

The Centre of Excellence for Data Sharing and Cloud in 2023

**Catalyzing the
Digital Transition in
The Netherlands**



: Overview

The importance of federative data sharing and supporting cloud infrastructures is clearly on the radar of the European Commission (EC). The development of data spaces is at the core of the European Data Strategy. The EC plays an active role in the development and the deployment of data spaces by both providing the foundational regulations, developing the reference architectures and associated (open-source) building blocks. The EC supports the deployment of Common European Data Spaces in multiple sectors. Ecosystems of companies, public organisations and knowledge institutes can benefit from these developments and actively contribute. The EC provides generic support via the Dataspaces Support Centre (DSSC), via their SIMPL initiative aiming at a common data sharing middleware layer and via their active involvement in private initiatives like Gaia-X and IDSA. Also, the EC has developed a lot of new legislation around data and cloud, like the Data Act. Thus, the EC uses a “carrot and stick” approach.

In The Netherlands, an active approach is taken towards European developments. There are many national, sectoral and regional initiatives around data sharing and cloud. The Centre of Excellence for Data Sharing & Cloud (CoE-DSC) started in 2023 as the merger of several of such national initiatives: the Dutch Gaia-X hub, the data sharing working group of the Dutch AI Coalition (NLAIC), the Data Sharing Coalition and the Dutch IDSA hub. With this strong foundation, the CoE-DSC actively supports the setup of new dataspaces and associated use cases, works on harmonisation of data sharing initiatives and valorises results to the Dutch community. The CoE-DSC takes an active approach towards the European developments mentioned: we inform the Dutch ecosystem about European developments and help translate them for our local situation. The CoE-DSC also contributes actively to European developments and addresses Dutch priorities and solutions in the international agenda setting.

: The CoE-DSC highlights from 2023:

- 1. Realizing Digital Sovereignty:** In 2023 a Cloud Federation Testbed was realized by CoE-DSC together with the Gaia-X lighthouse project Structura-X. The cloud services of 7 providers in The Netherlands, Italy and Spain were successfully integrated into a federation of clouds. Cloud federation provides a powerful alternative to the Big Tech cloud solutions and reduces the risk for EU organizations of vendor lock in. The Testbed demonstration at the Gaia-X Summit in Alicante generated enormous visibility.
- 2. Verifying Digital Compliancy:** Gaia-X released Open-Source components in 2023 for the operation of the Gaia-X Digital Clearing House (GXDCH): an essential function in digital infrastructures for the automation of compliancy. The CoE-DSC developed a test environment that integrates these components. In 2024, the CoE-DSC GXDCH Test Environment will be used to strengthen the NL cloud sector. Also, the Gaia-X compliancy framework has been assessed by NOREA (the organisation of Dutch EDP auditors) in the context of the Smart Connected Supplier Network project, which is also a Gaia-X lighthouse project.
- 3. Creating Value from Sensitive Data:** in the community of CoE-DSC the adoption of Privacy-Enhancing Technologies (PET's) shows a strong increase. PETs provide a solution for the trusted processing of sensitive data in collaborations. PETs and Data Spaces are therefore a very powerful combination: Data Spaces provide identity management, discoverability, and trust where PETs provide data visiting and local processing capabilities. The CoE-DSC has created an architecture and a demonstrator to show how this works in practice.



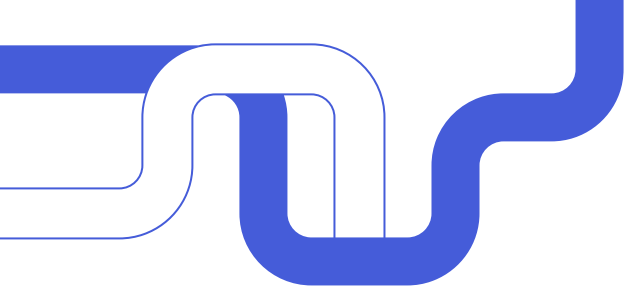
4. **Societal Transitions need Cross-Sectoral Data Sharing** to be successful. Examples are the energy transition, the digital product passport, sustainability reporting, and the monitoring of the effectiveness of governmental policies. Agreements and rules have to be established to enable data sharing across data spaces. The CoE-DSC is developing a multi-level governance framework for the Netherlands, together with other relevant Dutch initiatives and embedded within the broader context of the EU developments on data spaces.

