A digital ecosystem for the Environment and Sustainability
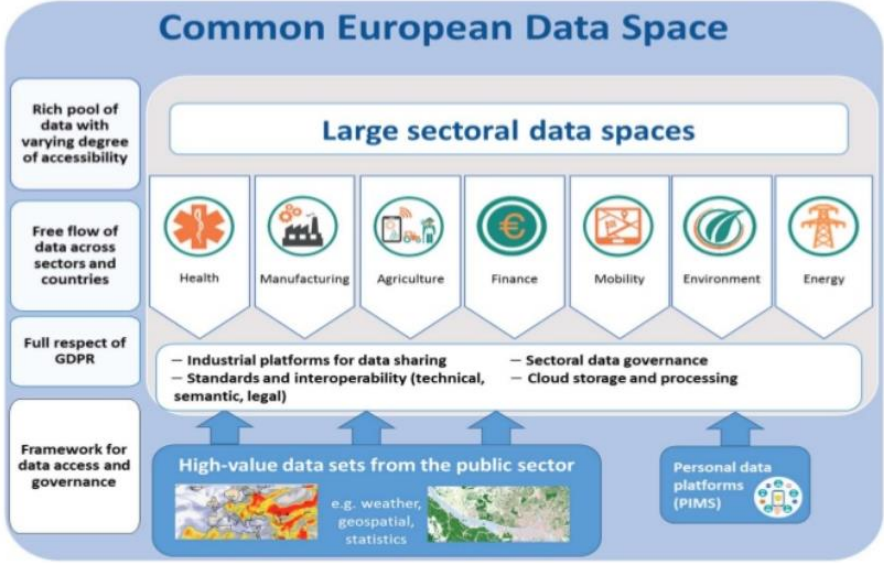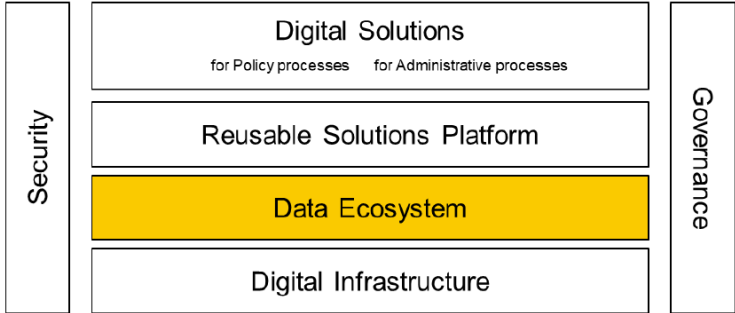
This umbrella action should pave the way <u>to converge in a common initiative in the context of the EU data strategy</u>:

- Initial preparatory work to define critical elements for convergence at governance/legal/technical level

- Definition of roles and responsibilities (within EC and also with MS)

- Funding options, resourcing

- Legislative framework / instruments

  (e.g. Green Data4All – *preparatory work*)

- Synergies with other relevant initiatives

  (e.g. UNEP's digital ecosystem for environment

  and sustainability) and platforms
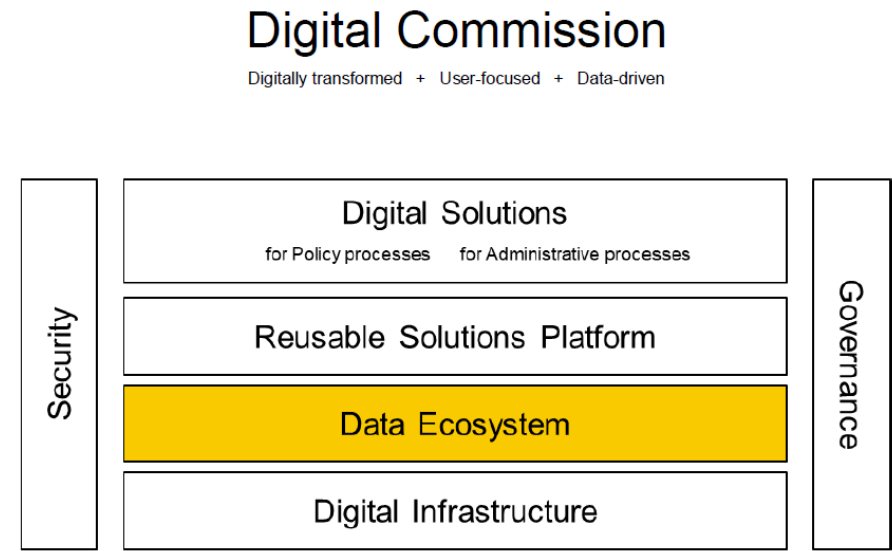

Image courtesy: EU Commission

European Environment Agency

The common European Dataspace

Dimensions:

