newsletter

DS2
DATA SPACE | DATA SHARE

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ABOUT DS2

Welcome to the DS2 project!

DS2, a project funded by the European Commission (+7M EUR), is on a mission to break down industry silos and create a modular, secure, trust-sensitive, platform-neutral environment for cross-sector data sharing. DS2 aims to make possible data sharing between sectors, larger groups of entities, and between SME and Public sectors. Led by VTT, the technical research centre of Finland, the project brings together researchers, developers, and policy-makers to create a standardised solution for sharing complex data between industries seamlessly and responsibly.

DS2 envisions the creation of a European, modular environment for connecting diverse industry dataspaces. The project aims to develop and test an Intersectoral Dataspace Toolkit (IDT) with common standards and modules for dataspace federation, focusing on improving energy efficiency, monitoring air quality, and precision agriculture sectors. The innovative approach will empower industries to overcome sovereignty, interoperability, portability of data, and data protection challenges, fostering a robust, secure, and connected data infrastructure across Europe.

READ MORE

"In the ever-expanding realm of data, DS2 represents Europe's commitment to forging a future where the sharing of data, and respect for data sovereignty, converge. Together, DS2 embarks on a transformative journey, building a foundation for responsible and interconnected cross-sector data sharing that empowers individuals, organizations, and society as a whole."

Juha-Pekka Soininen, DS2's coordinator, VTT

DS2 ARCHITECTURE

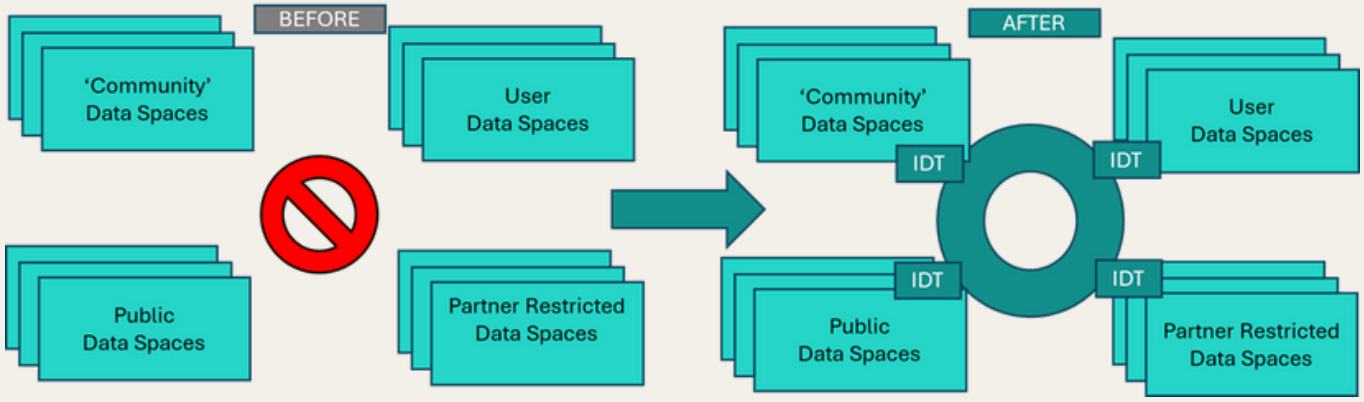
The nature of DS2 is holistic, modular, pick-and-mix, and platform-independent. As such, each DS2 Module has its own architecture and independent functionality but where 1+1=3 functionality increase can be obtained by linking features of Modules so offering increased exploitation potential. Overarching the Modules is a reference architecture that supports deployment, some common supporting features, and the DS2 trust environment focused on inter-dataspace sharing.

All Modules need to support both the holistic nature of DS2, common dataspace paradigms, and expectations such as International Data Space Association (IDSA), challenging and advancing them, as necessary. The Modules can be used independently and also together in a customised manner.

Developers provide the Modules to a web portal that provides a marketplace for collaboration networking, and packaging into the Intersector Dataspace Toolkit (IDT), which is a containerised environment for the deployment of Modules to data space participants. The IDT enables data sharing between IDTs via an embedded connector for those Modules that may need it.

In short, the DS2 technical objectives and implementation will:

- Allow Data Sharing between dataspaces
- Allow the installation of dataspace enabling Modules (DS2 Modules) to enable or enhance their functionality in dataspaces and whose Modules may interact across dataspaces and/or only in one dataspace



DS2 USE CASES

The three pioneering use cases illustrate how technology and data-driven solutions are being applied across different sectors to address pressing environmental and societal challenges. These use cases are part of larger efforts to create smart, sustainable cities and agricultural systems by leveraging innovative technologies such as IoT, AI, and data spaces. A key enabler of these solutions is the seamless sharing of data across different stakeholders, fostering collaboration and enhancing decision-making through interoperable, multi-sectoral dataspaces.

