

# Real Estate Ecosystem

*A shift from isolation towards a Real Estate Ecosystem*  
Diggin Discussions 2025-04-25



AKADEMISKA HUS

## PLATFORM (X<sup>n</sup>)

A platform is a base of functions and regulations that **enable** a number of activities for a number of actors.

### DESCRIPTION

Platforms facilitate collaboration between two or more parties (producers, consumers, partners).  
Enable the formation of an ecosystem.

### FOCUS

## ECOSYSTEM (REE)

An ecosystem is a defined area where a number of actors perform a number of activities (a platform both enables and sets boundaries for an ecosystem)

In an ecosystem, the interaction and the result/value are the focus for the participating actors.

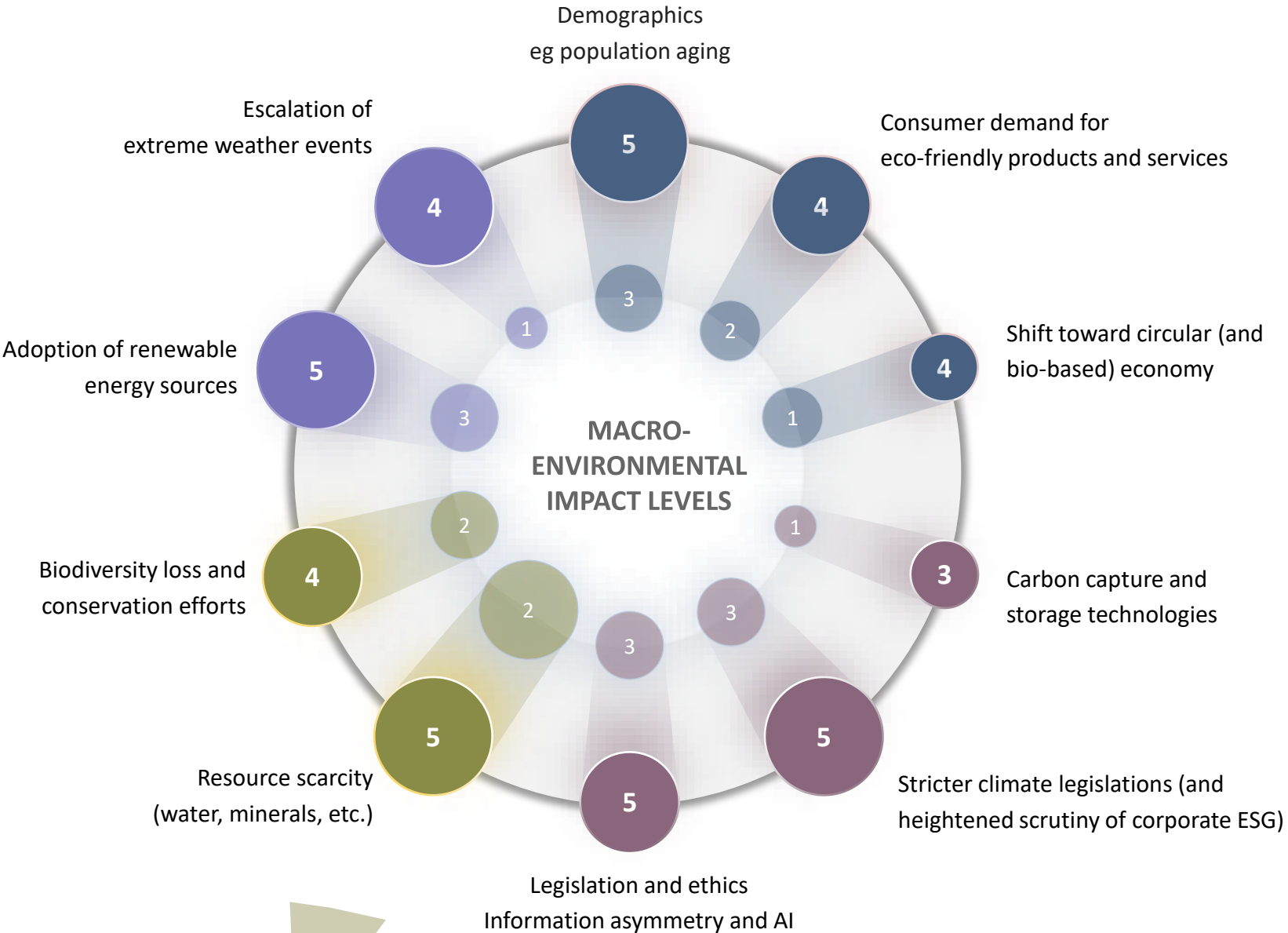
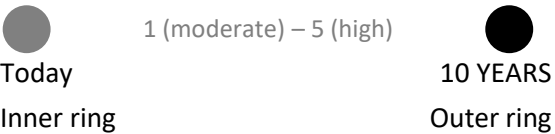


The background of the slide is a complex, repeating pattern of white lines on a light gray background. These lines form a variety of geometric shapes, including triangles, squares, and polygons, some of which are further divided into smaller sections. The overall effect is a dense, tessellated design that resembles a stylized map or a complex architectural plan.

