



IPIC 2023

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Physical Internet Conference

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Athens, Greece



FEDeRATED and EU Mobility Data Spaces towards an operational framework

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Facility of the European Union

13-15 JUNE 2023 Athens, Greece
www.pi.events/IPIC2023

alice | Alliance for
Logistics Innovation
through Collaboration
in Europe



Expanding the logistics Scope

DATA SHARING



The future of data – technology

Controlled data flow

An abstract visualization of data flow. The image features a dark background with several vibrant, multi-colored lines (red, orange, yellow, green, blue, purple) that flow and curve across the frame. These lines are composed of many small, bright particles, giving them a shimmering, particle-like appearance. The overall effect is one of dynamic movement and complex data paths.

The future of data – data at the source

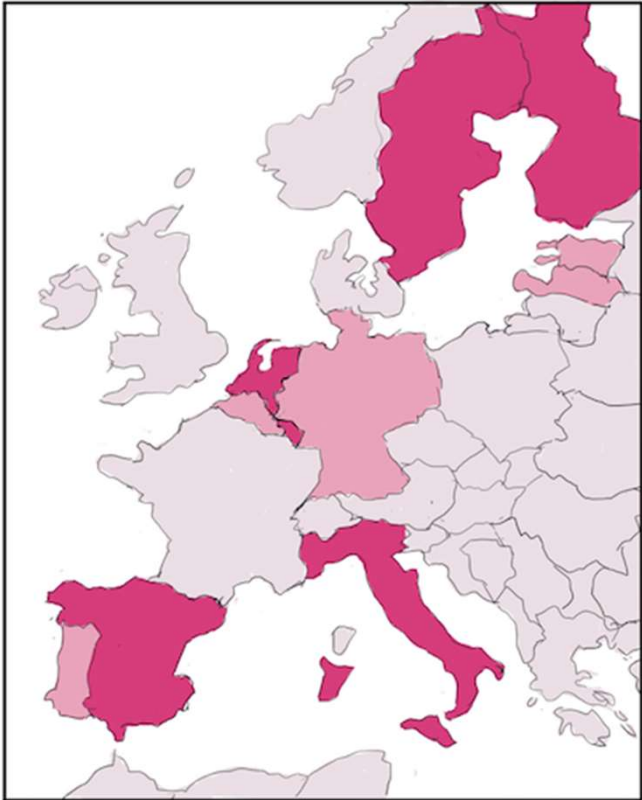


Any data you need, from any company, any government, any platform:

just browse the graph

Who

15 partners from 6 EU Member States



<p>Vediafi Ahola</p>	<p>Traficom</p>
<p>51Biz Luxembourg</p>	<p>Swedish Transport Administration Swedish Maritime Administration</p>
<p>Codognotto Italia S.p.A. Grimaldi Euromed Terminal San Giorgio Consorzio ZAILOG</p>	<p>NL Ministry of Infrastructure and Watermanagement</p>
<p>IATA</p>	<p>ES Ministry of transport and urban development Puertos del Estado Administrador de Infraestructuras Ferroviarias (ADIF)</p>



FEDeRATED Living Labs

1. [CaaS Asia Gateway for perishables - Vediafi](#)
2. [CaaS North Sea - Baltic corridor - Vediafi](#)
3. [CaaS Scandinavia-Mediterranean corridor - Vediafi](#)
4. [Data sharing SME Last Mile Delivery -STA](#)
5. [RFID in Rail - STA](#)
6. [Rail-road Terminal CDM - STA](#)
7. [Real Time Port Visit Service - SMA](#)
8. [Multimodal Information Sharing III - SMA](#)
9. [Transparant Transport City Helsingborg - STA](#)
10. [Hermes Fleet Performance Monitoring System - Grimaldi](#)
11. [Internet of Logistics - IATA](#)
12. [Terminal Track and Trace System - Zailog](#)
13. [BetterFlow - STA](#)
14. [Sustainable Inter-Modal Chains \(SIMC\) - STA](#)
15. [Optimized Port Operations - STA](#)
16. [D4YOU - Codognotto](#)
17. [EU Gate CMR/eFTI/OneAPP - 51Biz](#)
18. [smarTSGate - Terminal San Giorgio](#)
19. [DEFlog - NL Ministry of Infrastructure and Watermanagement](#)
20. [eGovernment Logistics - NL Ministry of Infrastructure and Watermanagement](#)
21. [SIMPLE - Puertos del Estado/ADIF/MITMA](#)
22. [B.E.A.standard -ELSA - STA](#)
23. [Real Time Multimodal Transportation Visibility Platforms - Ahola/Attracks](#)