5. **Connecting the Dutch Sectors to the EU Data Spaces:** The CoE-DSC is an active stakeholder in the main EU initiatives Gaia-X, IDSA and the Data Space Support Centre (DSSC) and implements the connection to and from the Dutch data sharing community. The DSSC has delivered the first version of the Data Spaces Blueprint. This is a major step in the digital Strategy of the EU. The Common European Data Spaces are the top-level community of practice for Data Sharing. International projects are now progressing the designs delivered in 2023 towards deployment. The CoE-DSC encourages Dutch initiatives to stay closely aligned with the EU Data Spaces to pave the way towards international interoperability and actively supports them in this endeavor.

6. **Achieving a Common Understanding of Data:** Semantic interoperability means achieving a common understanding of data. Data consumers and data providers spend

a disproportionate amount of time trying to make sense of the data they need and to figure out how to combine them. Where community driven semantic standards (vocabularies, data models) exist, they should be followed. This goes for both data suppliers and data consumers. Publishing, sharing, and cataloguing these semantic standards is needed to allow for findability and reusability. In the CoE-DSC we delivered a solution to share semantic standards between data ecosystems. This solution builds on the DCAT open standard. The next step is further development and standardization of this mechanism for vocabulary exchange, and its adoption in other data sharing ecosystems. Internationally, this topic is addressed by the GOFAIR Foundation. The CoE-DSC has an active working relation with GOFAIR.

7. **Digital Identities for control on Personal Data:** Digital Identities for Data Spaces Data Spaces struggle with concepts of identity and trust. The eIDAS regulation is now revised to version 2.0 and includes several digital trust services that could assist Data Spaces with this challenge. Data Spaces can make use of an interoperable European infrastructure to identify legal entities and natural persons. This does not only allow Data Spaces to identify their participant with the appropriate level of assurance. It also enables Data Spaces to verify trusted attestations about their participants and add value by issuing attestations their participants can use elsewhere. The CoE DSC has shown to Data Spaces how they could make best use of these services.



8. **Involving Citizens** in data sharing is essential in Business to Consumer (B2C) and Government to Consumer (G2C) processes. It is vital that citizens get control of their personal data to build trust. Human Centric design of Data Spaces was elaborated in the Common EU Data Space on Skills. The concept of the Personal Data Space (PDS) was explored in the CoE-DSC. PDS and SSI, are cornerstones for citizen involvement in data sharing.

9. **Sharing of Streaming Data:** Connected sensors and devices are a cornerstone of the Internet of Things (IoT). The associated data streams can provide value to different use cases. The CoE-DSC has demonstrated how streams of sensor data can be shared in a Data Space in a controlled manner among multiple receivers or consumers, with timeliness being an important aspect.

10. **Community Building and Sharing of Expertise in The Netherlands:** The CoE-DSC is the hub for the wide Data Sharing & Cloud community in The Netherlands. On a monthly basis, community events enable the exchange of knowledge and best practices from projects. The CoE-DSC website, newsletters and social media provide access to important knowledge and experiences, (inter) national events and announcements.

11. **The EU Digital Acts provide opportunities for SMEs:** The EU Digital Strategy is a powerful combination of policies, standards, funding opportunities. The Digital Acts provide a legal foundation for the open market. The EU digital sector is strengthened by cloud and data sharing solutions that prevent vendor lock in, safeguarding privacy and sovereignty. CoE-DSC has provided an overview of obligations and opportunities for SMEs in the era of data sharing.



CoE-DSC forward look

The CoE-DSC will continue in 2024 to realize its main goal: to enable value creation from data sharing in The Netherlands.

