Demystifying Gaia-X for the UK

Amanda Brock, CEO, OpenUK

London, 31st March 2022

Open:UK

Open:UK PURPOSE

DEVELOP UK LEADERSHIP AND GLOBAL COLLABORATION IN OPEN TECHNOLOGY

Board

Rob McQueen
Chair of the Board

Amanda Brock
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Director

Henry Nash
Director

Ian Burgess
Director

John Laban
Director

Laura James
Director

Liz Rice
Director

Matt Jarvis
Director

Phil Weir
Director

Rob Taylor
Director

Terence Eden
Director

Tim Telford
Director

Lou Peers
Board Facilitator

Steve Bianchi
Board Facilitator

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CEO and Chief Policy Officer

Alison Dowdney
Head of Student Outreach

Andrew Martin
Chief Security Technology Officer

Chris Eastham
Chief Legal Officer

Cristian Parrino
Chief Sustainability Officer

Gen Ashley
Chief Open Technology Partnership Officer

George Brooks
Copywriter

Georgia Cooke
Chief Design Officer

Iain G Mitchell QC
Honorary QC

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Recruitment Officer

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Chief Business Community Officer

Lou Peers
Project Manager Lead

Mark Kember
Chief Communications Officer

Matt Barker
Entrepreneur in Residence

May Cheung
Chief of Staff

Robert Carolina
Chief Security Policy Officer

Robert Grannells
Chief Future Leader

Rochelle Farmer
General Counsel

Shaz Ali
Chief Technology Officer

Ambassadors

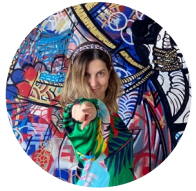
Anais Urlichs
Ambassador

Andre Maia Chagas
Ambassador

Andrei Cioaca
Ambassador

Ashleigh Monagle
Ambassador

Ashley Nicolson
Ambassador



Carla Gaggini
Ambassador

Charlie Hull
Ambassador

Chris Kranz
Ambassador

Chris Lloyd-Jones
Ambassador

Chris Simmonds
Ambassador

Chris Howard
Ambassador

Danny Abukalam
Ambassador

Ambassadors

David Burns
Ambassador

Dominique Top
Ambassador

Eddie May
Ambassador

Fiona Nielsen
Ambassador

Gen Ashley
Ambassador

Ian Watt
Ambassador

Ingo Weiss
Ambassador

Jason Bell
Ambassador

Jason Evans
Ambassador

Jon Seager
Ambassador

Jordi Mon Companys
Ambassador

Julieta Arancio
Ambassador

Ambassadors

Justin Cormack
Ambassador

Laura Czajkowski
Ambassador

Leanne Kemp
Ambassador

Lewis Denham Parry
Ambassador

Lorna Mitchell
Ambassador

Mark Baker
Ambassador

Mark Dansie
Ambassador

Mauricio Salatino
Ambassador

Michael Cade
Ambassador

Mo Ladha
Ambassador

Neil McGovern
Ambassador

Nelly Kiboi
Ambassador

Ambassadors

Nick Jones
Ambassador

Nicki Watt
Ambassador

Nigel Abbott
Ambassador

Paula Kennedy
Ambassador

Pushpita Dey
Ambassador

Richard Morrell
Ambassador

Sonya Moisset
Ambassador

Steve Helvie
Ambassador

Will Hall
Ambassador

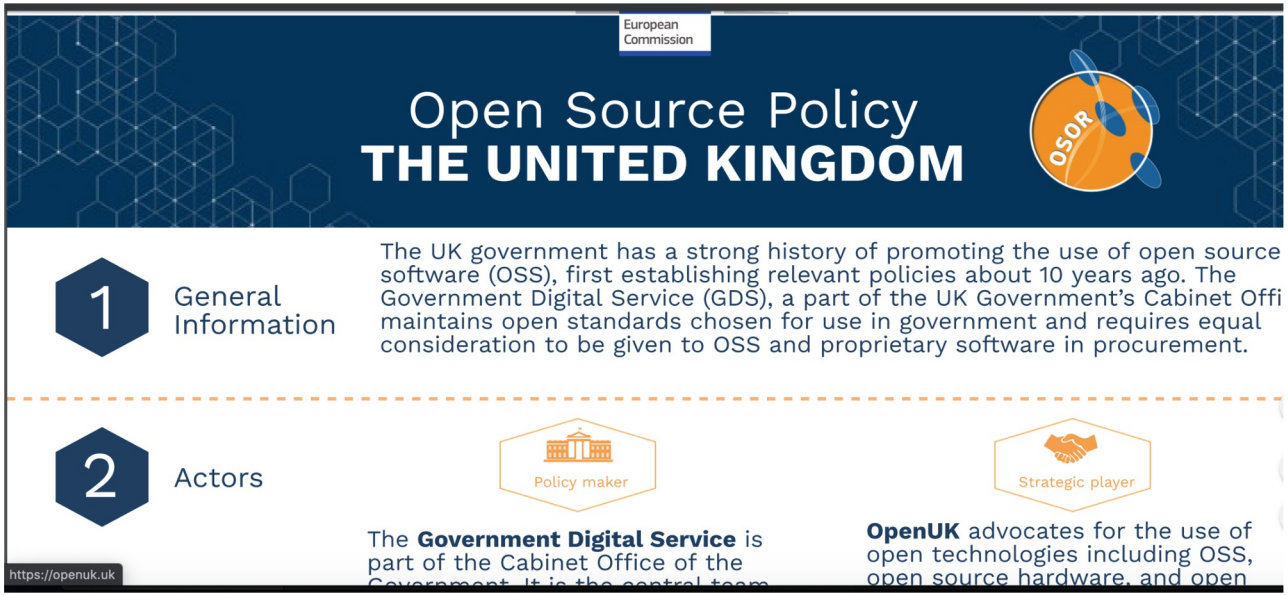
Community: Building a cohesive and visible Community around Open Technology in the UK:

