ASECAP DAYS
MADRID 2025

52nd ASECAP DAYS

Challenges of Future Mobility | The Role of Road Infrastructure

26 - 28 May 2025 | Madrid
www.asecapdays.com

Organized by ASECAP

Hosted by seopan
Asociación de Empresas Constructoras y Concesionarias de Infraestructuras

A Security Framework for the Mobility Data Space

Massimiliano Masi

Autostrade Per L'Italia S.p.A.

The Mobility Data Space

What is a Data Space?

Common European data spaces will ensure that more data becomes available for use in the economy, society and research, while keeping the companies and individuals who generate the data in control

https://interoperable-europe.ec.europa.eu/collection/semic-support-centre/data-spaces

And the Mobility DS?

The **common European mobility data space** (EMDS) aims to facilitate data access, pooling and sharing for **more efficient, safe, sustainable and resilient transpor**t

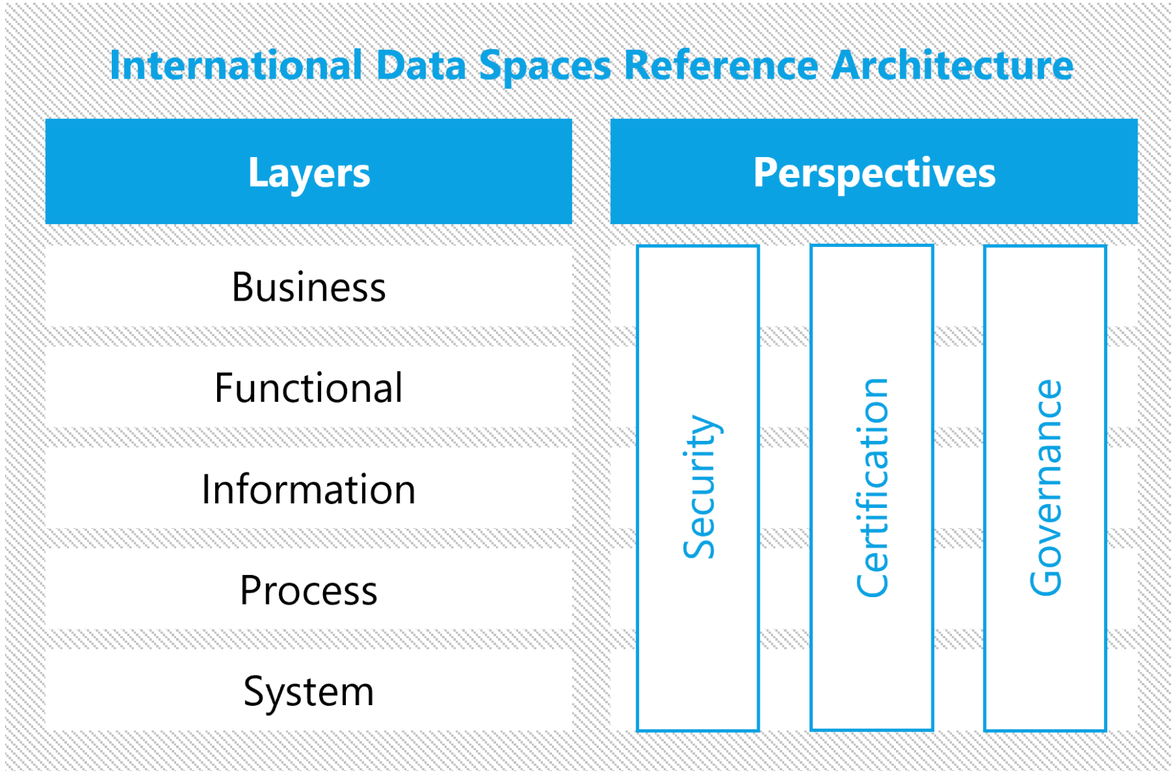
The roots of the reference architecture seems to leverage the International Data Space Association. **Interoperability is a key concern.**

The IDSA Reference Architecture

The IDSA Reference Architecture Model (RAM) is based on the concepts of **Enterprise Architecture**

