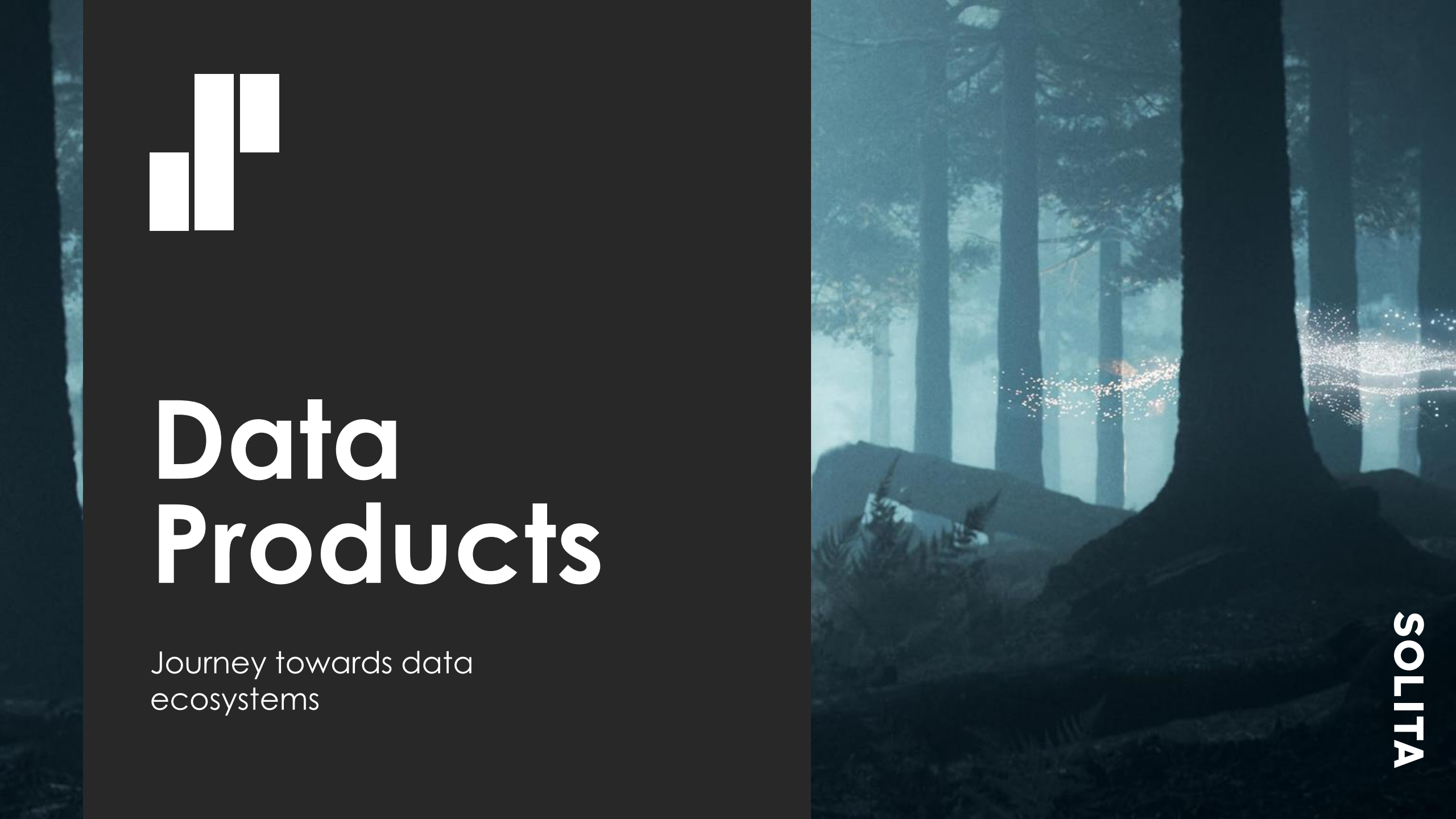


Data Products

Journey towards data ecosystems

SOLITA

Who am I?

- Juha-Pekka “JP” Joutsenlahti
- Data Advisor, Solita
- Doctoral Student, LUT University
- Areas of interest: Master Data, Metadata, Data Governance, Information Architecture, Data Strategy, Information Semantics

What is a data product?

