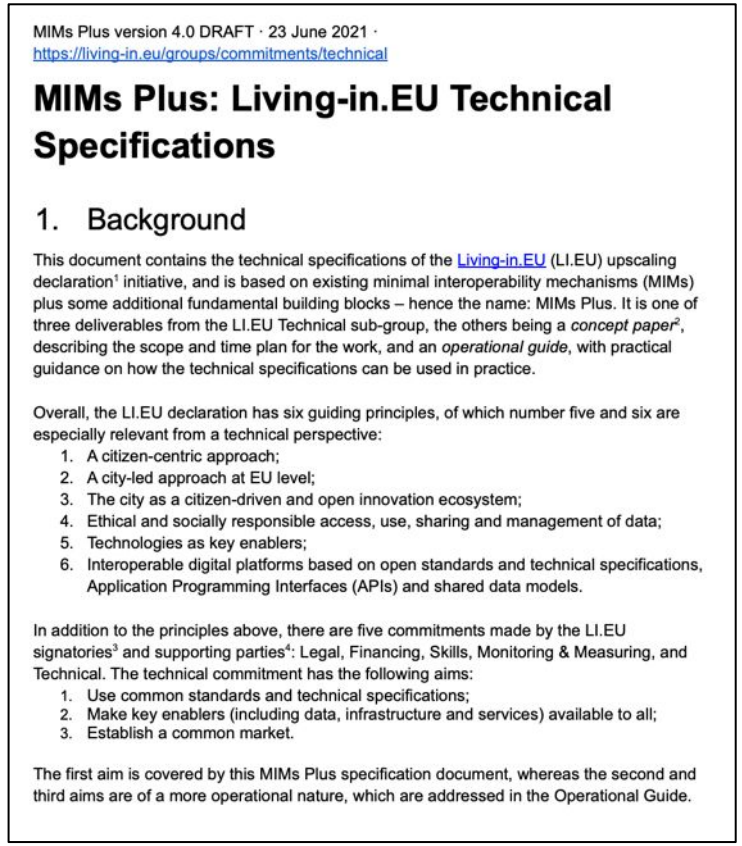
OPEN & AGILE SMART CITIES

MIMs

MIM	Subject	Name	Status
MIM1	Context	Context Information Management	Governance
MIM2	Data Models	Shared Data Models	Governance
MIM3	Contracts	Ecosystem Transactions Management	Capability
MIM4	Trust	Personal Data Management	Capability
MIM5	Transparency	Fair Artificial Intelligence	Capability
MIM6	Security	Security management	Work item
MIM7	Places	Geospatial information management	Work item
MIM8	Indicators	Ecosystem indicator management	Work item
MIM9	Analytics	Data Analytics Management	Work item
MIM10	Resources	Resource Impact Assessment	Work item

Plus European initiatives and regulation

- EIF / EIF4SCC
- ISA^2 / EDGES
- CEF Digital
- INSPIRE, ELISE
- DESI / LORDI
- 100ICC, EIP-SSC
- National
- Regional



MIMs Plus version 4.0 DRAFT · 23 June 2021 ·
https://living-in.eu/groups/commitments/technical

MIMs Plus: Living-in.EU Technical Specifications

1. Background

This document contains the technical specifications of the Living-in.EU (LI.EU) upscaling declaration[1] initiative, and is based on existing minimal interoperability mechanisms (MIMs) plus some additional fundamental building blocks – hence the name: MIMs Plus. It is one of three deliverables from the LI.EU Technical sub-group, the others being a *concept paper*[2], describing the scope and time plan for the work, and an *operational guide*, with practical guidance on how the technical specifications can be used in practice.

Overall, the LI.EU declaration has six guiding principles, of which number five and six are especially relevant from a technical perspective:

1. A citizen-centric approach;
2. A city-led approach at EU level;
3. The city as a citizen-driven and open innovation ecosystem;
4. Ethical and socially responsible access, use, sharing and management of data;
5. Technologies as key enablers;
6. Interoperable digital platforms based on open standards and technical specifications, Application Programming Interfaces (APIs) and shared data models.

In addition to the principles above, there are five commitments made by the LI.EU signatories[3] and supporting parties[4]: Legal, Financing, Skills, Monitoring & Measuring, and Technical. The technical commitment has the following aims:

1. Use common standards and technical specifications;
2. Make key enablers (including data, infrastructure and services) available to all;
3. Establish a common market.

The first aim is covered by this MIMs Plus specification document, whereas the second and third aims are of a more operational nature, which are addressed in the Operational Guide.

https://living-in.eu/groups/commitments/technical

This is a journey

Let’s continue working together to help all communities – especially small and medium sized communities and ones with little resources – build effective local data ecosystems

Join us in OASC to continue to develop the MIMs

michael@oascities.org

Switching from policy making to societies' needs

Suzanne Dumouchel
CNRS/OPERAS
EOSC Board of Directors

Where the EOSC Association plays an important role…

1. Promoting the voices of the scientific communities at the EOSC Steering Board level (EOSC Partnership) -> through the SRIA update and the TFs
2. Increasing interdisciplinarity between researchers but also with public and private sectors
3. Learning from each other on scientific, technical, legal matters related to scientific services development
4. Identifying the next disruptive technologies and sciences and creating innovation for societies at large
5. Addressing the societal challenges by providing useful and relevant services for the societies

How EOSC services can serve the scientific community?

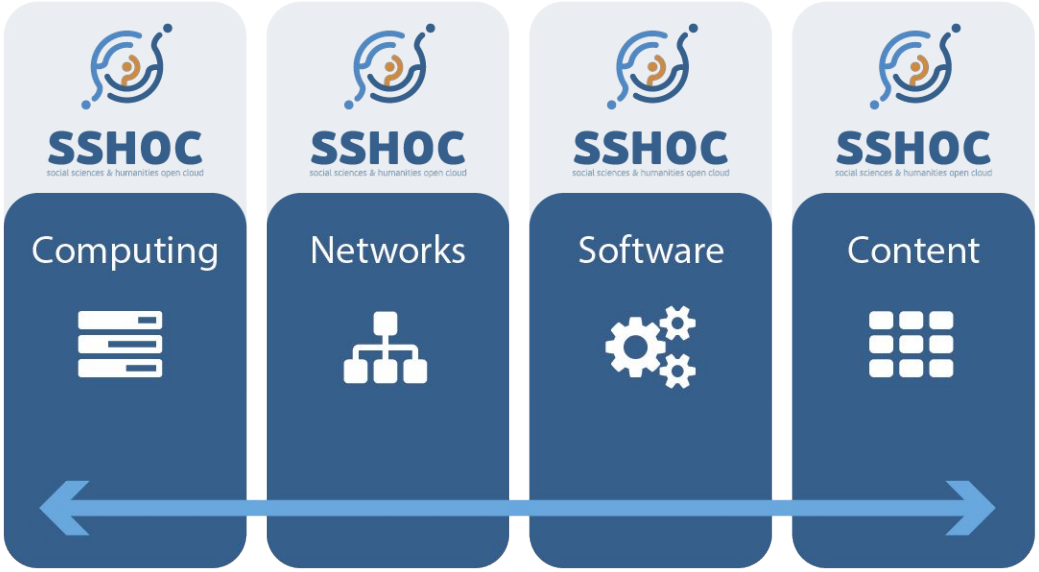
Examples from the SSHOC project…

This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
social sciences & humanities open cloud

Transition from disciplinary silos and separate e-infrastructures into cloud-based infrastructure for scholars

With FAIR data & Tools and Training Services



This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
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SSHOC Stakeholders and offering

On- and offline trainings and training materials and an international cross-disciplinary trainer network

