



# IPIC 2023

9th International  
Physical Internet Conference

June 13-15, 2023  
Athens, Greece



## FEDeRATED and EU Mobility Data Spaces towards an operational framework

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Co-financed by the Connecting Europe  
Facility of the European Union

**13-15 JUNE 2023** Athens, Greece  
[www.pi.events/IPIC2023](http://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 digital visualization featuring vibrant, multi-colored lines (orange, blue, green, and red) that flow and curve across a black background. These lines are composed of many small, glowing particles, creating a sense of dynamic movement and data flow. The overall effect is reminiscent of a high-speed data stream or a complex network visualization.

# The future of data – data at the source

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

**just browse the graph**

# Who

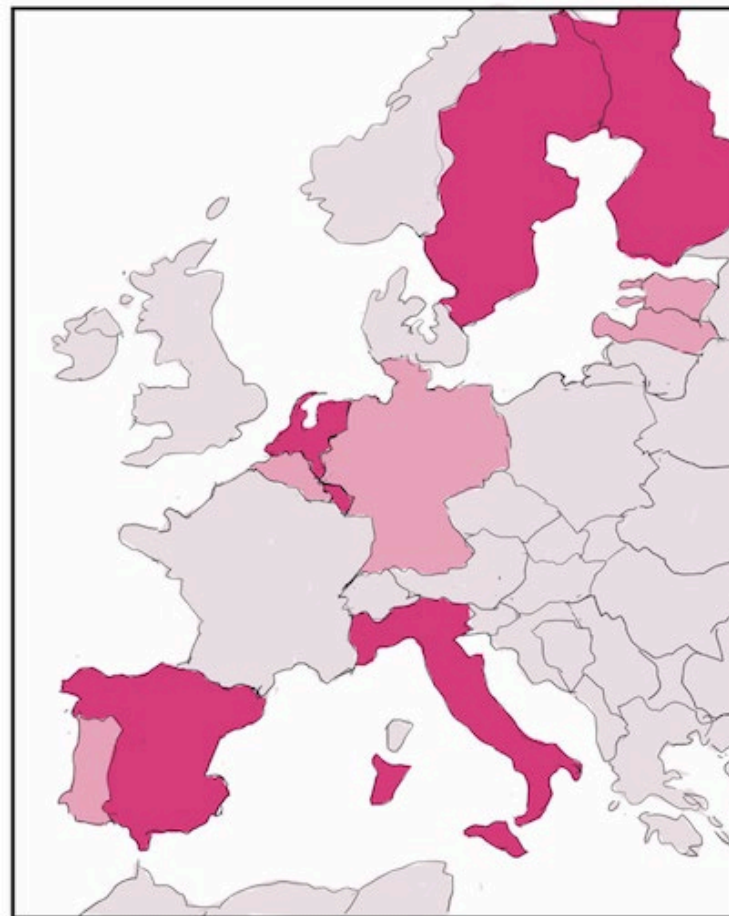
15 partners from 6 EU Member States

Vediafi  
Ahola

51Biz Luxembourg

Codognotto Italia S.p.A.  
Grimaldi Euromed  
Terminal San Giorgio  
Consorzio ZAILOG

IATA



Traficom

Swedish Transport Administration  
Swedish Maritime Administration

NL Ministry of Infrastructure and  
Watermanagement

ES Ministry of transport and urban  
development  
Puertos del Estado  
Administrador de Infraestructuras  
Ferroviarias (ADIF)