- Awards
- NY Honours List
- Ambassador Program
- Supporters
- Sponsors and Doneors

Open UK
Awards 2021

Influencing Legal and Policy to make sure the UK is a great place to do Open

- Invited to speak with UK Trade on aspects of treaty negotiations
- Joint report on UK and Open with OSOR 2020
- Amicus Brief in Google v Oracle decided 5 April 2021
- Review of new laws and policy, respond to consultations
- Future Leaders Report on Government Procurement
- Day One Member Gaia-X
- State of Open: The UK in 2021 Report – 3 Phases
- COP26 Blueprint for data centre & Sustainable Open Technology Day


European Commission
Open Source Policy
THE UNITED KINGDOM
OSOR
1
General Information
The UK government has a strong history of promoting the use of open source software (OSS), first establishing relevant policies about 10 years ago. The Government Digital Service (GDS), a part of the UK Government's Cabinet Offi maintains open standards chosen for use in government and requires equal consideration to be given to OSS and proprietary software in procurement.
2
Actors
Policy maker
Strategic player
The Government Digital Service is part of the Cabinet Office of the
OpenUK advocates for the use of open technologies including OSS, open source hardware, and open
https://openuk.uk

No. 18-956

IN THE
Supreme Court of the United States

GOOGLE, LLC,
Petitioner,

v.

ORACLE AMERICA, INC.,
Respondent.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

BRIEF FOR AMICI CURIAE PYTHON SOFTWARE FOUNDATION, TIDELIFT, OPEN UK, AND PROTOCOL LABS, IN SUPPORT OF PETITIONER

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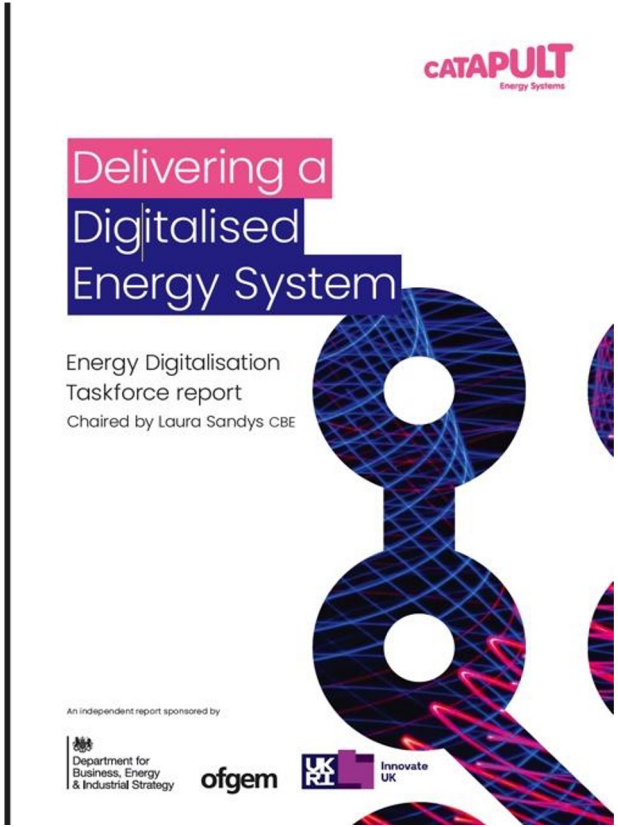
CATAPULT
Energy Systems
Delivering a Digitalised Energy System
Energy Digitalisation Taskforce report
Chaired by Laura Sandys CBE
An independent report sponsored by
Department for Business, Energy & Industrial Strategy
ofgem
UKRI
Innovate UK

Open:UK

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Open:UK

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£43.15bn

1. Using EC Report methodology open source contributes £43.15bn pa GDP

5th

2. UK is 5th for global open source contribution

89%

3. 89% UK companies run open source software

69%

4. 69% UK SME's contribute to open source software

72%

5. 72% UK companies see collaboration benefit of open source

51%

6. 51% UK companies look for open source skills in hiring

58%

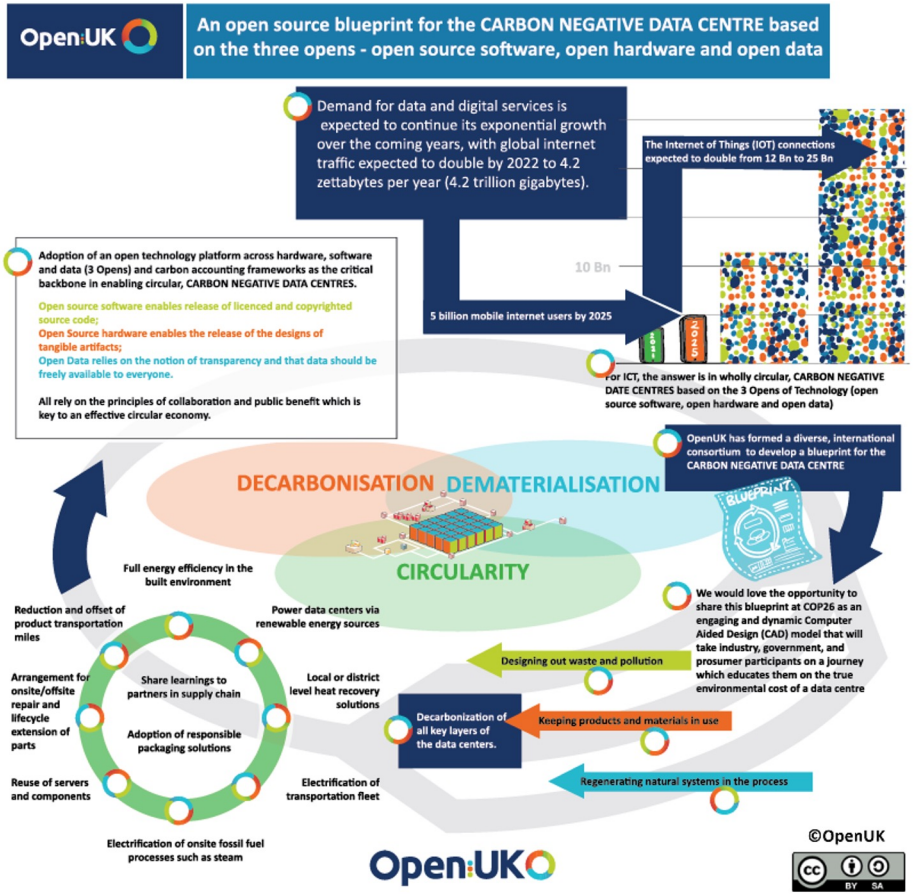
7. 58% of companies have open source governance and a security policy