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Timeline

2019

VISION (31/12/2019)

2020

INTERIM MASTER PLAN (31/3/2020) : PILOTS/LIVING LABS SCOPING REPORT (31/7/2020)
CONSULTATION REPORT 2019 (31/3/2020) : PEER REVIEW GROUP REPORT 1 (31/10/2020)

2021

INTERIM TESTING PILOTS/LIVING LABS (31/3/2021) : MID-TERM EVENT (30/11/2021)
CONSULTATION REPORT 2020 (31/3/21) :

2022

CONSULTATION REPORT 2021 (31/3/22) : PILOTS/LIVING LABS ASSESSMENT (31/10/2022)

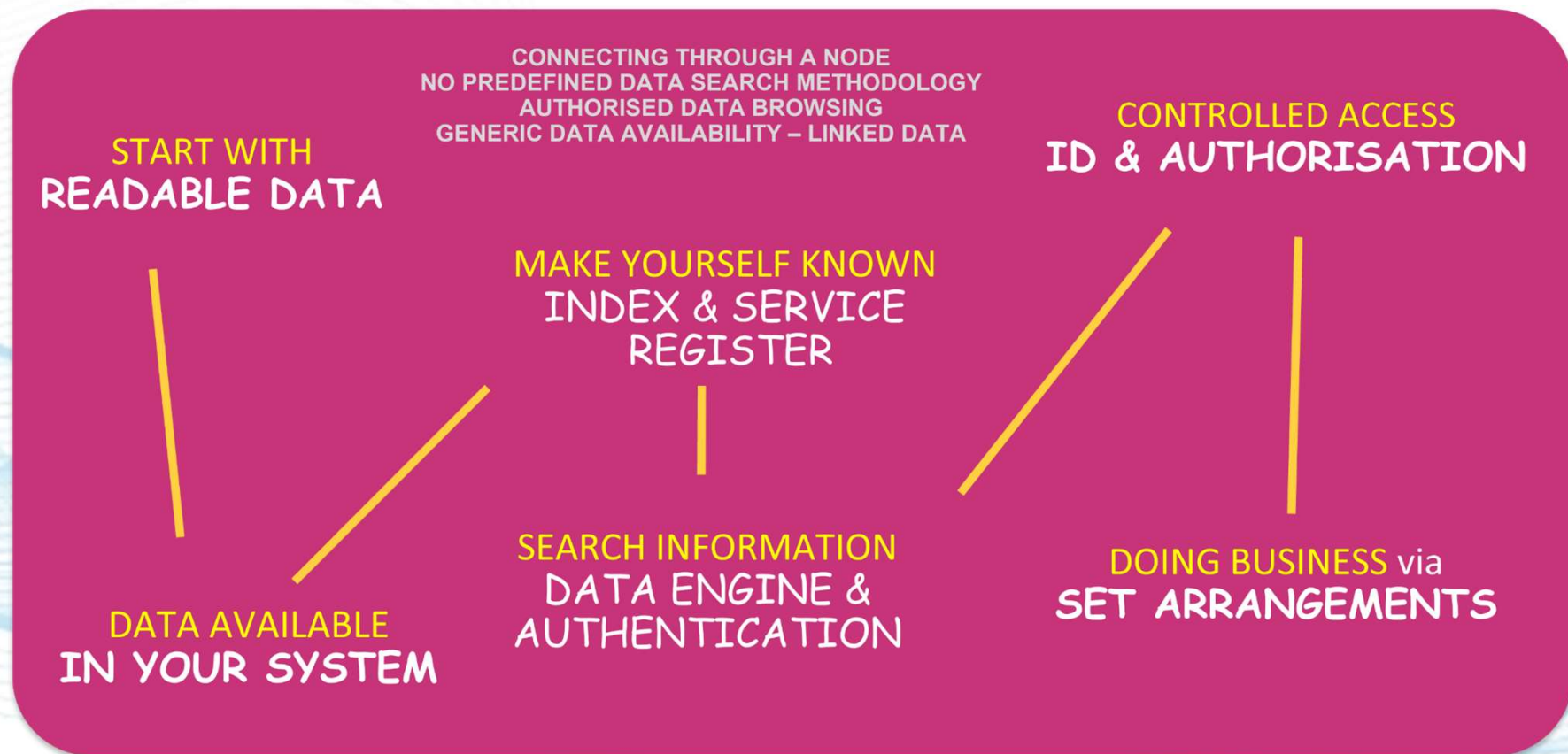
2023

CONSULTATION REPORT 2022 (31/3/23) : VALIDATED MASTER PLAN (31/10/2023)
FINAL PILOT/LIVING LABS REPORT (30/09/2023) : FINAL EVENT (30/11/2023)
PEER REVIEW GROUP REPORT 2 (31/10/23)

Objectives

- Supply chain visibility, optimized asset and infrastructure use and new services in a trusted & pull based infrastructure provision
- Paperless transport based on M2M interoperability, not digitized documents
- No proprietary solutions, vendor lock-ins or monopolistic Platforms
- Harmonized data interoperability - Agreed semantics based on events (semantic web) – data at source (Core operating Framework)
- Capability all stakeholders to become data points (nodes) monetizing on multiple transactions