City Scape

Focused on Cluj-Napoca, one of Europe's fastest-growing tech cities, this case aims to centralize and harmonize data to help achieve a Net Zero City. The project aims to reduce greenhouse gas (GHG) emissions, improve energy efficiency, and optimize public services by enhancing dataspaces within the city. Collaboration among stakeholders from various sectors—such as public authorities, research institutes, companies, and civil society—will be essential for collecting and sharing city-level data. This cooperative data exchange will enable more accurate, data-empowered policy-making and create a more sustainable urban environment.

DS2 | CITY SCAPE

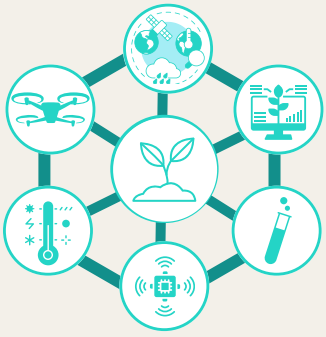
DS2 | GREEN DEAL

Green Deal

This use case focuses on monitoring air quality and raising public awareness about pollution levels, especially particulate matter (PM10). Using IoT sensors and AI tools, the use case gathers real-time data on pollutants and GHG emissions, aiming to improve local air quality and provide actionable insights for residents and policymakers. By facilitating data sharing between sectors such as agriculture, transportation, and industry, stakeholders can collaboratively address the root causes of pollution. Integrating these datasets in multiple dataspaces will allow for a more comprehensive understanding of the environmental impacts, ensuring a holistic approach to public health and environmental policy.

Precision Agriculture

This case focuses on increasing crop production while minimizing resource usage through precision farming techniques in Northern Greece. Utilizing IoT sensors and data analytics, the project creates a digital ecosystem for efficient field monitoring and crop management. The connection of datasets from different farms through data spaces enables cross-sectoral data sharing between agronomists, farmers, researchers, and technology providers. This sharing of data across multiple stakeholders allows for more accurate, real-time AI-generated recommendations for optimizing water, fertilizer, and pesticide use, while maintaining data security and sovereignty.

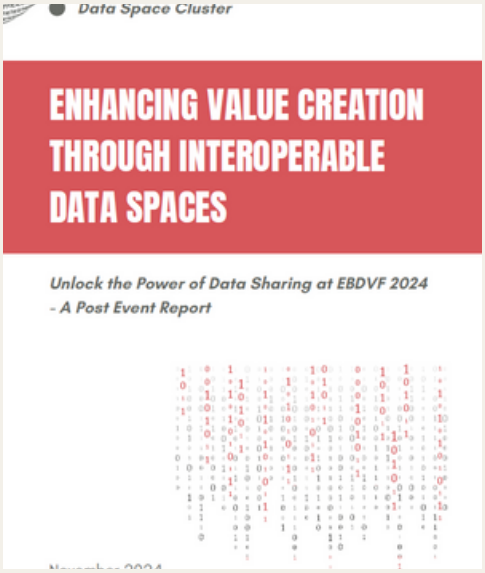


DS2 | AGRICULTURE

DATA SPACE CLUSTER

The European Big Data Value Forum (EBDVF) is a leading annual event uniting Europe's data-driven research and innovation community hosted a DS2-led session on the future of data sharing and value creation through interoperable data spaces.

DS2, CEDAR, CyclOps, NOUS, and PLIADES projects, have joined forces to support data sharing and created the Data Space Cluster to unlock the full potential of data. The first insights and recommendations are within the Enhancing Value Creation Through Interoperable Data Spaces report.



DOWNLOAD

WOMEN IN ICT CAMPAIGN

DS2 will play its part in raising awareness of women working in tech and encouraging young women to pursue tech careers. DS2 is starting the Women in ICT Campaign where the career journeys and experiences of the women working on the project will be shared.

From breaking barriers in the workplace to leading communities with compassion, women are making incredible strides every day. Let's continue to support and uplift each other!

Thank you Riina Luoma for being the first guest of this campaign!

WE WANT TO HEAR FROM YOU! DS2 SURVEY

DS2 project is conducting a quick survey on B2B data sharing. Tell us your attitudes to inter-organisational data sharing and your organisation's current inter-organisational data sharing practices.

SURVEY

Thank you in advance for your time!

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