



10th meeting of the eDelivery Informal Cooperation Network

15 May 2024



Presentation of Simpl – a middleware platform supporting data spaces

Manuel Mateo Goyet





Simpl

Vision & Engagement

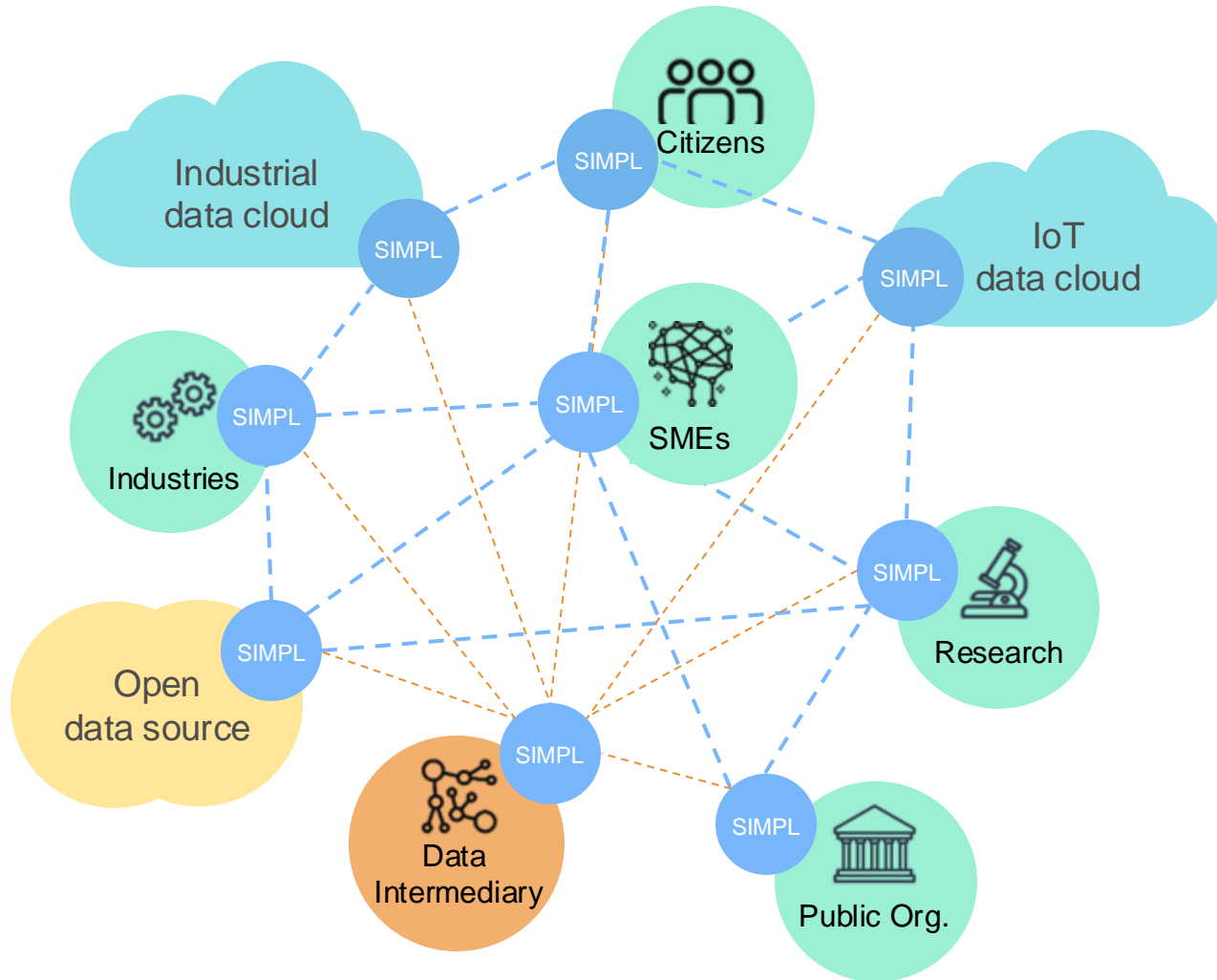
*Manuel Mateo Goyet – Acting Head of Unit
European Commission DG Connect E2*

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A brief catch-up

Simpl is the common software behind common data spaces



Common European Data Spaces are **a federated data ecosystem based on shared policies and rules**. The participants of data spaces are enabled to access data in a secure, transparent, trusted, easy and unified fashion.

Data holders remain in control of who can access and use their data, for which purpose and under which conditions.

--- Data exchange
--- Metadata exchange

European Single Market for Data

Data legislation

Data Act

Data Governance Act

Open data directive

GDPR

...

Common European Data Spaces



Health



Industrial & Manufact.



Agriculture



Finance



Mobility



Green Deal



Energy



Public Admin.



Skills



EOSC



Tourism



Cultural heritage



Media



Language

High Value Datasets from public sector

European Data Innovation Board

- Facilitate the sharing of best practices
- Prioritisation of cross-sectoral interoperability standards

Data Spaces Support Centre

- Development of blueprint, glossary, etc.
- Support of data space projects

Technical infrastructure

Standards

Digital identity (eIDAS)

Smart Middleware solutions (Simpl)

High-Performance Computing

Testing and Experimentation Facilities

Simpl

open-source means built-in trust & security, flexibility to deploy, simplicity to customise

middleware are software suites that enable applications and databases to work seamlessly together and provide a flawless user experience

Simpl is the **open-source** smart **middleware** platform that enables **cloud-to-edge federations** and **all major data initiatives** funded by the European Commission

all major data initiatives, in particular the development of **Common European Data Spaces** modular and interoperable way.

cloud-to-edge federations put together resources across cloud and edge computing environments as a cohesive system, creating a seamless integrated infrastructure that combines the strength of both cloud and edge computing.