**Why change perspective?**

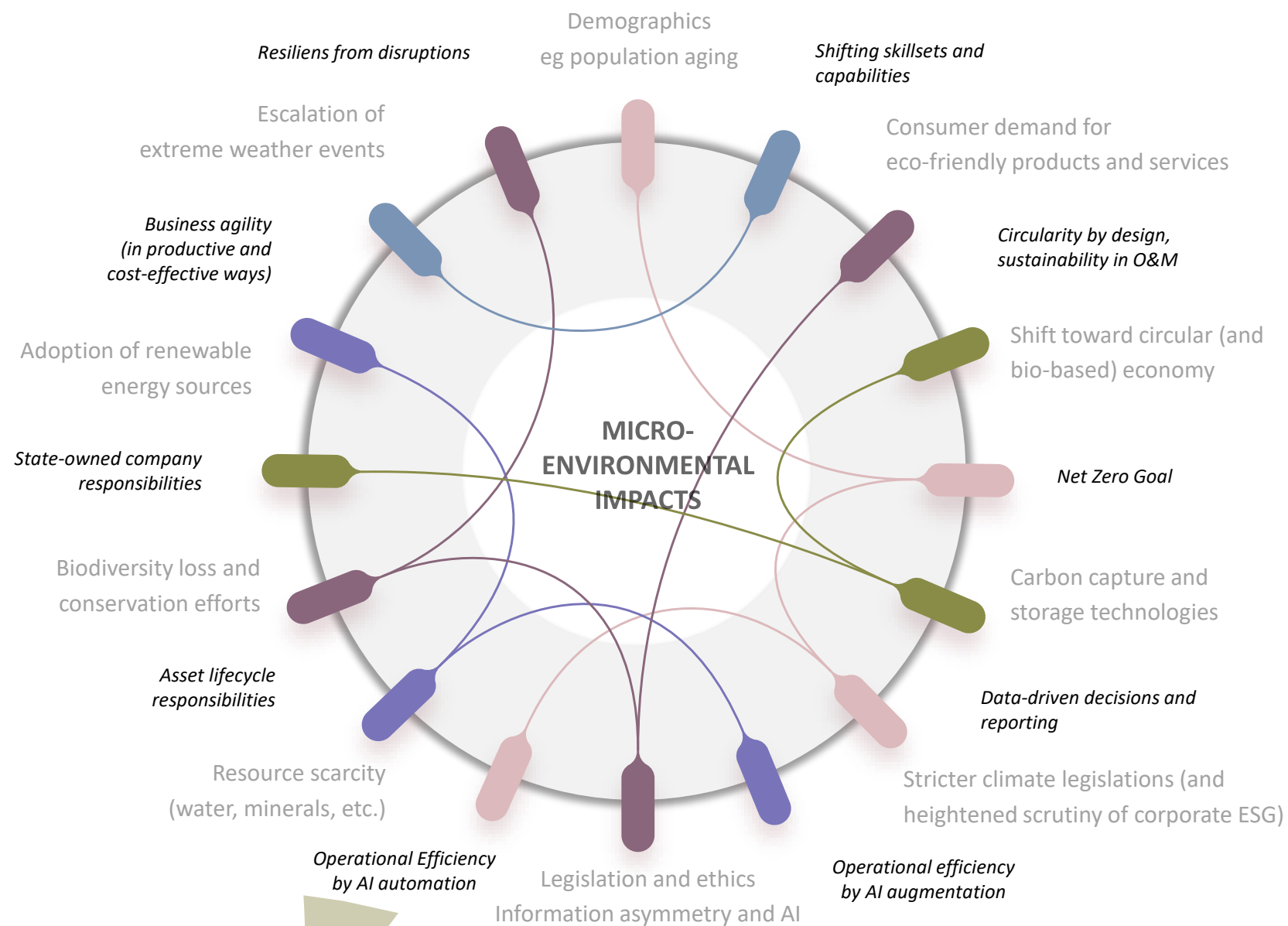
# The industry

- Society and Cultural Shifts
- Policy, Regulation, and Legislations
- Resources and Ecosystems
- Climate and Environment



# Akademiska Hus

- Society and Cultural Shifts
- Policy, Regulation, and Legislations
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# Akademiska Hus

Sustainability planning  
Maintenance planning  
Operational efficiency

Available, valid and reliable data  
Lifecycle management  
Value system (chain) integration

Silo-bursting  
Converge IT|OT|ET  
Object-oriented  
Machine readable  
but with human-in-the-loop  
**Systemic changes greater than AH**

*Resiliens from disruptions*

*Shifting skillsets and capabilities*

*Business agility  
(in productive and  
cost-effective ways)*

*Circularity by design,  
sustainability in O&M*

*State-owned company  
responsibilities*

## DIGITAL FOUNDATION

*Net Zero Goal*

*Asset lifecycle  
responsibilities*

*Data-driven decisions and  
reporting*

*Operational Efficiency  
by automation*

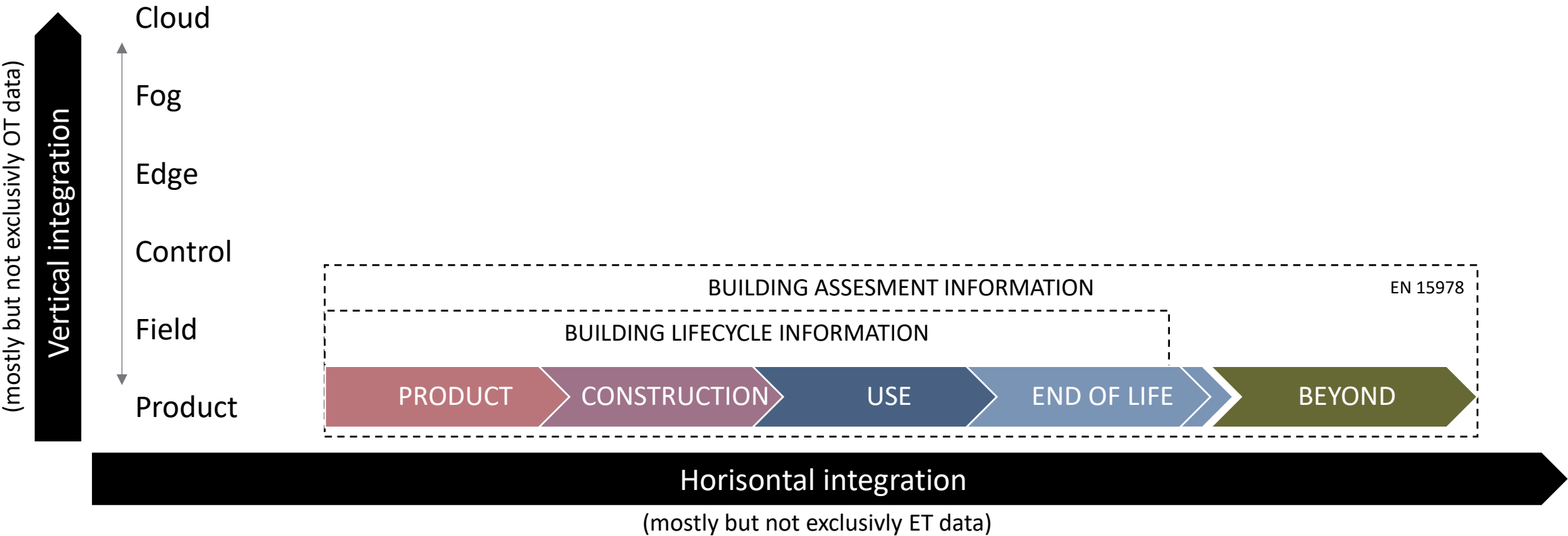
*Operational efficiency  
by augmentation*



The background of the slide is a complex, repeating pattern of white lines on a light gray background. These lines form a variety of geometric shapes, including triangles, squares, and polygons, some of which are further divided by internal lines. The overall effect is a dense, tessellated design.