# 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](#)
-

# 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

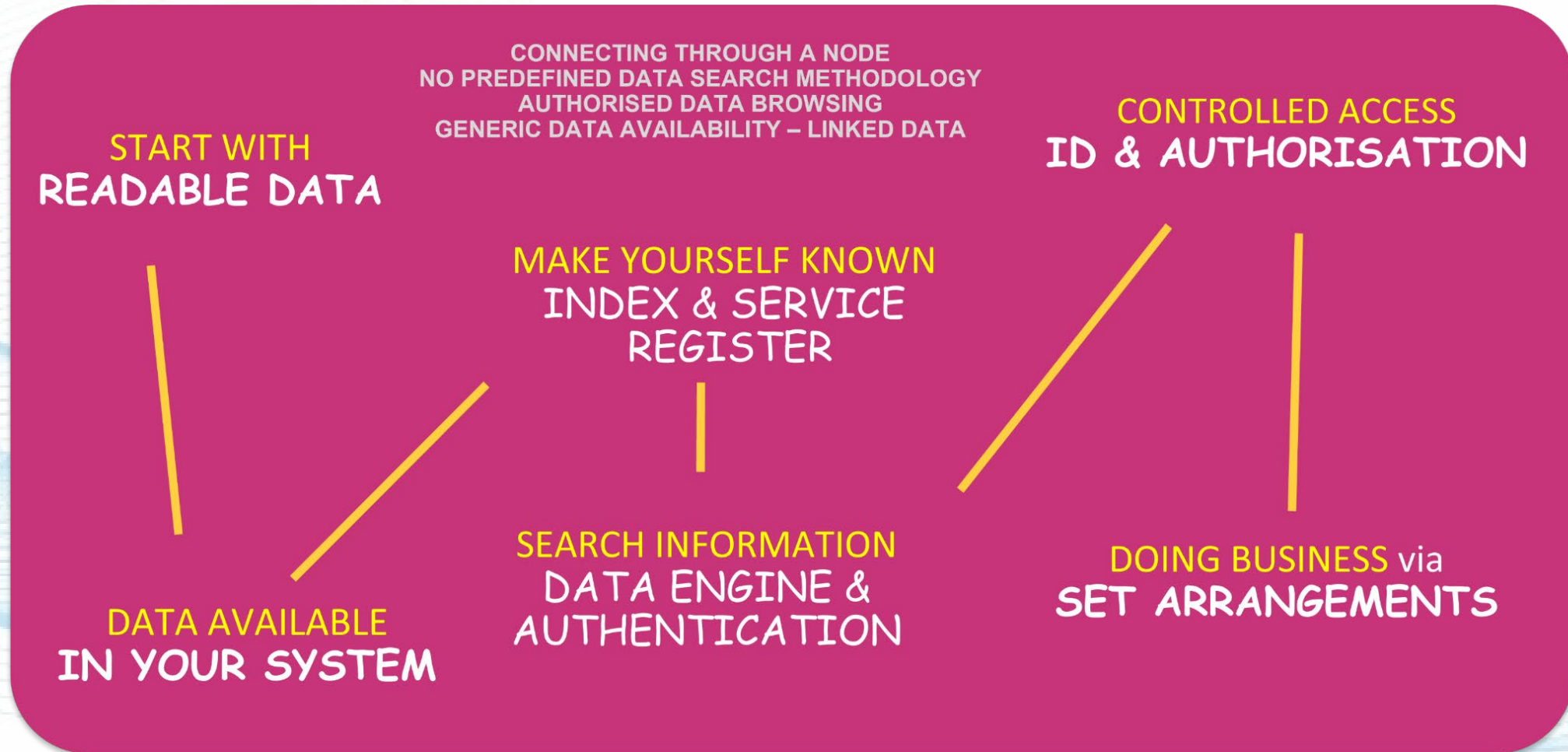
CONSULTATION REPORT 2022 (31/3/23) : VALIDATED MASTER PLAN (31/10/2023)  
FINAL PILOT/LIVING LABS REPORT (30/09/2023) : FINAL EVENT (30/11/2023)  
PEER REVIEW GROUP REPORT 2 (31/10/23)

