Data Spaces 10:00 Symposium Engaging SMEs and Start-ups in Data Spaces

Óscar Lázaro, Arne Berre, Daniel Sáez-Domingo, Till Riedel, Denia Kanellopoulou, Jakob Logar & Jeanette Nilsson





.DW²⁴ under the umbrella of: Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

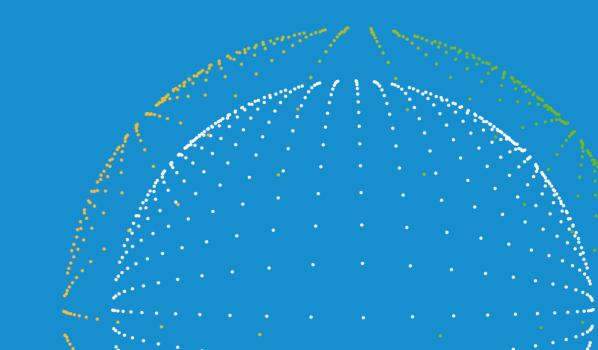
Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement nº 101083412

Engaging SMEs and Start-ups in Data Spaces

12/03/2024 10:00 - 11:30 (CET)

Óscar Lázaro Innovalia







Eventually, everything is data: • to plan & monitor goods and processes, and • as a tradeable product in itself, for data-driven business

Every company has big data in its future and every company will eventually be in the data business.

FUTURE CI CLUB

-Thomas H. Davenport

DW²⁴ It is koy that SMEs

From

Egosystem

Ecosystems

То



"A **DISTRIBUTED** SYSTEM DEFINED BY A **GOVERNANCE FRAMEWORK** THAT ENABLES SECURE AND TRUSTWORTHY **DATA TRANSACTIONS** BETWEEN PARTICIPANTS WHILE SUPPORTING TRUST AND DATA SOVEREIGNTY. A DATA SPACE IS IMPLEMENTED BY ONE OR MORE **INFRASTRUCTURES** AND ENABLES **ONE OR MORE USE CASES**".





Challenges for SMEs & Start-Ups in Data Spaces

LACK OF TRUST



of organizations reveal valuable data



of organizations have loose control over data



of processes & systems are inconsistent



of organizations **use common tools & platforms**





of organizations find **High cost** in 3rd party data licensing



of **Contracting terms** of (data licenses) are very diverse



of organizations have **Low confidence** in data quality



of organizations find **Hard** to combine data

LACK OF INTEROPERABILITY

70-80%

Time & Efforts in organizations are invested in managing

- Data acquisitions
- Integration
- Quality Management



Challenges for SMEs & Start-Ups in Data Spaces

LACK OF CONNECTION

LACK OF TOOLS



LACK OF OPERABILITY

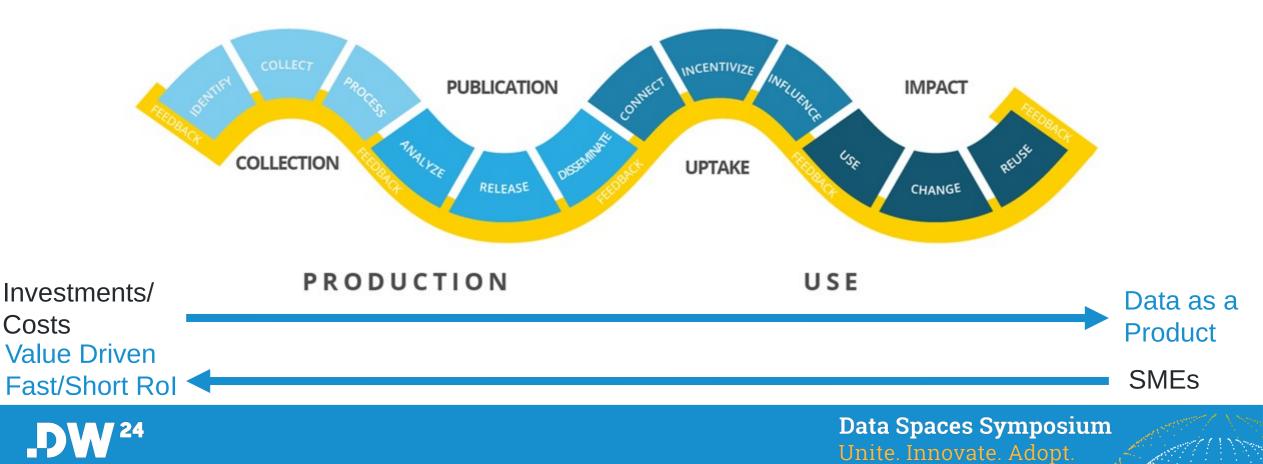
Most organizations don't share their data with their suppliers to drive efficiency Most organizations don't have any tools to respond to the data and continuity challenge

Most organizations struggle with data exchanges and keeping safe, reliable functioning operable processes and systems