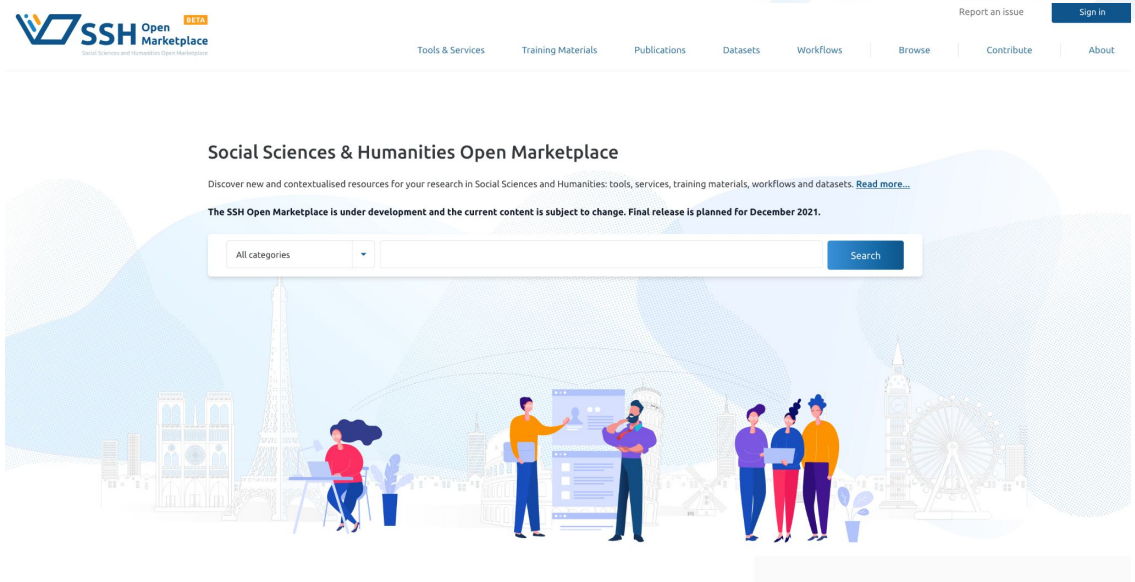
Availability of an EU-wide, easy-to-use SSH Open Marketplace, where tools and data are openly accessible

This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
social sciences & humanities open cloud

SSH Open Marketplace as one of the SSHOC services

- Discovery portal for SSH resources
  - Tools & services
  - Training materials
  - Workflows
  - Datasets
  - Publications
- 3 guiding principles
  - Contextualisation
  - Curation
  - Community



Beta version: marketplace.sshopencloud.eu

This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

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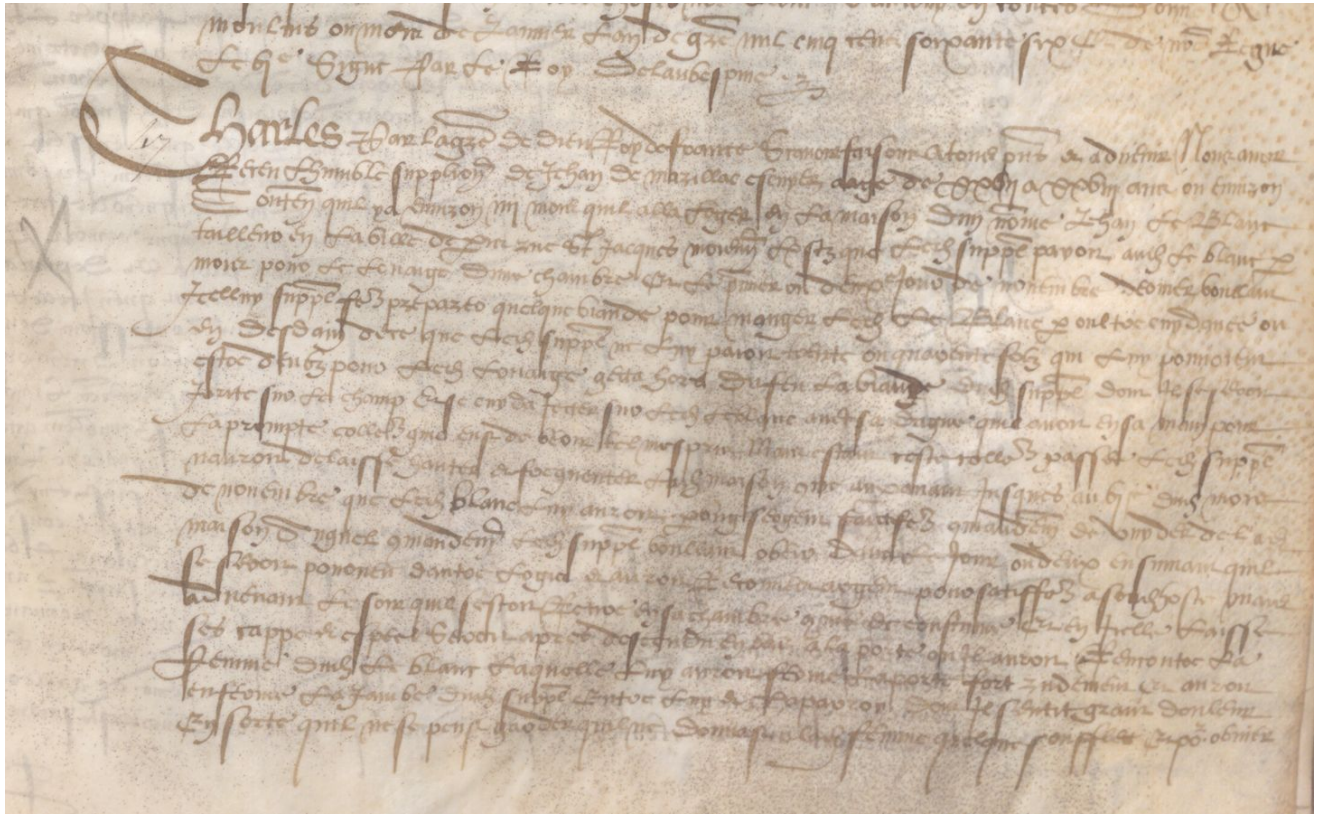
social sciences & humanities open cloud

Use cases - Transkribus



HTR - *Handwritten Text Recognition*

- Who has time to read this? Let the machine help you

Archives nationales
JJ//264/47, fol. 23

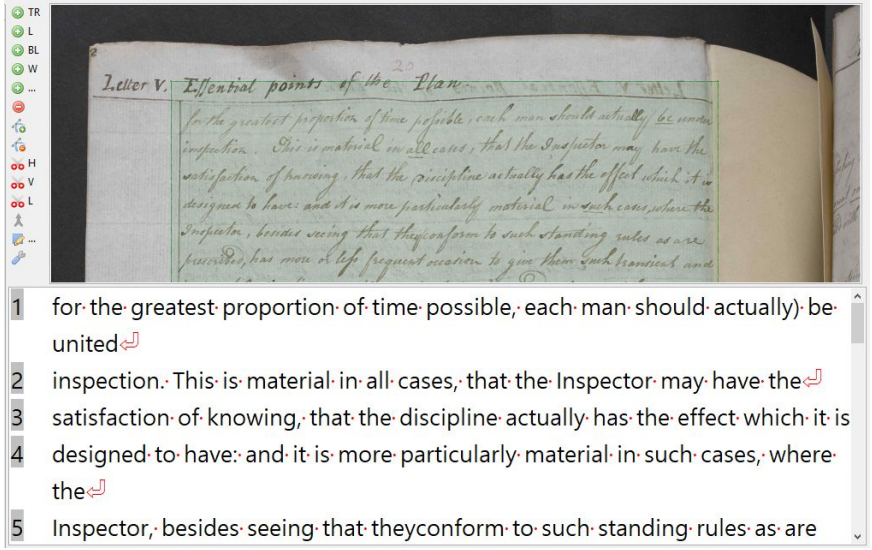
This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
social sciences & humanities open cloud