# 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



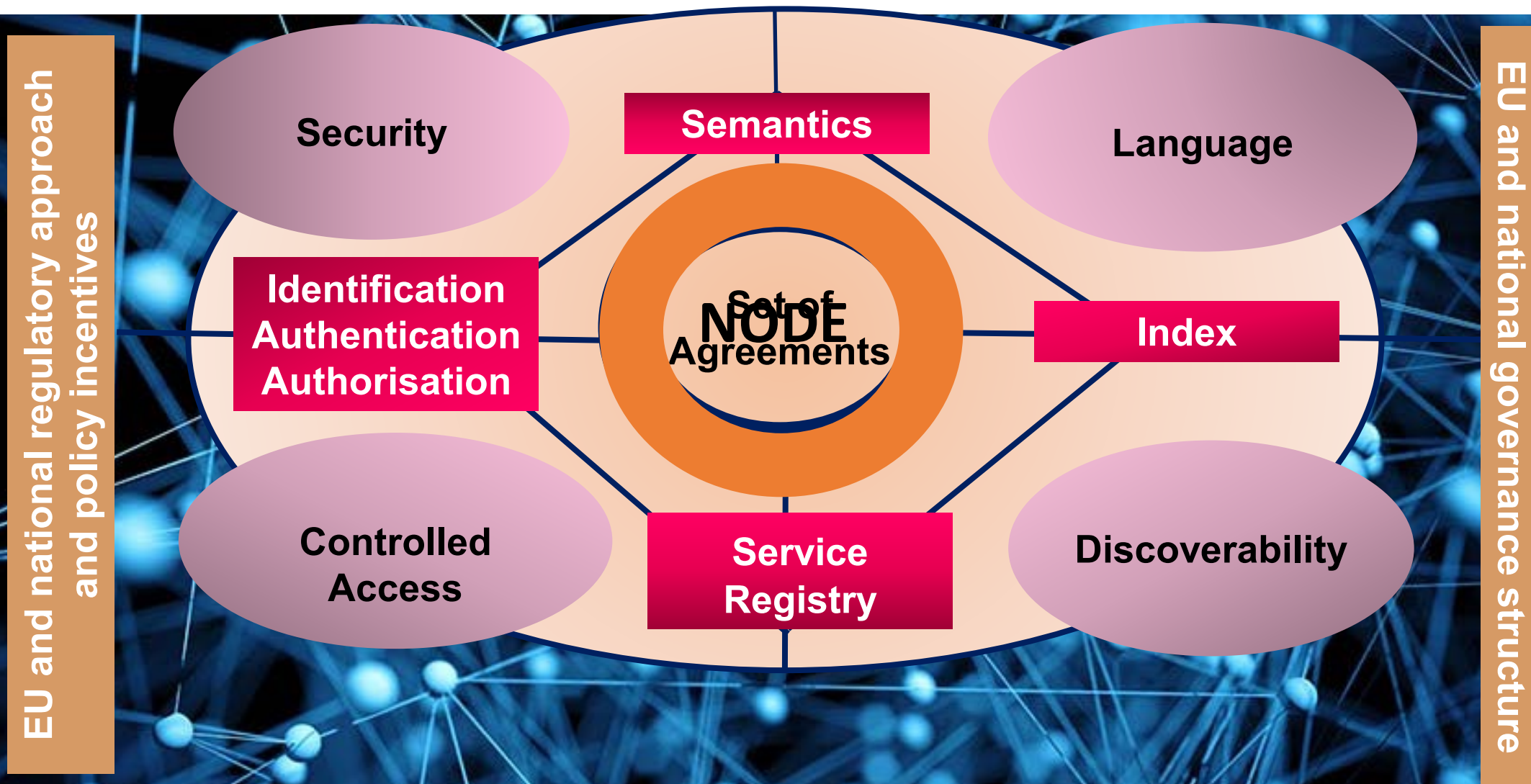


Do you speak  
FEDeRATED?

