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# DSIC

## Data Sharing Interoperability Compass

MVP version, 2024

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# Welcome!
# Meet our team

## DSIC

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## Use cases

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## Architect community

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# Agenda

| | *Time* | *Speaker(s)* |
|---|---|---|
| • Welcome | 15:00 - 15:05 | Pieter Verhagen |
| • DSIC introduction & steps forward | 15:05 - 15:15 | Peter Verkoulen |
| • DSIC findings, reflections and implications | 15:15 - 15:35 | Gijs van Houwelingen |
| • Connection with practice, learnings from CoE use cases: | 15:35 - 15:55 | |
| ◦ CCAM | | Richard Beekhuis |
| ◦ Company Passport | | Gerard van der Hoeven |
| *Break* | 15:55 – 16:00 | |
| • Deep-dive: Overview of upcoming DSIC tools | *16:00 – 16:10* | *Yekaterina Travkina* |
| • Deep-dive: DSIC learnings on Trust & Discoverability | 16:10 – 16:25 | *Yekaterina Travkina* |
| • Next steps | *16:25 – 16:30* | *Pieter Verhagen* |
| • Q&A | 16:30 – 17:00 | |

# The next step in the development of data spaces is realising cross-domain data sharing which requires practical navigation

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# DSIC introduction & steps forward

# DSIC findings, reflections and implications

# In 2024 DSIC team carried out interviews, workshops, specialised meetings and federative cases to extract results

**15 Snapshot Interviews**

Building block snapshots:

Related to trust:
- Participation management
- Identity and attestation management
- Access and usage policies
- Trust framework (part 1, and 2)

Related to discoverability:
- Publication and discovery

**3 Interop. Workshops**

**3 Meetings of Architects**

**2 Federative Use Cases**

**Indepth analysis of the data sharing landscape**

# DSIC presents interoperability principles and actionable insights for Data Sharing Initiatives, Service Providers & Policy Makers

**High level principles**

Interoperability is ultimately **a requirement to realize the true value of data spaces**. Standardization is key – but we should take a **holistic view**: It is about more than just technical solutions. Collaboration of different stakeholders, within, but also across sectors, is more needed than ever **as interoperability is turning into a legal requirement**.

| | Data Sharing Initiatives | Service providers | Policy makers |
|---|---|---|---|
| Development actions | Adopt standardized solutions. Avoid overcommitment to custom solutions. | Use standards<br>Design for interoperability | Incentivize and fund interoperability initiatives |
| Collaboration actions | Collaborate and engage early | Participate in standard setting. Co-create with clients | Support cross-sectoral collaborations. Ensure cross-domain harmonization. |
| Support & Awareness | Connect to relevant CEDS | Provide training. Broaden generic service portfolio. | Raise awareness & provide guidance |
| Regulatory actions | Assess and ensure compliance | Ensure compliance. Enhance data portability | Provide implementation guidelines |



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# DSIC reflection: the EU employs a ‘carrot and stick’ approach to promote cross-domain interoperability in data sharing practices

## Tools & Support

Data spaces Support Centre (DSSC)

Data Innovation Board

European Interoperability Framework (EIF)

Rolling Plan for IT Standardisation

SIMPL

## Data spaces development

EU Level:
Common European Data Spaces**:**

- European data space for agriculture
- European data space for research (EOSC)
- European data space for cultural heritage (Europeana)
- European data space for tourism
- European health data space
- European data space for smart cities
- European data space for manufacturing
- European data space for mobility
- European data space for Energy
- Etc.

Local level:

- Public & private data sharing initiatives

## Regulatory frameworks

Universal:

- Data Act
- Data Governance Act
- Interoperable Europe Act
- AI Act
- Digital Services Act
- Digital Markets Act
- GDPR

Sector Specific:

- FIDA
- PSD&PSR
- eFTI
- EHDS
- Open Data Directive

Facilitation of interop. tools:

- EUDI regulation (eIDAS2)
- DPPs via ESPR

***Carrot***

***Stick***



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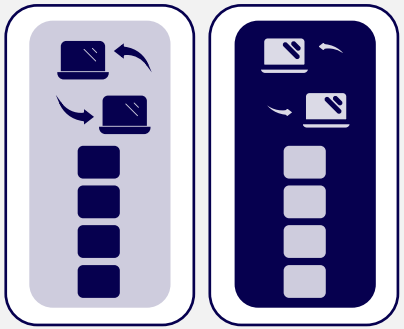
# DSIC reflection: observed 3 ways for data spaces to arrange interoperability, with thin data spaces as a future direction