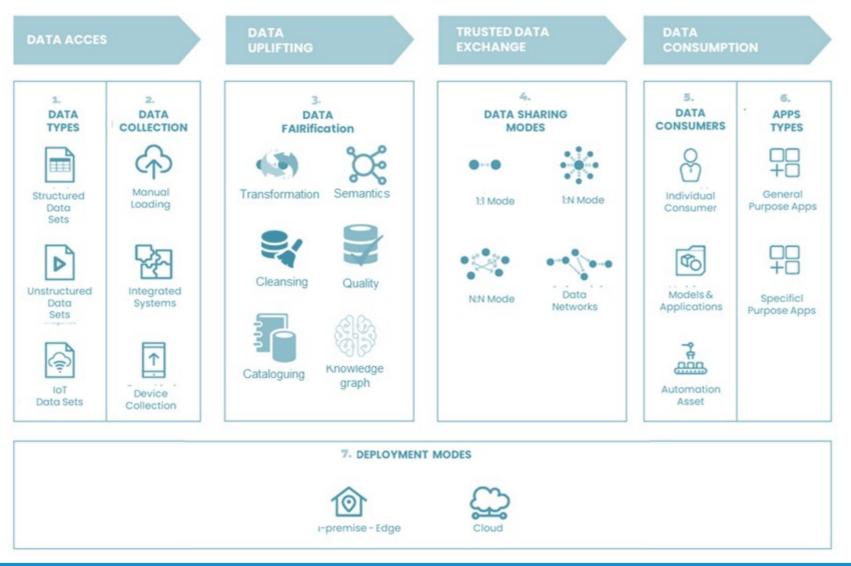


Data - Data Spaces vs Time to Value

DATA VALUE CHAIN

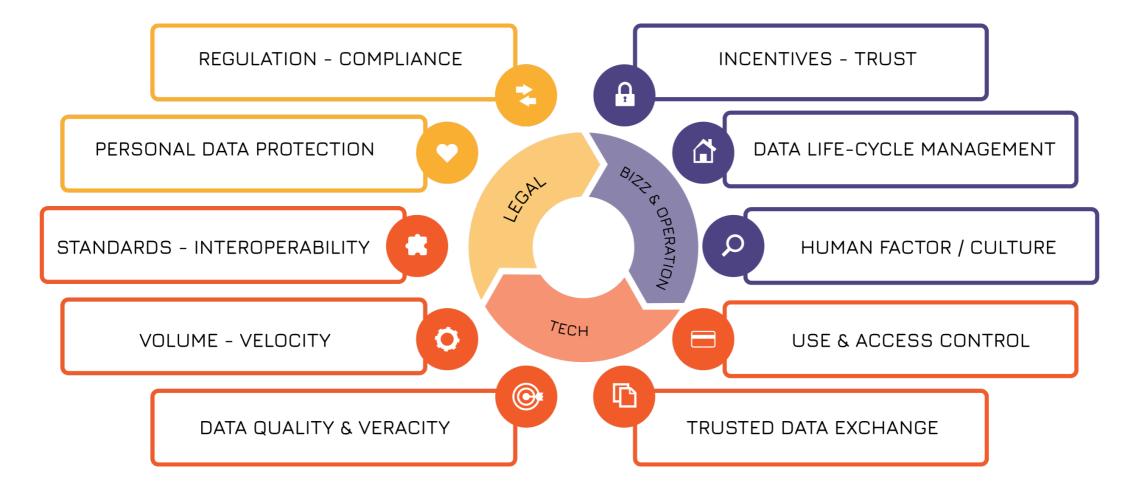


Data - Data Spaces vs Time to Value



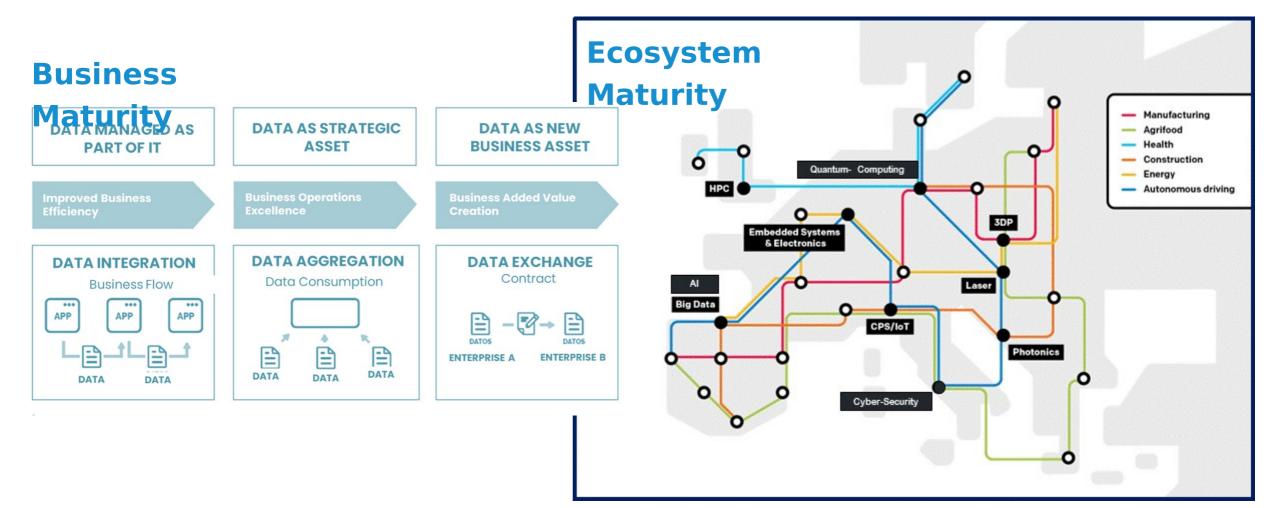


Tools, Ecosystems & Value





Tools, Ecosystems & Value







.DW²⁴





Tools, Ecosystems & Value

Working Groups



Networking the Networks

Discover the guidelines for collaboration presented by the Working Groups during the EDIH Network Annual Summit.



Sustainability The upcoming WG Sustainability meeting will be announced on this page.



Data in Manufacturing The upcoming WG Data in Manufacturing meeting will be announced on this page.



Public Administration, with focus on Al The upcoming Al4PA WG meeting will be announced on this page.





Digital Health

Digital Health WG will organize three thematic focused webinars from March to April. Please check the WG page to find out more.



Digital Business Models

The upcoming WG Digital Business Models meeting will be announced on this page.



Construction

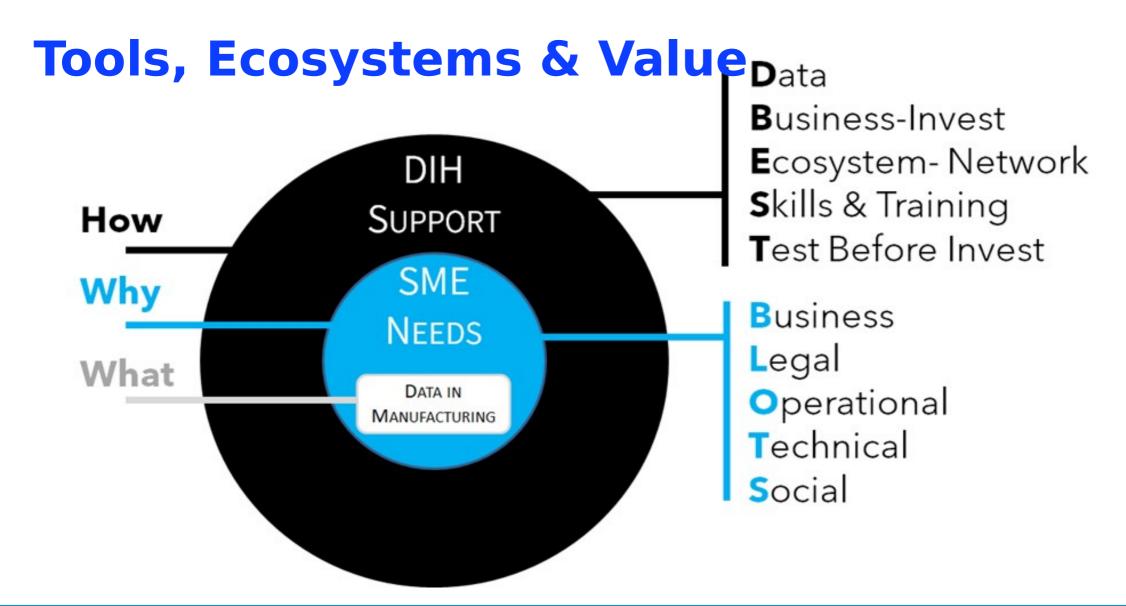
The upcoming WG Construction meeting will take place on Tuesday 12 March at 14:00.