£46.5bn

8. £46.5bn estimated value to UK business in 2020

9. Open Source contributing to environmental sustainability in UK

Open:UK


Open:UK
An open source blueprint for the CARBON NEGATIVE DATA CENTRE based on the three opens - open source software, open hardware and open data
Demand for data and digital services is expected to continue its exponential growth over the coming years, with global internet traffic expected to double by 2022 to 4.2 zettabytes per year (4.2 trillion gigabytes).
The Internet of Things (IOT) connections expected to double from 12 Bn to 25 Bn
10 Bn
5 billion mobile internet users by 2025
Adoption of an open technology platform across hardware, software and data (3 Opens) and carbon accounting frameworks as the critical backbone in enabling circular, CARBON NEGATIVE DATA CENTRES.
Open source software enables release of licenced and copyrighted source code;
Open Source hardware enables the release of the designs of tangible artifacts;
Open Data relies on the notion of transparency and that data should be freely available to everyone.
All rely on the principles of collaboration and public benefit which is key to an effective circular economy.
For ICT, the answer is in wholly circular, CARBON NEGATIVE DATE CENTRES based on the 3 Opens of Technology (open source software, open hardware and open data)
OpenUK has formed a diverse, international consortium to develop a blueprint for the CARBON NEGATIVE DATA CENTRE
DECARBONISATION
DEMATERIALISATION
CIRCULARITY
BLUEPRINT
We would love the opportunity to share this blueprint at COP26 as an engaging and dynamic Computer Aided Design (CAD) model that will take industry, government, and prosumer participants on a journey which educates them on the true environmental cost of a data centre
Full energy efficiency in the built environment
Reduction and offset of product transportation miles
Power data centers via renewable energy sources
Arrangement for onsite/offsite repair and lifecycle extension of parts
Share learnings to partners in supply chain
Adoption of responsible packaging solutions
Local or district level heat recovery solutions
Reuse of servers and components
Electrification of transportation fleet
Electrification of onsite fossil fuel processes such as steam
Designing out waste and pollution
Decarbonization of all key layers of the data centers.
Keeping products and materials in use
Regenerating natural systems in the process
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Open:UK

Open:UK
Open Technology for Sustainability
Sponsored by
Red Hat
Federated Hermes International
openuk.uk/sustainabiltiy #openukcop26

Building Learning in Open Technology

- Annual Kids' Competition
- 8200 Digital Glove kits given away
- 2 Courses - second using OSD 10 definitions and Sustainable Development Goals
- Year one presented 20 October and Year 2 presented at COP26 11 November
- Digital Summer Camps
- Apprenticeship scheme – creating a Knowledge Module for 2022
- Curriculum – working on GCSE and Scottish equivalent for 2023
- University - Partnerships and Modules in 2022

Open:UK

OpenUK Kids Camp

https://openuk.uk/openkidscamp/ #openkidscamp

Sponsored by Red Hat

Camp 2 Episode 1

Camp 2 Episode 2

Open:UK

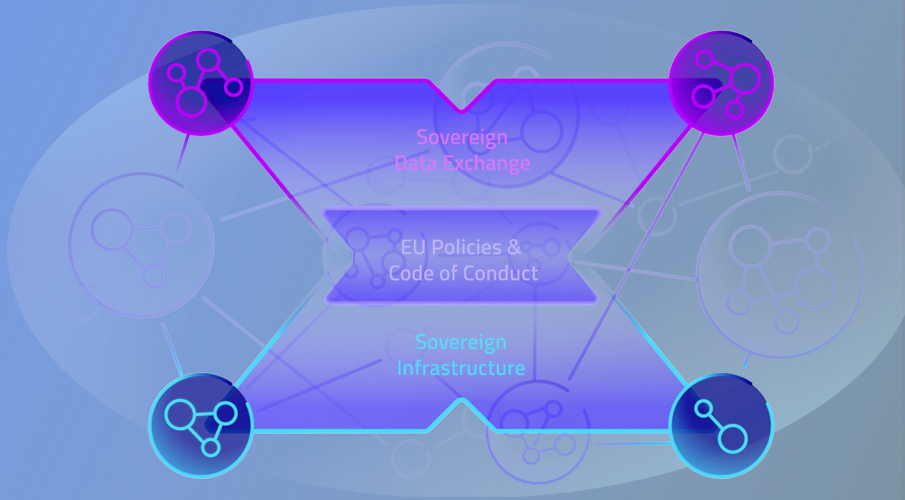
Community Engagement Challenge
2
20 RUNNER-UP 20
Presented by GNOME and Endless

Open:UK
belonging
www.openuk.uk

OpenUK
Gaia-X Day One Member and UK Hub Coordinator

Innovation through digital sovereignty – that's the goal of Gaia-X.

Achieved by establishing an **ecosystem** in which data is made available, collated and shared in a **trustworthy environment**. What emerges is not a cloud, but a **federated system** that links many cloud services providers and users together.