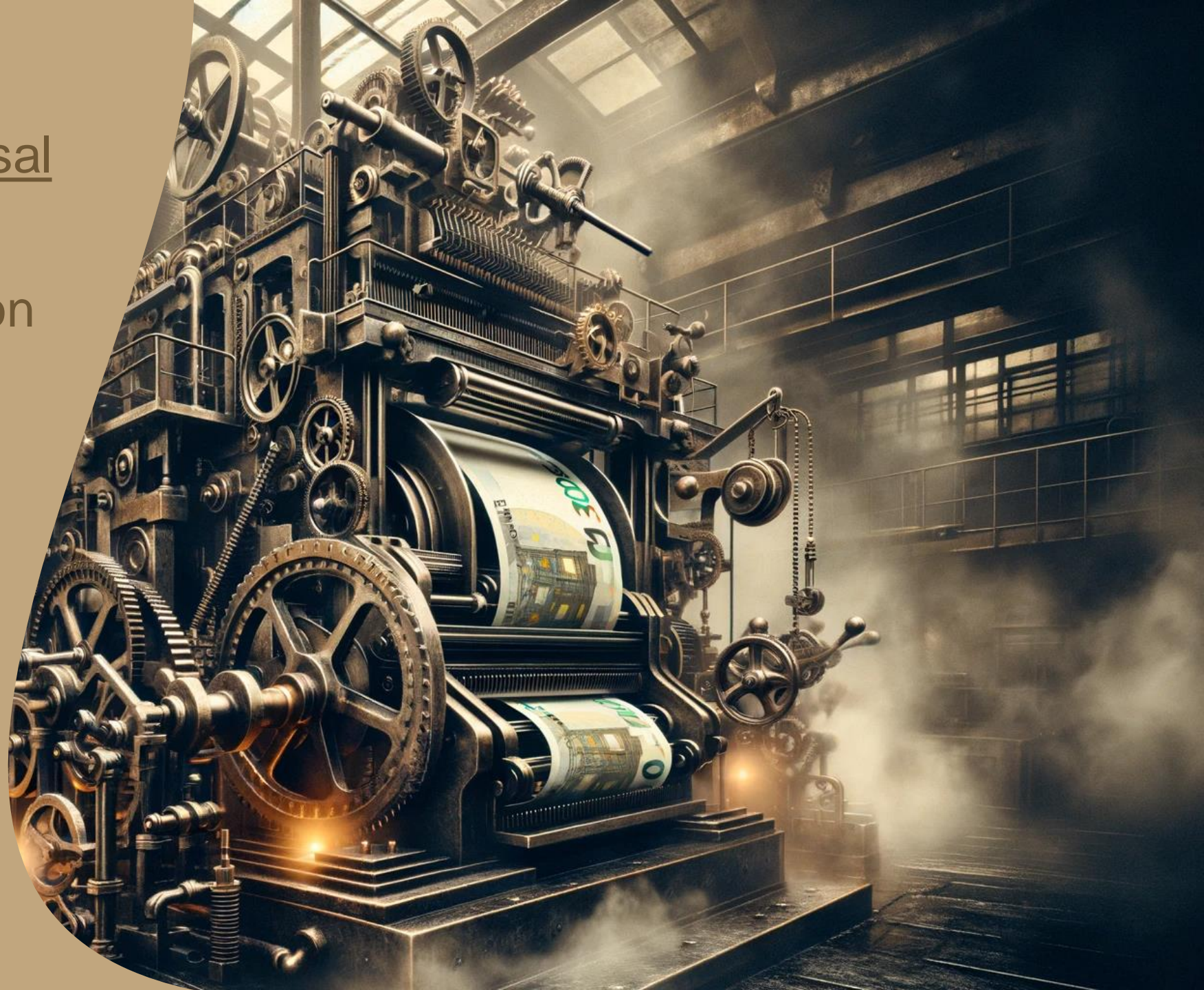
Simpl's value proposal

No wheel re-invention

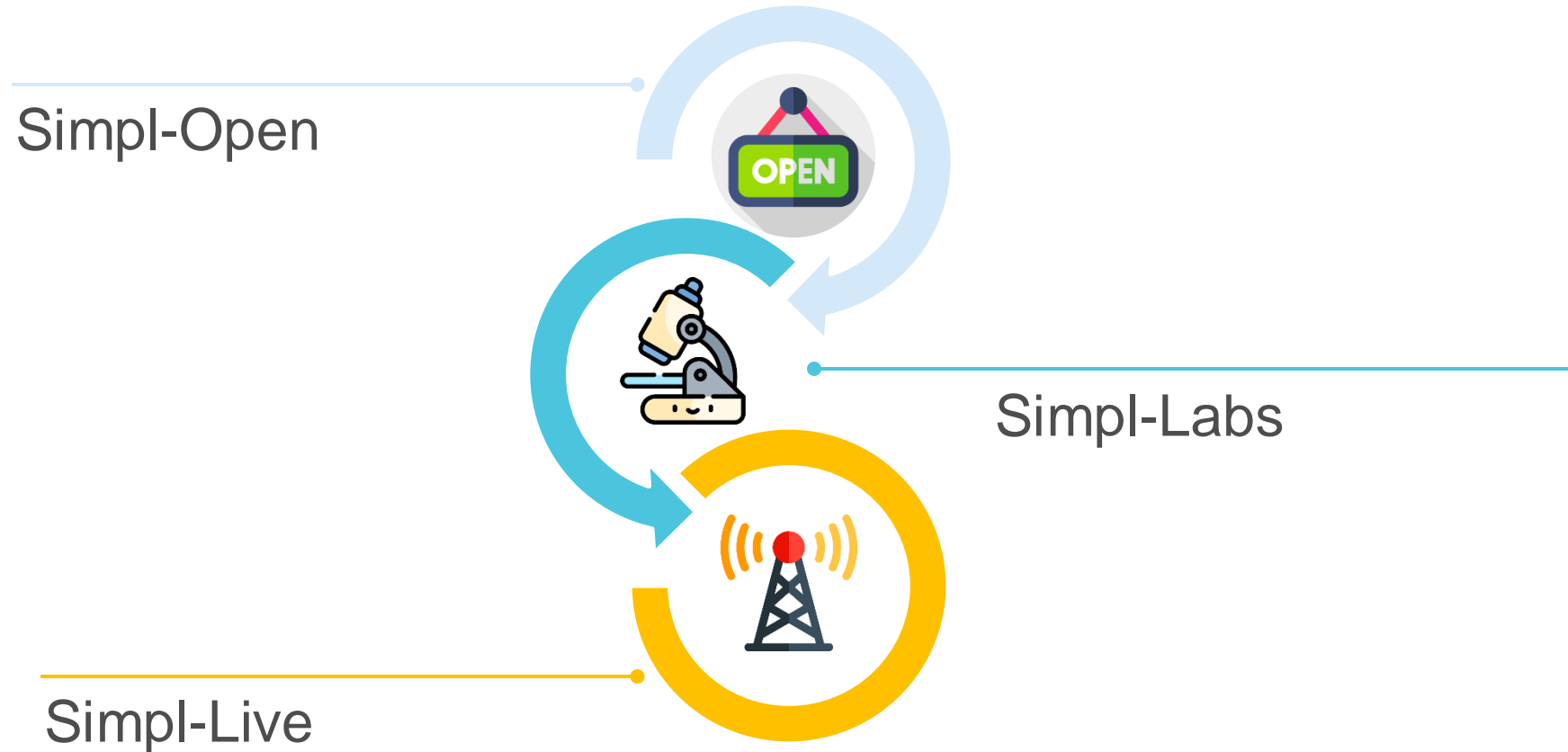
Interoperability

Save money

Save time



Simpl is made of three products



Simpl-Open

Simpl-Open

= the open-source smart middleware
itself



Simpl-Labs

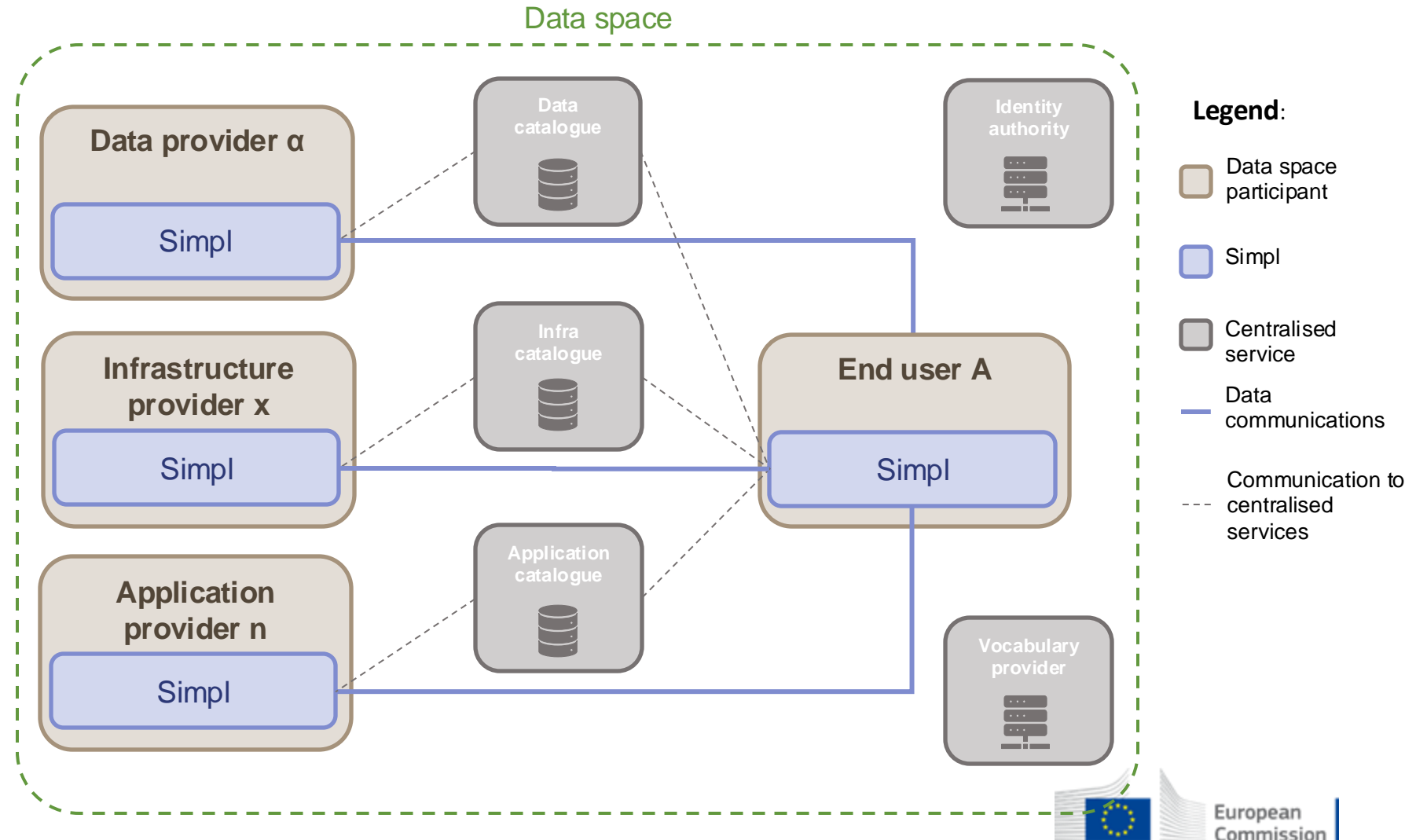


Simpl-Live

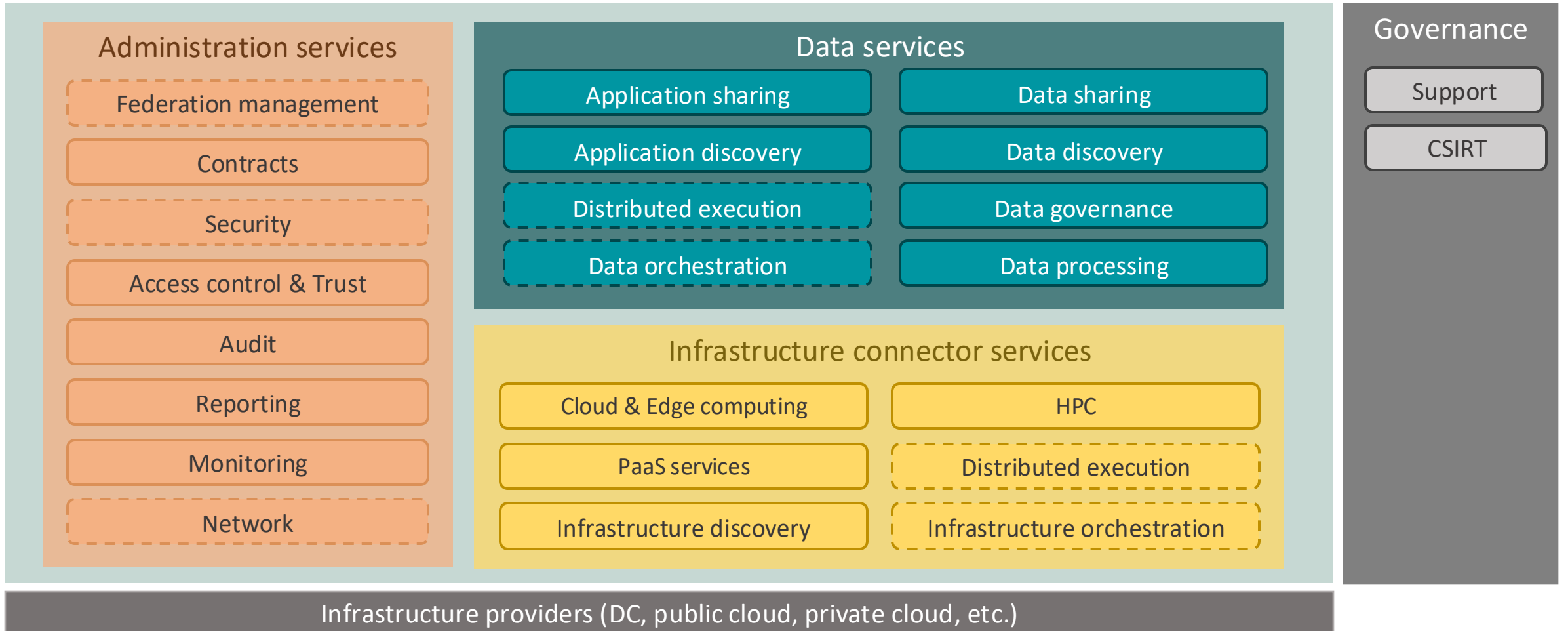
Simpl is deployed throughout data spaces

With centralised and decentralised components

- Centralised services = services that provide capabilities through centralised system components.
- *Data, Infrastructure and application catalogues* provide the cataloging service for end users to discover shared services in the data space
- *Vocabulary providers* provide the definition of metadata representation, vocabularies, and ontologies
- *Identity authorities* manage the identities of the data space participants and provides proofs that other participants can use for authentication and authorization