Cybersecurity

The TWG Cybersecurity will open soon. We will inform you here about the next steps. Data in Manufacturing Thematic Working Group page









Thematic Working Group

The Thematic Working Group (TWG) on Data in Manufacturing provides an active community for EDIHs to agree on

- common knowledge and approaches
- areas of collaboration and effective mechanisms for cooperation
- support to drive manufacturing SMEs to use data and data-related

technologies (AI, digital twin, industrial metaverse, ...)







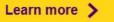
Find your EDIH



Explore our interactive **EDIH Catalogue** to find the European Digital Innovation Hub nearest to you.

Discover how these dynamic hubs serve as your digital champions, ready to guide both companies and public sector organisations through the maze of digital challenges.

Your journey to successful digitalisation starts here!





D) **V** 24



Algeri.

3



Russia





Thank you!



















Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region



.DW²⁴ under the umbrella of: Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement nº 101083412

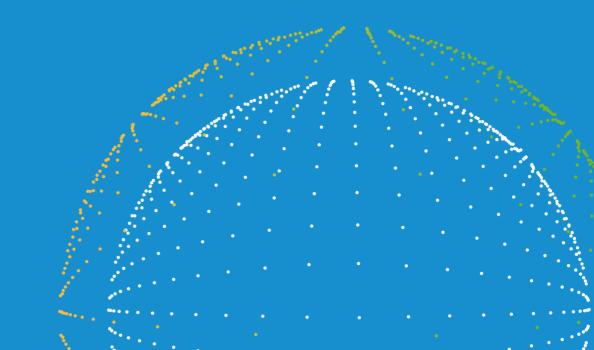
Engaging SMEs and Start-ups in Data Spaces

12/03/2024 10:00 - 11:30 (CET)

Arne Berre

Sintef







SINTEF Nemonoor

The SINTEF GEMINI iSpace with existing partners



NTNU

Has merged with additional partners in **Nemonoor AI EDIH**



Nemonoor is the national Norwegian AI and Big Data focused European Digital Innovation Hub (AI EDIH) - with an initial domain focus on AI for Energy, Smart Cities and Communities, Manufacturing and Health.





Arne.J.Berre@sintef.no



Main challenges of SMEs and Start-ups in joining Data Spaces Experiences from the Norwegian SINTEF Nemonoor AI EDIH and BDVA iSpace Gold label

- Understanding the value proposition of EDIHs in supporting SMEs and start-ups in data and AI innovation.
- Exploring the main challenges faced by SMEs and start-ups in joining Data Spaces and identifying strategies to overcome them.
- Examining the practical implications and benefits of Data Space Labs for SMEs, and discussing how they can facilitate experimentation, testing, and innovation within Data Spaces.



Main challenges of SMEs and Start-ups in joining Data Spaces Experiences from the Norwegian SINTEF Nemonoor AI EDIH and BDVA iSpace Gold label

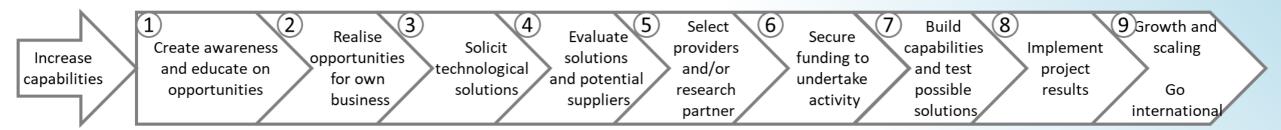
nderstanding the value proposition of EDIHs in supporting SMEs and start-ups in data and AI innovation.

EDIHs provide a journey for SMEs and start up to understand their AI/Datav Digital Maturity – and help to select appropriate services for AI Test and Experimentation and further development/funding opportunities.

Data Spaces are valuable as sources of data that can be included in the AI training and operational strategies for the SME/start up value propositions and business models.

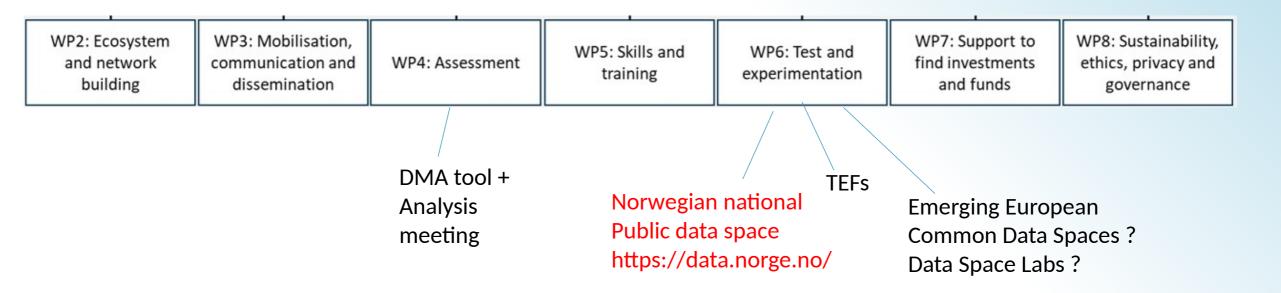


The Nemonoor AI EDIH Customer Journey: Stages in the digital transformation journey



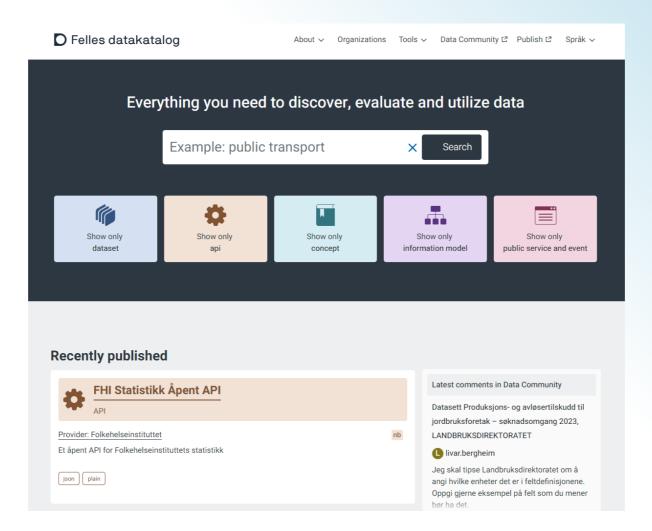


Norwegian Nemonoor AI EDIH - Service organisation





Norwegian National Public Data Sets - https://data.norge.no/





Main challenges of SMEs and Start-ups in joining Data Spaces Experiences from the Norwegian SINTEF Nemonoor AI EDIH and BDVA iSpace Gold label

ploring the main challenges faced by SMEs and start-ups in joining Data Spaces

d identifying strategies to overcome them.

Initially, the Data Spaces have not been available – and the early approaches has mostly contained historical data set examples - which have not met the needs from the SME/start-up value proposition.

The current development of Data Spaces with broader, up to date data sets, might become an Important factor for new innovative value propositions.