Use cases - Transkribus

HTR - *Handwritten Text Recognition*

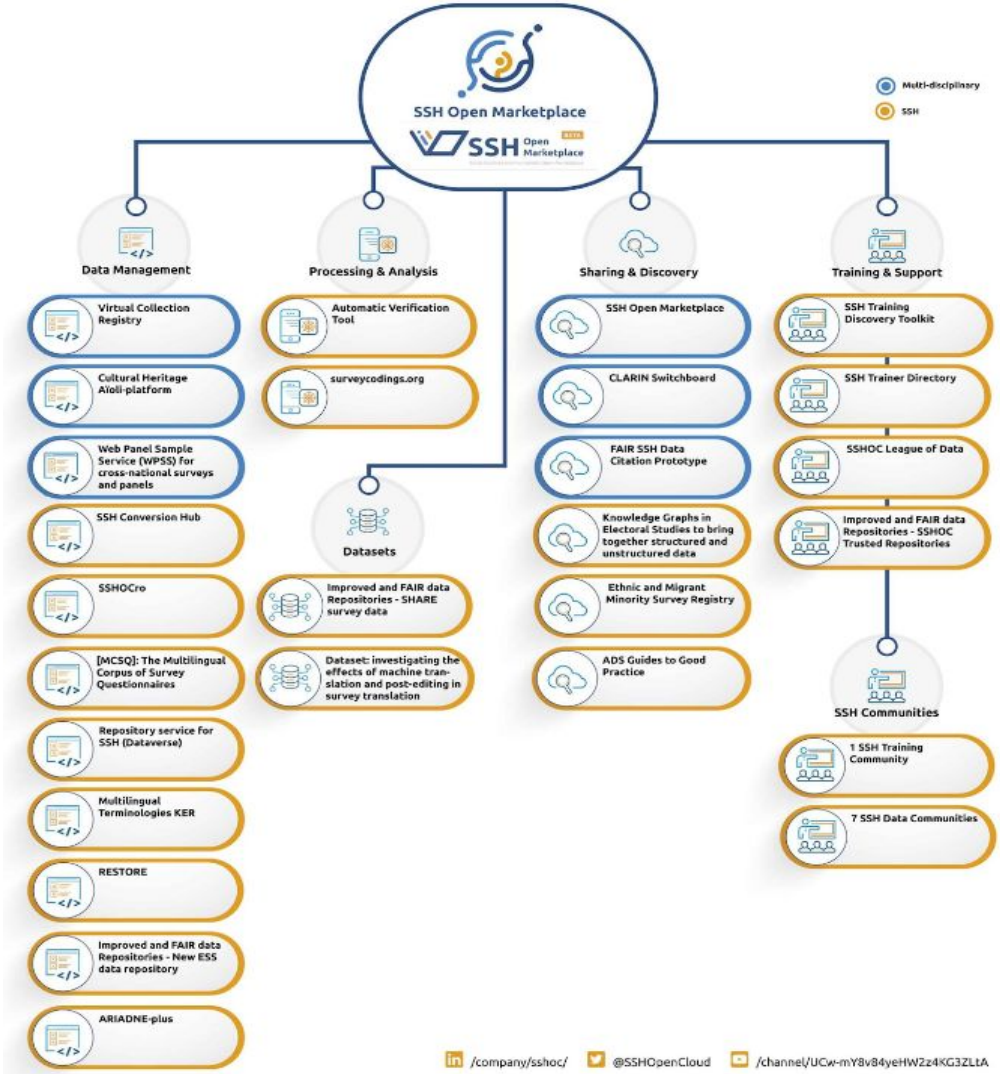
- Train the machine to read paleographic materials
  - You need a sufficiently large corpus, ~500 previously transcribed pages of the same or similar hand to train a model.
  - Ask yourself: is this worth the effort?
- Use other models to help read your own materials
  - Will not be perfect
- Or even, as an interface for your own transcriptions
  - Very user friendly



Source:
https://readcoop.eu/transkribus/howto/how-to-transcribe-documents-with-transkribus-introduction/

This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
social sciences & humanities open cloud



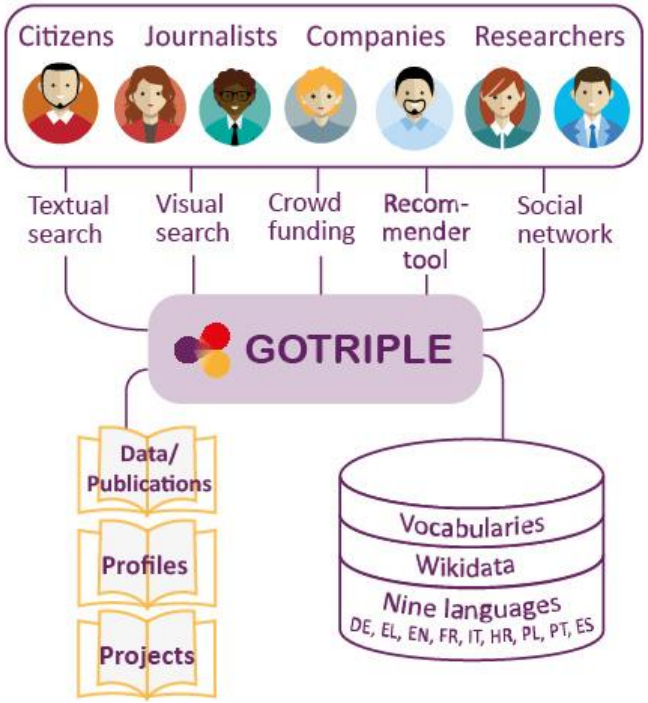
32 SSHOC KER for the SSH community and beyond

eement No. 823782

SSHOC
social sciences & humanities open cloud

EOSC services and the public sector: The Discovery platform for SSH resources, GoTriple

A multilingual discovery solution for the SSH, which will provide a single access point that allows you to explore, find, access & reuse publications & data, projects and researcher profiles at European scale