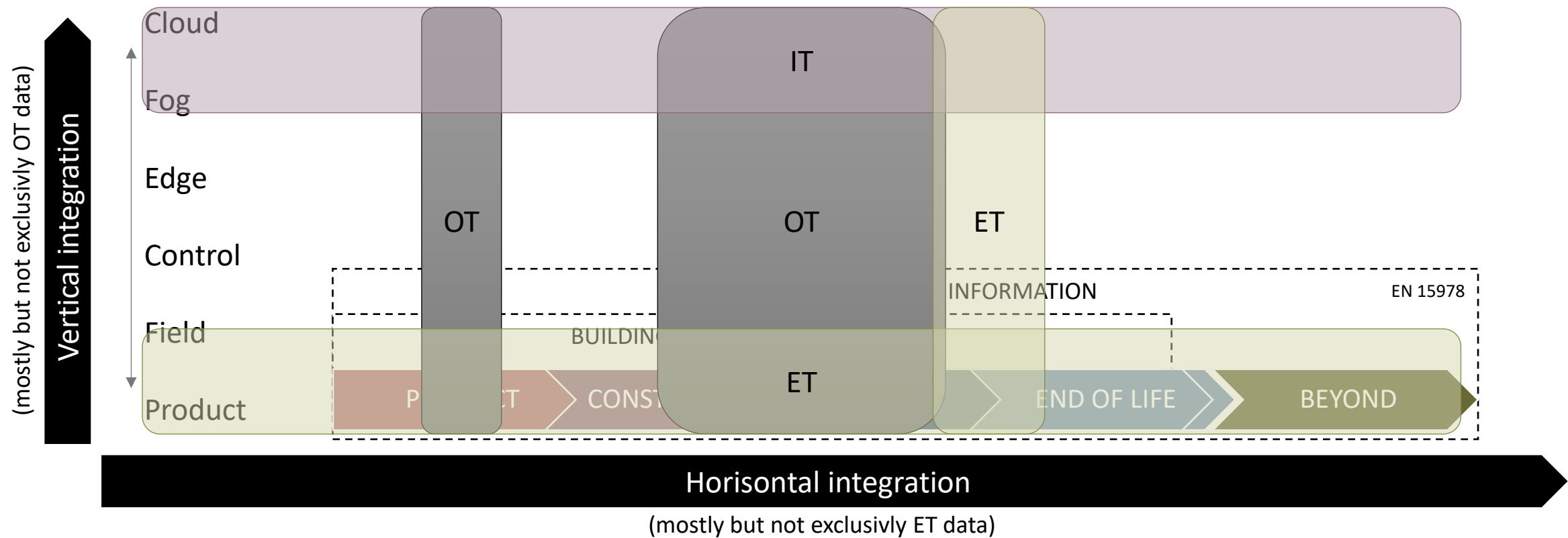
**How have we approach this?**

# Break down data and knowledge silos

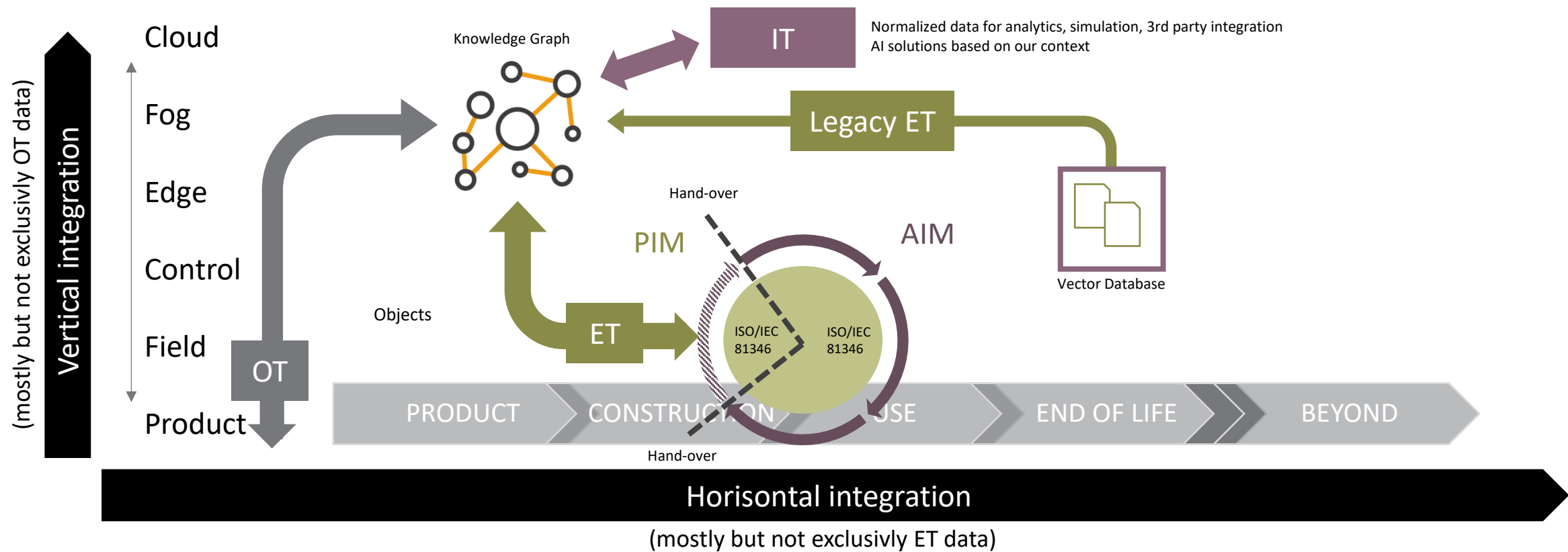




# Converge IT | OT | ET



# Make it object-oriented and machine readable



The background of the slide is a complex, abstract geometric pattern. It consists of numerous white lines of varying thicknesses that intersect to form a variety of shapes, including triangles, squares, and irregular polygons. The background color is a solid, muted purple. The pattern is dense and covers the entire area of the slide.