Main challenges of SMEs and Start-ups in joining Data Spaces Experiences from the Norwegian SINTEF Nemonoor AI EDIH and BDVA iSpace Gold label

kamining the practical implications and benefits of Data Space Labs for SMEs,

and discussing how they can facilitate experimentation, testing, and innovation within Data Spaces.

The Data Spaces and Data Space Labs can become important assets for the Test and Experimentation services from European EDIHs and DIHs / iSpaces – and further also become a foundation through aavailable data for new AI and Big Data Innovations from European SMEs and Start-ups.





Thank you!

60

DATA SPACES

SUPPORT CENTRE

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme the European Union under grant agreement n° 101083412



Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region



.DW²⁴ under the umbrella of: Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement n° 101083412

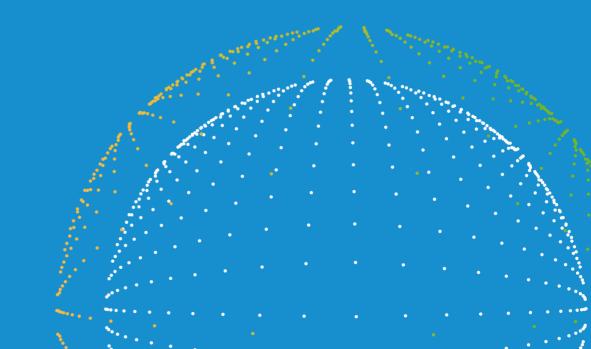
Engaging SMEs and Start-ups in Data Spaces

12/03/2024 10:00 - 11:30 (CET)

Daniel Sáez-Domingo







ENGAGING SMES AND START-UPS IN DATA SPACES

ITI EXPERIENCE

INVESTIGATE TO INNOVATE



Daniel Sáez-Domingo (dsaez@iti.es)

Strategic Intelligence and Technology Transfer Director in ITI Coordinator of ITI Innovation Space (i-Space Platinum BDVA) Member of Board of Directors of BDVA and GAIA-X







ACCELERATING THE ADOPTION OF

INNOVATIVE DATA & AI

TECHNOLOGIES BY THE ECONOMY

The largest Technology Centre in Europe focused on Data & Al
Key player in eDIH, Al Network of excellence & Data Spaces
6+M€ investment yearly in Data & Al
WISEPHEREechnology stack
250+ companies formally linked

500+ companies in our ecosystem

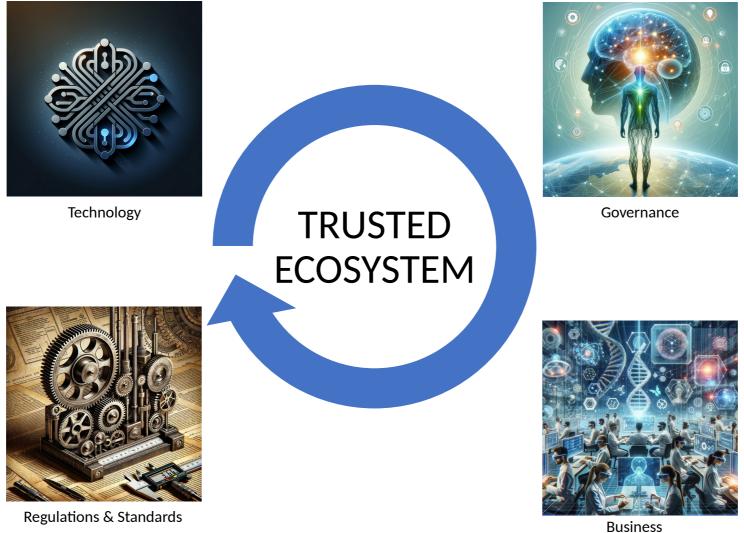








Data Spaces





Poor Quality of Data

Lack of computing power

Lack of knowledge in data ethics

Fair data value chains still need to be invented

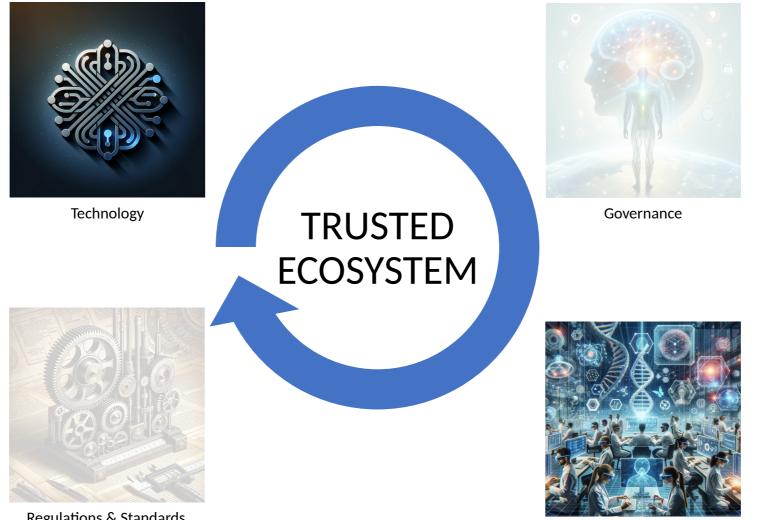
Data owners (really big data holders) need incentives to share

> New AI and Data **regulations** bring challenges for innovators

Lack of Skills



ITI proposal to Data Spaces

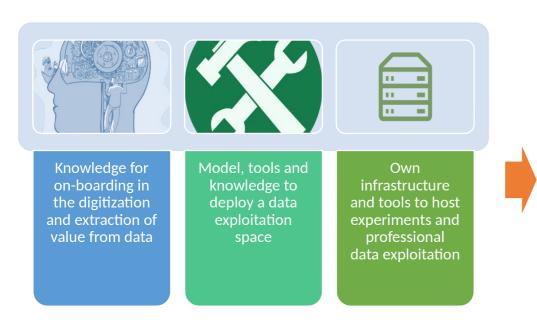


Regulations & Standards

Business



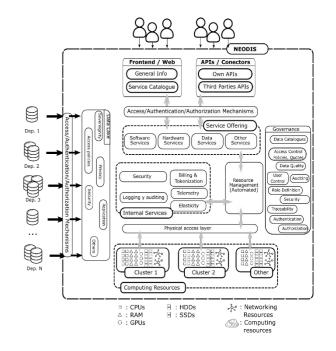
Enriched node providing:



Data Quality Data Governance Data Ingestión Data Storage Data Sharing Data Processing Access control and security A Data Space in itself Able to connect to other nodes and enlarge the Data

Space opening the door to the

Universe of Data and AI

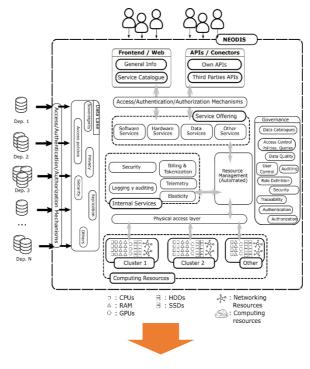


INVESTIGATE TO INNOVATE



Wisephere deployment in ITI for experimentation and business model definition before going to a Data Space