A scalable approach with the data owner in control of the data sharing is essential. The main goals for 2024 are:

to strengthen the Dutch Cloud Sector by

- » extending the National Cloud Testbed with more partners, and
- » implementing and testing components for the Gaia-X Digital Clearing House;

to deliver a first version of a generic agreements framework for cross-sectoral data sharing, in The Netherlands, closely aligned with the developments in Europe;

to test the software delivered by the EU project SIMPL;

to maintain a well informed and active community;

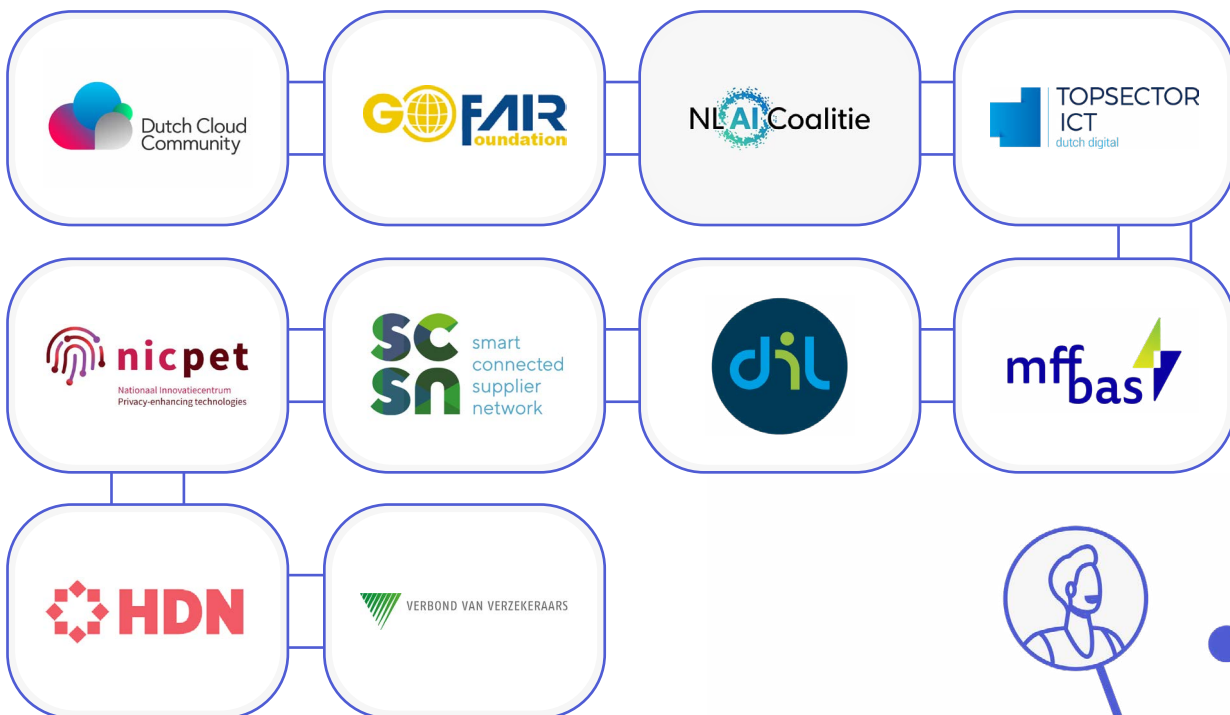
to steer the alignment of developments in the EU and in The Netherlands related to Data Sharing and Cloud.