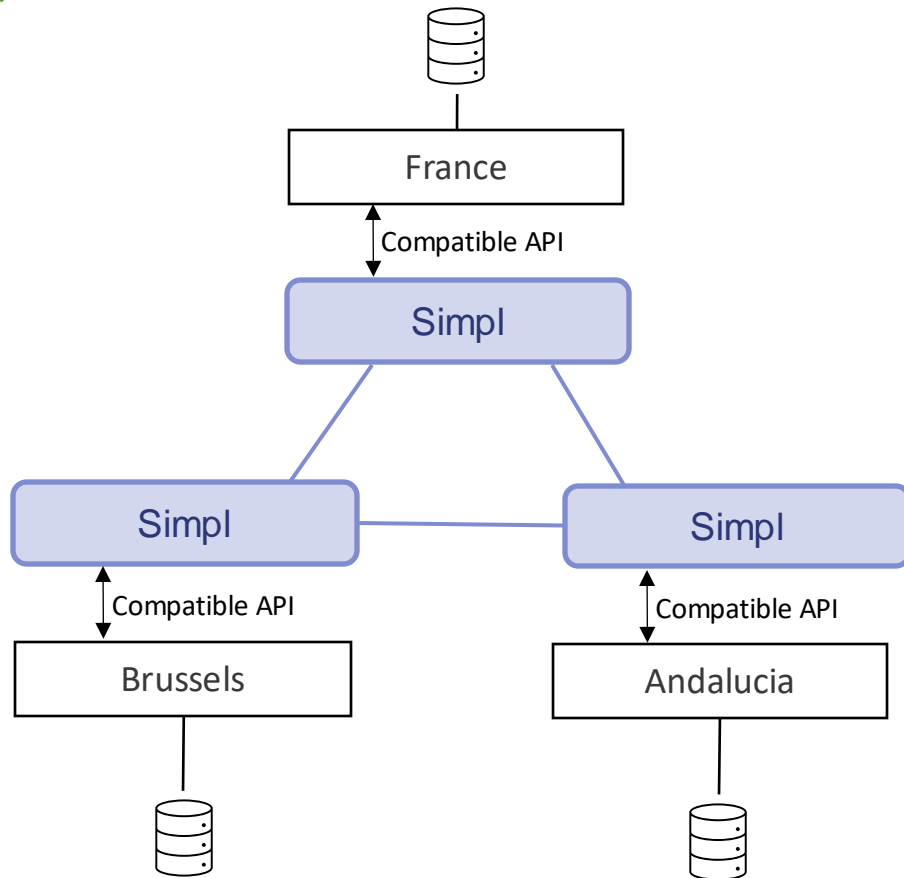


Simpl's conceptual architecture is stable

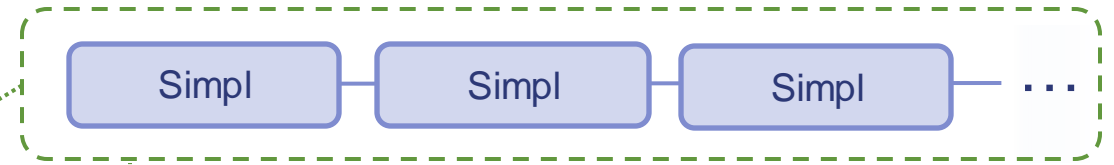


Simpl adjusts to different data spaces and facilitates interoperability

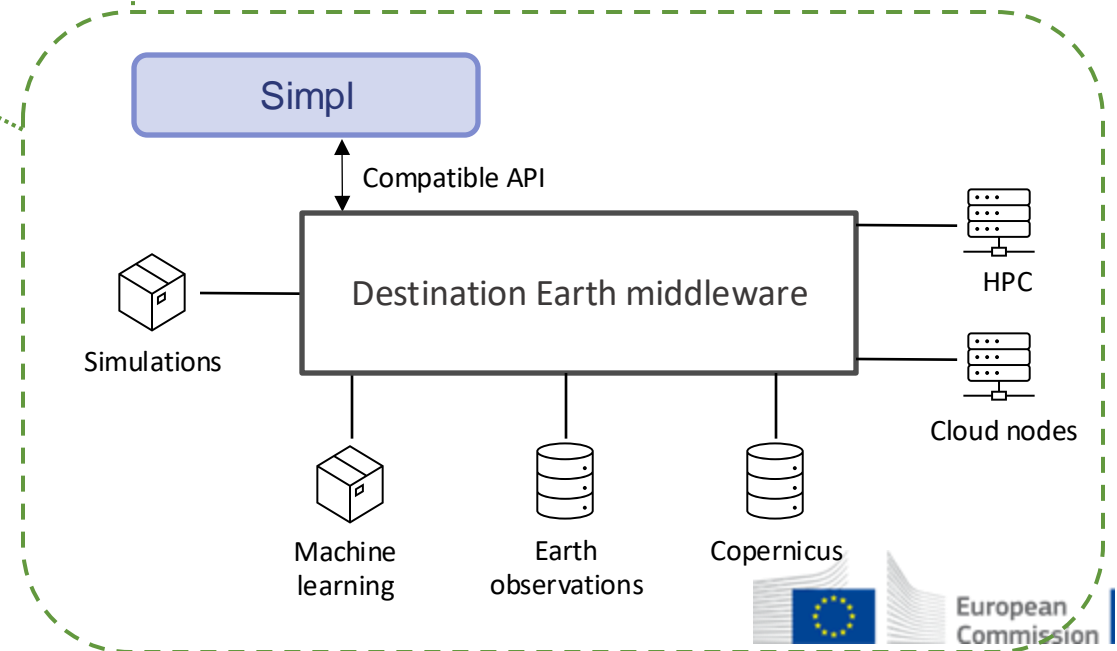
Smart Communities



Industrial data space

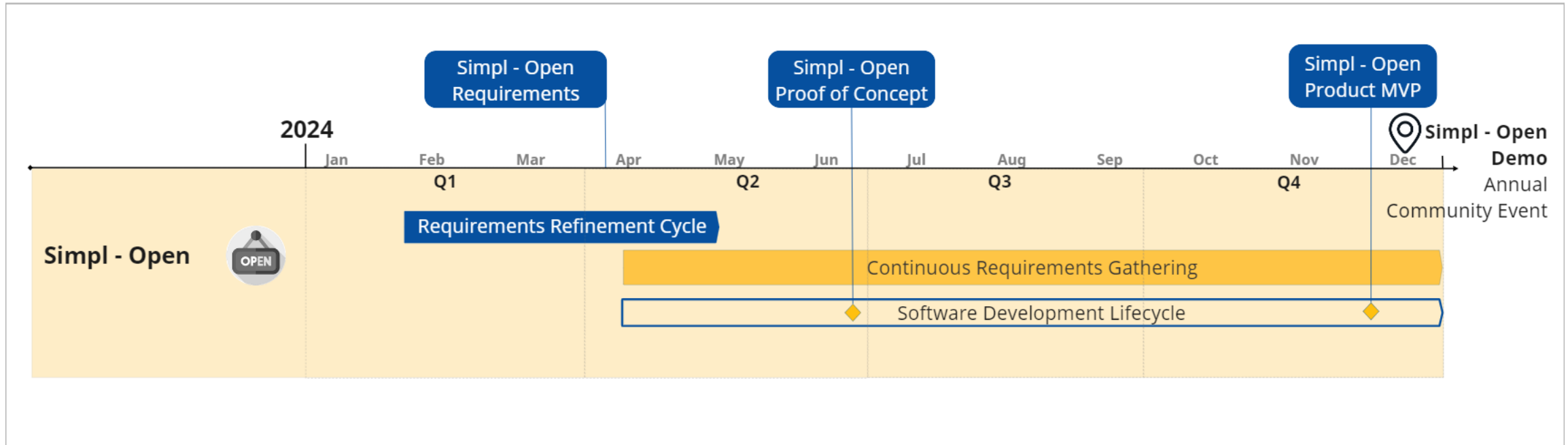


Destination Earth

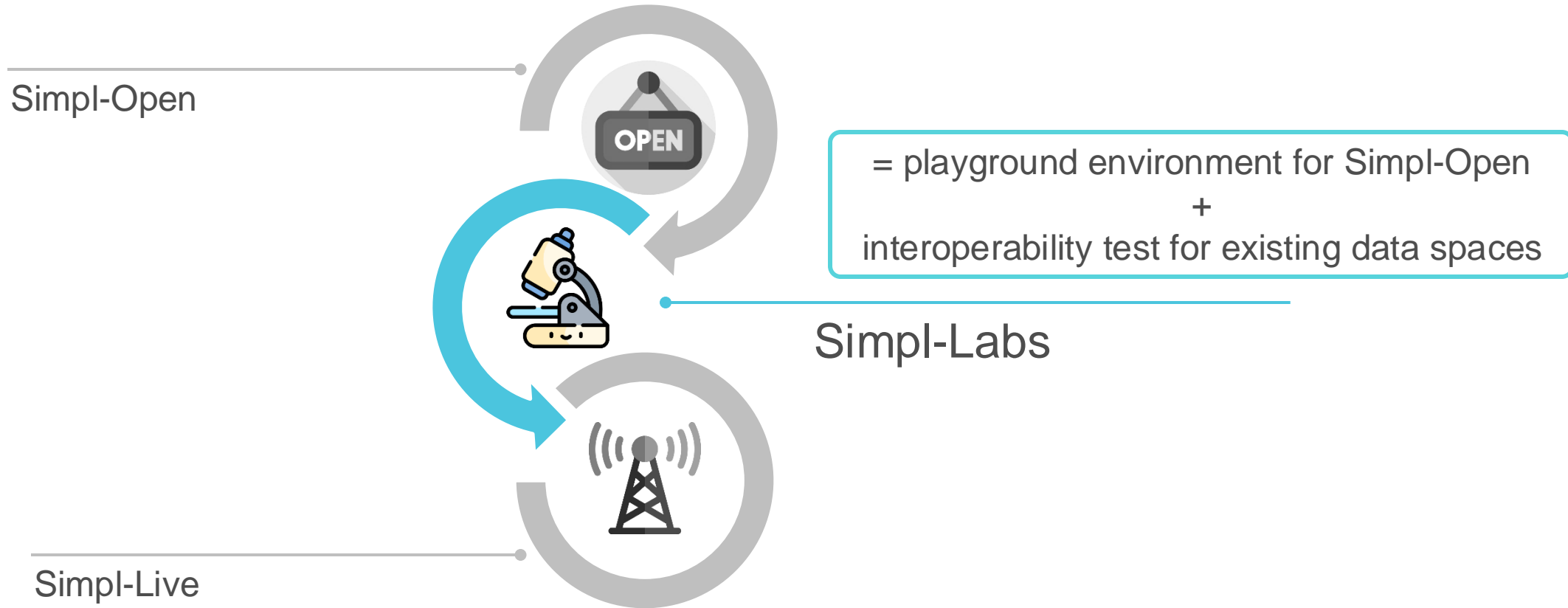


Zoom into 2024 Simpl-Open's development that will last until at least 2026

Simpl - Open

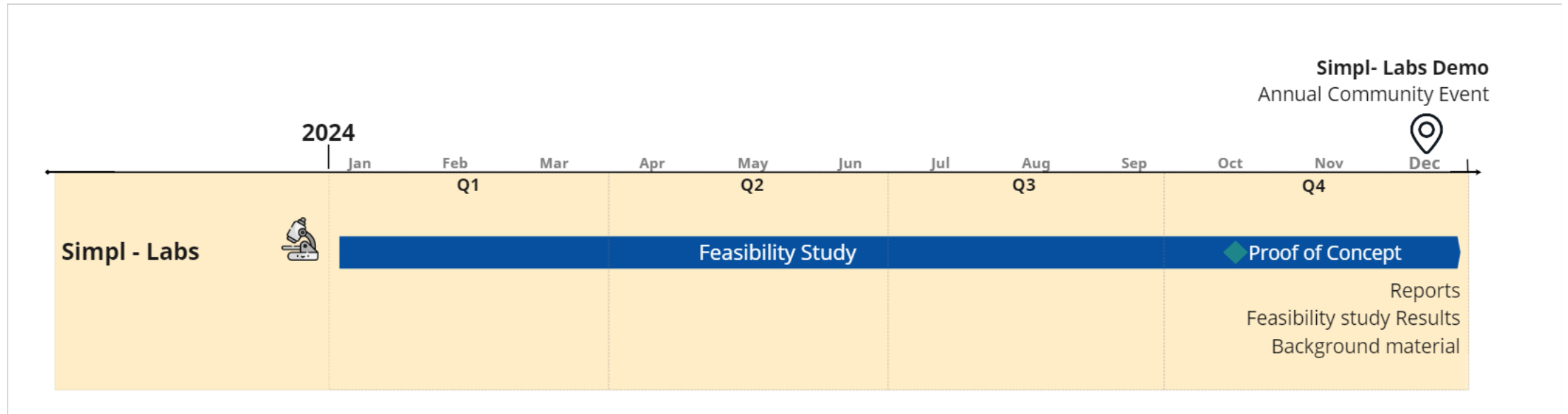


Simpl-Labs

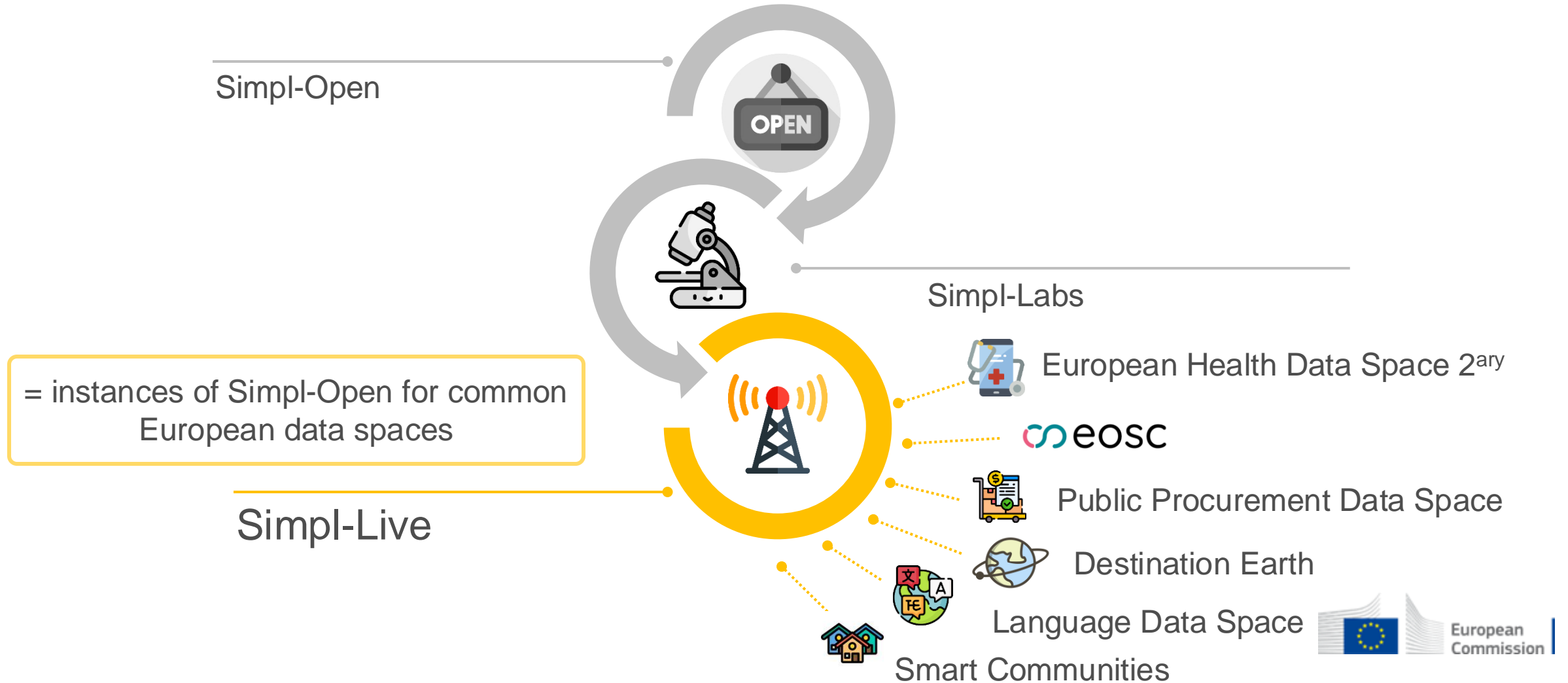


Simpl-Labs timeline 2024

Simpl - Labs

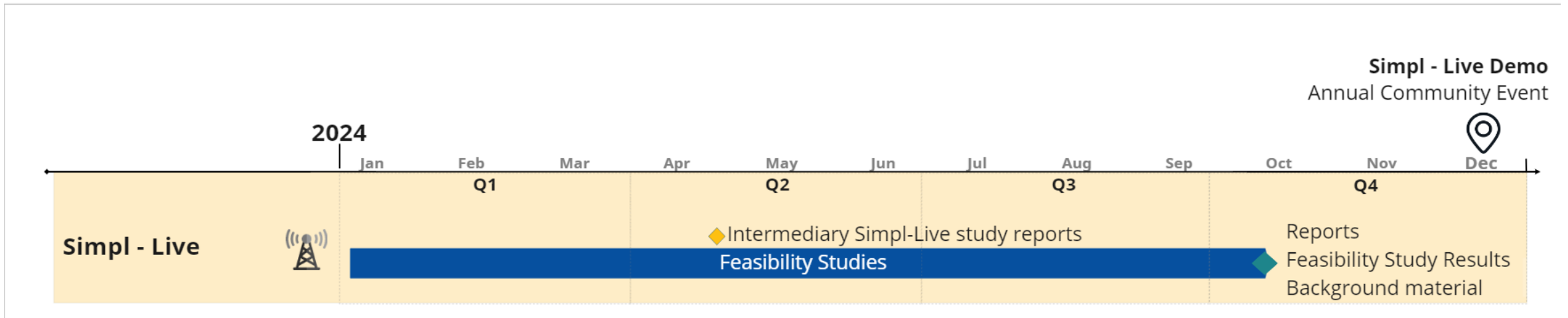


Simpl-Live



Simpl-Live timeline 2024

Simpl - Live



Contract awarded to

EVIDEN



IONOS



And
indra

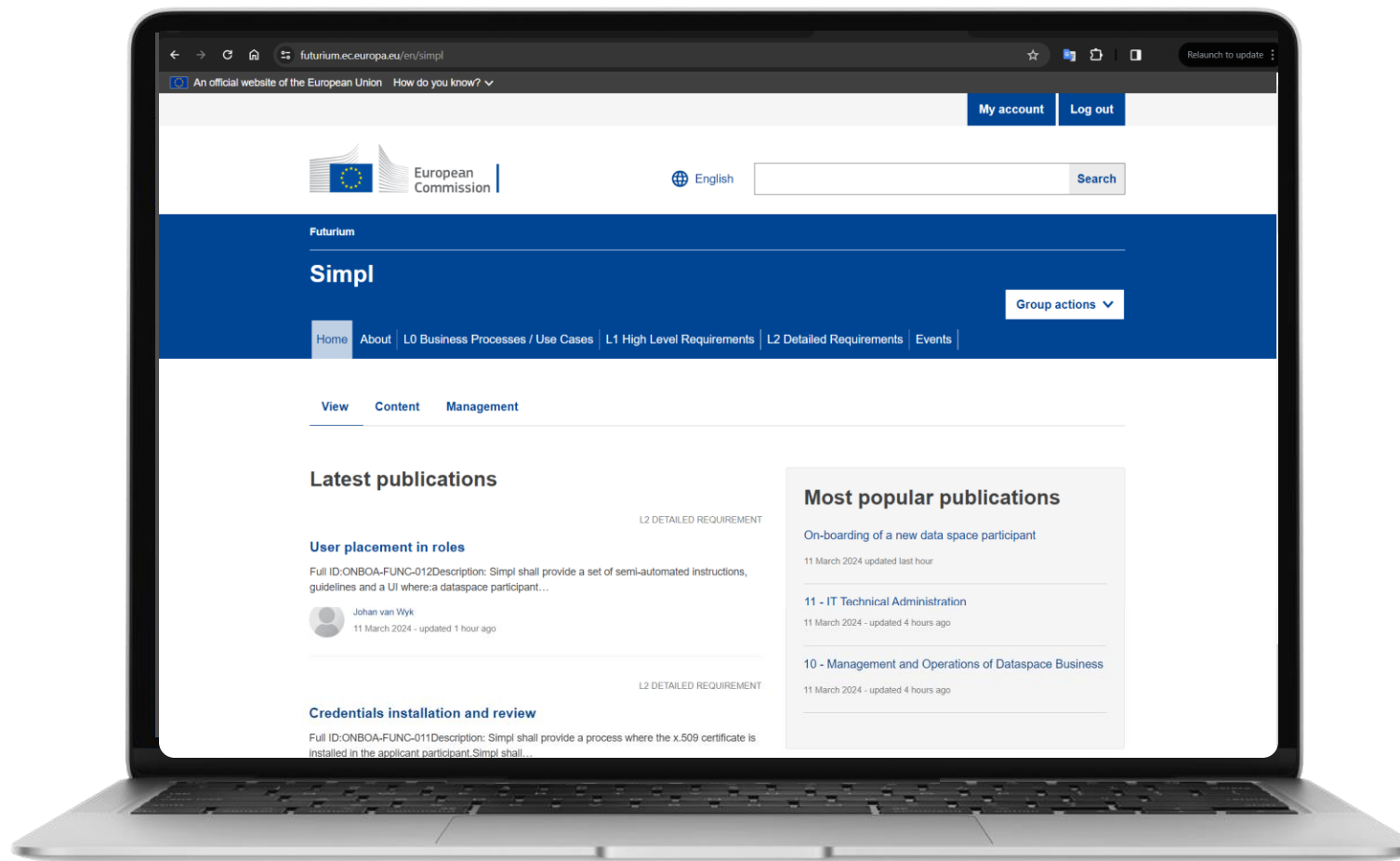


Status & next steps of the programme

*What are
we working
on today?*

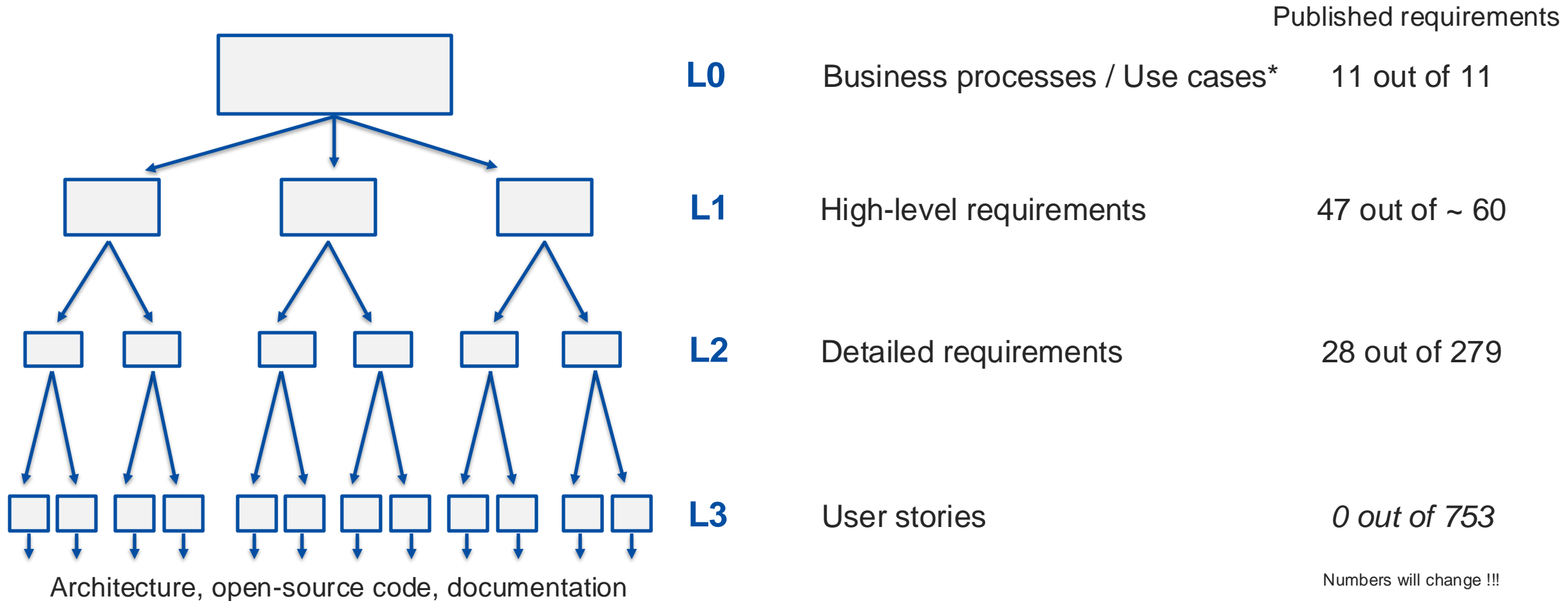


Simpl-open requirements are online