Browse, query the FEDeRATED network of platforms



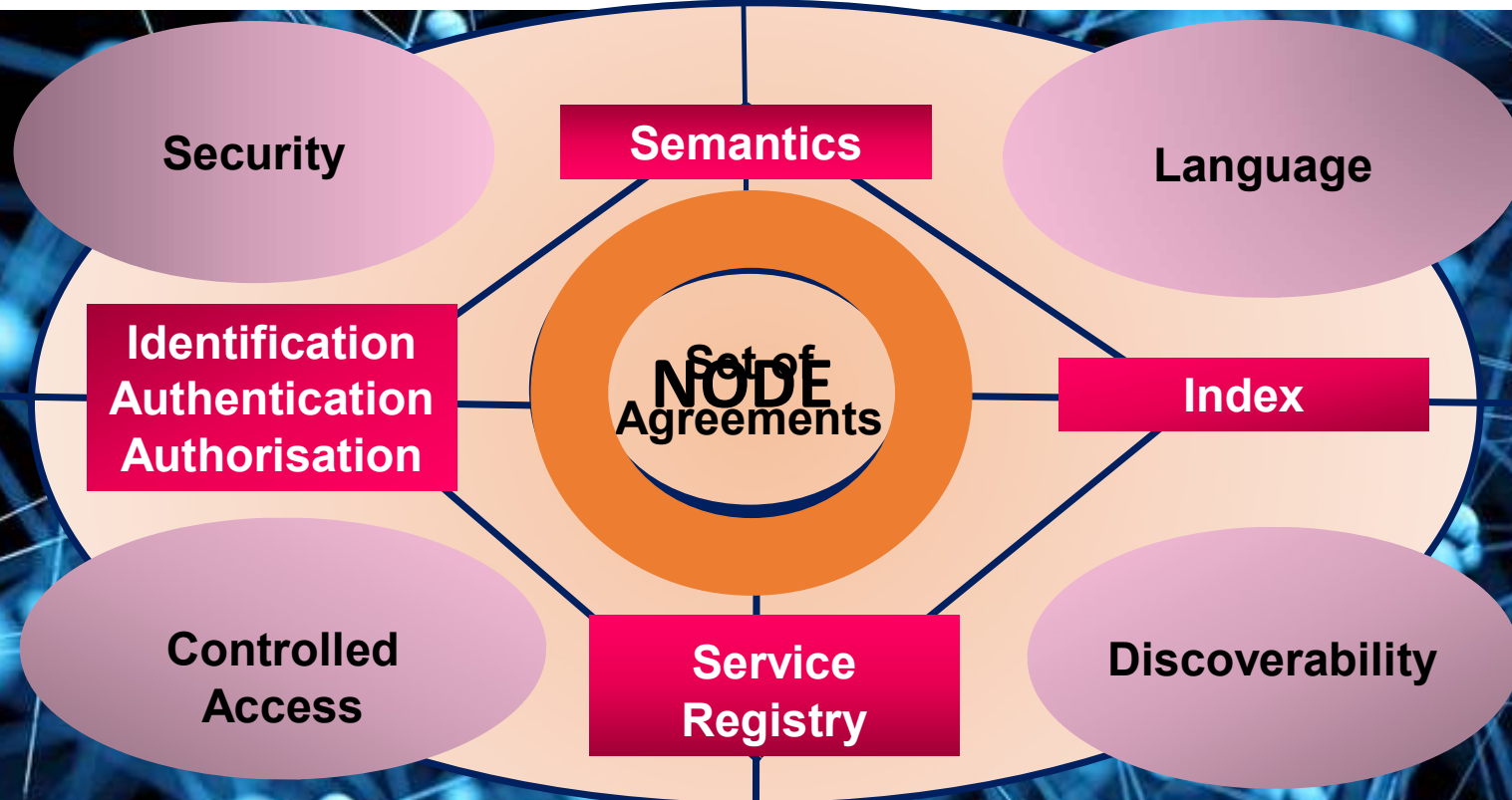


Do you speak
FEDeRATED?

[FEDeRATED semantic interoperability \(federatedplatforms.eu\)](http://federatedplatforms.eu)