EU calls for data economy

A real **data economy**, on the other hand, would be a powerful engine for innovation and new jobs. And this is why we need to secure this data for Europe and make it widely accessible. **We need common data spaces** – for example, in the energy or healthcare sectors. This will support innovation ecosystems in which universities, companies and researchers **can access and collaborate on data**.

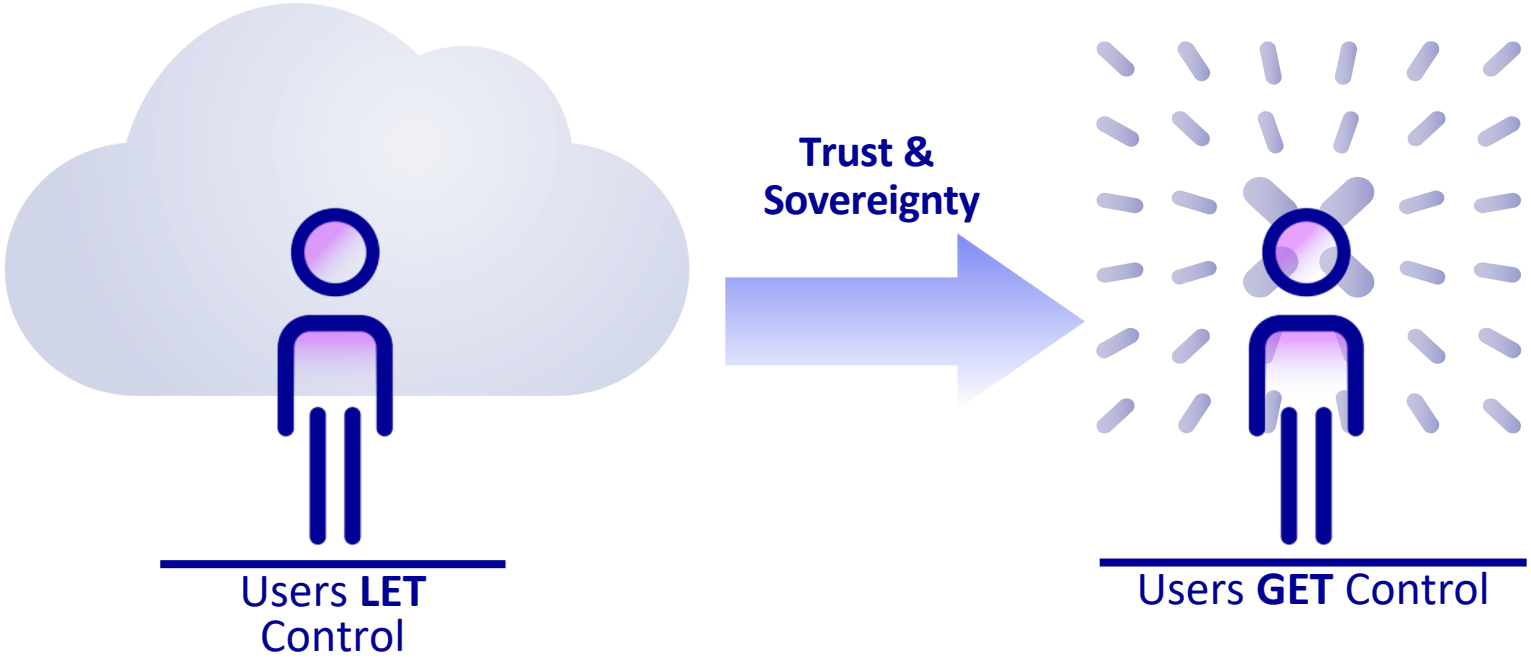
(State of the Union Address on 16 September 2020)

Source: European Commission (2020)

From traditional Cloud to Gaia-X

- Concentrated
- Proprietary
- Opaque

- Distributed
- Open
- Transparent



What is Gaia-X?

Our vision

Access and share data through a federated data infra-structure to ensure innovation for our future thanks to the next generation of Information Technology.

European cooperation

Ensure the efficiency of European data infra-structure, based on European values and supported by the European Commission.

Transparency

Secure open interfaces and standards to allow the aggregation of data while driving innovation and efficiencies within a transparent environment.

Our objectives

Foster the creation, formation, roll out and growth of digital ecosystems that can be used commercially in and across data spaces.

Maximum security

Maximise data sovereignty for business, customers and governments through services that ensure interoperability and privacy by design.