<https://futurium.ec.europa.eu/en/simpl>

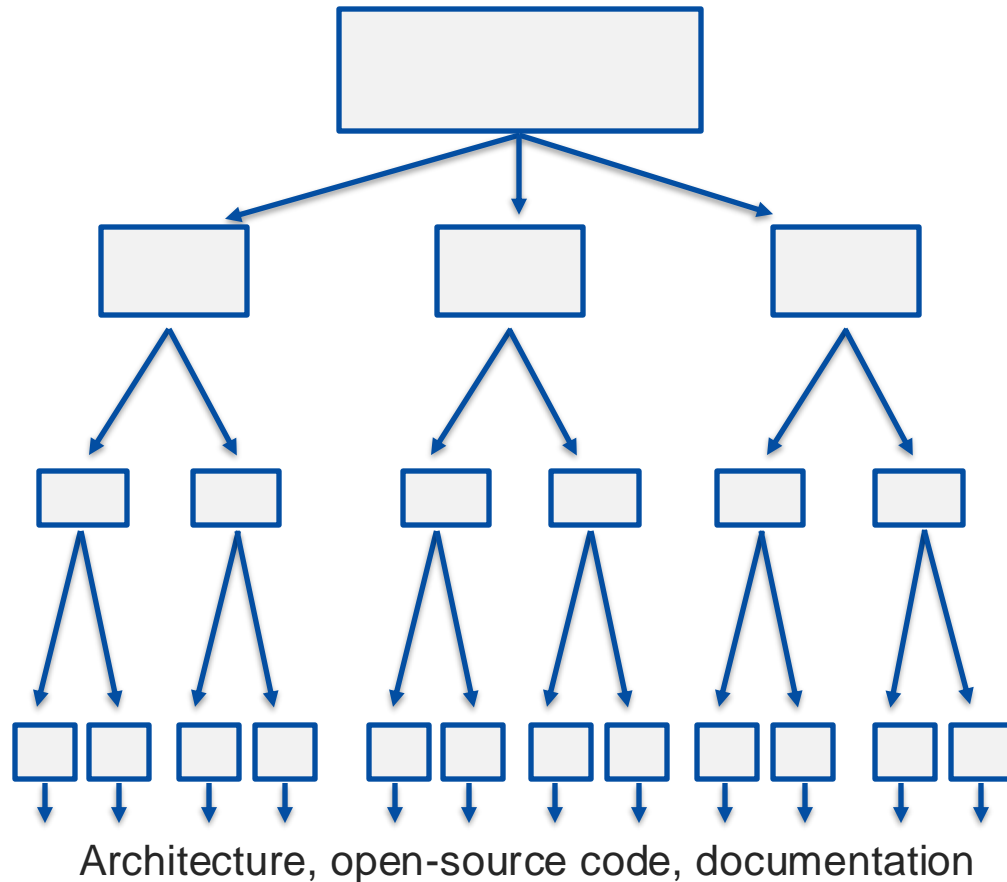
Simpl-open requirements are online














*Definitions:

- **Business process:** Business Process (BP) is the end-to-end process that involves actions outside of the Simpl platform, encompassing interactions and transactions that extend beyond the platform's internal flows, E.g. manual approvals & reviews, contract signatures, etc.
- **Use case:** Use cases refer to the specific processes and scenarios within the Simpl platform, detailing how users interact within the system, the functionalities they employ, and the internal workflows designed to meet their needs

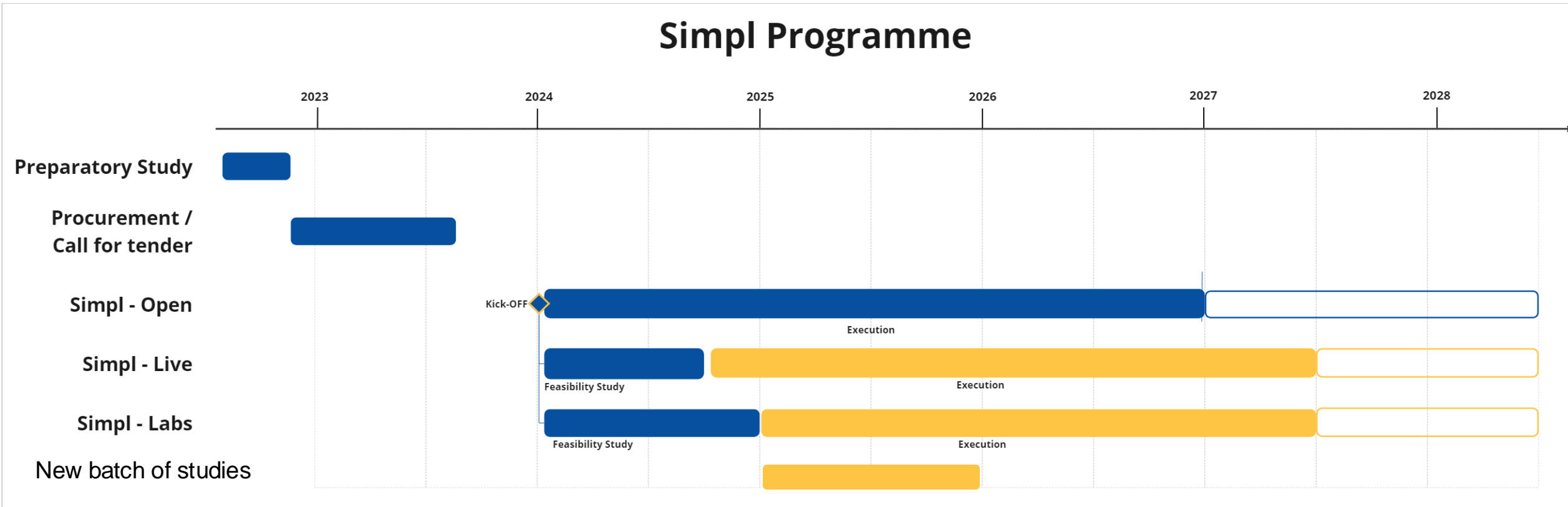
Simpl-open requirements – An example



- L0** Onboarding of a new data space participant
- L1** Simpl shall process onboarding requests of a new data space participant
- L2** Simpl shall provide UI interface for applicant data space participants to submit onboarding documentation
- L3** *"As an applicant data space participant, I want to upload the specific documentation to initialise the onboarding procedure"*

-  1. Setup of Dataspace: Role of Governance Authority
-  2. Setup of Catalogues and Vocabulary
-  3. Onboarding of a new Dataspace Participant: Providers of data, application, infrastructure
-  4. Onboarding of a new Dataspace Participant: Data Consumers
-  5. A provider adds and updates a new Resource of data, application or infrastructure on the Dataspace's Catalogue
-  6. Data Consumers search Resources on Dataspace's Catalogues
-  7. Data Consumers establish a contract with the Provider for selected Catalogue Items
-  8. Data Consumers use a Resource from the Provider of data, application, infrastructure
-  9. Data Consumers decommission the Resource from the Provider of data, application, infrastructure
-  10. Management and Operations of Dataspace Business including catalogues, vocabulary and clean up
-  11. IT Technical Administration