WISEPHERE FOR EXPERIMENTATION



Experimentation Space

Access to datasets
Access to infrastructures and tools
Support to experiments
Feasibility analysis
Proof of concept

- Prototyping
- •Data and Services Marketplace
- •Selection and testing of technologies

Data management consultancy

Advice on data sharing, governance, sovereignty, ...
Advice on legal and ethical aspects
Advice on data transformation processes (curation, anonymization, ...)
Enablement in Big Data Analytics

Training

- TechniqueInfrastructure deploymentData governance
- Business



GUIDE FOR SMES IN THE PROCESS TO DATA SPACES





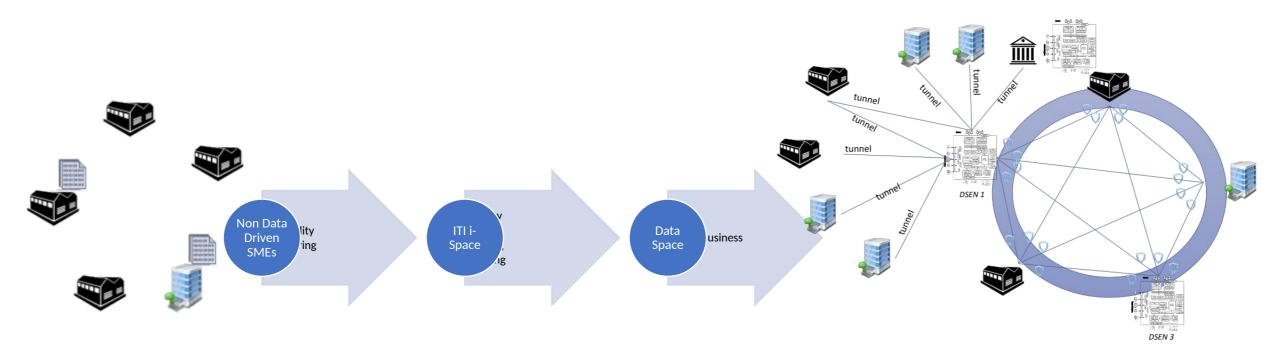
GUIDE FOR SERVICE PROVIDERS IN THE INDIA PROCESS TO DATA SPACES

From ITI we will help you understand the characteristics of a data space and its architecture.

Free access to the ITI Data Innovation Space, so you can experience solutions based on data and AI.

Access to the Data Space so that you can provide the services

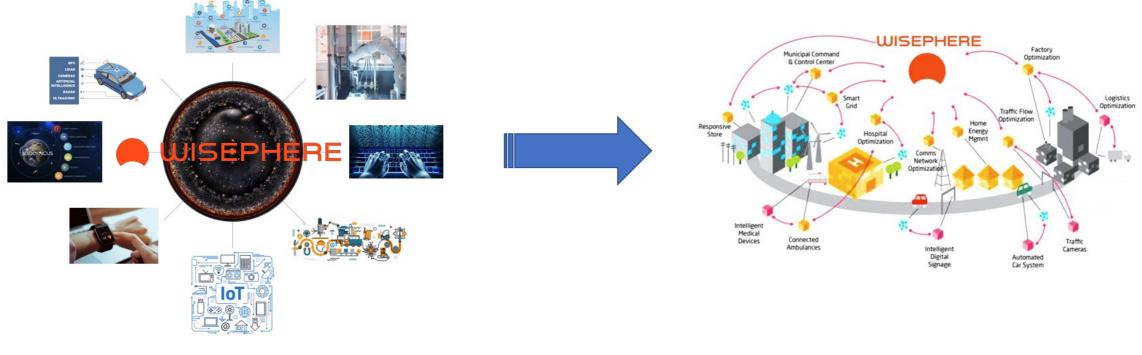




FEEDING DATA SPACES WITH SMES READY TO MAKE BUSINESS



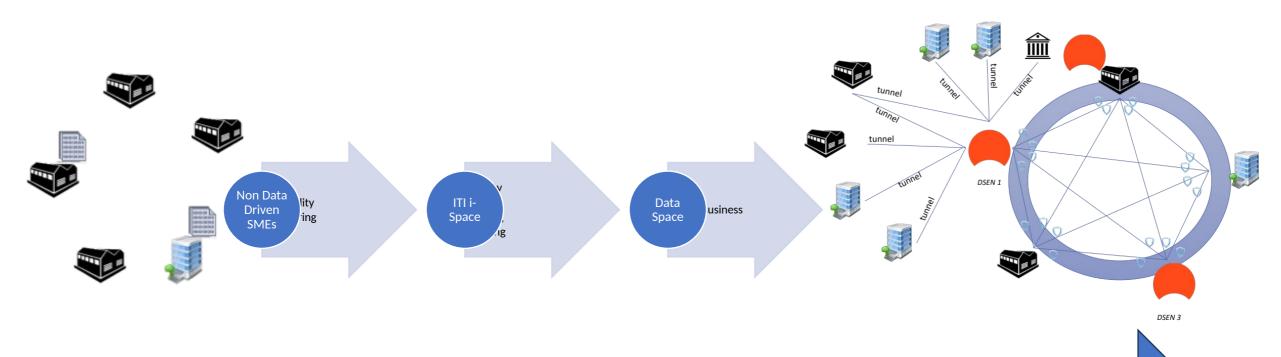
WISEPHERE FOR DATA SPACES



Single Organization

Multiple Organizations





ACCELERATING THE BUSINESS IN DATA SPACES





.DW²⁴ under the umbrella of: Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement n° 101083412

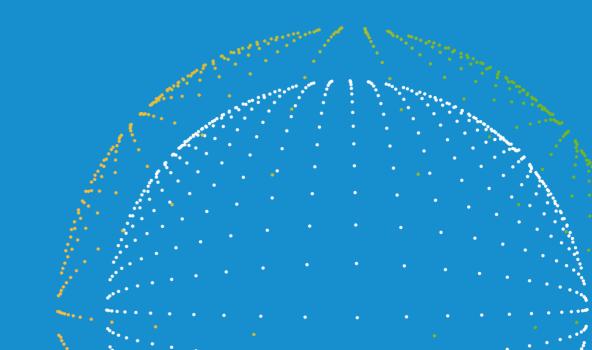
Engaging SMEs and Start-ups in Data Spaces

12/03/2024 10:00 - 11:30 (CET)