The FEDeRATED operational framework - grid

EU and national regulatory approach
and policy incentives

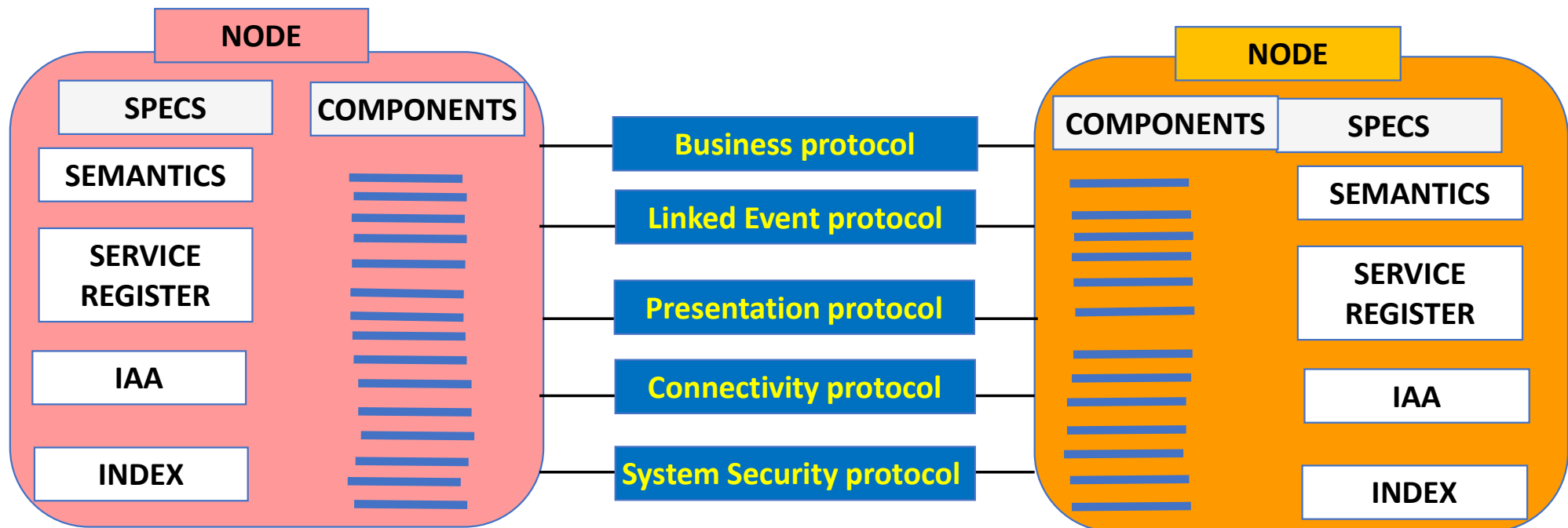


EU and national governance structure

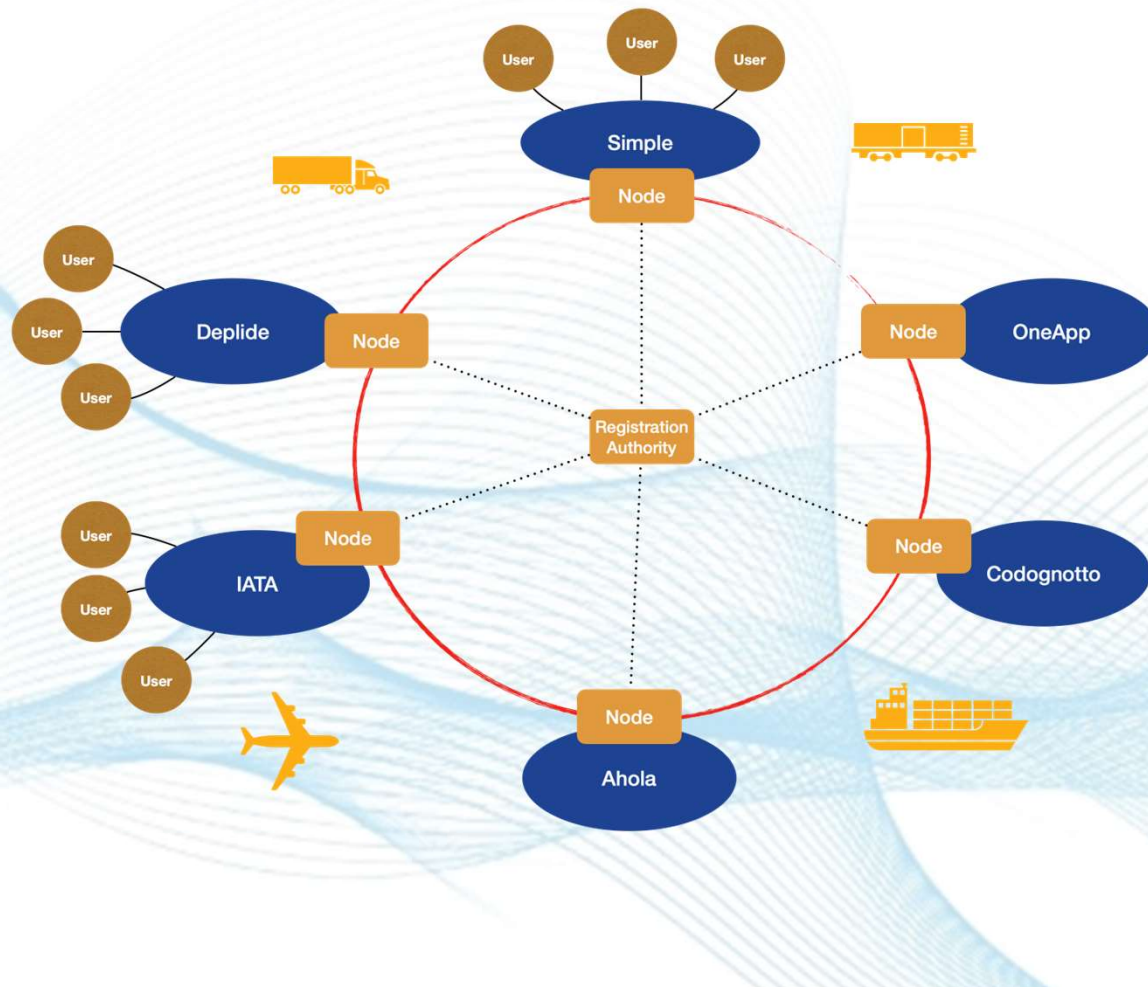


The regulatory approach – set of agreements (protocols)

- **Internal autonomy** (dataspace, platform, etc.) – implementation of their own agreements
- **Federation** – acting as one according to common agreed rules
- **Capabilities** - need to be proved – trusted and licenced to operate – unique license to operate