: Stakeholders

Europe



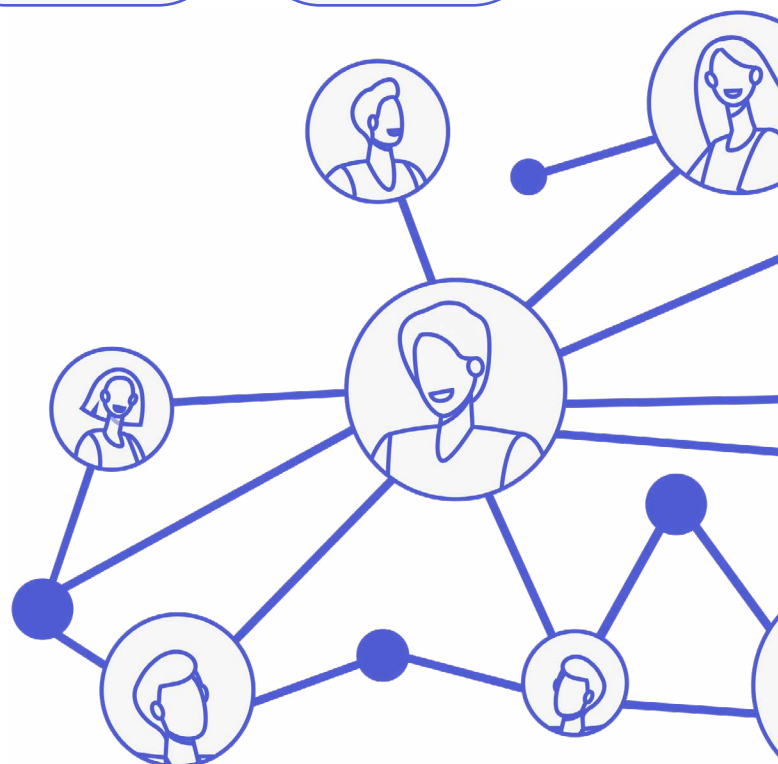
The Netherlands



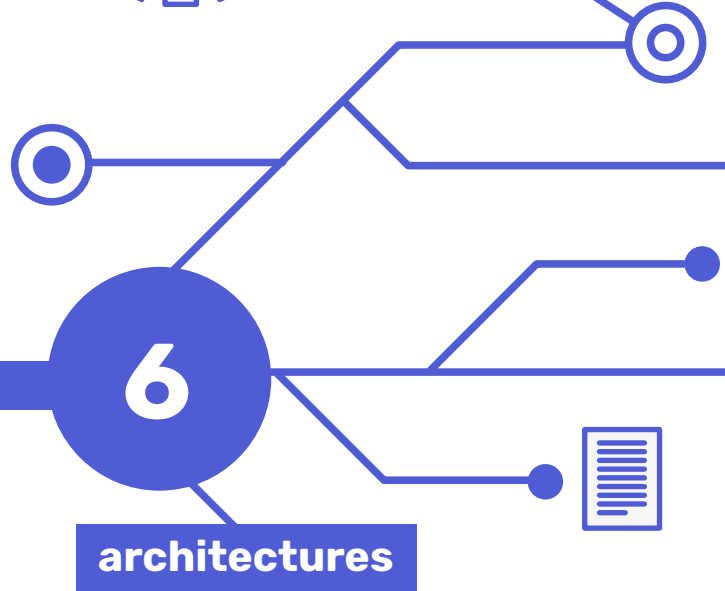
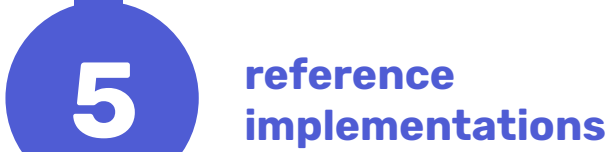
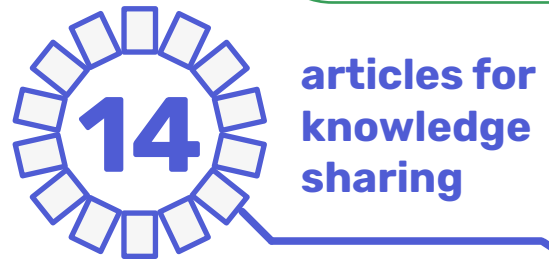
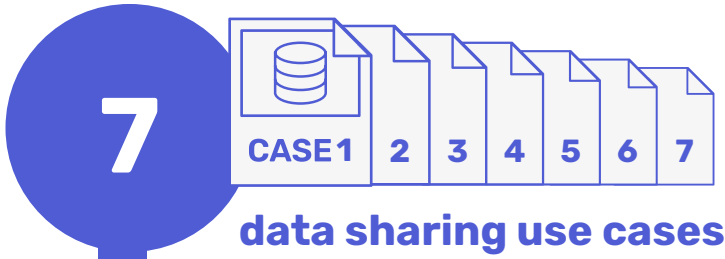
: Community

225

unique members
brought together



: Results



: Events



: Communications

LinkedIn 454 followers
212 impressions per post:

Newsletter 587 subscribers
39.5 % open rate

Website 635 website visitors per month
972 sessions per month