Rights protection

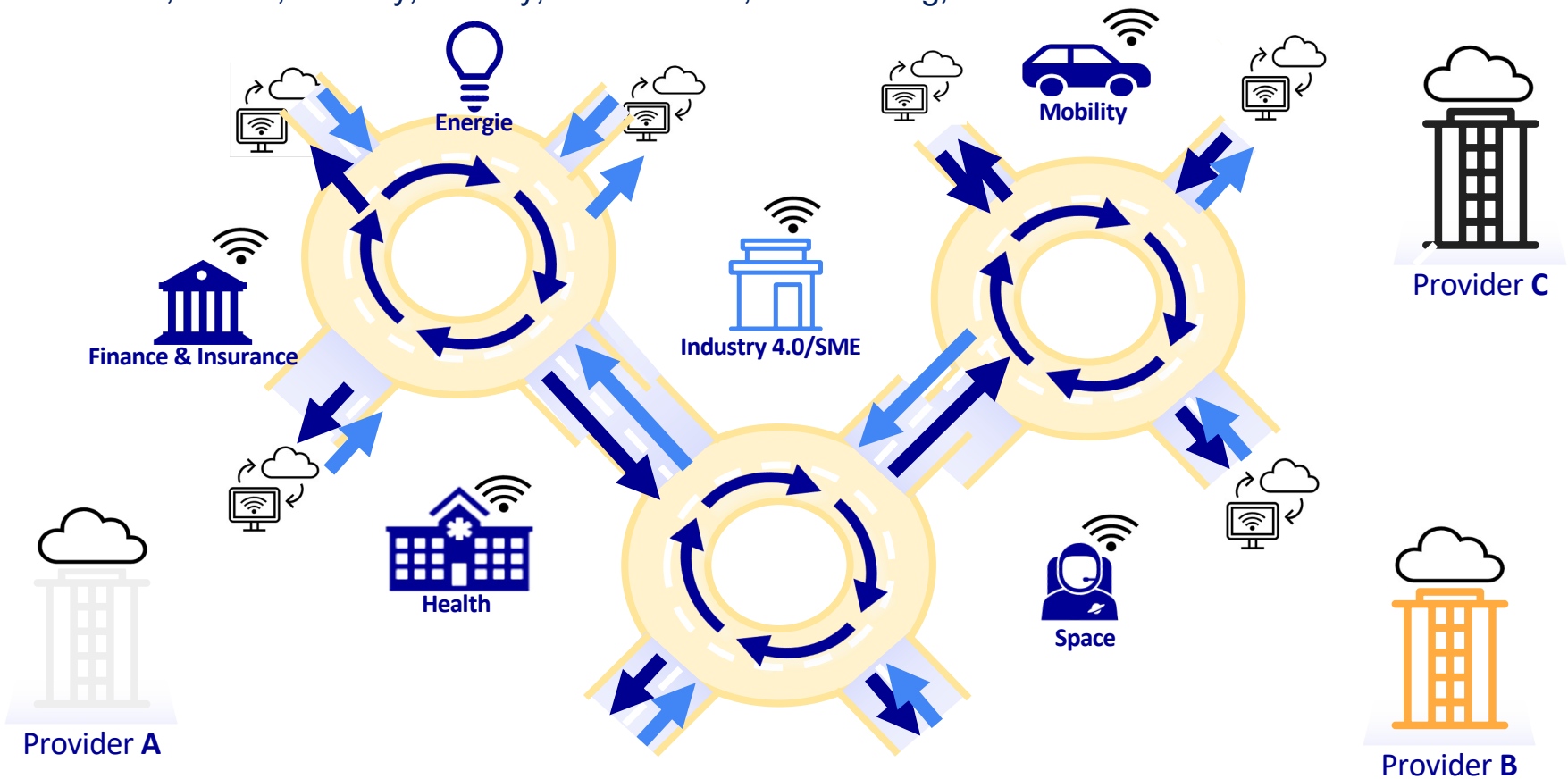
Guarantee citizens' privacy as a human right and respect the sovereignty of other nations.

Gaia-X Data Spaces and Use Cases

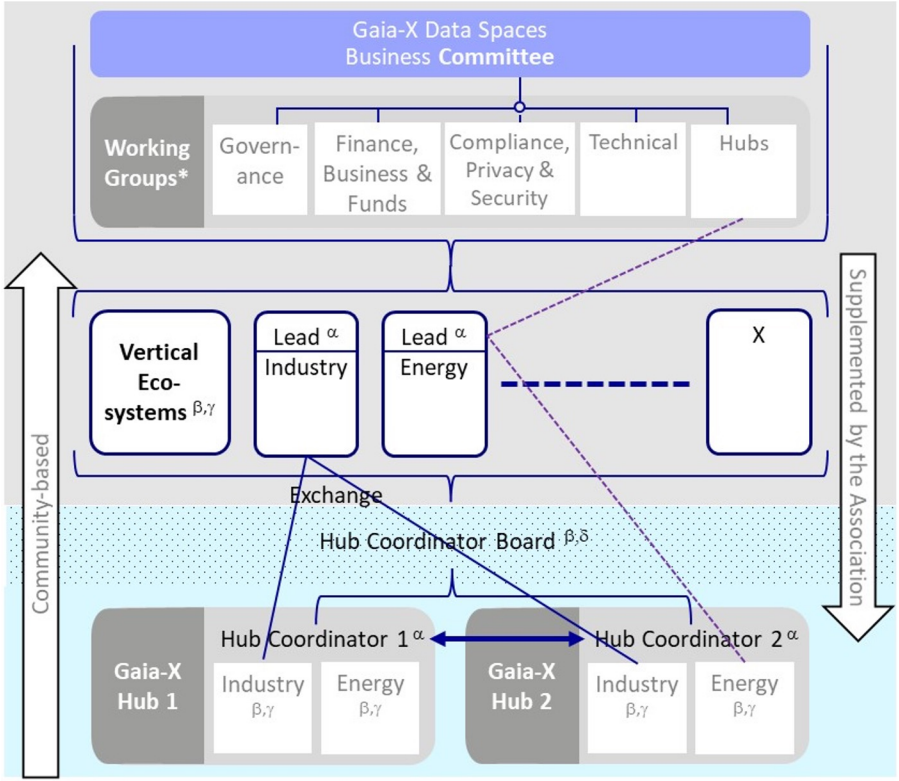
13 Data Spaces

Aerospace, Agriculture, Circular Economy, Education, Energy, Finance, Geoinformation, Health, Industry, Mobility, Public Sector, Smart Living, SPACE

gaia-x



Gaia-X Data Spaces



α Membership in Association strongly requested
β Alignment, Reporting, Feedback
γ Lead and Vice Lead election and rotation may use the ruling of the Gaia-X Association
δ Proposal of Lead and Vice Lead candidates
* Is subject to changes by the Gaia-X Association

Gaia-X Dataspace Business committee

DSBC stands for Dataspace Business committee and gathers working group organized by vertical domain (Aerospace, Agriculture, Circular Economy, Education, Energy, Finance, Geoinformation, Health, Industry, Mobility, Public Sector, Smart Living, SPACE…).