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

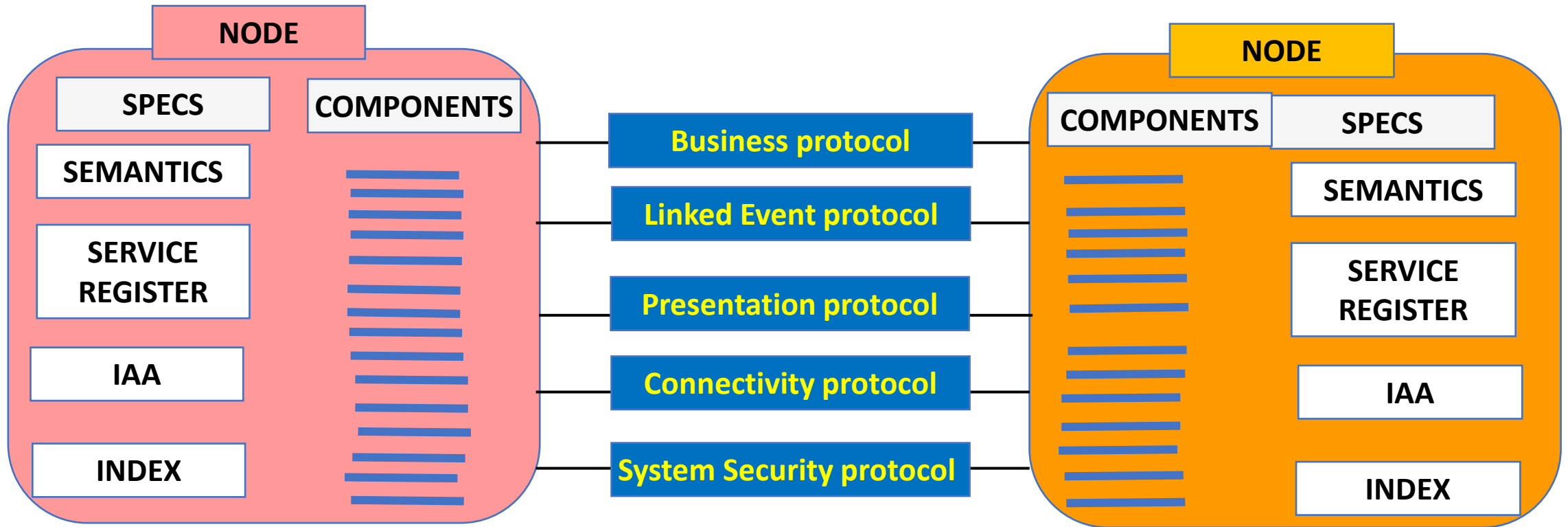


# The FEDeRATED operational