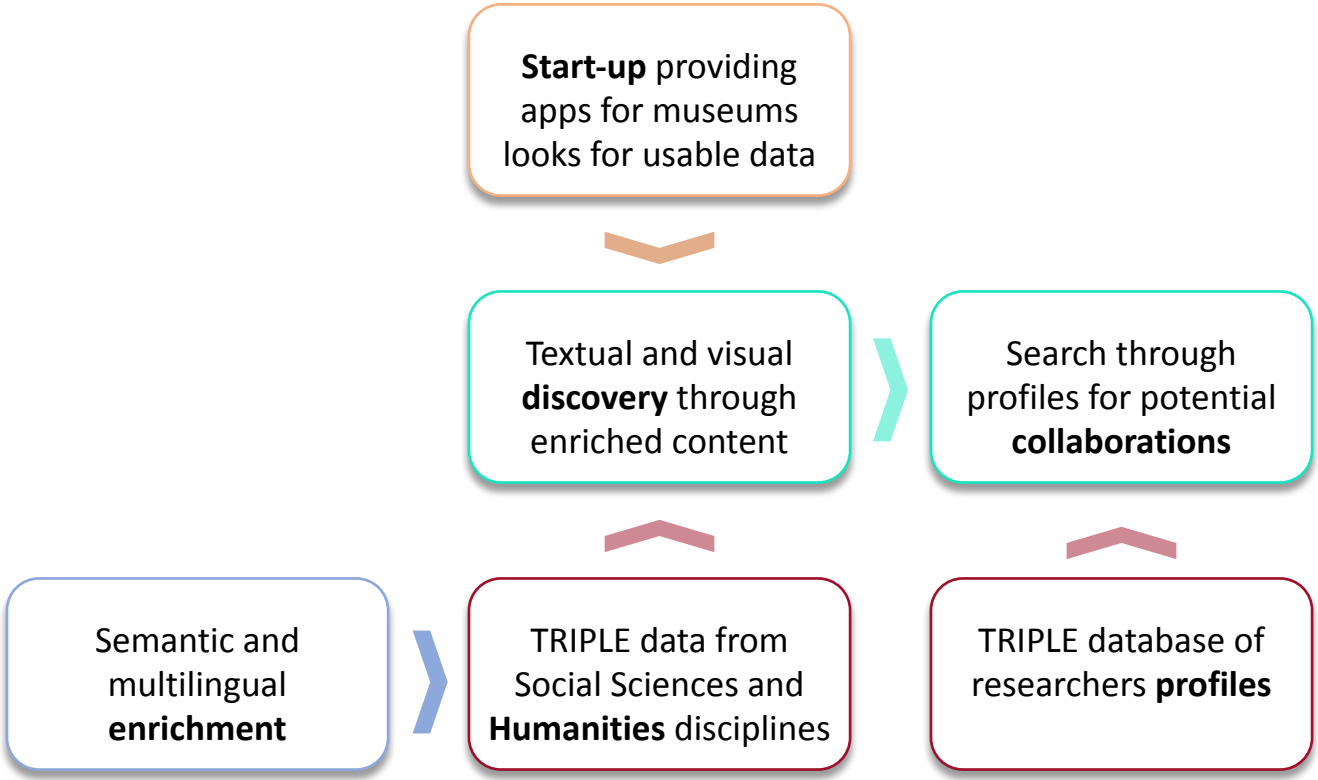
Goals & advantages

→ A discovery service
→ Innovative services
- **1/** Visual discovery system
- **2/** Annotation service (Pundit)
- **3/** Trust building system
- **4/** Recommender system
- **5/** Crowdfunding platform

Discover Connect Collaborate

Triple

GoTriple platform: A discovery use case



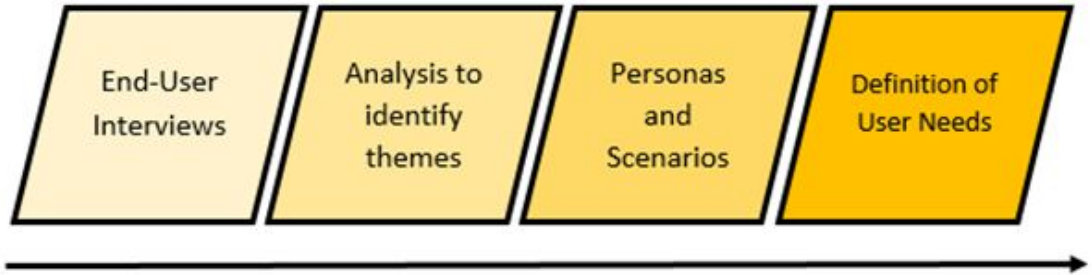
Discover
Connect
Collaborate

Triple

Identification of users requirements

In order to develop a usable and effective discovery platform for SSH we ensured that we:

- worked with academic & non-academic stakeholders
- carried out 37 in-depth qualitative interviews questioning working practices & what users require from such a platform
- conducted Thematic Analysis of the interviews to discover themes
- developed a range of Personas and Scenarios (using the results of the above work)



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TRIPLE Personas

Discover Connect Collaborate

Triple

TRIPLE Scenarios

Dr Emily Lewis

AGE: 29

ACADEMIC POSITION: Post-Doc/ Early Career Researcher

DISCIPLINE: Human Geography / Environmental Science

NATIONALITY: British

WORKING IN: University of Leeds

SCENARIO:

Emily has been using Triple as a search engine and repository for her research work for the last few months and has found it much easier to be kept up to date, thanks to the notifications sent to her when relevant new work is published, she can bulk download all the suggestions at a single click if she wishes, or choose to individually download which also allows her to tag and/or colour code the files as they are saved. She finds that it's much easier to retrieve her saved Twitter datasets by using the 'tags'.

Emily is arranging a workshop on regional actions towards the Future Security of Food, Energy and Water, which will be held in Leeds towards the end of the year. She has a number of colleagues from other UK universities who will be involved and who will attend, but they are also looking to invite other key academics and also Policy makers and individuals from the relevant industries.
Emily would like to set a geographical region to limit the search for people to a geographical area, only inviting those within 100 miles as the focus was on local environmental actions. She had previously tried using LinkedIn and Research Gate, but they returned mostly international academics.

In addition to providing a list for the specific region, the Triple platform is able to give details of the people's interests that she'd like to invite so that she can produce a very tailored invitation, explaining how their skills will be useful for the workshop. She has found that she gets a much better response rate taking this personalised approach. She also makes us of any mutual acquaintances that are flagged up by the system. She can view their personal page, some include recommendations from colleagues (similar to LinkedIn) highlighting their individual strengths, which Emily finds very useful in selecting people for her workshop.
Emily is also able to advertise details of the workshop on her public-facing profile page, specifying her need for local stakeholders, she can easily upload the link to the platform and display this as a clickable tile for people to view. Emily can also see the metrics of how many people have viewed the link.

Emily has found several relevant 'Groups' and also other ongoing 'Projects' that are relevant to her research. She is able to link to the individual academics from their project page, saving time with separate searching. She requests that her link is shared to the group. Emily can send invitations via the platform (or she can choose to use their email contact details). She finds that the platform makes it easier to keep up to date with responses as to who is attending (she gets an email notification if she chooses to select the notifications option).

The TRIPLE project is funded by the European Commission, under Grant Agreement No. 863420

Triple

Discover Connect Collaborate

Defining user requirements

Scenario narratives

Transformation into Scenario steps (list of user activities)

List with more formal definition of user requirements

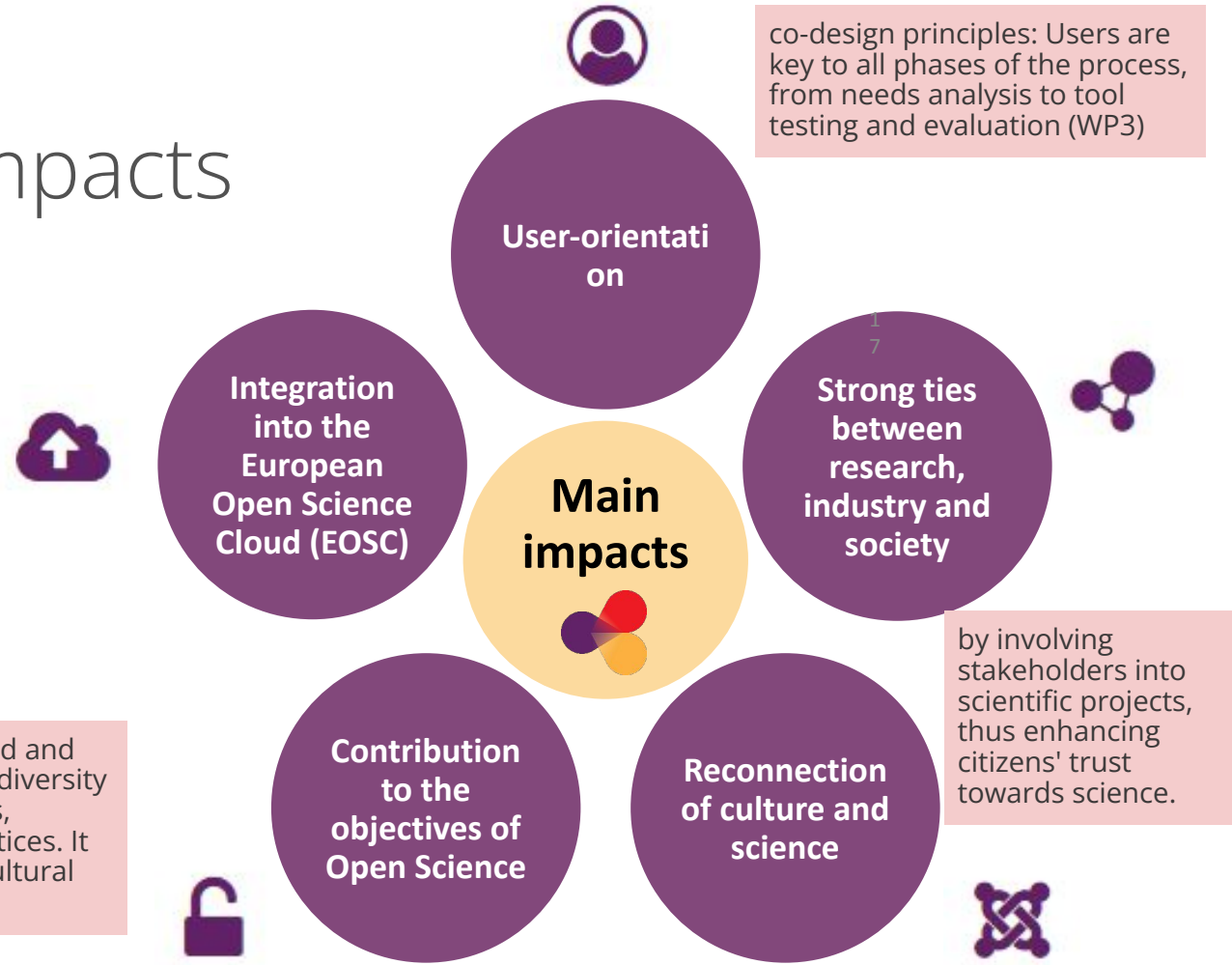
Basis for
- identification of platform functionalities +
- subsequent production of interface prototypes