**What have we've been doing?**

Today: Alarm, RC Unit LB01-EB01-VAVxx !



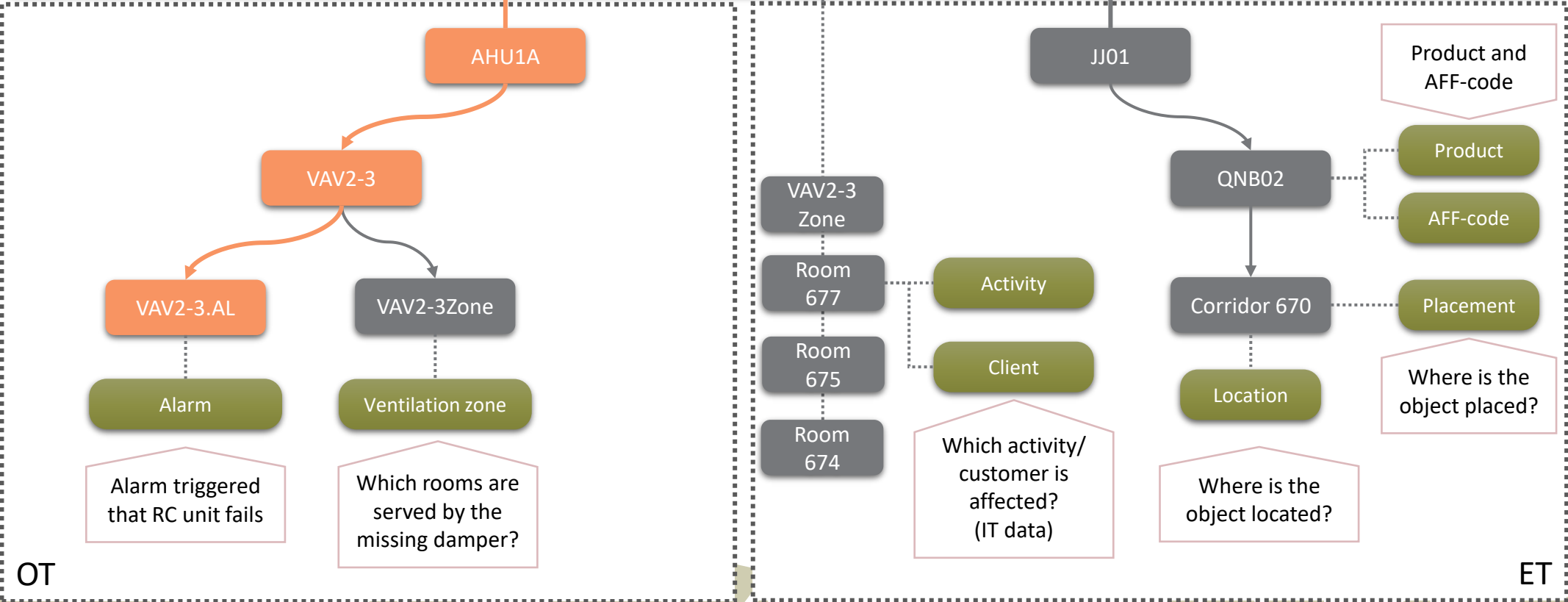
In the future: Building x has problems with ventilation in rooms 674, 675 and 677 used by customer x (non-critical business).

The VAV device is of the Lindinvent brand - DCV RC (link) and is located above the suspended ceiling in corridor 670.

Generate service order

Technical Analysis

# Digital Operational Support

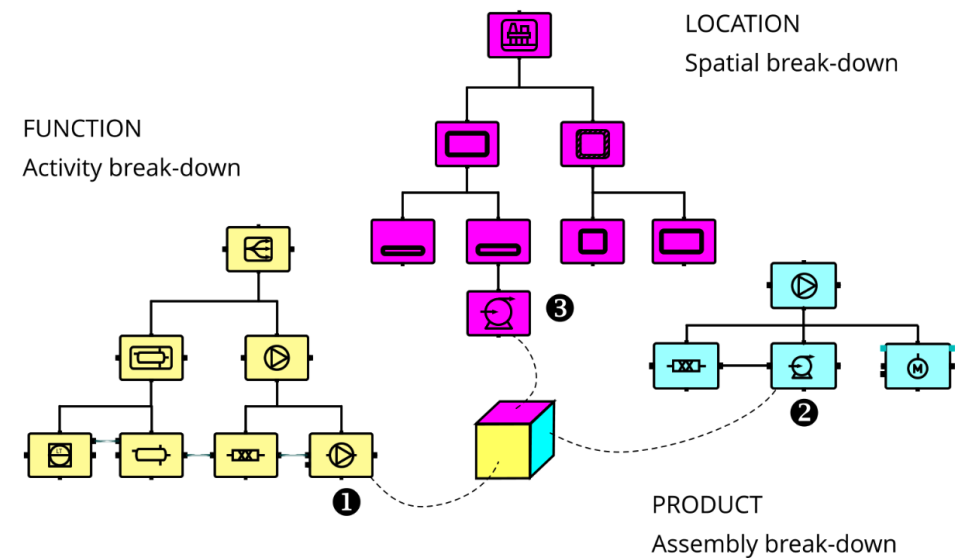


The background of the slide is a complex, abstract geometric pattern. It consists of numerous white lines of varying thicknesses that intersect to form a variety of shapes, including triangles, squares, and irregular polygons. Some of these shapes are filled with a solid olive green color, while others are left white. The overall effect is a dense, textured, and somewhat organic-looking geometric design.