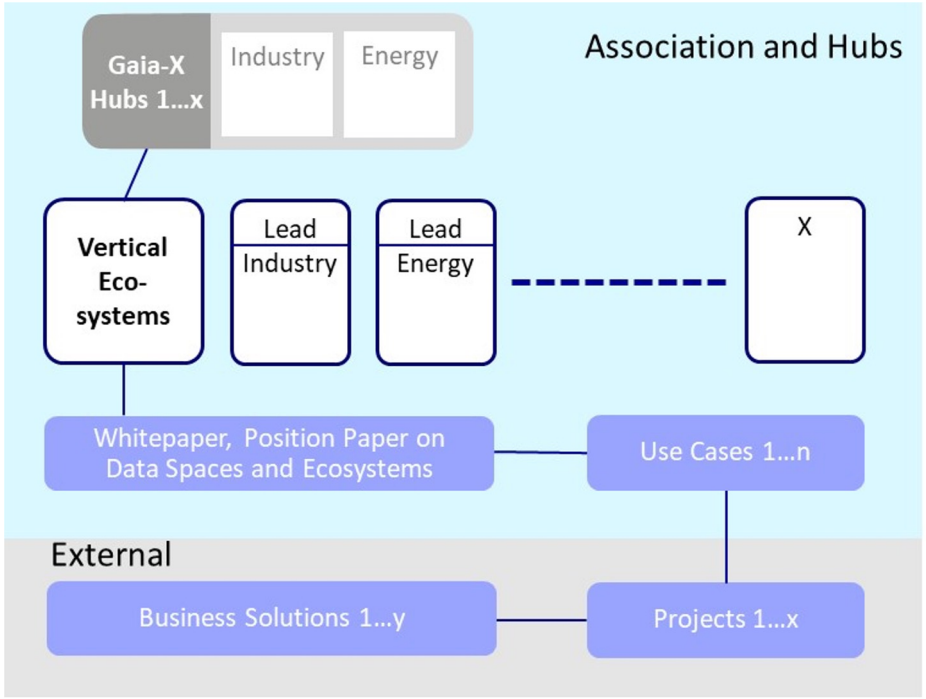
Position papers of each of these dataspace describe the main goals, challenges and use cases foreseen to develop each of them.

Share best practices in terms of data exchange, promote common data format standards, learn from other experiences, be inspired and cross-fertilize use cases in order to support the overall expansion of the dataspaces.

First challenge: obtaining a good level of data interoperability/quality which will for example faster and ease the creation of efficient and relevant decision making dashboard in each of their respective area.

These dataspaces are creating value thanks to the use of better data exchange : energy, finance, health, agriculture, mobility, education

Gaia-X Use/ Business Cases



Gaia-X Program Criteria

1. Aligned with the vision and the goals of Gaia-X (What is Gaia-X), https://gaia-x.eu/what-is-gaia-x
2. Adopt the Gaia-X policies, rules (PRD), architecture (AD) and the label document
3. Impact on EU economy and/or society
4. Pan-European scale (i.e. deploy and scale in more than one country)
5. Large potential user-base (i.e. small medium enterprises in addition to larger players)
6. Target scale and scale potential (i.e. the target scale after initial ramp-up and the longer-term scale potential)
7. Clear use cases, value/business case and deliverables
8. Critical mass of committed stakeholders
9. Openness: creating open ecosystems for data exchange, non-proprietary only (not monopolistic platform approaches)
10. Funded and resourced
11. Time to initial go-live and time to initial target-scale
12. Complementary to and linked to data spaces

Gaia-X Business Cases and Lighthouse Projects

More to follow

- Health-X (Philips, Siemens Healthineers, Sanofi, Takeda, Paris hospitals – APHP, Charite Berlin, etc.
- Mobility: Eona-X
- Energy-X
- EU Finance dataspace (Patrick Laurens-Frings, CDP)
- Aerospace
- Space (Boost aerospace)
- Green deal Education

Gaia-X Labels - https://www.youtube.com/watch?v=ER9H-biWOkA

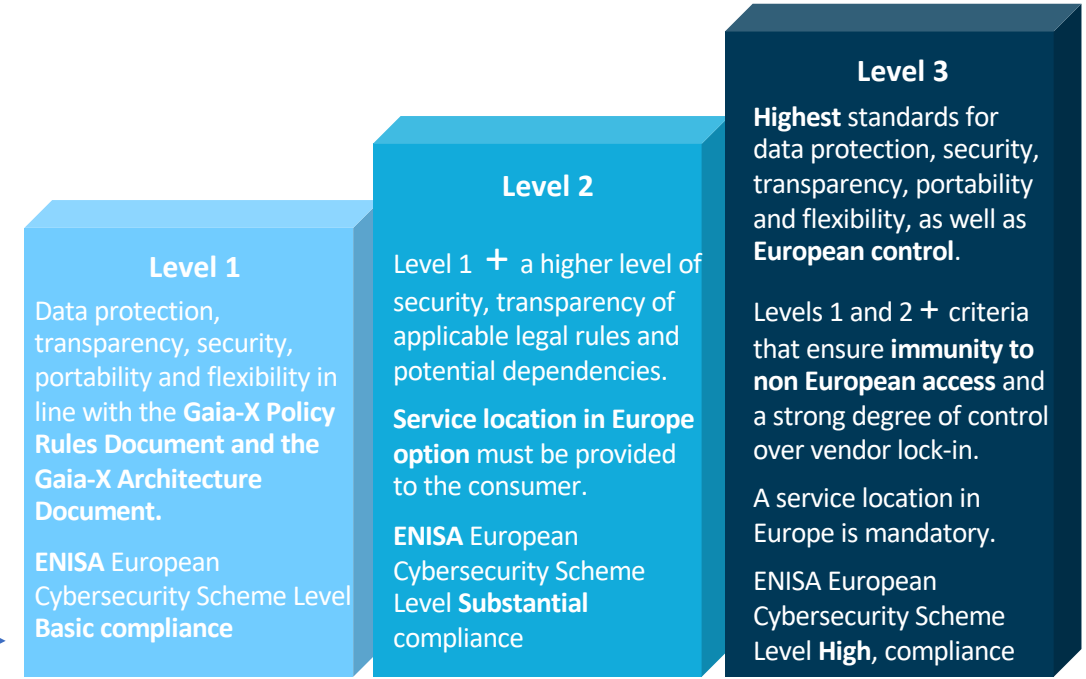
Details on labels roles & levels

The Gaia-X Compliance and Labelling Framework identifies can serve both, Label Owners and Label Issuers:

- **Label Owners** – entities that decide to define a specific Label for their business.
- **Label Issuers** – entities, defined by the Gaia-X AISBL, that can implement and issue a Label.