Divided in different Layers, each one describing different aspects of interoperability

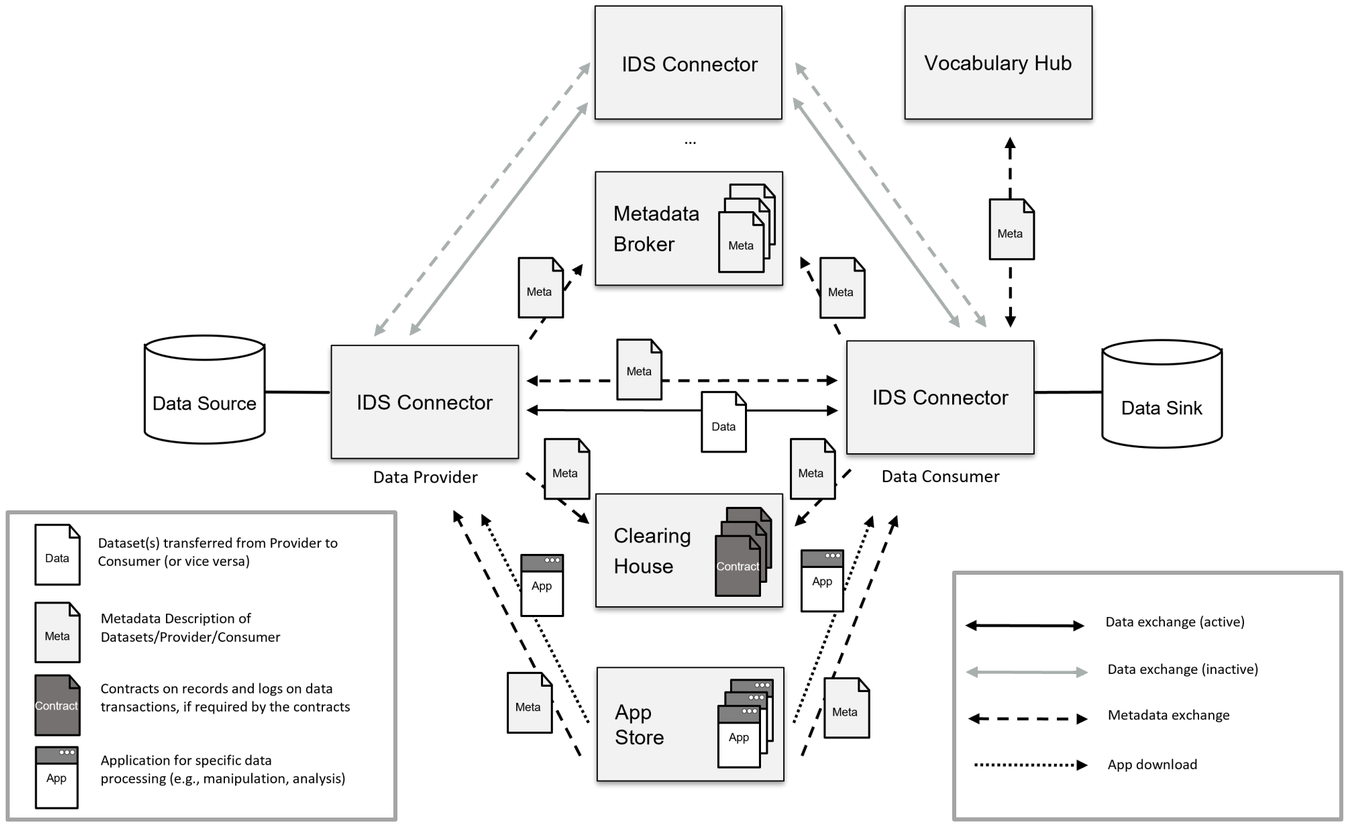
Cybersecurity is a *Cross-Cutting Concern,* it is a perspective which belongs to each abstraction layer of the architecture



The IDSA Reference Architecture

At the System Layer, the Reference Architecture is composed by the network of the ***Connectors.***