Connecting the dots.. or data

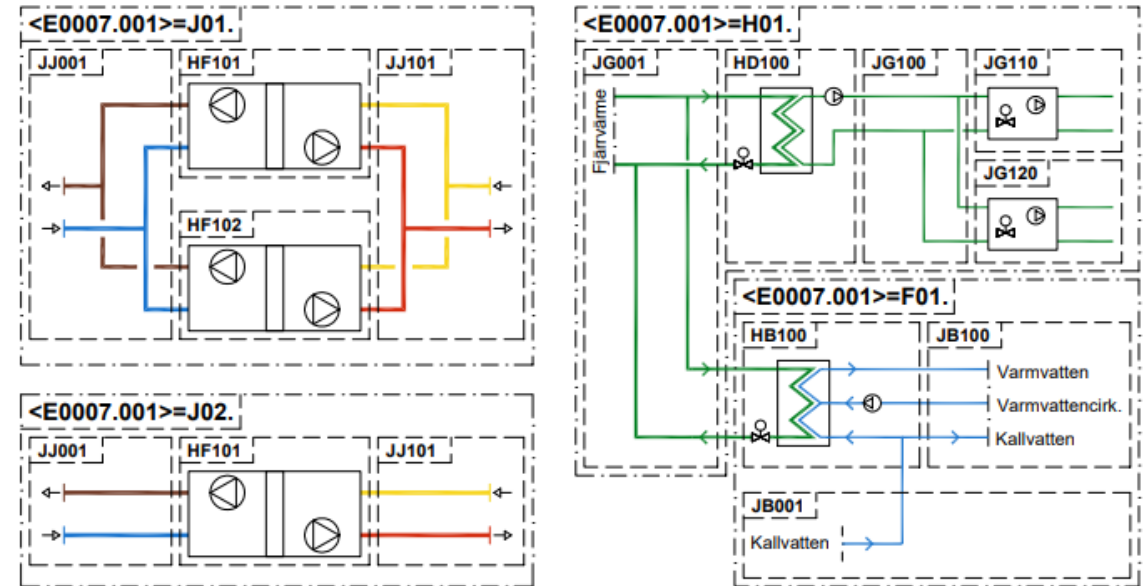
# Reference designations

- Reference designation (RDS) = identification system for an organization's technical objects.
- RDS = a common technical language.
- IEC/ISO 81346 formulates RDS and establishes classification schemes with defined object classes and letter codes.
- IEC/ISO 81346 is the only system designed for the life-cycle stable classification and identification of digital objects. Other systems exist and have different roles in specific phases of the construction and asset management process.

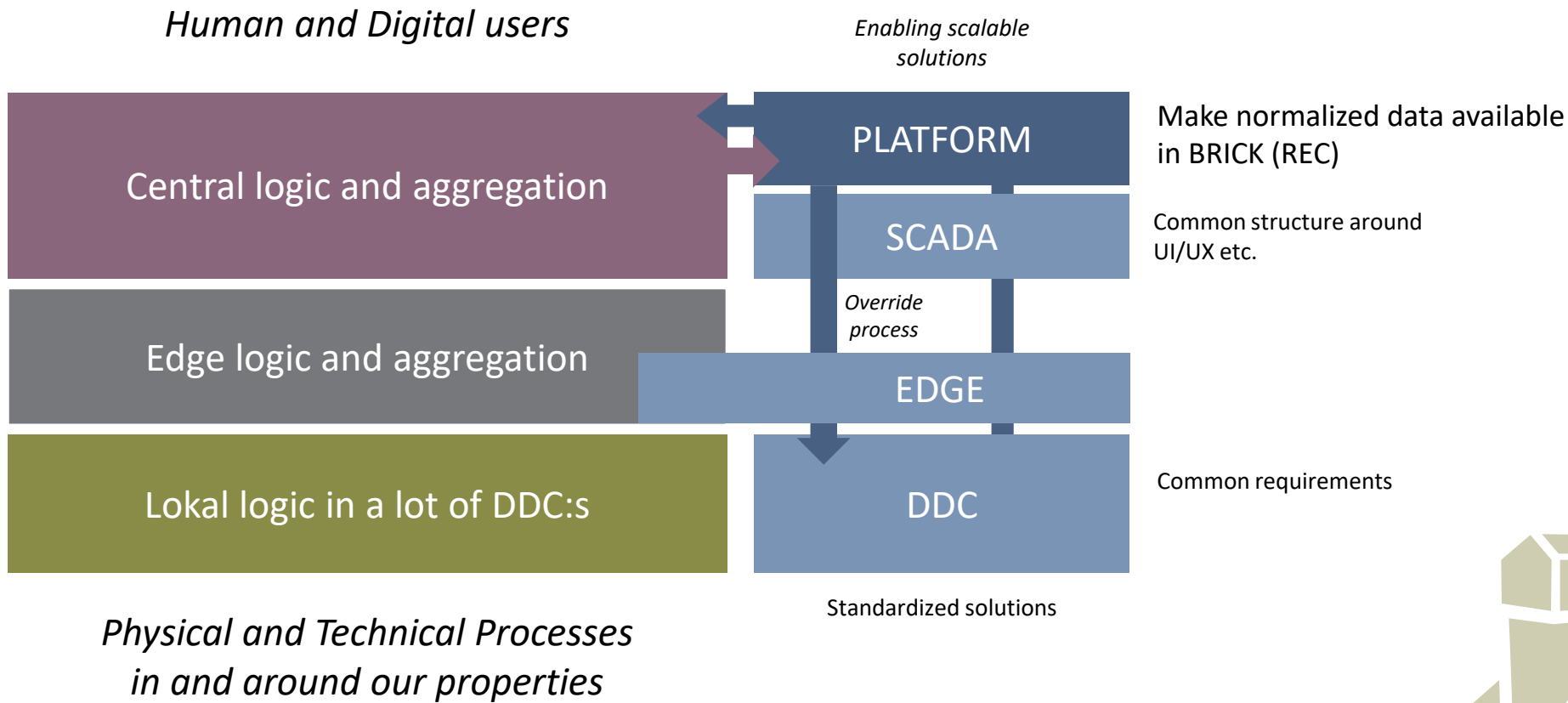


# Reference designations

- CoClass = Svensk Byggtjänst implementation of ISO 81346.
- #46 = Akademiska Hus implementation of 81346 from a functional perspective.
- Done so far (from isolation towards collaboration)
  - Developed rules for BMS
  - Tested in a construction project in Umeå
  - Synced CoClass with Bipkoder
  - Continued sync between REC and 81346
  - Discussions with Svensk Byggtjänst
  - Shared the work with everyone interested and started a cooperation with Skandia Fastigheter