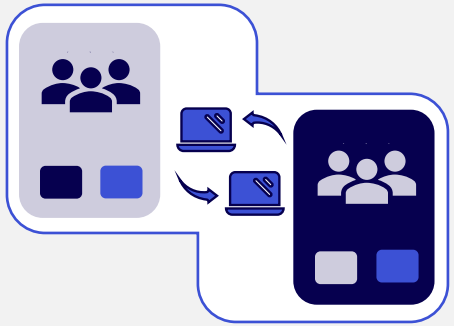
**Approaches to interoperability currently observed on a spectrum**

- We are witnessing a shift towards 'thinner' data spaces, where minimal definitions are set at the individual data space level.
- Additionally, we see the rise of federations-of-federations, where services and functions are managed at a federated level.
- The question remains: will federations-of-federations become a lasting fixture, or will they eventually fade away?

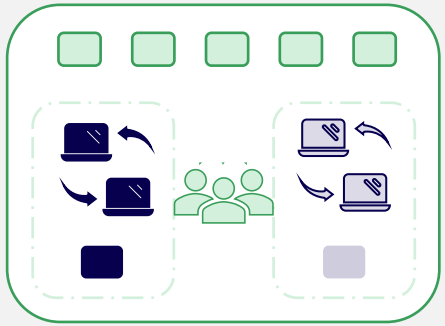
**Thick data spaces**



**Federations of Federations**



**Thin data spaces**





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# Connection with practice, learnings from CoE use cases

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# Connection with practice, learnings from CoE use cases

## CCAM

### Involved parties

mffbas

DITM

## Company Passport

### Involved parties

iSHARE

Company Passport

# The CCAM use case: exploring data sharing between the energy and the mobility sectors

## Use case goal

- Identify the potential value of data sharing between the energy sector and the mobility / logistics sector
- Find a solution to current barriers in cross-domain data sharing

## Use case approach

- Explore potential alignment between initiatives in the energy sector (MFFBAS) and the mobility sector (DITM)
- Explore potential for value creation in this cross-domain data sharing set up

## Involved parties

mffbas

DITM



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# The CCAM case shows the importance of aligning on the goals of involved domains first, and then designing with adoption in mind

## Preliminary learnings from the use case

**Data sharing is a means, not a goal:**

- Start by considering the needs and challenges of the parties involved

**Be aware that sharing is not always caring:**

- Commercial sensitivity
- System stability

**Thus, address business compatibility of the two domains first:**

- Participating parties must be aligned on the objectives

**Then, focus on the ease of adoption when designing solutions:**

- Combine regulatory, business, and technology drivers of both domains to generate value
- Make it not too challenging to the status quo of both domains to ensure "buy-in"
- Include existing intermediaries and/or ‘bridges’
- Involve the ‘coalition of the unwilling’



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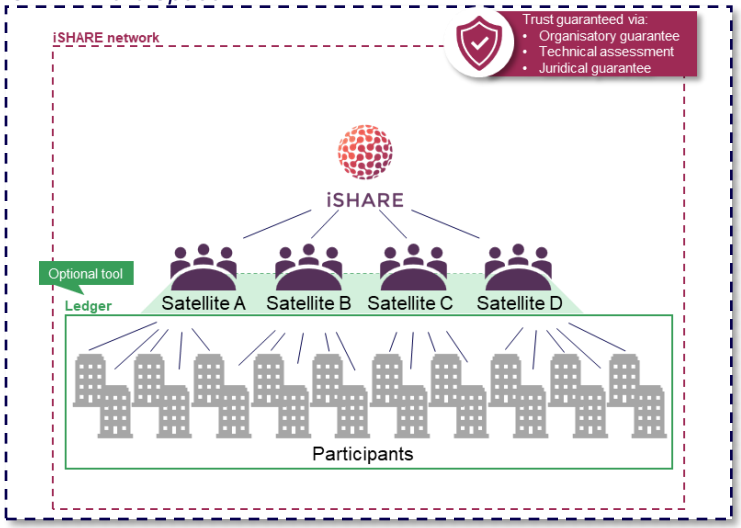
# The Company Passport use case: the value of the Organisational Wallet (eIDAS) for Data Spaces