Needs for Scenario 7: David Green (stakeholder)

- 7.1 The user shall be able to Search ordering by 'impact'
- 7.2 The user shall be able to Search by most recent publication
- 7.3 The user shall be able to Search for Projects
- 7.4 The user shall be able to Search for presentations (slides/video format)

(cf. D3.1 Report on User Needs)

TRIPLE: Main impacts



co-design principles: Users are key to all phases of the process, from needs analysis to tool testing and evaluation (WP3)

access to open content and resources and facilitates collaborations across disciplinary and language boundaries;

involve new economic actors into the EOSC

by involving stakeholders into scientific projects, thus enhancing citizens' trust towards science.

discover, understand and highlight European diversity in terms of societies, languages and practices. It helps to promote cultural diversity in Europe.

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Conclusion (sort of)

Collaboration, Co-design process and user-centered approach is at the heart of these SSH services but also at the heart of what is expected for a useful EOSC.

Very powerful practices to:

- have greater impacts (rather than using indicators)
- involve societies, researchers, citizens
- facilitate serendipity
- develop innovation
- address societal challenges

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For more information

EOSC Association:
Website → www.eosc.eu
Twitter → @eoscassociation / @EoscPortal

SSHOC project:
Website → www.sshopencloud.eu
Twitter → @SSHOpenCloud

TRIPLE project:
Website → www.gotriple.eu/ / www.project.gotriple.eu
Twitter → @TripleEU / @OPERASEU
Mailing List → gotriple-communities@listes.huma-num.fr

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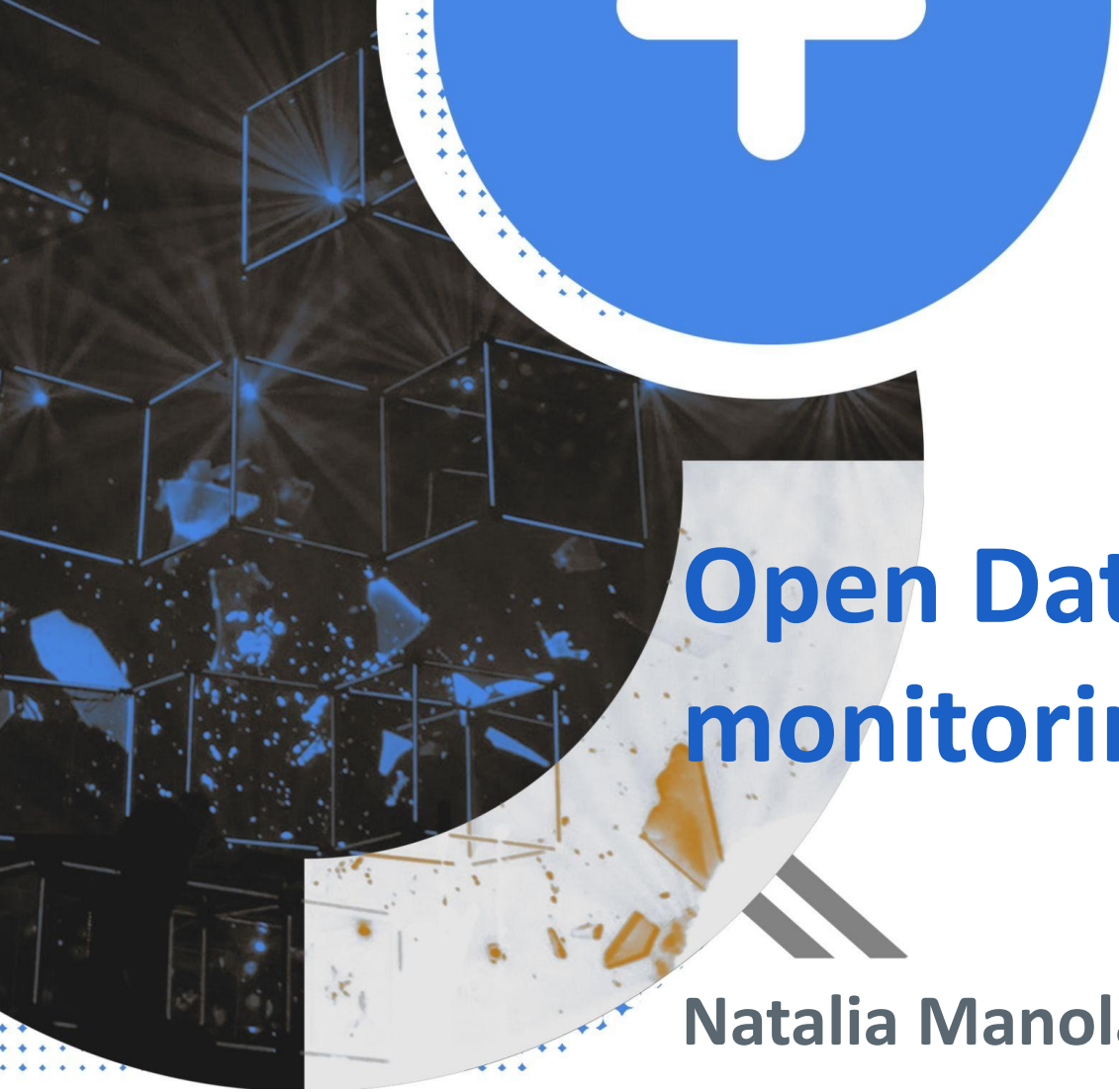
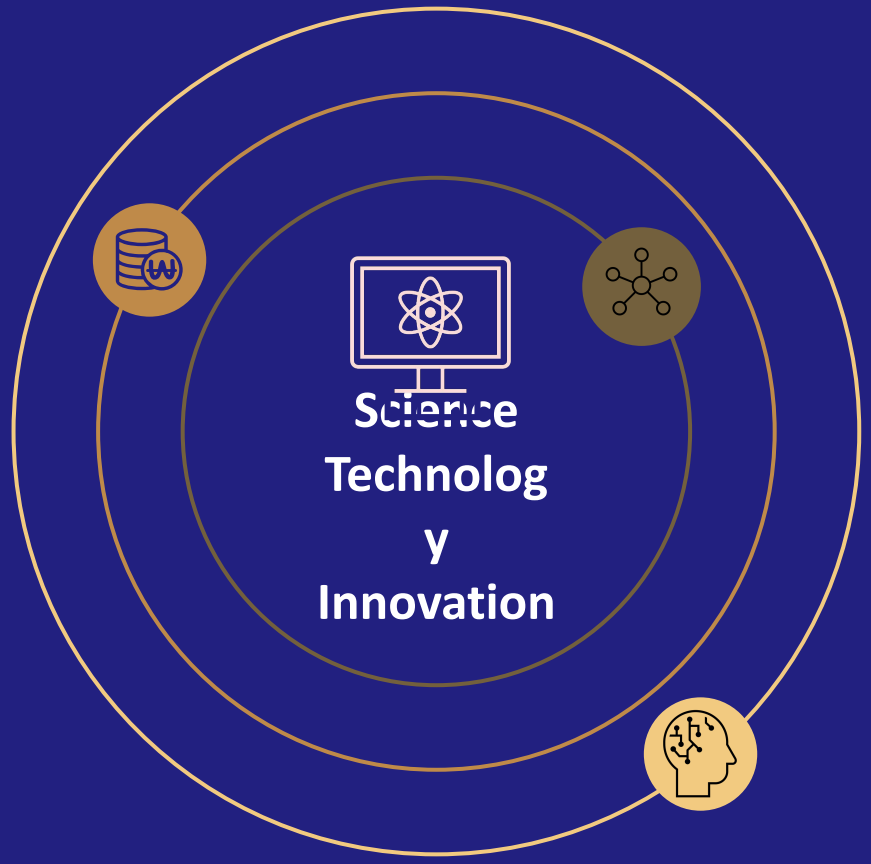