Till Riedel

KIT





Smart Data Innovation Lab



Smart Data Innovation Lab

We are accelerating innovation on data



GEFÖRDERT VOM



Bundesministerium für Bildung und Forschung

History of SDIL

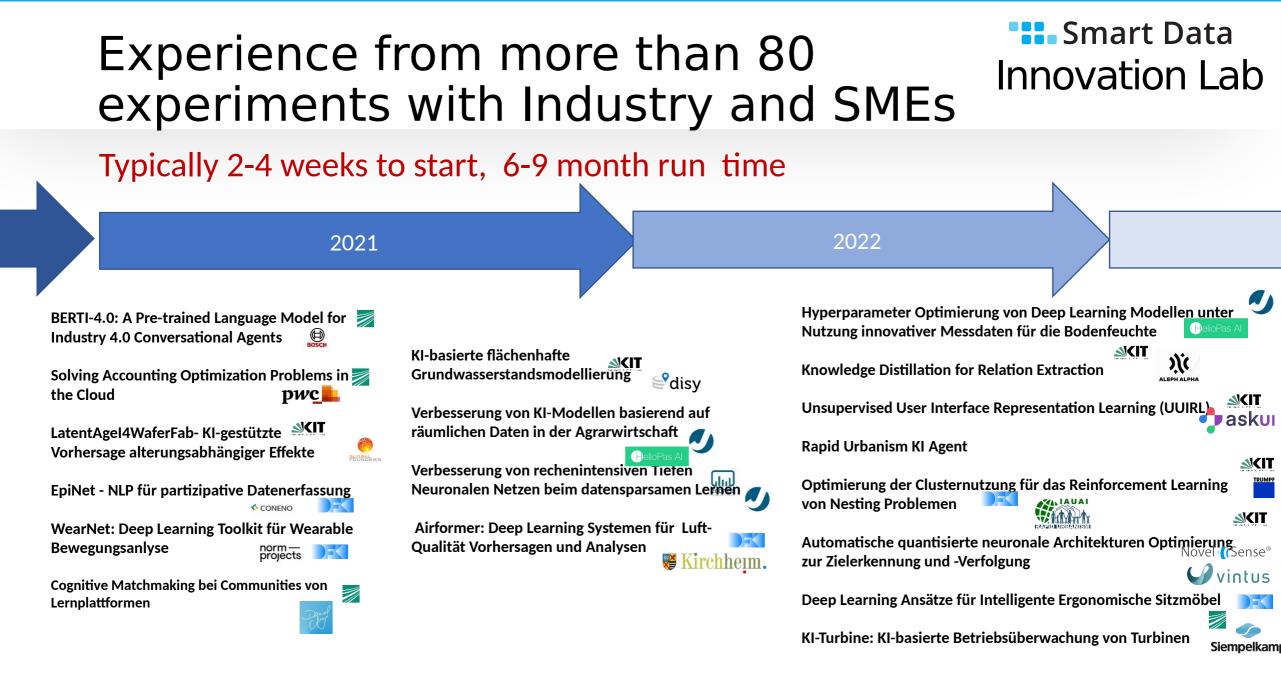
2014 PPP started from national IT Summit2015-2019 Buildup Phase2019-2023 Experimentation

2023- Smart Data Innovation Services Catalog



Smart Data Innovation Lab





Data Clean Room Concept

Smart Data Innovation Lab

Goal since beginning : Accellerate Innovation on Data

State of the Art Infrastructure

in Germany/ On-Premise

Community

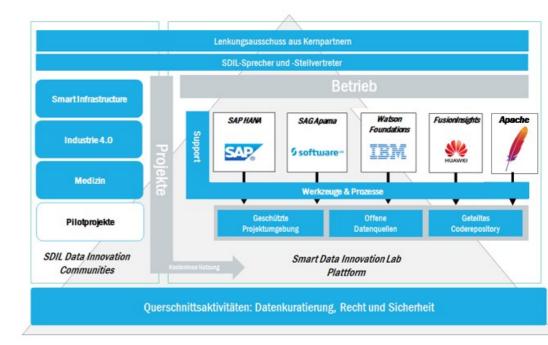
Trust needs community

Legal & Governance

Scalability needs standards

Common Assets: Data, Tools, Algorithms

 \rightarrow We started with idea of accumulating fair share: this did not scale! How can we scale to serve a large number SMEs??



Smart Data Innovation Services

Smart Data Innovation Lab

Since 2023 new Catalog

- Focus on reseach transfer offers
- Target: innovative SMEs and collaborative research with industry

Currently more than 20 Services

- all services should be usable in a (pre-competitive) commercial setting
- Can we sustain beyond funding retaining SME focus?

Legal challenges with "Commercialization"

- Funding rules are complicated in Europe (de-minimis, taxation, General Block Exemption Regulation)
- Integration of offers from partners







www.sdil.de/services

Smart Data Innovation Services

Nutzen Sie Innovation Services aus unserem Katalog, um eigene datengetriebene Innovationen zusammen mit deutschen Spitzenforschern umzusetzen.















Positioning in the German AI-Data-Service Ecosystem

Large funded offer inside Germany that often overwhelms SMEs:

- Additionally to EDIHs, etc: Germany has very federal structure for research transfer
- Prominently 4 AI-Service-Centers: giving access to AI infrastructure to SMEs

Despite funding: access to infrastructure for start-ups, scale-up and classical SMEs beyond research stays challenging

Goal SDIL starting 2024: Integration of services usable under commercial conditions beyond immediate ecosystem in Germany

Federation of iSpaces: Create also value accross Europe. What makes sense to offer cross-border???



Smart Data

Innovation Lab







Smart Data & KI for the Mittelstand

→ KIT/SDIL's regional initiative (also started 2014)

Association (in founding) with participation of SME, industry and academia Help adoption of AI and Data Space technology

Sustained via membership fees

USPs: Networking, Workshops/Training, Access to Compute

> gefördert durch MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST



KI-Allianz Baden-Württemberg Data platform

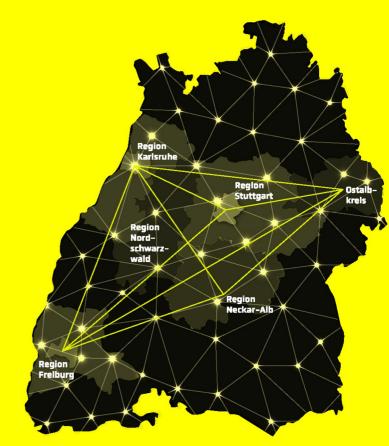
WE LOVE ÄI.

Sharing AI assets for cross-sector AI applications

We design and implement an operational, customisable platform for companies, preferably SMEs, public and scientific institutions according to a private-public partnership model based on the following principles:

- 1. generation, management and sharing of data and AI models
- 2. compliance with ethical and legal compatibility
- 3. value enhancement through services, cross-sector linking and standardised metadata

4. access to computing resources for the execution of AI models



Elephant in the room

Smart Data Innovation Lab

Data spaces are currently driven by politics not business ?!

Why should SMEs then invest in data space technology and consulting already today?

