



 **CENTRE OF EXCELLENCE**  
DATA SHARING & CLOUD

gxDCH

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# About myself

- Research consultant at TNO
- Background in Software Engineering and Distributed Systems
- Cloud enthusiast already since the early preview of “App Engine”

- Following the Gaia-X project since the “blue book” in 2019
- Organizing Gaia-X discussions in the Dutch Cloud Infrastructure Coalition

- Federated digital infrastructures, cloud-edge continuum
- Working in the IPCEI CIS, ECOFED and MISD
- Data Act: Regulations on switching Data Processing Services



Edwin Harmsma

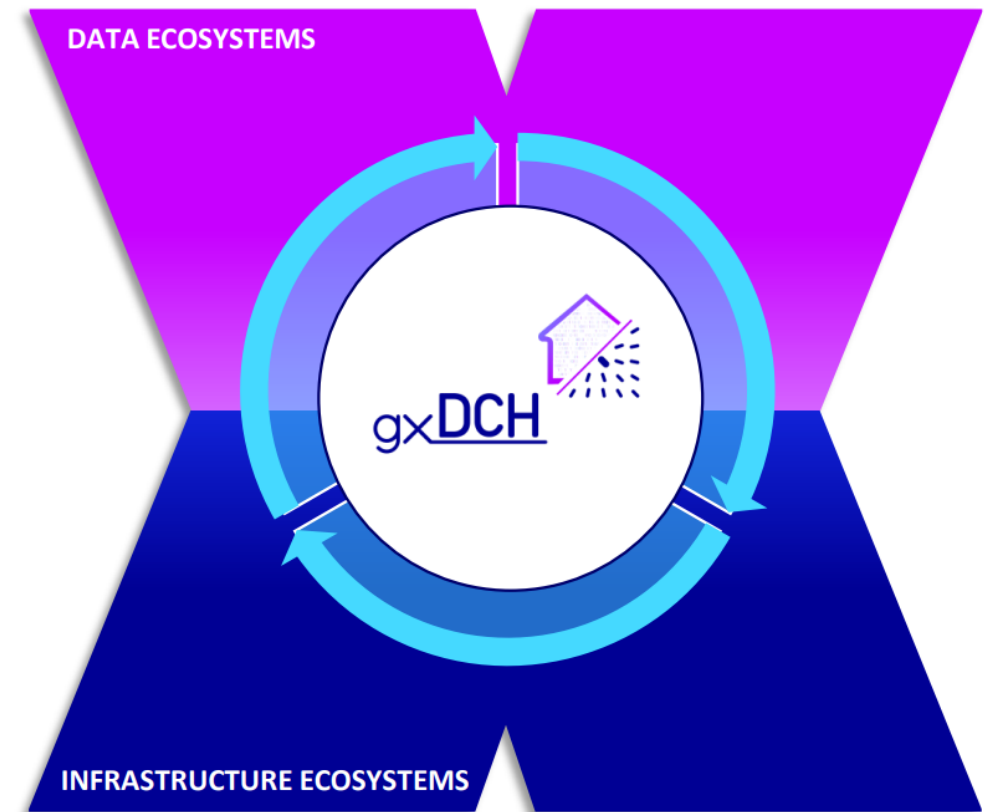
# Federated ecosystems

We want to get from *digital platform silos* into *federated ecosystems*.

- *Top and bottom-X!* We want to federate in both data and infrastructure ecosystems!
- The moment is *now!* We want to see the ecosystems in action!