Open Data for transparent STI monitoring & assessment

Natalia Manola, OpenAIRE CEO

STI: the new policy environment



Interconnectedness

A chain of models, a complex system with multiple actors and multiple pathways. Participatory policy style

Digitalization

Reshapes innovation through data driven processes and is speeding innovation cycles , from design to product to user feedback

Policy Intelligence

Streamlines a big data, AI-assisted policy modeling approach to augment human judgment for evidence-informed policy making

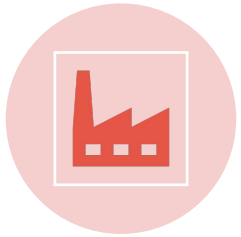
OpenAIRE

A wide range of actors involved

Different interests, different intervention points

RESEARCHERS

RESEARCH MANAGERS



INDUSTRY

POLICY MAKERS

PUBLIC

Tracking & assessment of STI

- **Evidence-based**
- **Automated**
- **Sustainable** – tracking long-term & repeatedly, outputs and impact of innovations
- **Comprehensive** – 360^{o} view across multiple facets of STI activities
- **Granular** – in-depth analysis to identify pathways and gain understanding
- **Trustworthy** – to guide decision making

Open data, Big data, AI

Where does open data come into play?

Open data as a means of

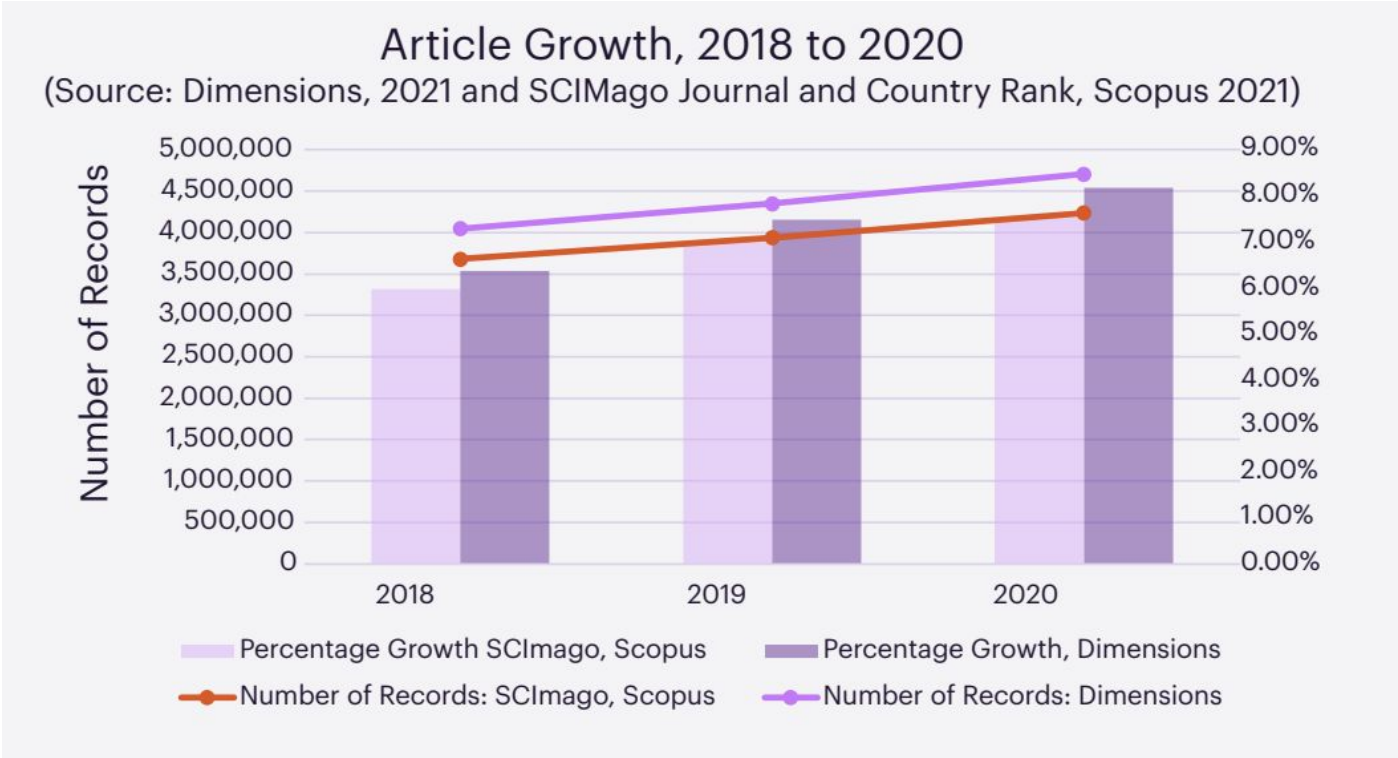
- Identifying research outcomes easily – **no barriers** to evidence
- Allowing **transparency** in assessment

Open science practices

- Sharing results at early stages – **responsiveness**
- Involvement of citizens - **participatory**