framework - grid



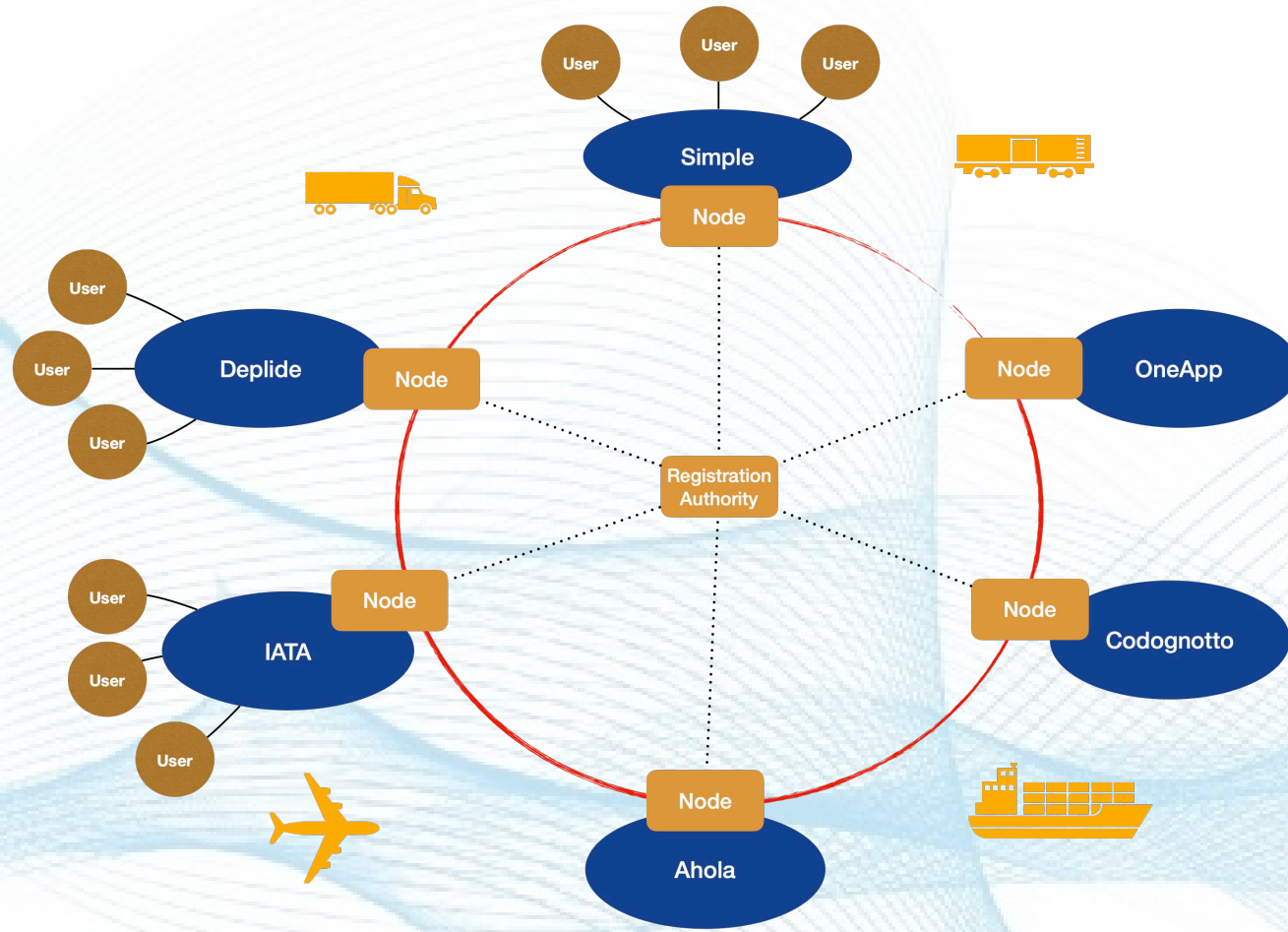
# The regulatory approach – set of agreements (protocols)