The Programme beyond 2024



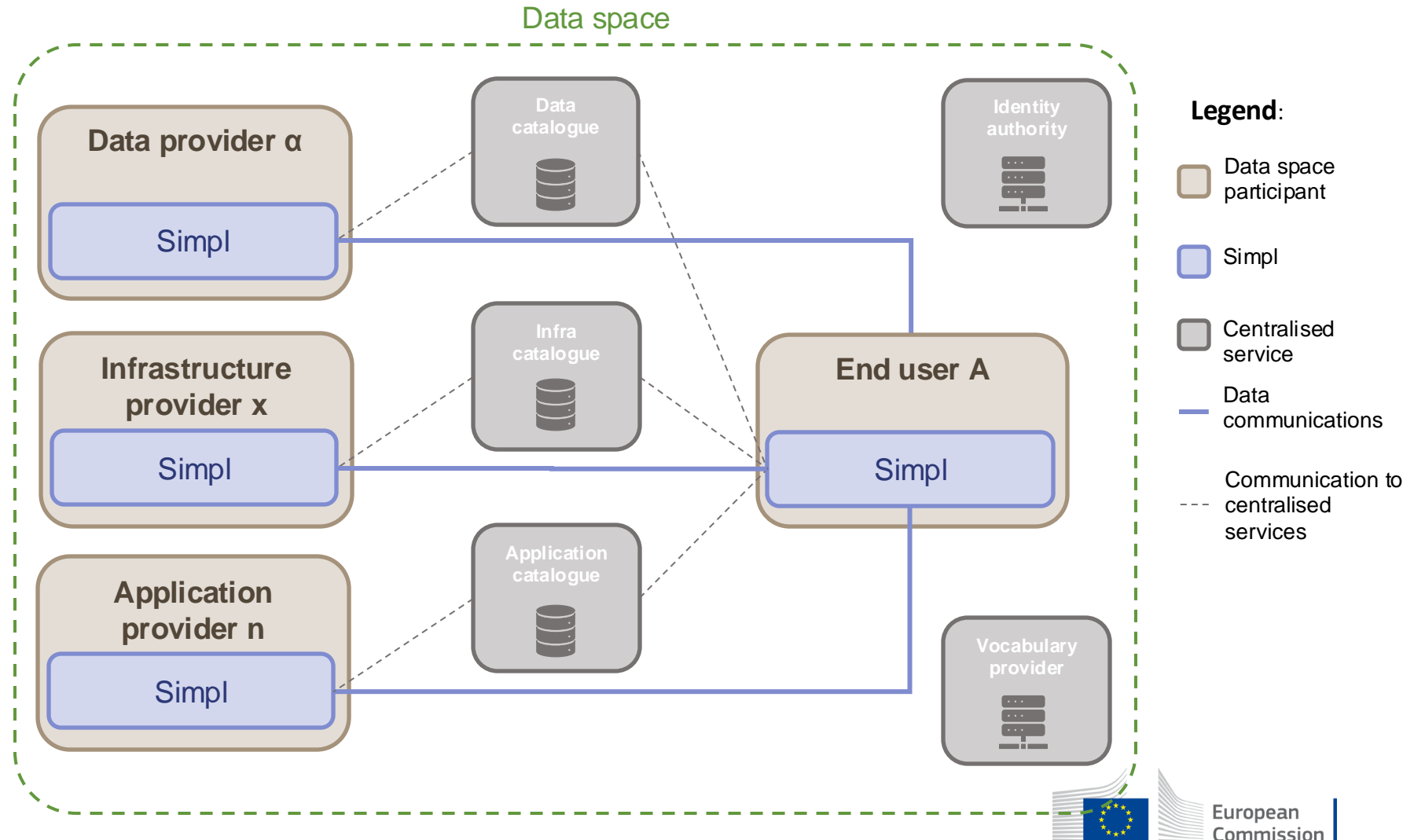
Funds for blue part: ~48m€ from Digital Programme 2021-22

Budget for yellow part: 41m€ from Digital Programme 2023-24

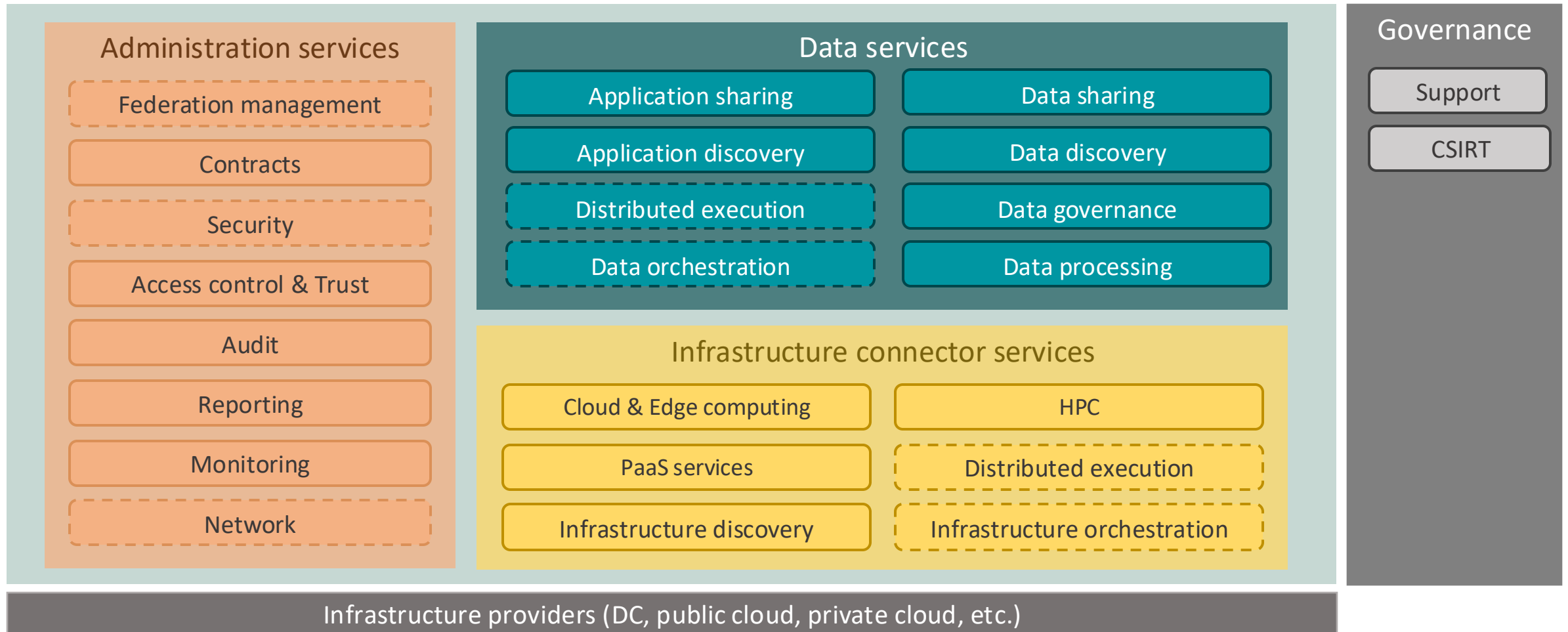
EuroCloud use case

Preliminary remark 1: Any of the roles in this scheme can be fulfilled by a Member State (/public sector entity)

- Centralised services = services that provide capabilities through centralised system components.
- *Data, Infrastructure and application catalogues* provide the cataloging service for end users to discover shared services in the data space
- *Vocabulary providers* provide the definition of metadata representation, vocabularies, and ontologies
- *Identity authorities* manage the identities of the data space participants and provides proofs that other participants can use for authentication and authorization



Preliminary remark 2: while use cases would differ from the private sector, all the functional blocks are as well useful in a public sector context