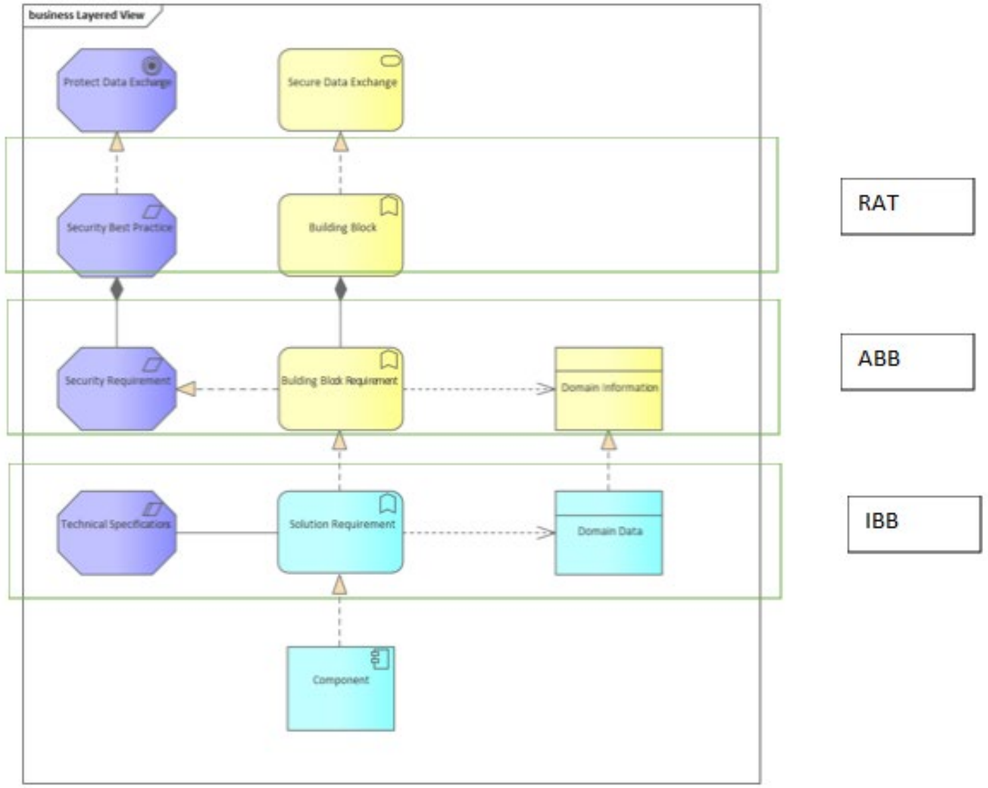
- **Connectors** proxy data sources brokering **syntactic** and the **semantic** layers.
- Connectors establish a **trust** framework with the Security concepts defined in the DIN SPEC 27070, which **does not define the minimum interoperability requirements of the security tools**



The NAPCORE Building Blocks

The National Access Point (NAP) constitutes a single point of access to data (EU 2010/40, Art. 1), a potential Data Source

- Each Member State's **NAP** implements different technologies – Need for Harmonisation
- Cybersecurity tools needs interoperability, and implementation details – Threat Actors are watching us!



The NAPCORE Building Blocks

NAPCORE specified IDSA-compliant (at ANY architectural level) building blocks for:

- **Data Provenance**: where do the data goes, and where does it come from?
- **Authentication, Authorization, Digital Signature, Encryption** : what are the technical details to enforce a secure and trusted message exchange?
- **Audit Trail** : defining forensics data that will be used when the Cybersecurity incident will happen

Conclusions

- **NAPCORE** specifications are the place where the Cybersecurity concepts for the exchange of Mobility Data can be found – all compliant with IDSA
- NAPCORE specifications will **continue to evolve** in the follow-up project (and will be included in the Datex II standard)
- Implementation details, **interoperability**, conformance, and **penetration testing** of the cybersecurity tools are compulsory when implementing services for the Mobility Data Space, given the lack of reference implementations

ASECAP DAYS

MADRID 2025

Thank You

Contact Us

+393420001300

mmasi@autostrade.it

https:// www.autostrade.it