- **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



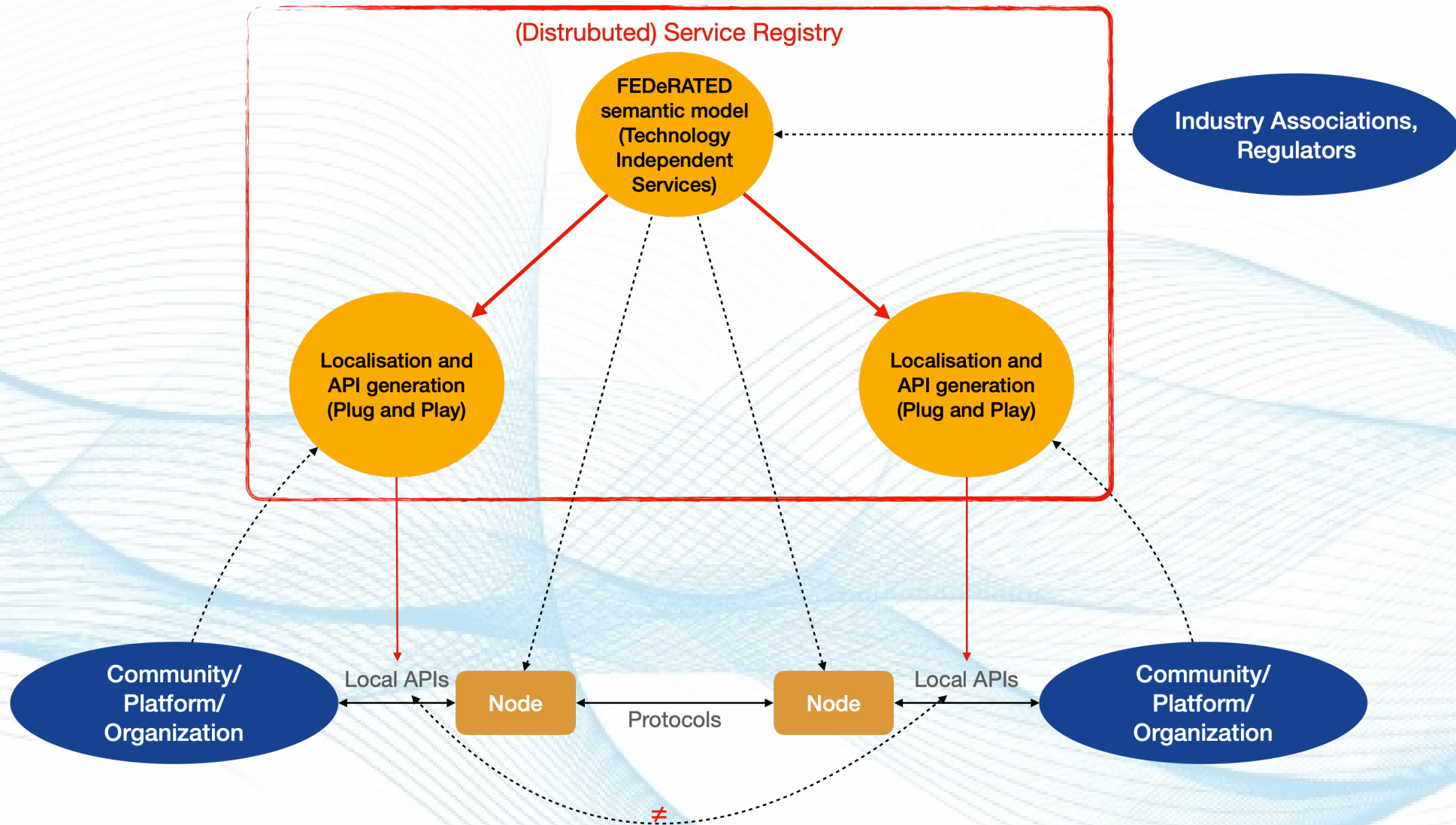
## Internal autonomy

- 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>

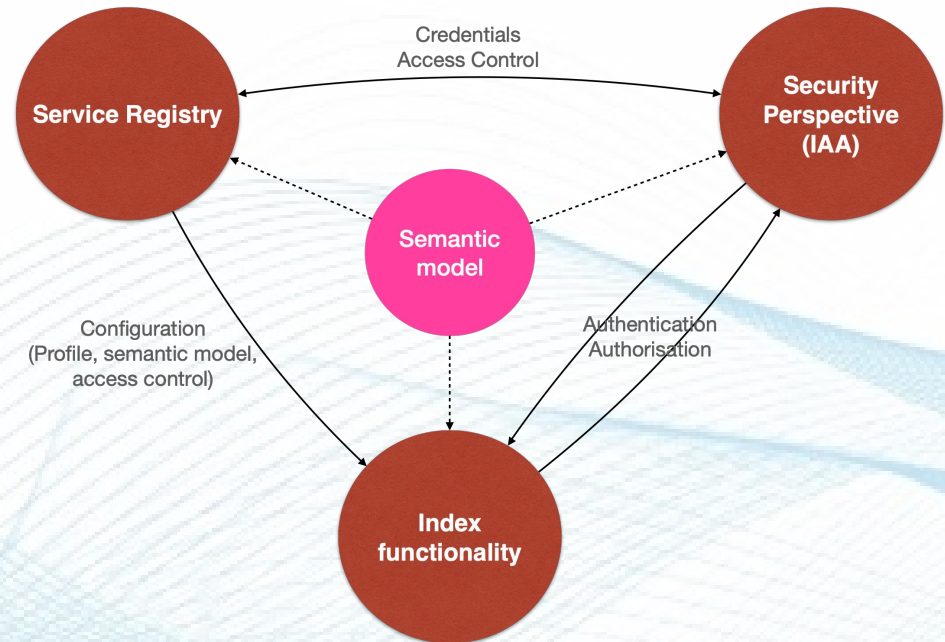
- Docker node

<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

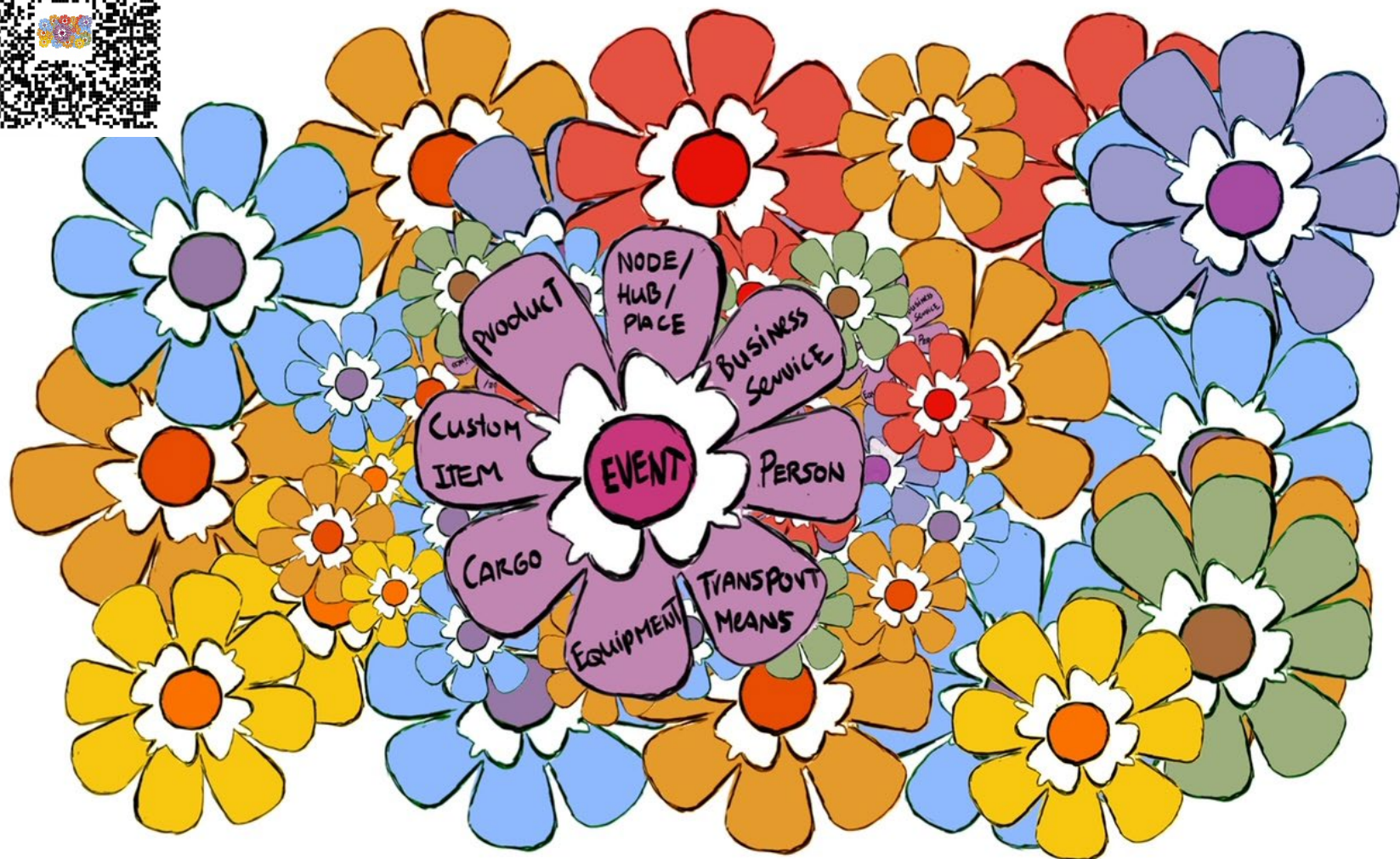
Let's continue  
the conversation

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

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[www.federatedplatforms.eu](http://www.federatedplatforms.eu)  
[@FeRated \(Twitter\)](#)  
[#FEDeRATED \(LinkedIn\)](#)



## INVITATION TO JOIN US - 30 NOVEMBER 2023



## EU DATA LOGISTICS FESTIVAL - BRUSSELS