Basis labels issued by AISBL

- Gaia-X will verify the compliance of a service attributes according to those specified for a specific label, but **will let external authorities** (Governmental, Industrial Specific, Standardization Bodies, etc.) **the ability to define domain specific Labels.**
- Besides externally defined Labels, Gaia-X will define **three basic level of compliance criteria clusters**,



LABELS ARE OBTAINED THROUGH GAIA-X SERVICES IMPLEMENTATION

The Gaia-X ecosystem of services and data

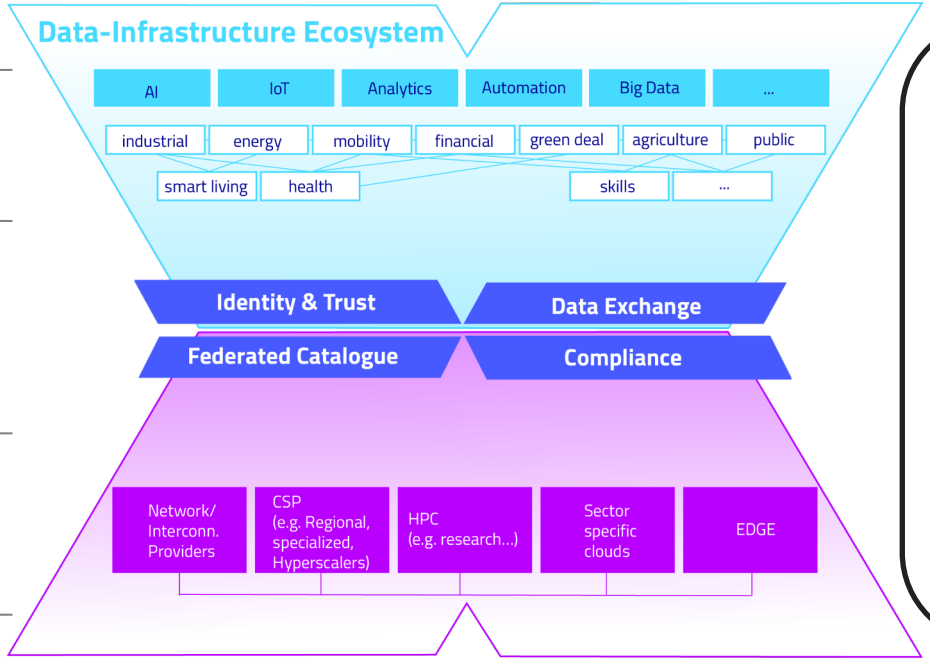
Advanced Smart Services
(Cross-) Sector Innovations / Market places / Applications

Data Spaces
Interoperable & portable (Cross-) Sector data-sets and services

Gaia-X Federation Services
Federated & distributed for interoperability Trust & Sovereignty services

Portability, Interoperability & Interconnectivity
Technical: Architecture of Standards
Commercial: Policies

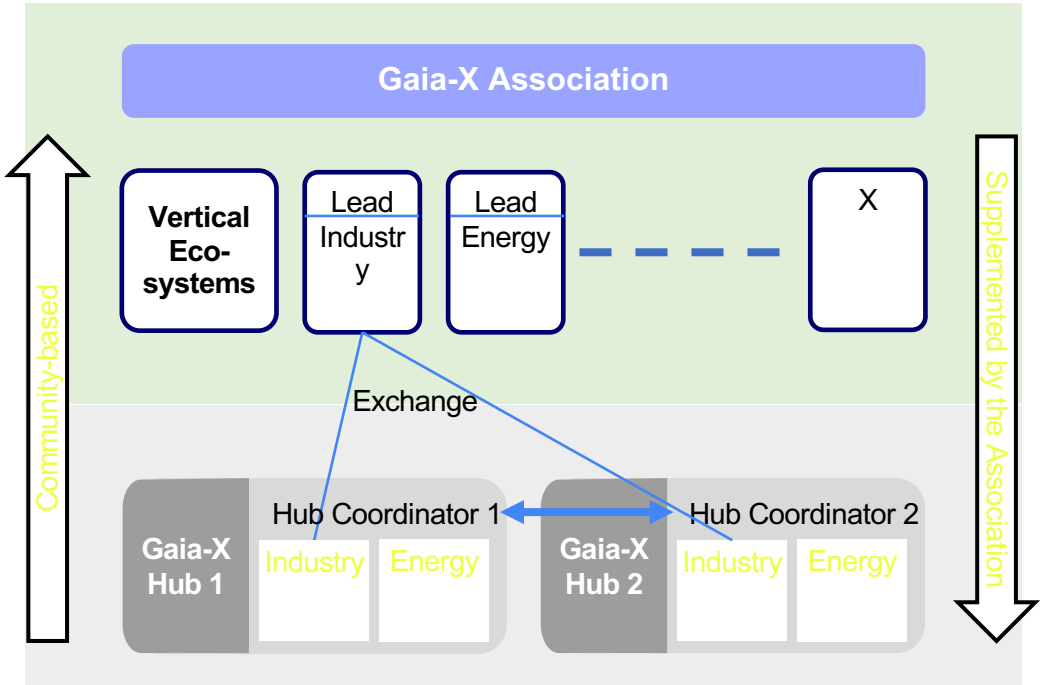
Compliance
Legal: Regulation & Policies



GAIA-X FEDERATION SERVICES HELP IMPLEMENTING COMPLIANCE
GAIA-X DECENTRALIZED SERVICES VERIFY COMPLIANCE
LABELS CAN BE OBTAINED IMPLEMENTING THE ABOVE

Gaia-X Hubs

The Gaia-X Hubs – How we collaborate with the Hubs



The roles of the Gaia-X Hubs

- Building the local (UK) ecosystem
- Use case/ Business Case incubation

Connect

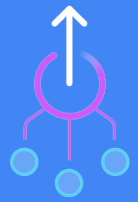
Hubs connect potential Gaia-X stakeholders, both within and across different countries and sectors.