A federated network of platforms/dataspaces



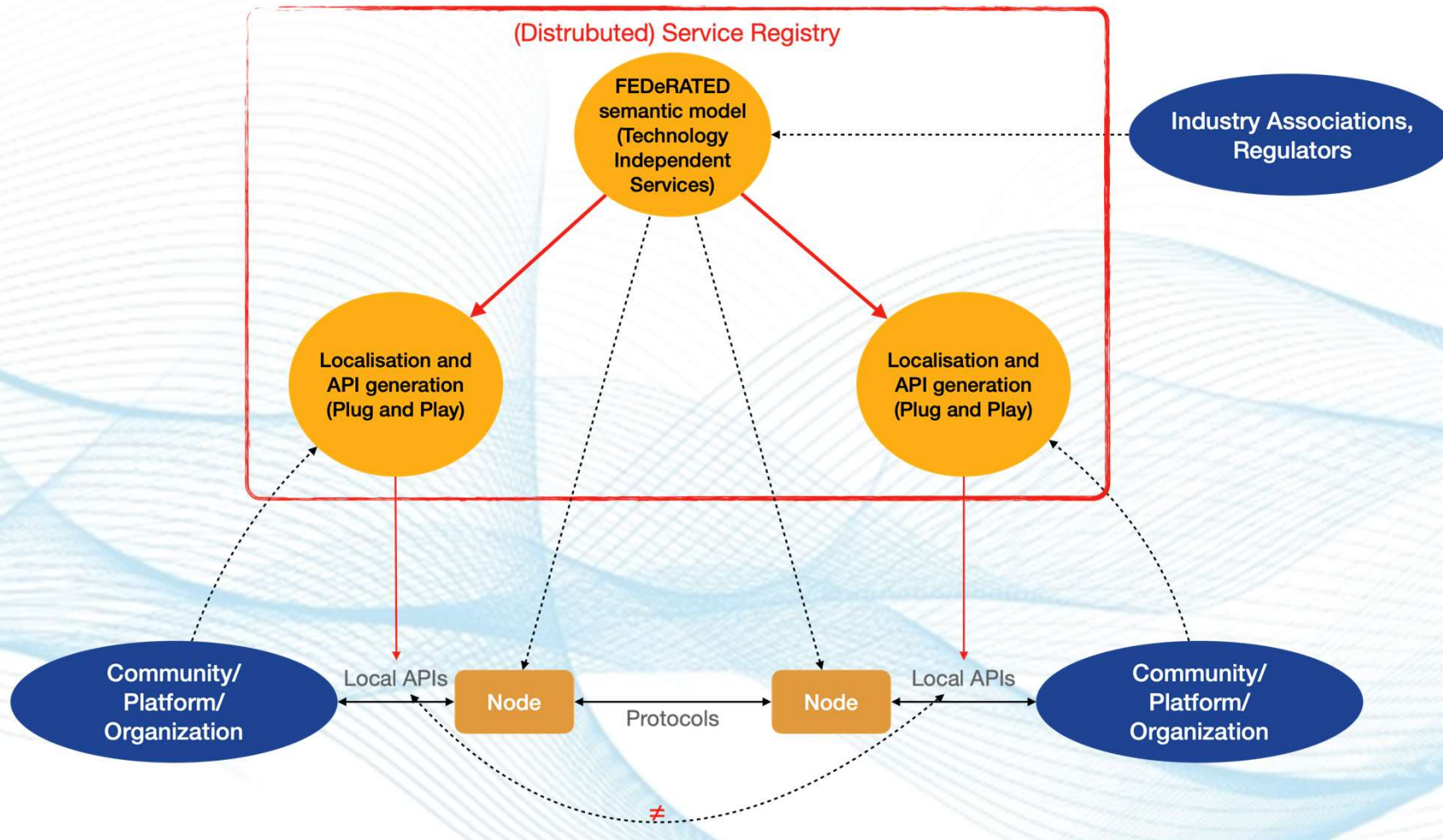
Internal autonomy

- Participants: enterprises, authorities, platforms/dataspaces.
- Each participants has its own internal systems and solutions.
- Each participant locally integrates to the network with a node.
- Each participant may implement the node functionality itself.

Federation

- Events are shared in a common format and structure via nodes.
- Reception of links provides data access at the source (authorization)
- Links provide access to additional data (agreed access policies).

A Localized Data Sharing Infrastructure



Where to find the code?

<https://github.com/tno/federated-bdi>

- Source code
- Technical documentation
- Unit and integration tests
- Gitlab CI pipeline
- Configured for a demonstration use case