**Digital ecosystems cannot go live if the intermediate roles are not up and running!**

- **Digital clearing houses**
  - Gaia-X Compliance: Clearing providers and their offerings according to the Gaia-X rules
  - Verifying Compliance with specific/additional federations
- **Marketplace operators**, making the provider offerings discoverable the customers – a potential mixture of:
  - Data marketplaces
  - Cloud-edge services marketplaces

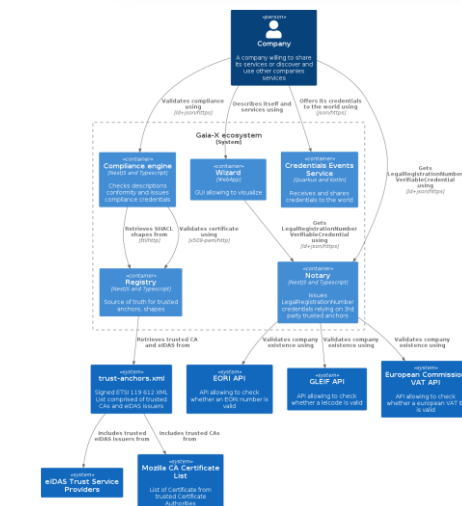
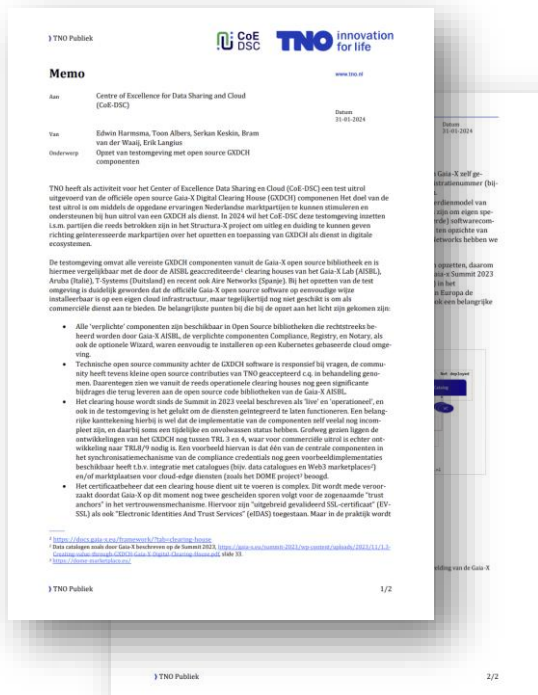


# Status of the gxDCH

- Reflecting on the clearing house presentations today.
- Open source software has been made available by the Gaia-X AISBL for the Compliance Engine, Wizard, Credential Events Service, Registry, and Notary (Loire release)
- Several European CSPs are already operating a gxDCH:

GXDCH by Aire Networks	GXDCH by ARSYS	GXDCH by ARUBA	GXDCH by deltaDAO	GXDCH by Gaia-X Lab	GXDCH by T- Systems
WEBSITE EMAIL	WEBSITE EMAIL	WEBSITE EMAIL	WEBSITE EMAIL	WEBSITE EMAIL	WEBSITE EMAIL

## Who will deliver the gxDCH services in the Netherlands?



# Taking the GXDCH technology into reality

- 1<sup>st</sup> prize winners of the Gaia-X Tech-X Hackathon in May: **TNO, BIT, SmartSense** and the **CoE-DSC**.
- **Structura-X**: Applying the Gaia-X trust framework in the context of sharing computing resources within a peering of cloud service providers.



Video about the Hackathon result: <https://youtu.be/hhFeU2NLKfM>



# Outlook: Shaping tomorrow's cloud infrastructure!

The essential ingredients for making the **federated cloud** reality are now coming together!

- Trust framework of Gaia-X
- Distributed catalogues/marketplaces (e.g. the DOME marketplace project)
- Technical frameworks and middleware to federate clouds (IPCEI CIS) and data spaces (EU SIMPL)

**Gaia-X Trust Framework:**  
Your Pathway to Trusted  
Digital Ecosystems

+



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# Thank you for your attention!

**Digital ecosystems cannot go live if the intermediate roles are not up and running!**

**Please reach out to us if your organization is interested in becoming a GXDCH!**

[info@CoE-DSC.nl](mailto:info@CoE-DSC.nl)

**Interested in becoming part of the ECOFED reference group?**

[info@ECOFED.eu](mailto:info@ECOFED.eu) (IPCEI CIS, 8ra)

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