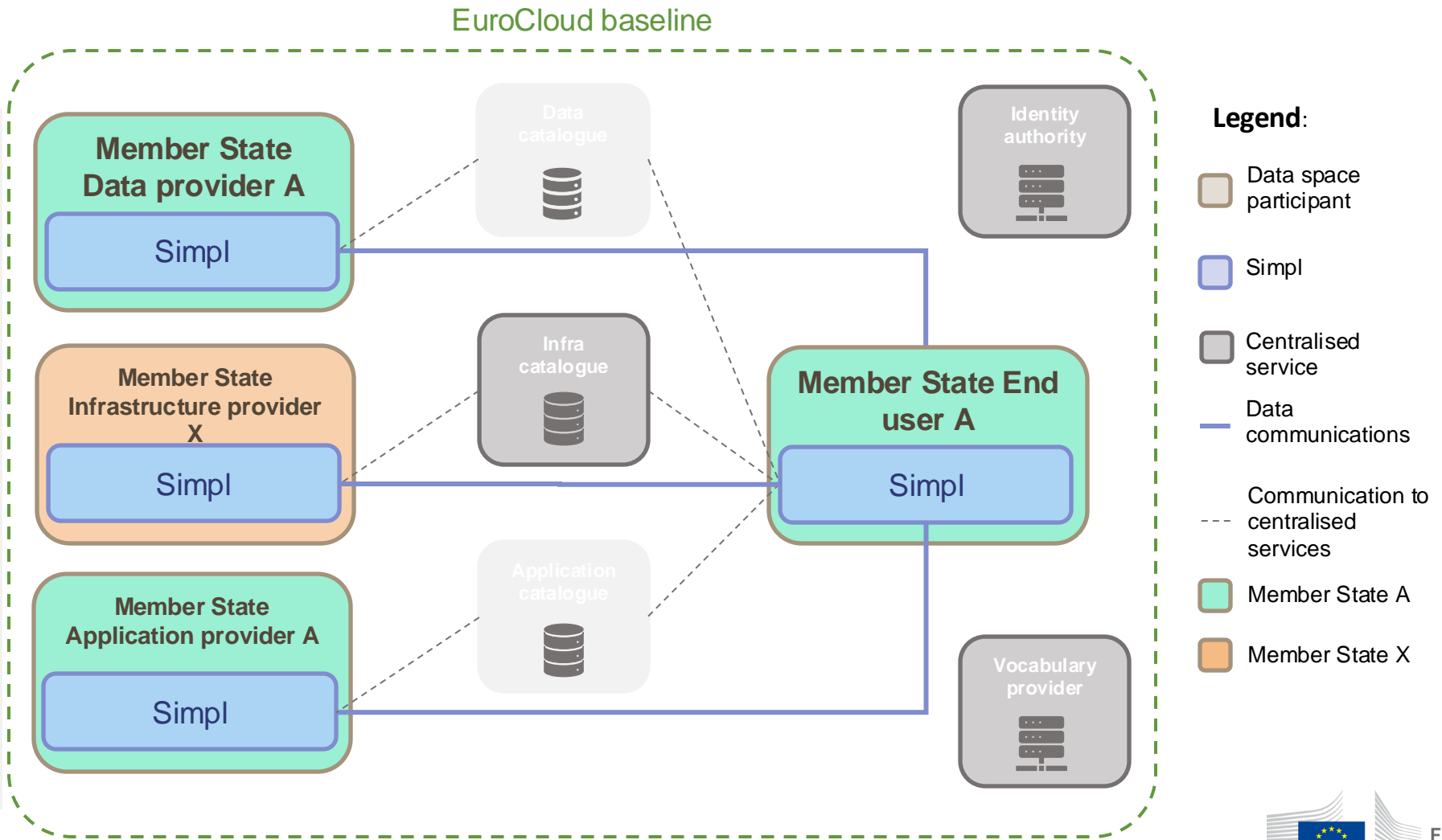


EuroCloud pilot

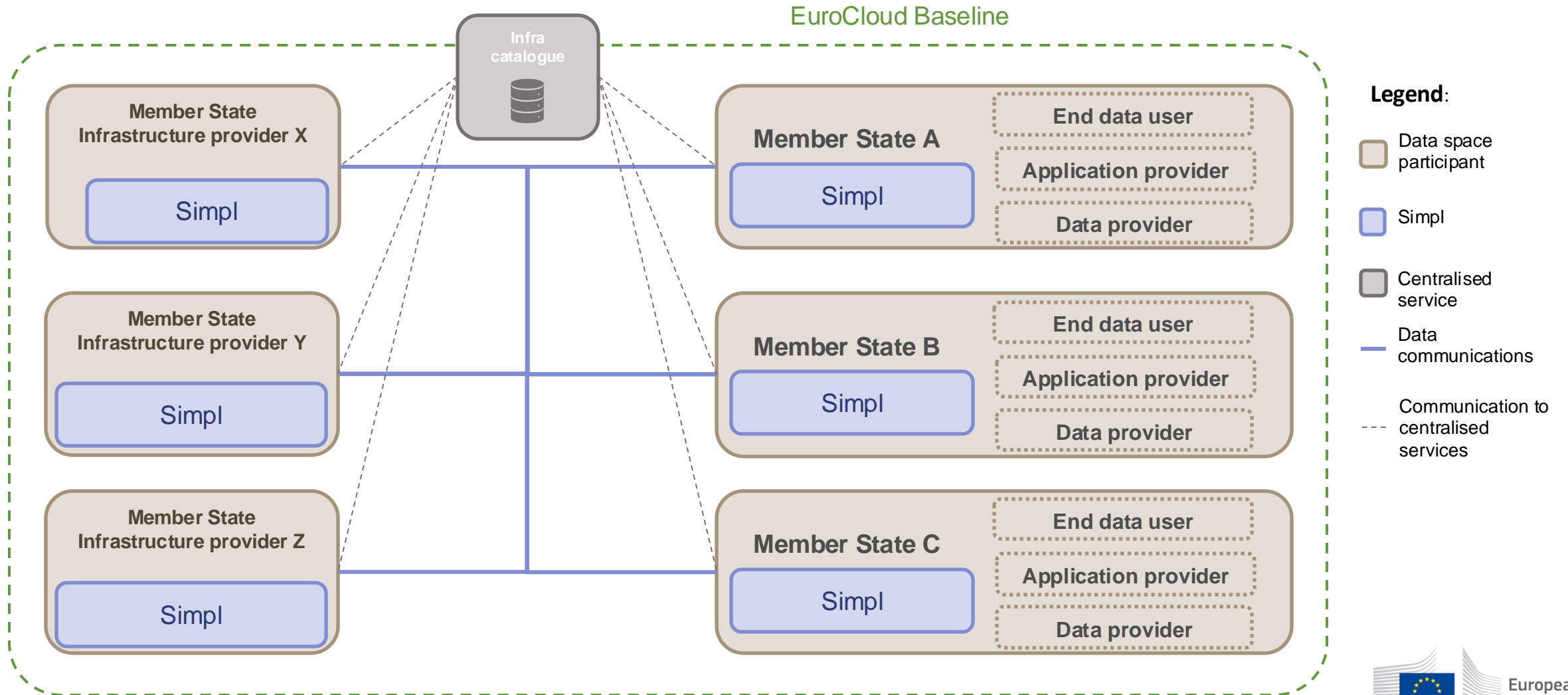
Baseline use case = Member State A wants/needs to use the infrastructure of Member State X

Baseline use case - Member State A wants/needs to use the infrastructure of Member State X

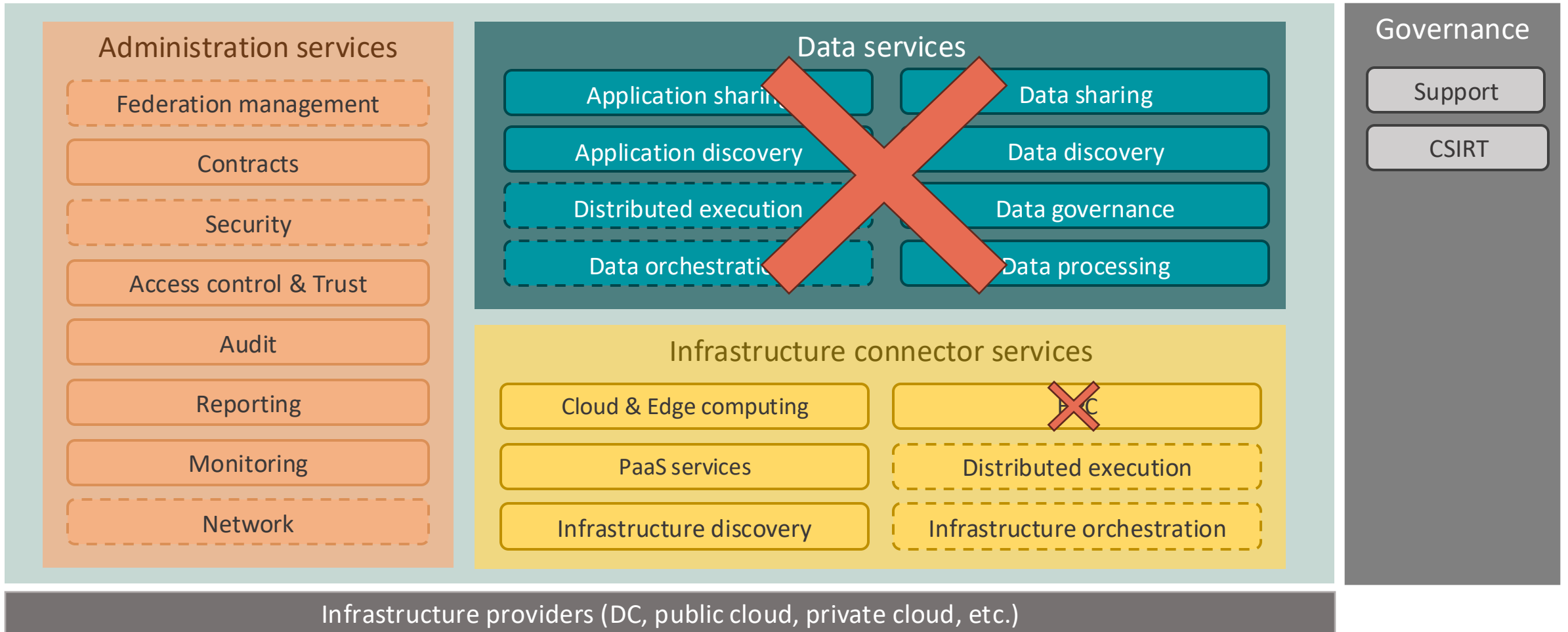
- Member State A:
- Provides its own data
 - Provides its own application
 - Is the final user of the data
- Member State X:
- Provides the infrastructure over which Member State A will process the data
- Not really needed:
- The data and application catalogues are “within” Member State A



Baseline use case – Expanded view



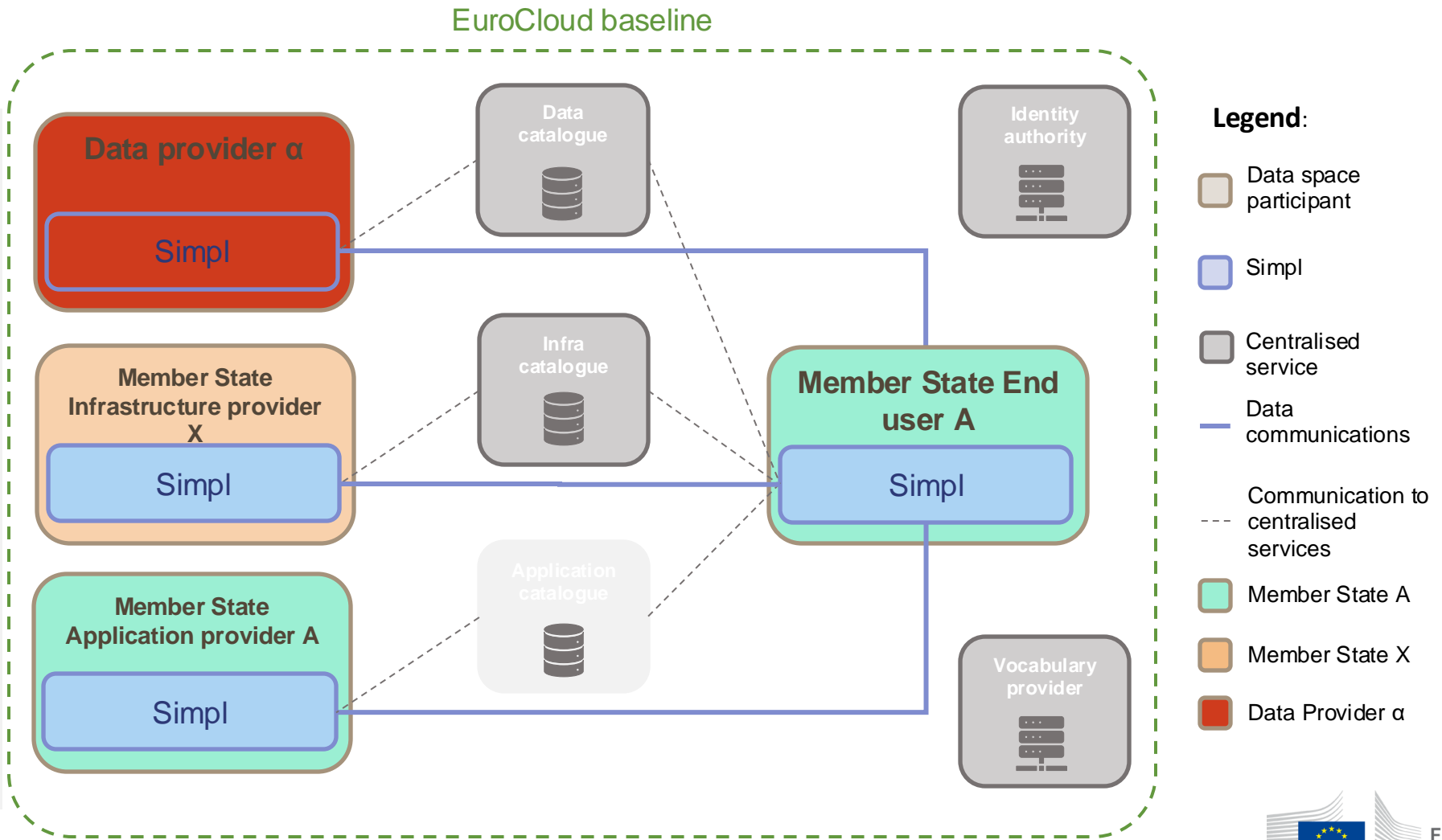
Baseline use case – Only some modules are needed