*iSHARE Data Space*




*Possible EUDI Wallet use in iSHARE*

## Use case goal

- Explore the potential value of the EUDI Legal Entity Wallet for Data Spaces
- Identify current barriers of the EUDI Legal Entity Wallet for Data Spaces

## Use case approach

- Work closely together with eIDAS experts, Company Passport and iSHARE in all activities
- Describe the current status of the EUDI Legal Entity Wallet
- Explore the impact of the EUDI Legal Entity Wallet on iSHARE and its DVU use case - where the wallet could add value to existing trust infrastructure and what the current barriers are
- Determining next steps to tackle the current barriers and facilitate adoption of the EUDI Wallet in Data Spaces

## Involved parties

iSHARE

Company Passport



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# The Company Passport use case shows that the Organisational Wallet adds value for Data Spaces, but challenges remain

## Learnings from the use case

**There is value in the eIDAS organizational wallet for Data Spaces**

| | |
|---|---|
| • To share dataspace membership credentials: | Implementation requires relatively little effort from iSHARE, as it will be an add-on to existing means |
| • To share static data within a Data Space: | Implementation is expected to be easy* for data providers: 1) mandatory acceptance of personal wallet will mean have already developed issuing capabilities; 2) suppliers are working on standardized solutions |
| • To share credentials allowing access to APIs of dynamic, streaming data while complying to certain criteria: | Requires more research as it could be of great benefit |

**It's risky for Data Spaces to offer the Organisational Wallet as a single solution**

- Specifications/standards of organizational wallets are still unclear
- Adoption is hampered if it's not mandatory and/or free
- A person acting on behalf of a company remains challenging - service-based mandating should be the EU standard

**There is a need for a new role of 'scheme aggregator' to overcome identified hurdles**

- To harmonize the content of credentials
- To harmonize the meaning of the credential and the meaning of a revocation

*depending on data availability and quality

# Break – be back at 16:00

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# Deep-dive: overview of upcoming DSIC tools

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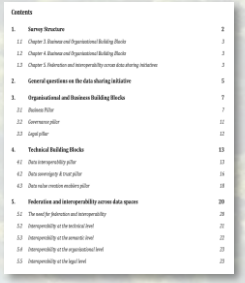
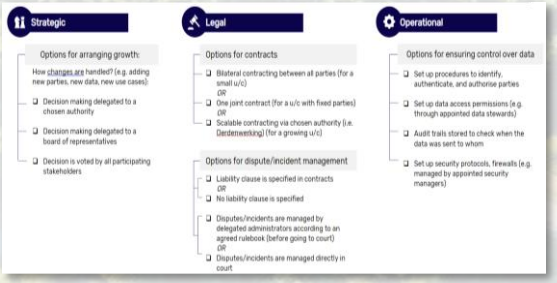
# In 2024, CoE-DSC produced Dutch Landscape Scan, and Self-assessment survey; next batch incl. matrices and decision trees

## Overview of DSIC tools






**Dutch Data Sharing Landscape scan**

**Self-assessment (survey)**

**Confrontation matrices**

**Contextual Decision Trees**

**Regulations in context**

**BB solutions in context**

**& more over time**

**Available online**

**Soon to be available**

**Coming in 2025**

**2025 - 2027**

# Deep-dive: DSIC learnings on Trust & Discoverability

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# Reflections on Trust: initiatives tend to outsource IAA, do in house participation management & agreements, and explore eIDAS2

## 3 Trust related trends we observed in practice

### Often outsourced

**IAA arranged by IDPs:**
- Can be generic or domain specific
- Can be of a higher or lower LoA depending on cost/sensitivity appetite

### Often built in house

**Arranged by initiatives:**
- Participation management (on/off boarding)
- Agreements Frameworks

### Often being explored

**eIDAS2 impact**

**Practical usage scenarios**
- eIDAS2 Trust services increase interoperability (e.g., QESeals, QWACs)
- Wallets & verifiable credentials potential use cases
- Balance between costs vs. high LoA & interoperability

**Mandating**

Attention on identities triad:
- of a person
- of a legal entity
- of an object

Attention to new details:
- Service- vs. role-based mandating
- Scheme aggregator role
- Revocation mechanisms

***Keeping this balance is a road to a thinner data space***

***Be aware of eIDAS2 developments and explore usage scenarios***



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# Reflections on Discoverability: initiatives tend to use DCAT and adjust discovery of participants & datasets based on the context