Al is the driving force behind the data economy

Smart Data Innovation Lab

The main challenge of SMEs joining data spaces is motivation

- 1. Al is a driving factor for value generation on data
- 2. Data Spaces and Innovation Hubs need to evolve together
- 3. i-Spaces can be an important accelerator for data innovation
- 4. Data innovation in i-Spaces need to prepare compliance with data spaces

 \rightarrow SMEs should be supported based on their needs

Data Spaces need to come "for free" facilitated by technology provided by hubs that need stable add-on funding to support this

(mix of public and private funding needs to be improved)



.DW²⁴ under the umbrella of: Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme under grant agreement nº 101083412

Engaging SMEs and Start-ups in Data Spaces

12/03/2024 10:00 - 11:30 (CET)

Denia Kanellopoulou, PhD NCSR "Demokritos"











A Pioneer in Scientific Excellence & Innovation

- NCSR "Demokritos" is the biggest multidisciplinary public research center in Greece
- The **Institute of Informatics and Telecommunications** (IIT) and more specifically its Intelligent Information Systems (IIS) Division leads cutting-edge **R & D** activities focused on **Artificial Intelligence** (AI)
- "Demokritos" has founded the **Technology Park "Lefkippos"** hosting spin-offs and start-ups that develop innovative and high added-value technology products
- IIT's digital innovation unit has established the "**ahedd**" **digital innovation hub** in order to develop an open cross-thematic (AI, Big Data, IoT) innovation ecosystem









Challenges in Greek Data Value Landscape

- Greek SMEs rank last in terms of digitalization in EU and only 2.6% of enterprises use AI (DESI 2023)
- 20% of Greek enterprises want to invest in AI (SEV 2024)
- Greek economy is recovering from a long economic recession
- Lack of investments in research and innovation
- Lack of skilled data and AI professionals













Leading AI-powered & Data-driven Innovation

- Top enabler of **AI Transformation** in Greece
- Orchestrator of a 5G- and IoT-enabled smart-city testbed for AI applications at Demokritos campus
- Major role in **key** EU & national **AI initiatives**
- Wide network of **business stakeholders**
- Coordinator of **Smart Attica EDIH**, the first EDIH for **AI** in Greece







Smart Attica: "Al-powering Greece"

- Smart Attica aims to increase the digital maturity of Greek businesses and local authorities.
- The core driving force is **Artificial Intelligence**, complemented by the expertise in High-Performance Computing, Cybersecurity and other emerging digital technologies like IoT, 5G and sensors.
- 17 acclaimed **partners** incl. Research & Academia, National Infrastructures, Tech Transfer & Accelerators, Banking & VCs, Business Associations, Public sector & Society
- More than 30 **associate partners** bringing sector-specific needs, willing to experiment or offer complementary services.







Focus & Challenges



Energy & Environment

Priorities: Natural resources use Energy efficiency Environmental impact Supply chain & Mobility

Priorities: Logistics Urban mobility Transportation



Culture & Tourism

Priorities: Citizen participation Visitor experience

- Administrative effort, Co-funding scheme (EU + Member state) delays
- Use cases & Commitment from SMEs
- Data availability and provision policies





Thank you!

Funded by The Data Spaces Support Centre receives funding from the European Union Digital Europe Programme the European Union under grant agreement n° 101083412



DATA SPACES SUPPORT CENTRE Data Spaces Symposium Unite. Innovate. Adopt.

Darmstadtium | Frankfurt region

DATA SPACE SYMPOSIUM 2024







DATA SPACE SYMPOSIUM

MAG. JAKOB LOGAR



KNOW CENTER A EUROPEAN INNOVATION AND RESEARCH CENTRE FOR TRUSTWORTHY AI AND DATA SCIENCE.

- 20+ years of experience
- 100 employees
- 100+ industry projects per year
- 50+ publications per year
- research & develop innovations in data science and AI models
- focus on trustworthiness and explainability







MISSION&VISIO

MISSION & VISIO

Our mission is to make data and Al models trustworthy, explainable and accessible, also for SMEs.



MISSION & VISIO

Data Spaces are an infrastructure that enables fast, efficient and secure sharing of data.

It can generate benefits for the entire European ecosystem and strengthen the competitiveness of European businesses.





Project "dataSChare 1.0"

Data Spaces in Supply Chains – Industry Requirements

.

.

.

.

.

.

.

.

and the second second



0

WHAT ARE THE USECASES?





USE CASES ranked by C-Levels:

Optimization of supply chain end-to-end visibility

Source: "dataSChare - Data Spaces in Supply Chains - Industry Requirement





USE CASES ranked by C-Levels of SMEs:

Integration of suppliers (with and without EDI)

Source: "dataSChare - Data Spaces in Supply Chains - Industry Requirement

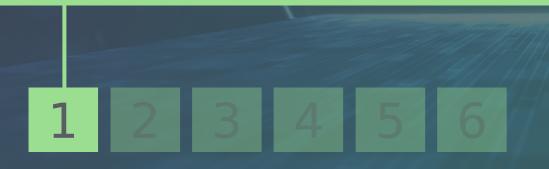




USE CASES ranked by C-Levels of SMEs:

Optimization of Sustainability

Uncertainty because it is a new technology



USECASES & OBSTACLES



Lack of ressources in capital and personel

2

KNOW

Centei

USECASES

OBSTACLES

The benefit of 1:n data connections/sharing was not clear

3

Centei

USECASES

OBSTACLES

Technical readiness was seen critically – connection to ERP-Systems is crucial



USECASES

OBSTACLES

5

Doubts about data security



USECASES

OBSTACLES

6

Low data quality



USECASES

OBSTACLES



HOW WE APPROACH DATA SPACE PROJECTS

CUSTOMER CENTRICITY:

HOW WE APPROACH

Cente

Take a customer centric approach: Define the benefit companies and organisations can reap from sharing data.

A STRONG USECASE IS THE KEY:

Find a usecase that is strong enough (pain, gain, job) that can best be solved with a data space.



HOW WE APPROACH

HOW WE APPROACH DATA SPACE PROJECTS

SIMPLICITY:

Simple & clear interfaces, low integration effort – not everybody has an IT department or wants to involve it in a complex data space project.



ONBOARDING & ASSESSMENTS:

Maturity assessments and assisted onboardings can help to lower entry barriers for SMEs.