- **IT systems**
- **Domain-specific data governance FW**
- **Standards (by domain and across)**
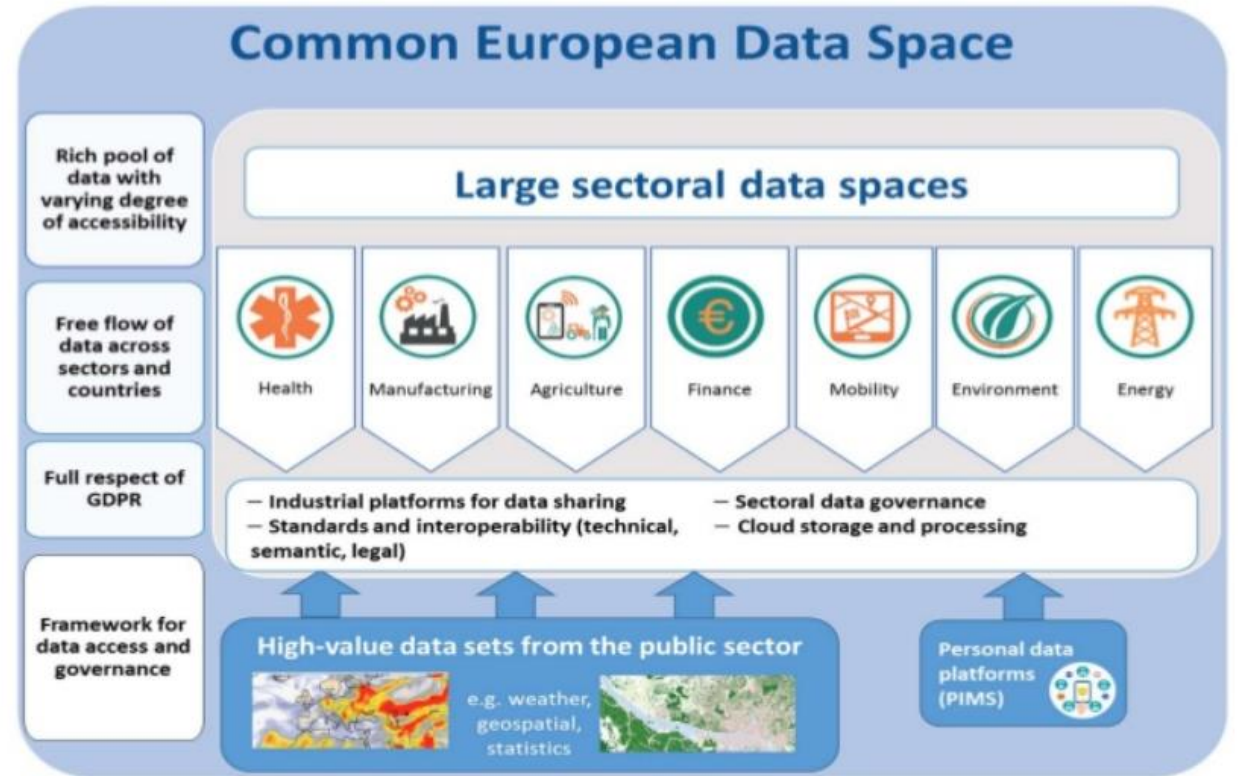- **Access and use of Cloud infrastructure**

Image courtesy: EU Commission

European Environment Agency

Building blocks

a) Data content level

– Identification of the full spectrum of data sources (*origins of data*) relevant for environment/sustainability: official monitoring data, INSPIRE, other public sector data, private sector data, Earth Observation/Copernicus, citizen science campaigns, sensors, drones, etc.

– Definition of the <u>reference data</u> for the data space (covering environment, geospatial, climate-related data – synergies with HVD/PDS/Core Reference Data)

– Raw Data vs Analysis-Ready Data; Near Real Time data (*data types*)

– Data quality, data validation (*semantic validation*)

– Data management

– Data standards and quality assurance

– Open data

European Environment Agency

Building blocks

b) Infrastructure level

- Architectural options and technological solutions (AI and ML, big data analytics, data cubes)

- Standards, access and interoperability aspects (interfaces (*e.g. open APIs-*, formats, web services)

- Data processing

European Environment Agency

Building blocks

c) Analytical level

– Data integration, data harmonisation aspects

– Analytical methods (*e.g. data cubes, cloud processing*) algorithms

– Shared, open algorithms

– National co-validation

European Environment Agency

Building blocks

d) Application level

– Definition of use cases / pilots in the domains of environmental and climate policies, circular economy, climate adaptation, sustainable finance… (*incl. definition of data content/quality requirements, tools and apps needed, functionalities, etc.*)

– Data space apps and tools (e.g. European Dashboard to monitor our natural resources/ecosystem services - or Green Deal ambitions – at different levels; personalised dashboards of some kind)