Spread

Hubs increase user interest across Europe and globally to scale up the spread of use cases.

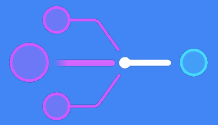
Coordinate

Hubs liaise closely with the Gaia-X Association to define requirements, relevant regulations and policies.



Consolidate

Hubs consolidate relevant initiatives within countries.

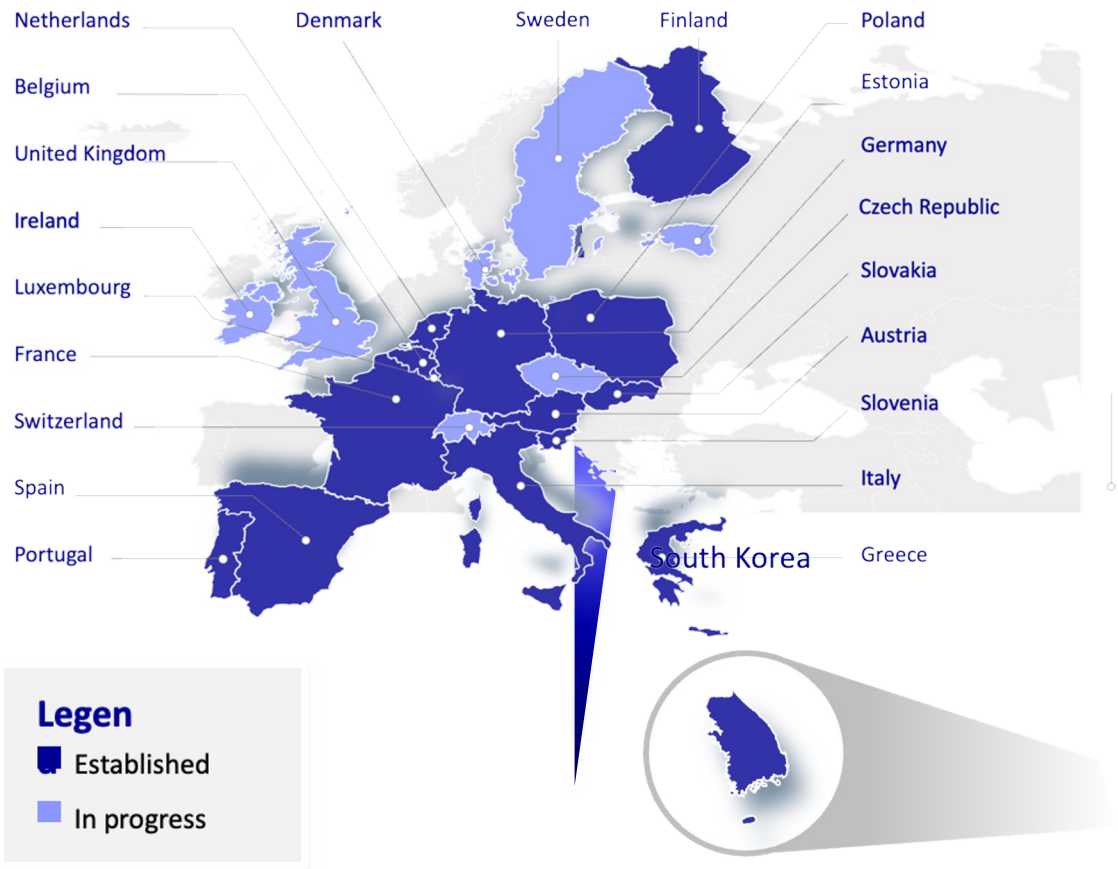


Streamline

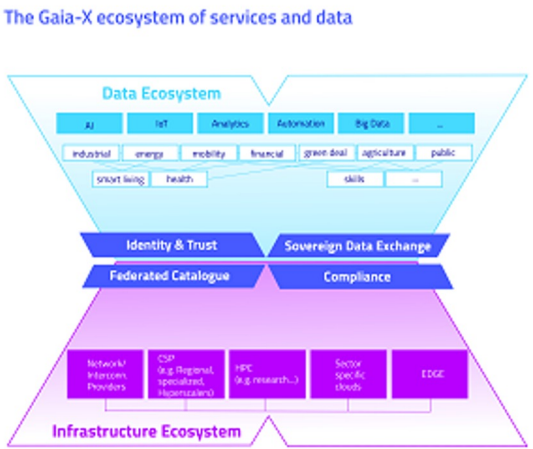
Hubs ensure efficient cooperation and avoid the unnecessary doubling up of efforts within a particular industry.

Gaia-X Hubs & Gov Endorsement

15 hubs, 1 International one (more on the way…)



Gaia-X plot on existing NL coalition ecosystem : UK will do same



Overall / Coordination

Applications / ertical use cases

Data

Platforms & Tools

Information Infrastructure

Communication Infrastructure

Brainport Industries

Health

Education

Mobility

Government

Energy

Security

Sustainability

Standardisation

Future Network Services

Thankyou

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