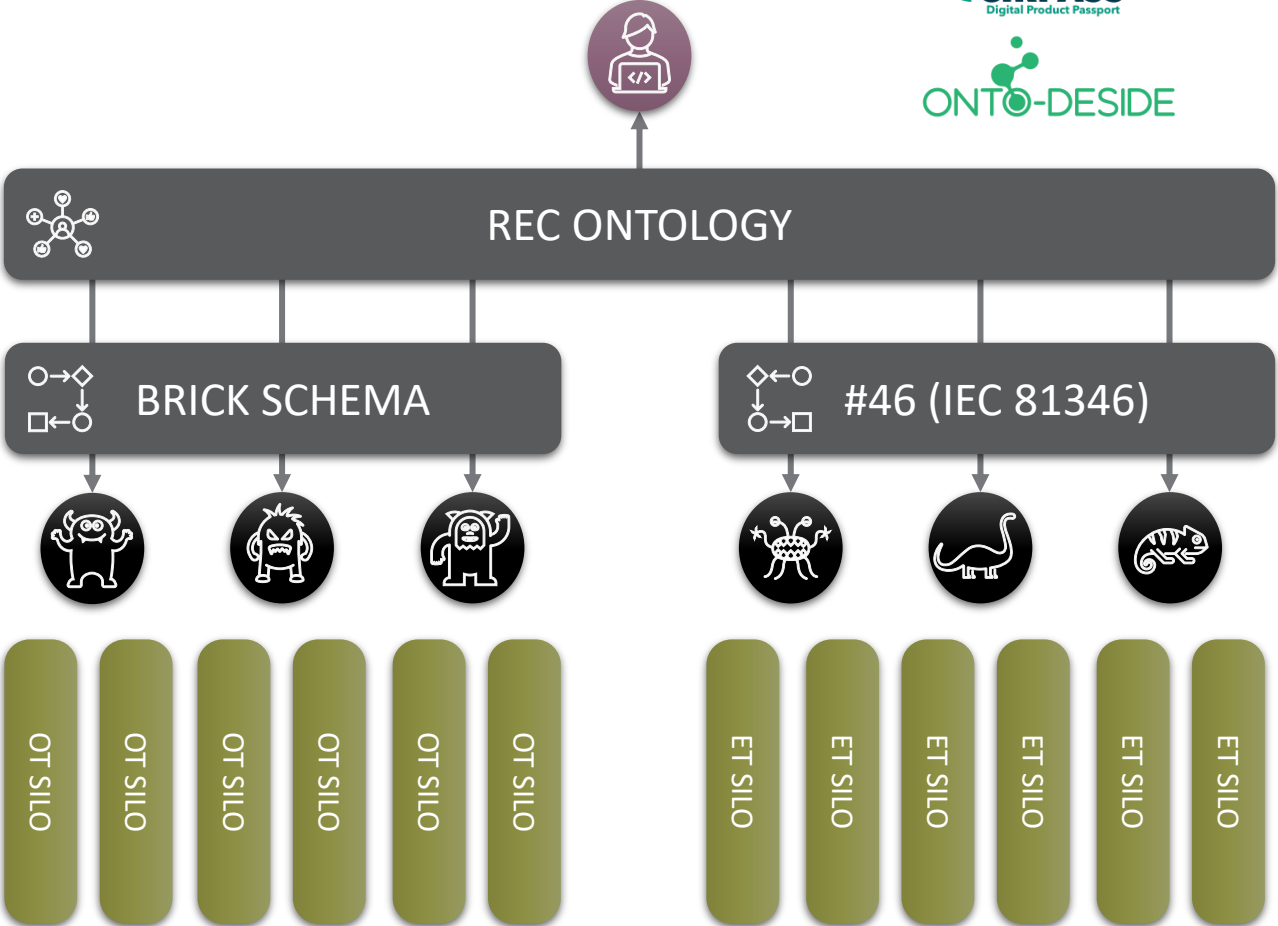
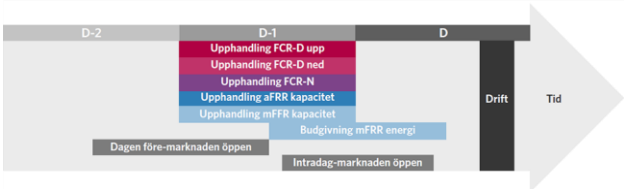
# Normalizing OT data





# Ontologies

- So that both people and systems can understand and use the data!
- Then we make it available to IT by building on the standards we already use today.
- We use standards to translate the different local vocabularies into a company-wide one for operating system data and one for engineering data.
- Data is in silos because it has different "words" (classifications, terms, variables, tags) for the same thing, which means that a lot of interpretation is needed to understand what is meant.
- Our data, if digitized and available, is stuck in many many silos.
- Thousands of systems och PDFs, DWGs excel files etc.