– Environmental impact monitoring

– Environmental compliance checking

Source:

Software AG
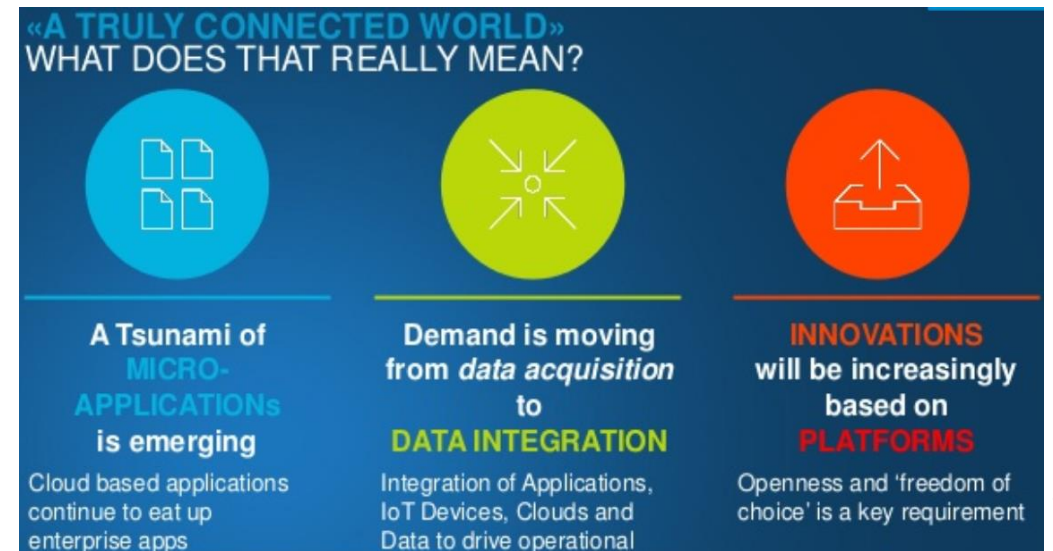
Common challenges

- Access to data and common governance of datasets

- Data policy sharing and licensing schemes (incl. Open Data)

- Data management aspects: preservation, quality, transparency, curation, etc.

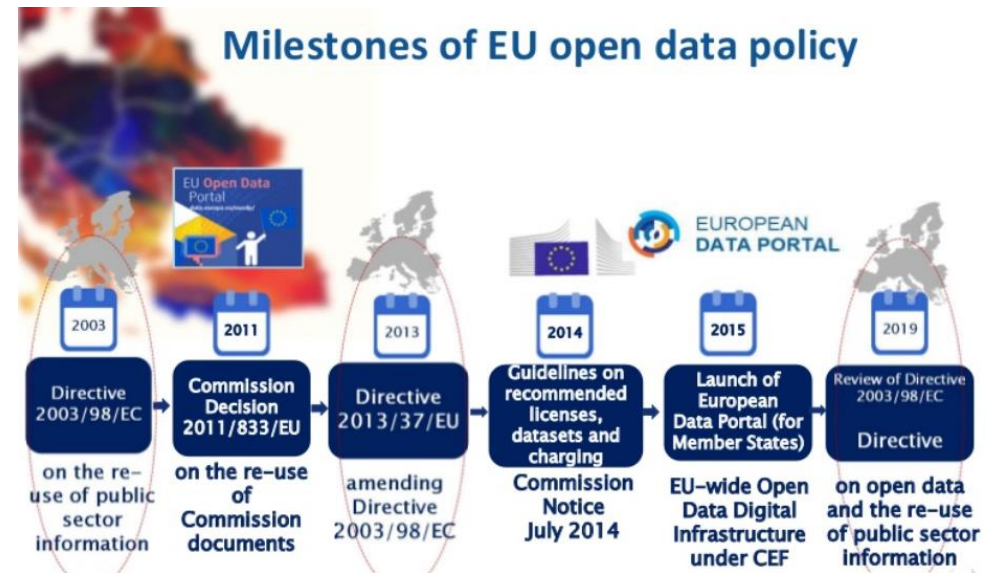- Data protection, privacy, security (*GDPR and beyond*)

Image courtesy: EU Commission

European Environment Agency

Three main umbrella actions

1. **Monitor the evolution** of the European Data and Digital Strategies in general and the Green Data Space in specific

2. **Define the digital ecosystem in detail** (components, governance, finances, stakeholders …)

3. **Awareness raising and capacity building** with Member States (training, conferences, webinars)