<https://github.com/federated-bdi/docker-bdi-node>

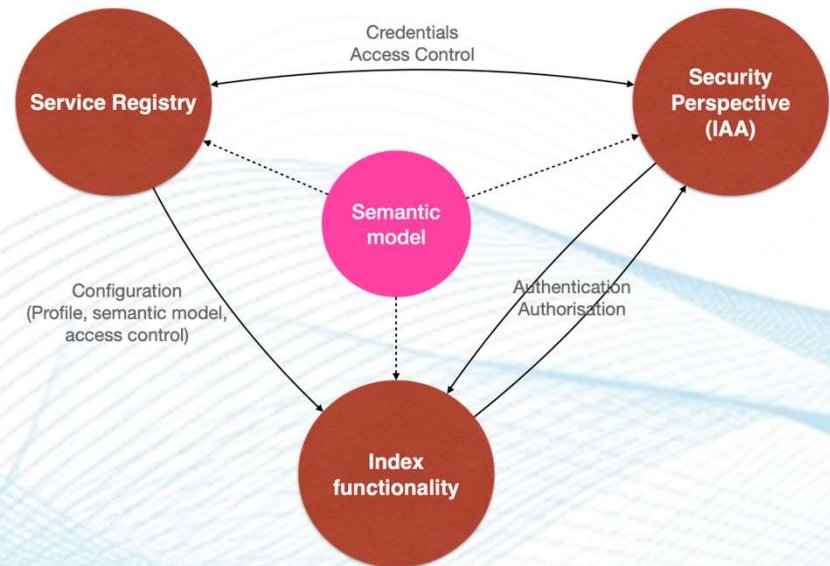
- Docker node

<https://github.com/federated-bdi/Kubernetes-bdi-node>

- Kubernetes node

Operational framework

- Self assessment instrument (functional/non-functional)
- Project book



MOBILITY DATA SPACE

OPERATIONS



THANK YOU

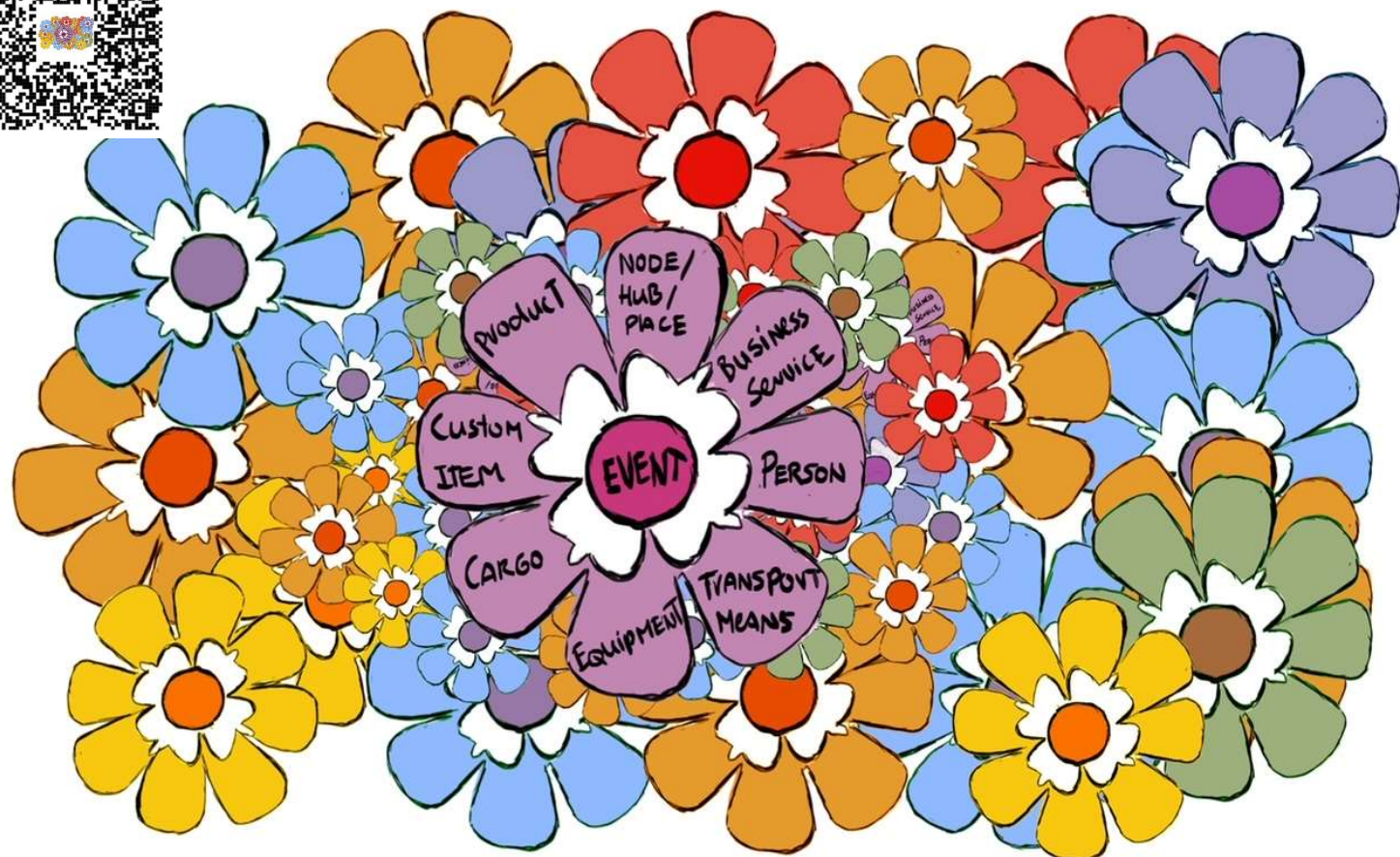
Let's continue
the conversation

More details: session 3.C
PI Data Sharing Infrastructure
(14 June, 9.00 – 10.00)

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www.federatedplatforms.eu
[@FeRated \(Twitter\)](https://twitter.com/FeRated)
[#FEDeRATED \(LinkedIn\)](https://www.linkedin.com/company/federated-network-of-platforms/)



INVITATION TO JOIN US - 30 NOVEMBER 2023



EU DATA LOGISTICS FESTIVAL - BRUSSELS