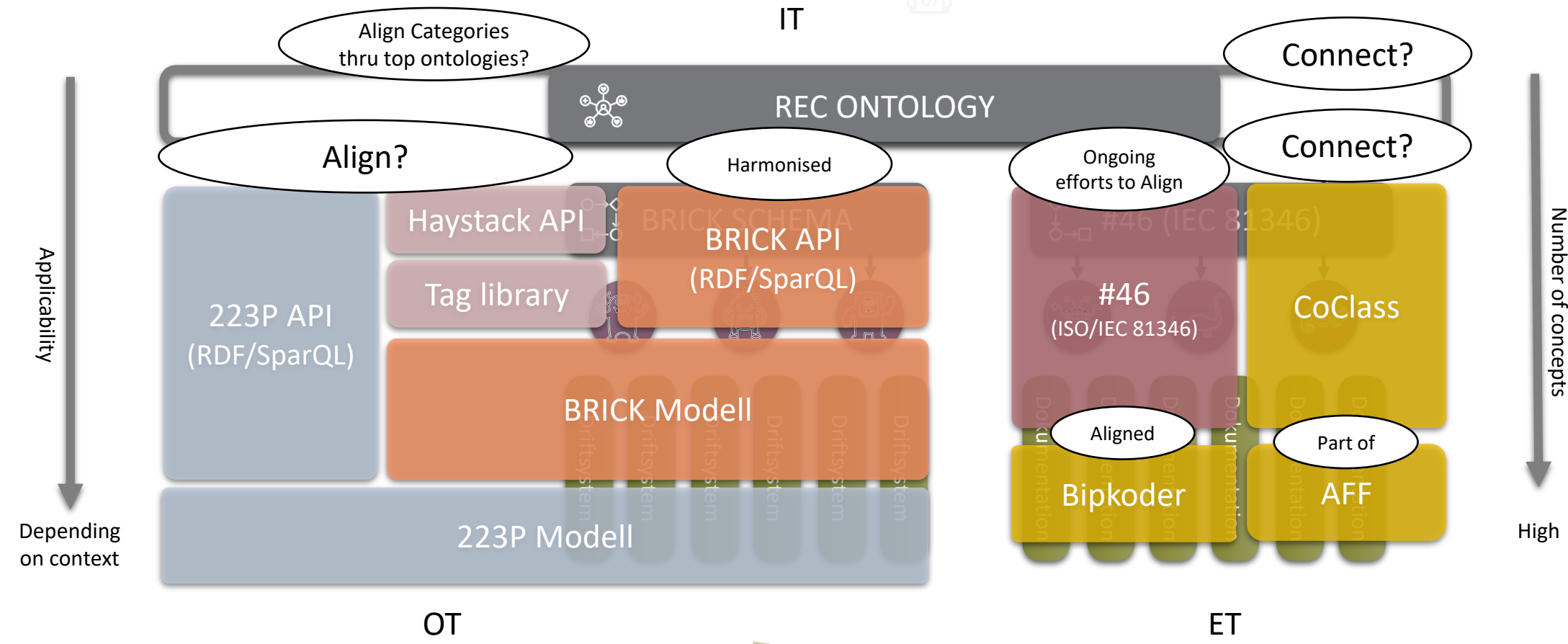


*We not only translate, but also create opportunities for systems to understand how things, processes and roles are connected and even how they work and what they need!*

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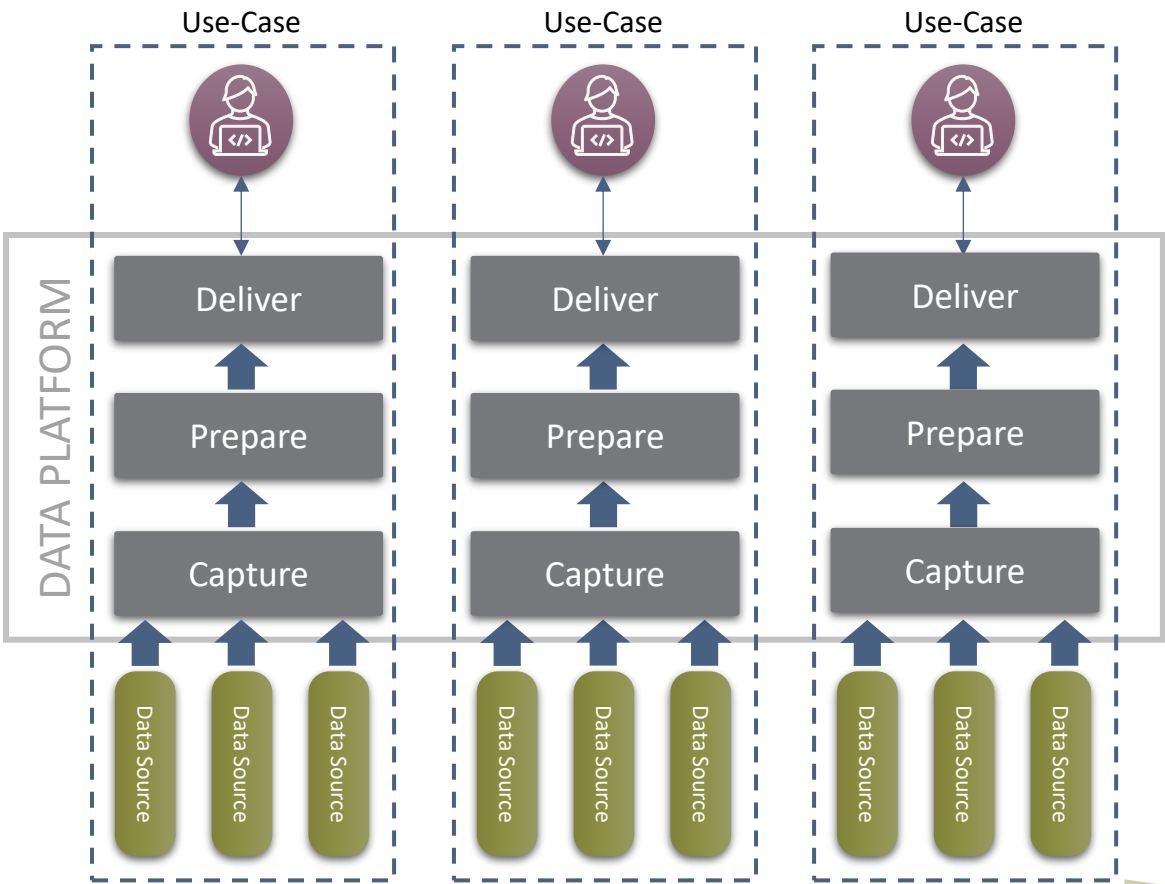
## **Enablers to a Real Estate Ecosystem**