Co.innovation
enlarging cooperations

Commission

EUIs and agencies

Member States

Cross-departments

European Institutions
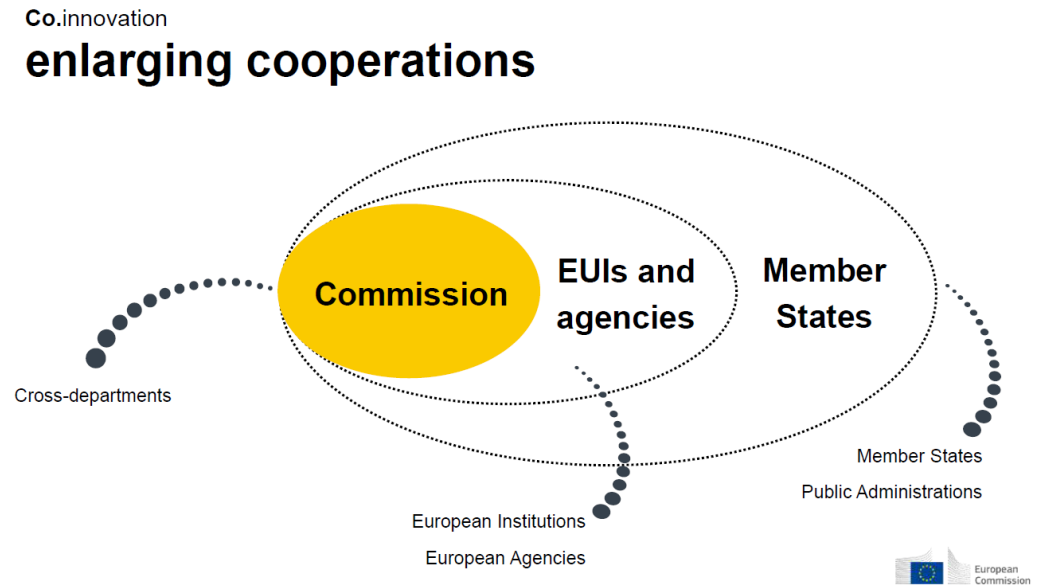European Agencies

Member States
Public Administrations

Image courtesy: EU Commission

Member State comments - Overall

FR France:

Clarify link between sectoral data spaces and INSPIRE data themes (*if there is*)

DE Germany and FI Finland:

Ambitious work programme lacking resources in Member States

SE Sweden:

Please add information where preparatory work on the Green Data4All initiative can be found. Be clearer on the legal actions.
Not only data aggregation but also user friendliness of data shall be promoted.
Will the data spaces be platform at European level?
Cloud services is not the solution for all data – national servers play a role.

European Environment Agency

Member State comments – on the building blocks and challenges

AT Austria:

"Need for evaluation of spatial data warehouses and semantic knowledge network,
Central vocabularies, ontologies needed."
"Conflict of INSPIRE and the Open Government Data (OGD) specifications"

NL The Netherlands:

What is meant by core environmental data? "Is this the e-reporting data or broader. And is it only geospatial data or also the environmental thematic data?"

Member State comments – on the main actions

AT Austria:

"Generally we support the three proposed steps in your approach".

"Focus on establishing central services and the European spatial knowledge network by considering regional characteristics."

DE Germany:

"There should be spatial data related actions in the end"

"While the text in this chapter is not wrong it does not really contribute to the WP either".

ES Spain:

ES advises to keep in the medium term cross-sectoral aspects of the data spaces in mind e.g. integration with circular economy et.al.

FR France:

"Is it realistic to expect an European reference data coverage without any obligation to produce these data? How to push national or regional data producers to deliver harmonized data without incentive measures like mandatory use by UE institutions, for example? Does the European Commission think that it is possible to get integrated European coverages without a dedicated structure, even small, to fix the last interoperability issues?"

European Environment Agency

Member State comments – on the 3 actions in the Annex

2020.2.1 Alignment

DE: Describe exact outcome of the action – MIG may contribute to legal framework

DK: Task is welcomed but MS role still unclear

2020.2.2 Definition of the digital ecosystem

DK: Who is in charge? Better define role of MIG and MS – what is the distinction

SE: Several actions are already covered by INSPIRE – needs better recognition

SE: Overlap of identifying data and defining reference data with the alignment action above

2020.2.3 Capacity building

DK: Who is in charge?

European Environment Agency

Main reflection on the comments – further explored by Slido

There is (naturally) more engagement to comment on the work area 1 - the landing zone – since it more concrete and happens earlier.

There is a positive attitude towards the future overall future evolution incl. merging the handling of spatial and other data.

Several Member States show concerns about the ambition level and the resource availability on their side.

European data spaces are not yet fully clear in the way they will be implemented and what this would mean for the interaction with Member States.

There are concerns about weather the framework is "fit for purpose to produce European reference data" also what exactly this data will be.

Roles and responsibilities regarding the core actions of the future work programme (in Annex) need more clarification.

European Environment Agency

stefan.jensen@eea.europa.eu