## 2 Discoverability related trends we observed in practice

### Often implemented

**Most used protocol for datasets discovery:** Variations of DCAT relevant to the specific sector

**For participants discovery:** for most DSIs, parties first build relations/connections in a physical world prior to engaging digitally

***Look into DCAT***

### Often seen discovery patterns are context-driven

- Identify the sensitivity of your context and
- Choose methods for finding right participants and right data sets based on that

| | Finding right participants | Finding right datasets |
|---|---|---|
| **Open to all** | Open marketplace tool for discovery | Look into relevant metadata standards for open data of your domain |
| **Sensitive many-to-many** | External address book/ yellow pages | Align on ontologies & semantics for data/datasets among your group(s) |
| **Sensitive Exclusive groups** | Internal address book/ yellow pages | |

***Be aware that the data sharing context matters in discoverability approach***

# Next Steps

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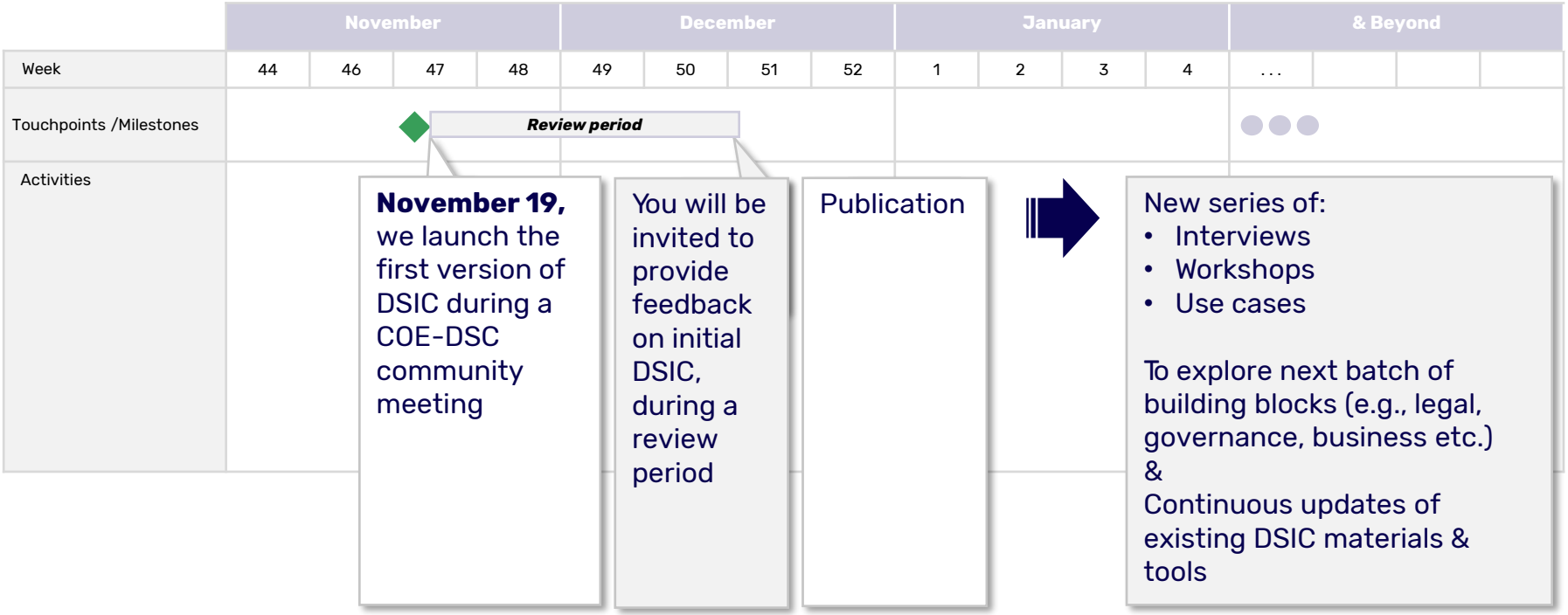
# DSIC progress and where we are heading, if you would like to contribute via a review reach out!




**Legend:** Events Interviews Community input

# Review & publication process

## When?

from Monday November 25th to Friday December 13th

## For Whom?

all involved in co-creation and input up to now:

- Workshops
- Interviews
- Use-cases
- NL perspective

## How?

E-mail by end of week with link to PDF
Structured approach with a survey

# Q&A – till 17:00