Big data

Scientific output is getting bigger in volumes



OpenAIRE in IntelComp

Open Science meets AI

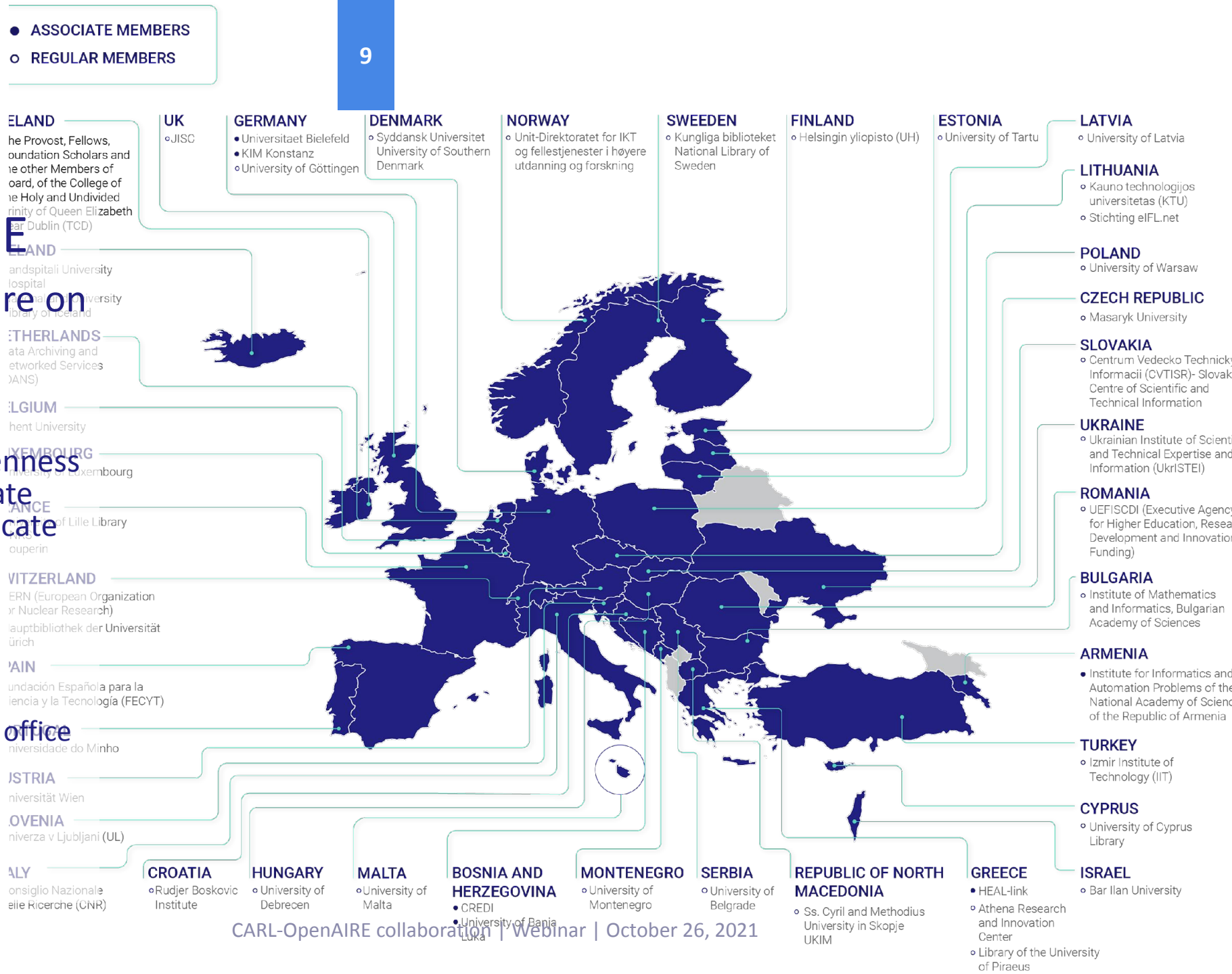
WHO IS OPENAIRE

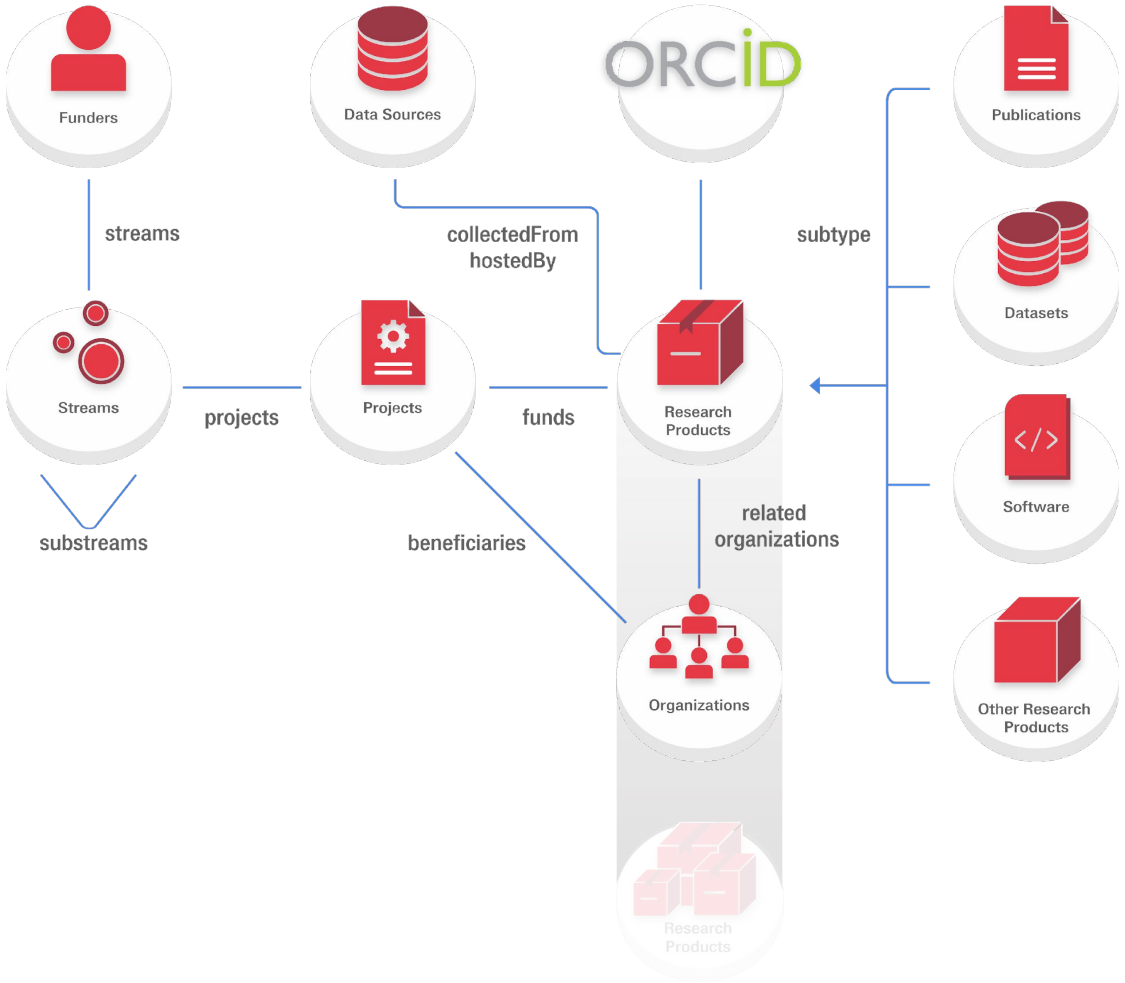
A European infrastructure on open scholarly communication

Mission: Shift scholarly communication towards openness and transparency and facilitate innovative ways to communicate and monitor research.

Non-profit organization

- Established Oct 2018
- Headquarter Greece, virtual office
- 47 members
- From 34 countries