HOW WE

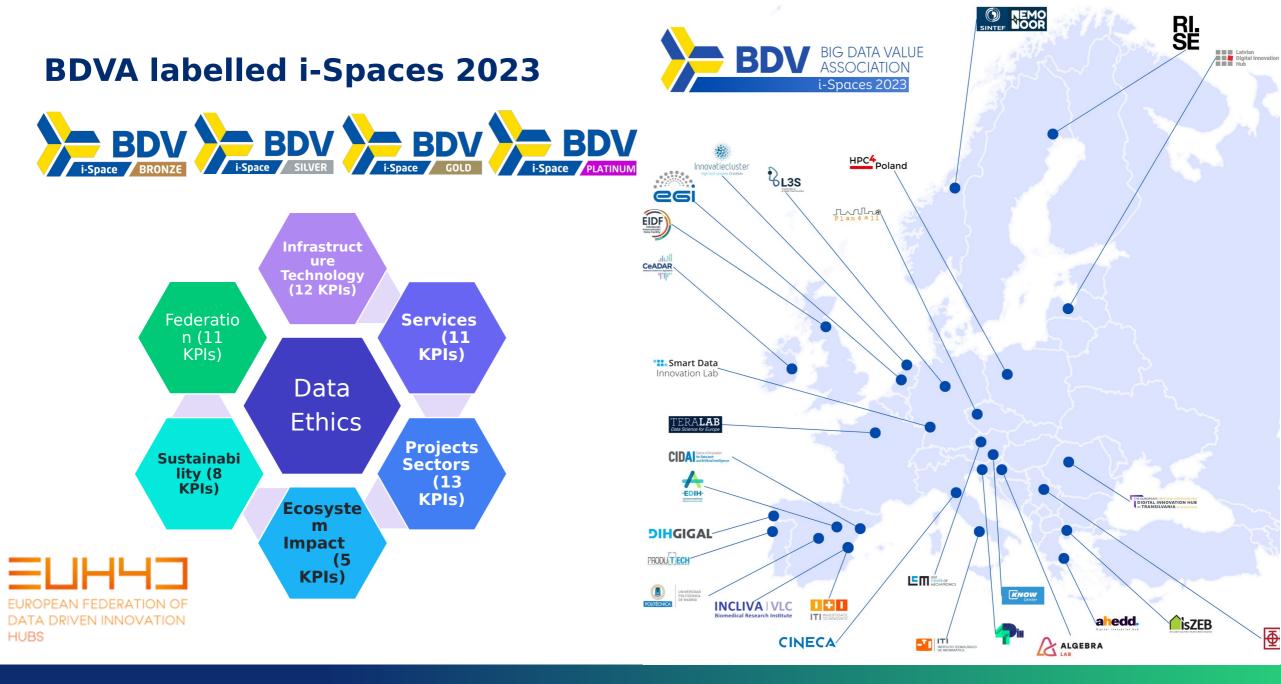
Thank you for your attention!

We are happy to meet you!



Data Spaces Symposium Experiences from EDIHs, i-Spaces at local and Regional

Jeanette Nilsson RISE





RISE ICE I-space





A full-scale research datacenter and testbed with the objective to be an enabler in the development of the AI & datacenter ecosystems by increasing knowledge and competence.

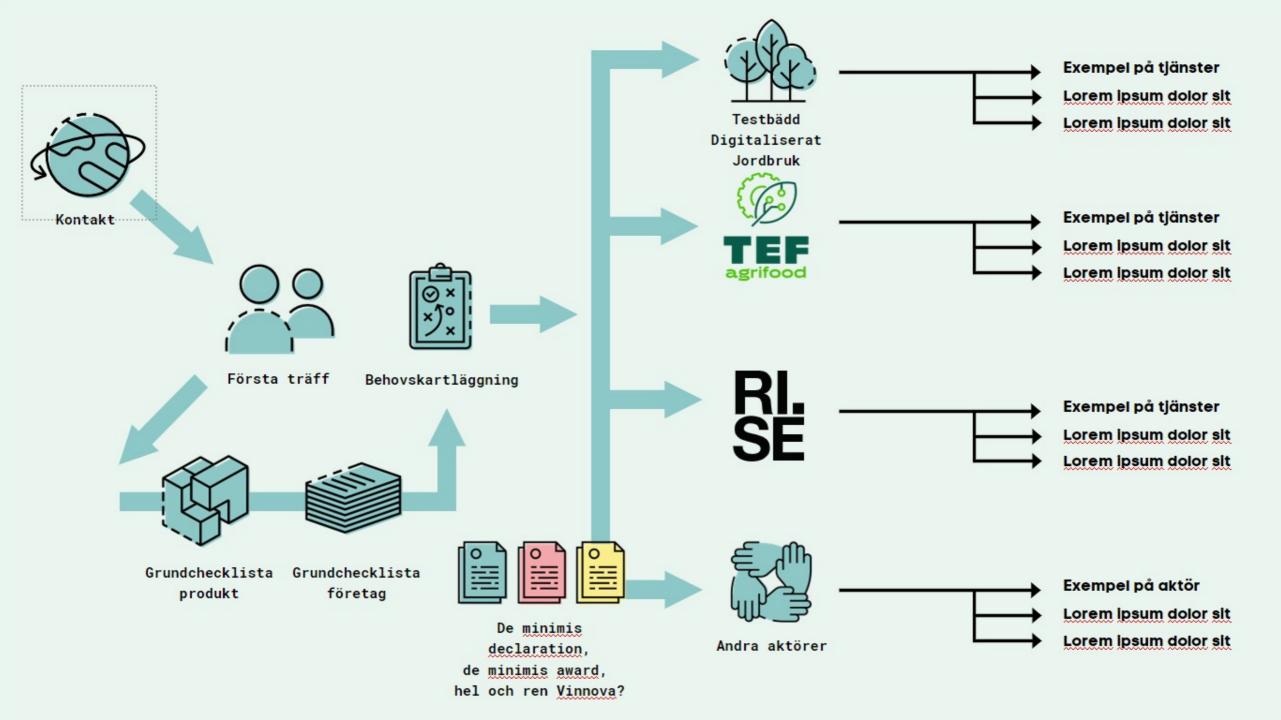
More than 100 projects have been performed with more than 100 project partners since the start 2016. Partners are Ericsson, ABB, Meta, LTU, Vertiv, BP Castrol.

Focus areas:

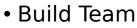
- Data centres
- 5G and Edge
- AI and Data Spaces
- Energy efficiency

RI. SE





Roadmap for AgrifoodTEF Swe Sat 2023-2024 2025-2027



- Internally Sverige
- SEU-TEF
- Build processes
 - Onboarding
 - State aid
 - International exchange (customers from other countries)
- Customer cooperation
 - Understand Customer needs
- Build Services
 - Infrastructure
 - Competens
- Making the TEF well known
- Create Policy Network
 - EDIH
 - Policy lab
 - Etc

- Value creation for customers
- Service build up
 - Web
- Continue Service development
- Continue Customer Cooperation
- Work with policies
- Make the Tef Independent
 - Long term Sustainability
 - Ways of working
 - Economy



2028->

- Operation (see 2025-2027)
- Economically sustainable for all stakeholders
- Companies are paying for services
- SME applies for funding (?)

RI. SE

90

Thank you for the attention

Jeanette.Nilsson@ri.se

Al/ HPC-Ecosystem expert BDVA, Member of the Board of Directors of RIAG member Sweden's representative in the EU's AI and Business Digitalization Working Group with responsibility for the Partnership for AI, Data and Robotics (Adra)