# Complementary metadata models – (enabling REE)

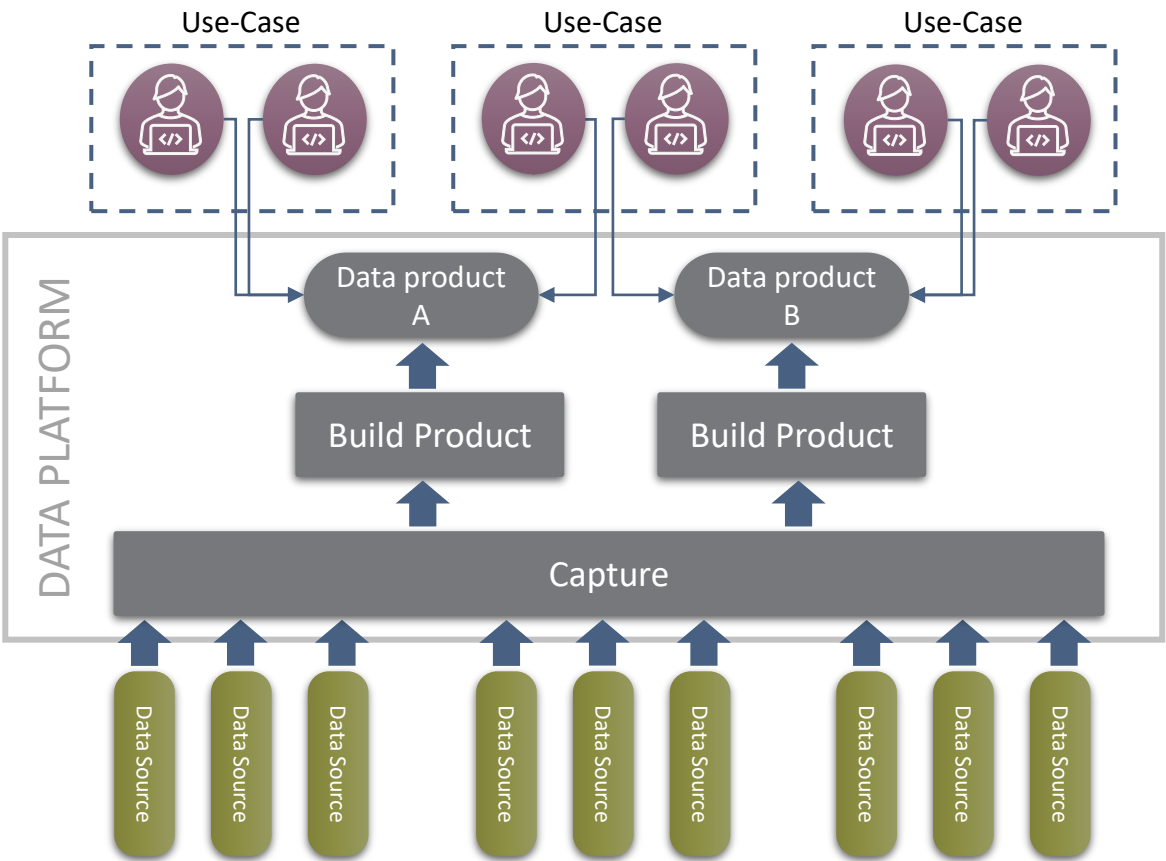


# Data products – (enabling REE)

## Project-driven

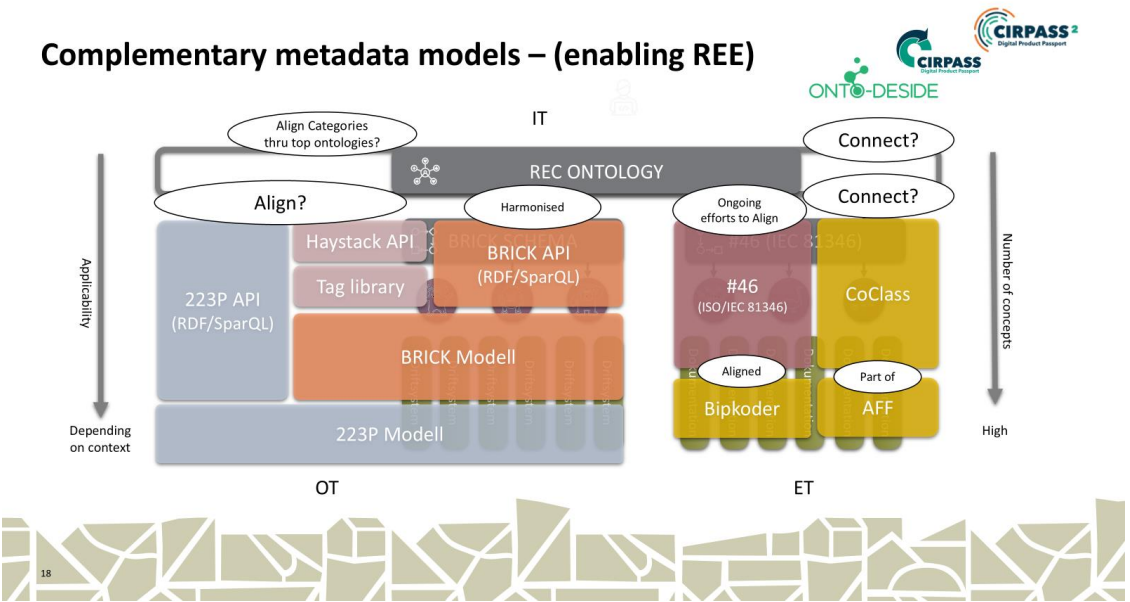


## Product-driven

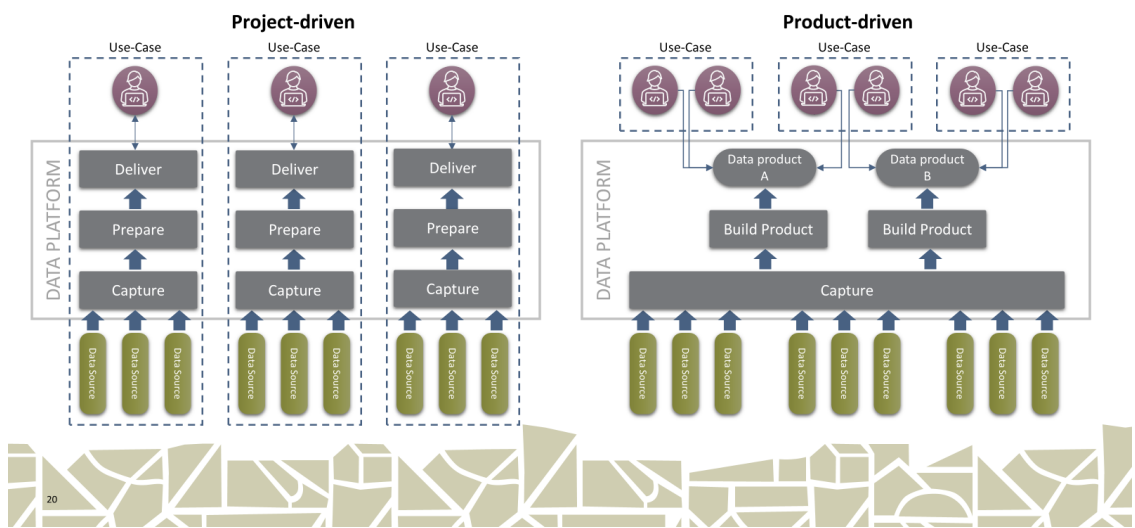


# QnA & Discussion

## Complementary metadata models – (enabling REE)



## Data products – (enabling REE)



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