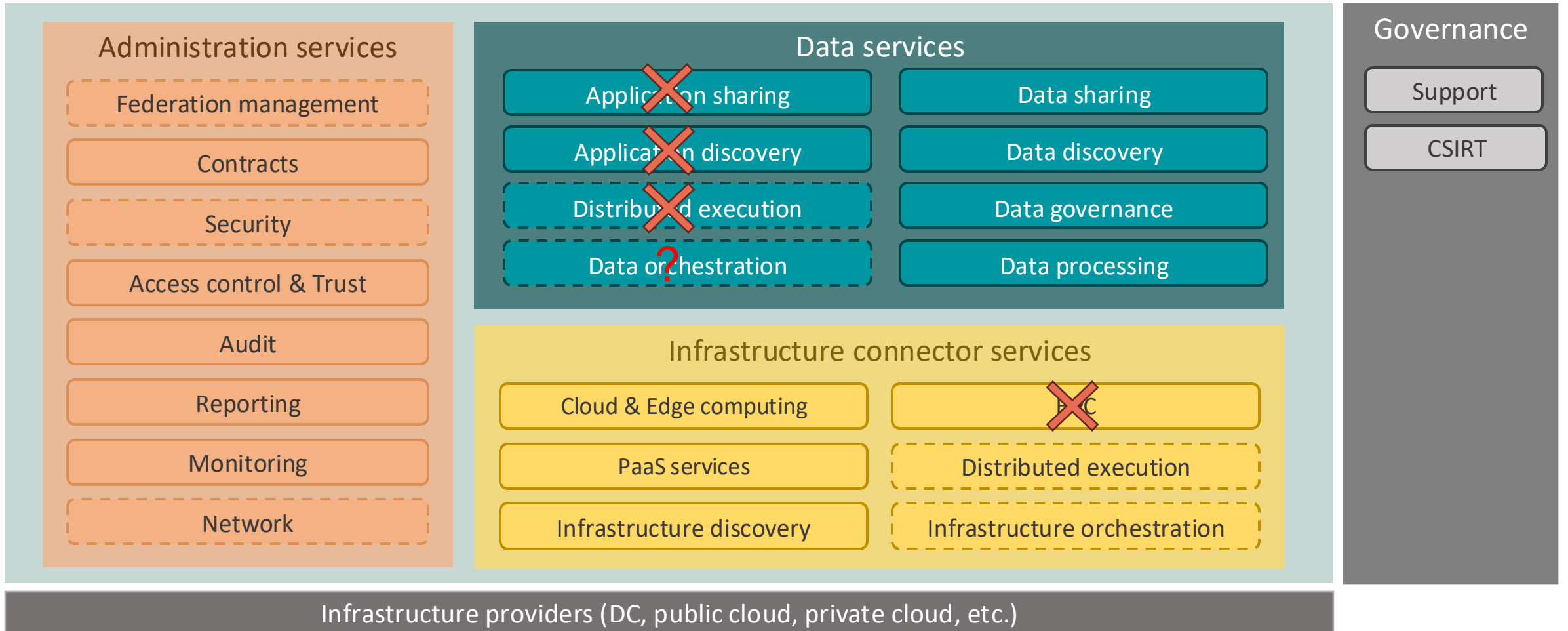
Possible ideas beyond the baseline use case

Idea 1 – Re-use third-party data from other Member States or from a central repository (Eurostat, Open Data Portal,....)

- Data provider α
- Can be another Member State
 - Can be another public entity: public utility, regional/local government....
 - Open Data Portal
 -



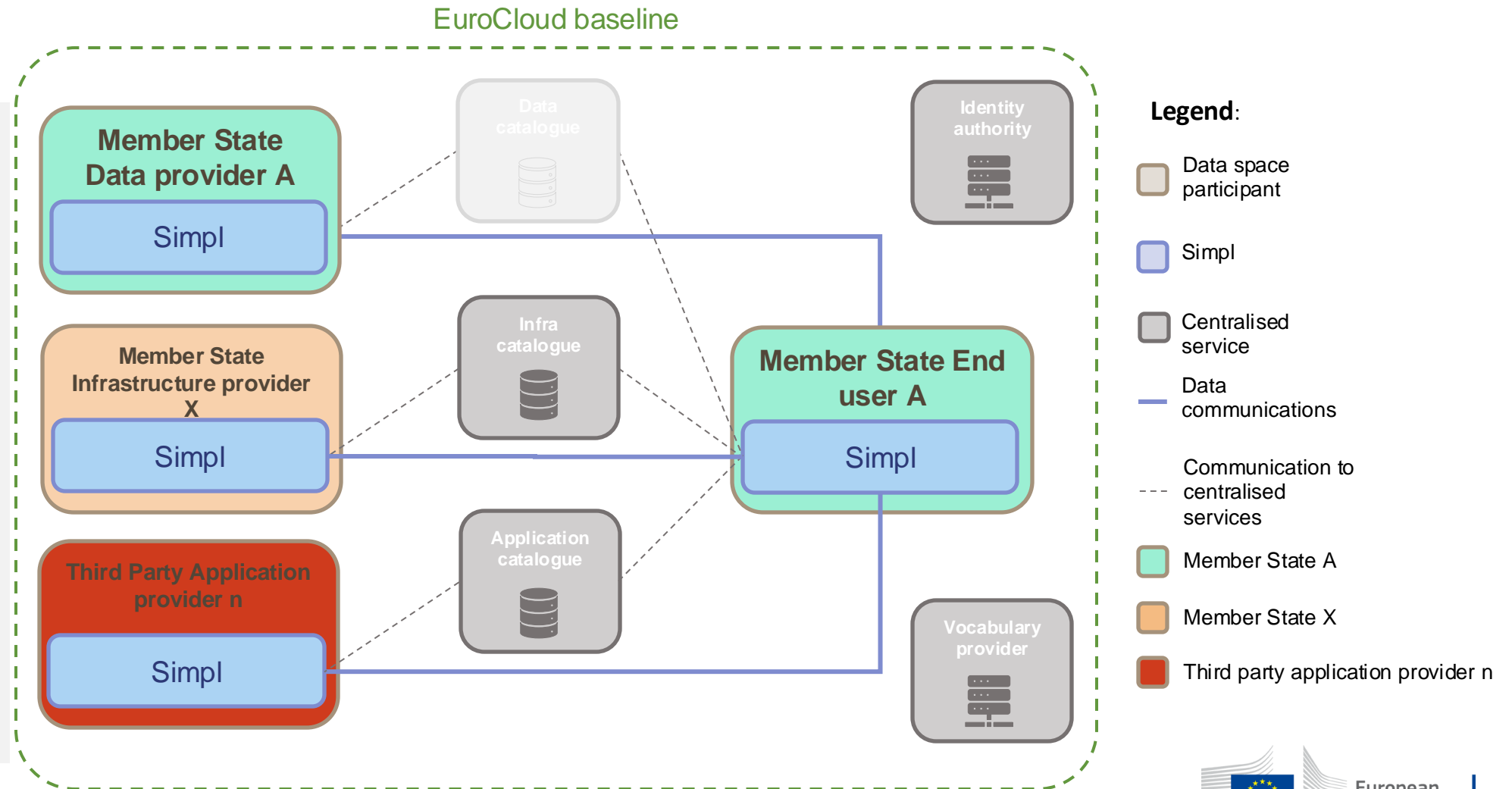
Idea 1 – Includes basic data services but possibly not all



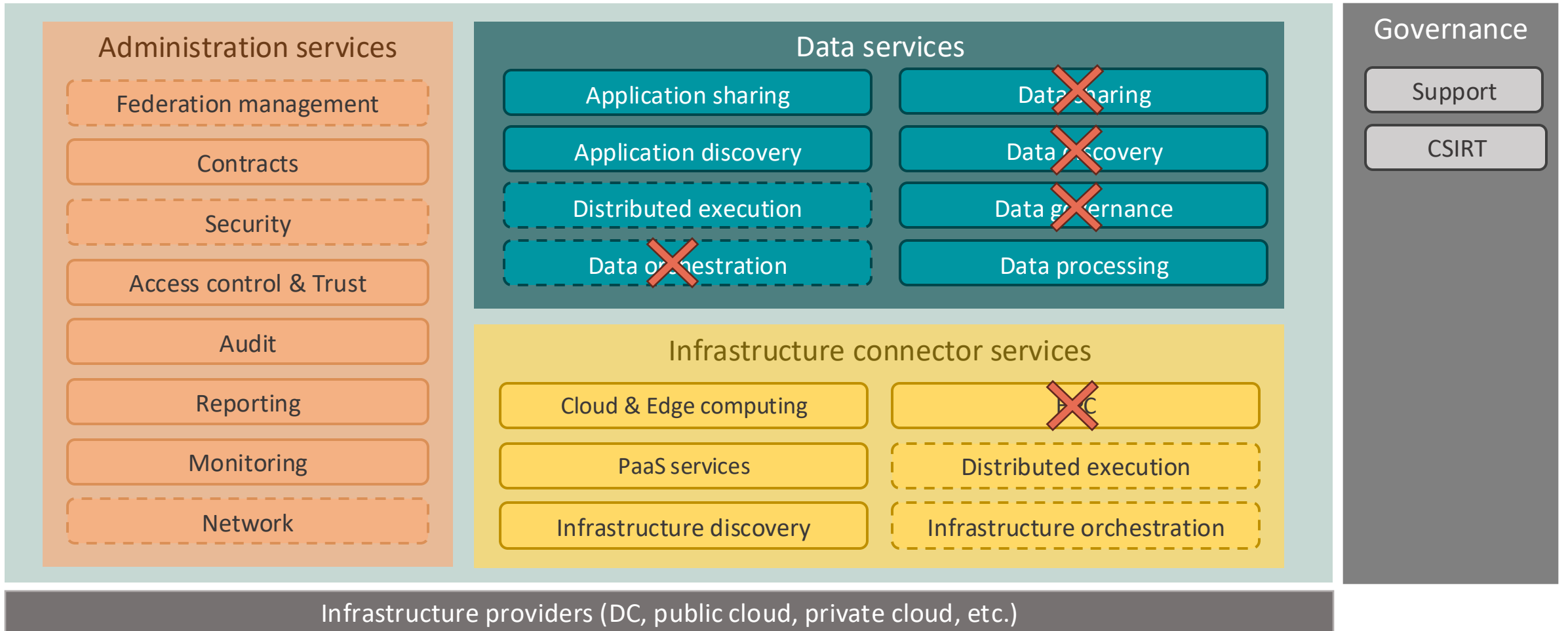
Idea 2 – Re-use third-party application from other Member States or from a central repository (e.g. Dome...)

Third party application provider:

- Can be another Member State
- Can be the AI algorithms developed under the Digital Programme
- Can be the Dome marketplace
-



Idea 2 – Includes application sharing but, again, not all



Discussion

A pilot for EuroCloud - Discussion

Scope

- Is the baseline use-case the right one?
- Is the third-party data use-case attractive?
- Is the third-party application use-case attractive?

Participation - Who is in for participating in a pilot project, as an infrastructure-user or data-user as per the baseline use case?

Support & Responsibilities:

- Technical support through the Simpl framework contract: Feasibility study and proof of concept in 2025, deployed environment in 2026
- Legal support through the EuroCloud study (legal aspects such as MoUs, SLAs,...)
- Organisational input from MS participants: willing to play the game, pragmatic mindset, business users bring their infrastructure or data 😊, ...

Thank you

Thank you

& stay in touch