Open scholarly communication data

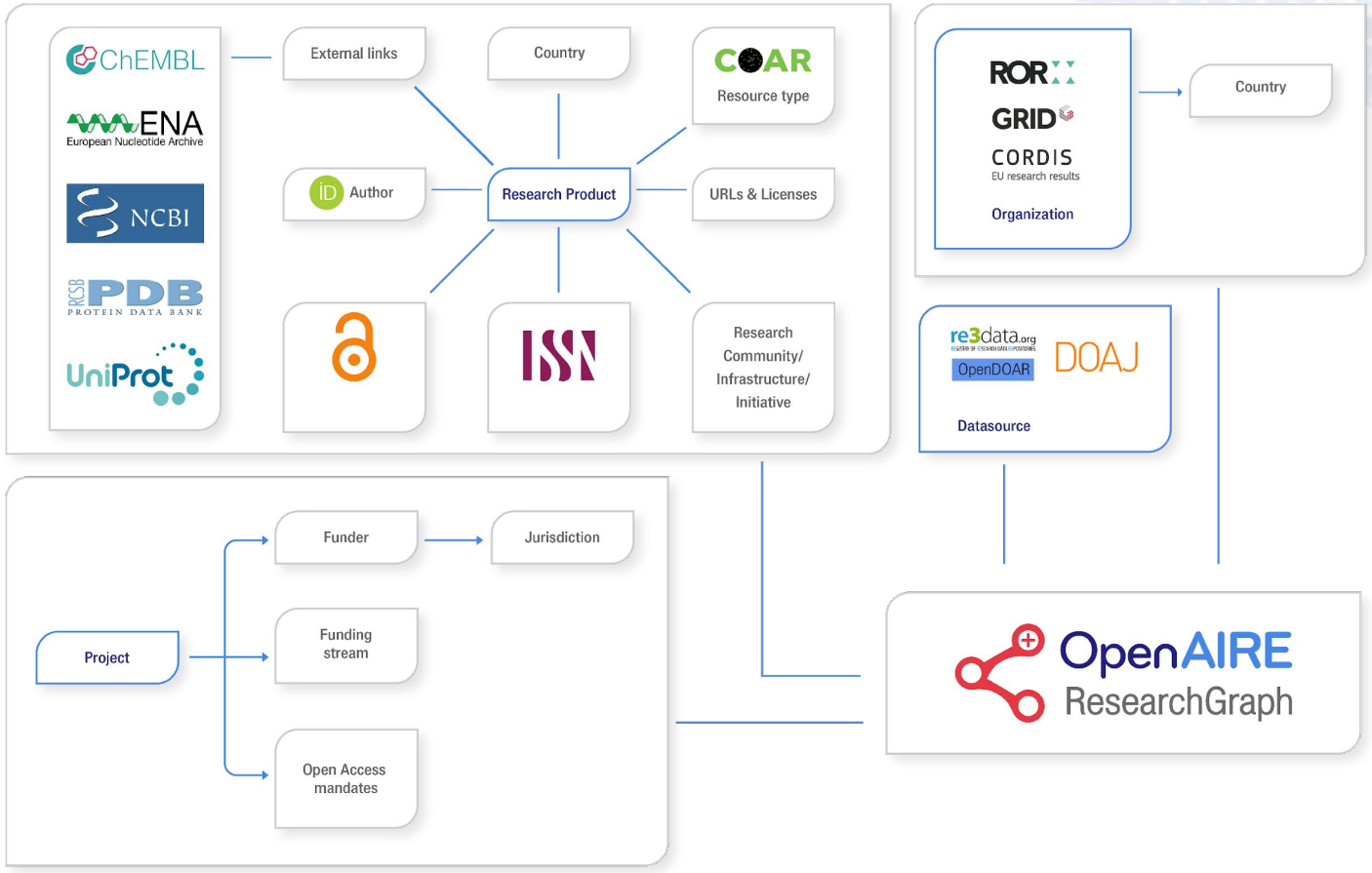
- A big, global **data space** for scientific results
- Gathers publications, linked to data and software, people, organisations, processes, facilities
- All **linked** together
- Used for **discovery**, tracking and **monitoring** of open science
- A core resource in the **European Open Science Cloud**

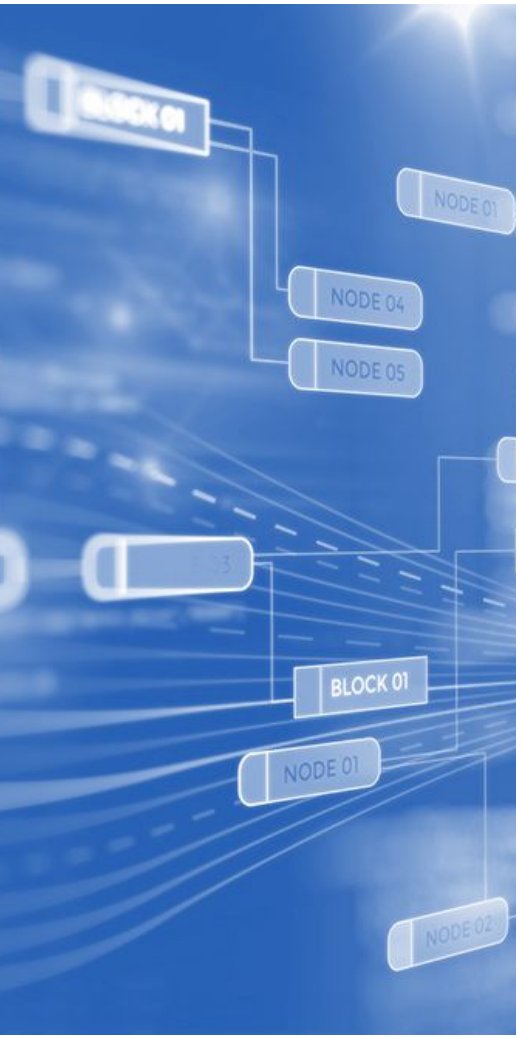
OpenAIRE ResearchGraph

OpenAIRE

A global CRIS+

- 120 Mi publications
- 12 mi data items
- 220 K software items
- 7 mi research products
- 20+ funders with 3 mi projects
- Linked to authoritative registries
- …





Data collected augmented by AI

OpenAIRE: Fulfilling research community needs

- Classifications (Frascati, SDGs, domain specific,…)
- Links and corelations
- Scientific trends
- Groups, clusters, collaborations
- Innovations
- Technological readiness
- Insights
- …

- **IntelComp:** Fulfilling the goals of STI policy formulation and assessment

A journey that has just begun

THANKS

Contact us for more information

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@openaire_eu
@nataliamanola

Data Driven Policy Cluster
Co-creating digital tools for better governance

Panel Discussion- From digital disruption to digital adoption

- What are the tangible opportunities (e.g. real-time information, predicted impact, gathering citizen input) for these new technologies and interoperable data spaces in policy making?
- What are the challenges for these new technologies to be adopted in policy making?
- What is your vision on the role of EOSC? What are the opportunities forEOSC in data sharing?


Co-organised by:
Policy Cloud
Cloud for Data-Driven Policy Management
Decido
AI4PublicPolicy
DUET
intelcomp
9-10 December 2021
EVIDENCE BASED POLICYMAKING IN EUROPE 2021
USE CASES AND DIGITAL TOOLS
FOR IMPROVED DECISIONS

Data Driven Policy Cluster
Co-creating digital tools for better governance

Agenda

- 11.30-11.45 Evidence Based Policy Cases - Pitching the tracks (Plenary)
  - Track 1: Co-creation & stakeholder engagement - Germana Gianquinto (AI4PublicPolicy)
  - Track 2: Policy Prediction - Zach Smith (Policy Cloud)
  - Track 3: Governance Ethics - Martina Piantoni (DUET)
  - Poll with audience
- 11.45-12.15 Coffee break (move to your track)
- 12.15-13.30 Tracks (Breakout rooms)
- **13.30-14.00 Wrap up (Plenary)**

Data Driven Policy Cluster

Co-creating digital tools for better governance

Evidence Based Policymaking 2021

Session: Evidence Based Policy Cases from data to decision making

Track 1 - Stakeholder Engagement

Join us:
10th December 11:30 am CET

Fabio Perossini

KPRF
DECIDO

Jerónimo Arenas García

Universidad Carlos III
IntelComp

Pavel Kogut

21C Consultancy
DUET

Data Driven Policy Cluster

Co-creating digital tools for better governance

Evidence Based Policymaking 2021

Session: Evidence Based Policy Cases from data to decision making

Track 2 - Policy Prediction

Join us:
10th December 11:30 am CET

Ricard Munné

Atos Reseach
PolicyCloud

Francesco Mureddu

Lisbon Council
DECIDO

Jurgen Silence

Flemish government
DUET

Data Driven Policy Cluster

Co-creating digital tools for better governance

Evidence Based Policymaking 2021

Session: Evidence Based Policy Cases from data to decision making

Track 3 - Governance Ethics

Join us:
10th December 11:30 am CET

Martim Taborda Barata

ICT Legal Consulting
Policy Cloud

Alberto Bettiol

ICT Legal Consulting
Policy Cloud

Vanni Resta

KPRF
DECIDO

Marina Cugurra

R&I Lawyer and Ethics Expert
AI4PublicPolicy

Data Driven Policy Cluster

Co-creating digital tools for better governance

Join our community!

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