*A data product is a **trustworthy**, **reusable** and **easily accessible** set of information that has been **designed**, **published** and **documented** to serve the **needs** of specific **data consumers***

High level building blocks of data ecosystem

IDENTIFY

Where and how digital & data can enable business success

PRODUCTIZE

Connected data products created within business domain

MEASURE

Both, technical improvement and realized business impact

BUSINESS

Continuous value creation & delivery

DATA OFFICE

TOOLBOX

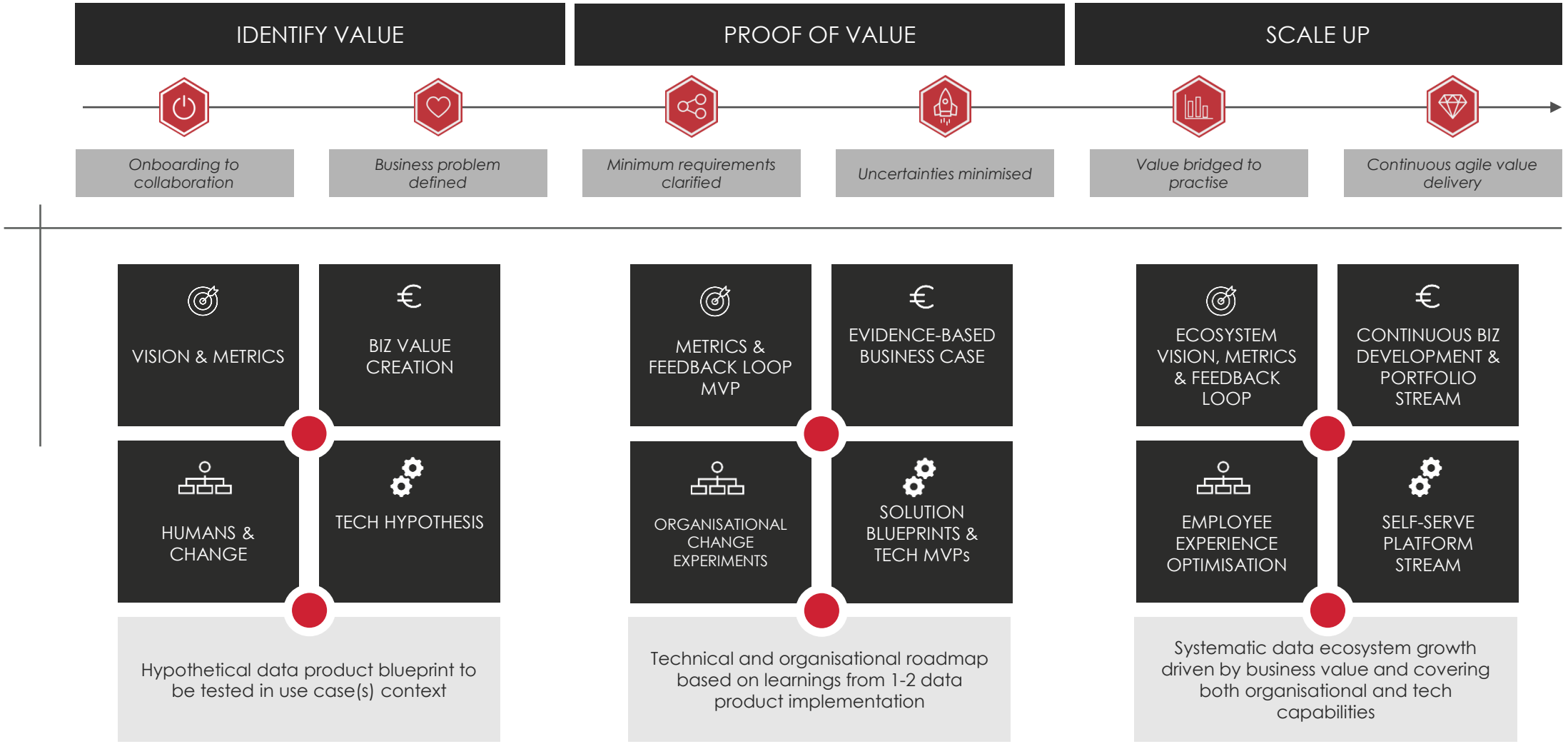
Technical capabilities that enable data ecosystem and value creation in domains

TRANSFORMATION

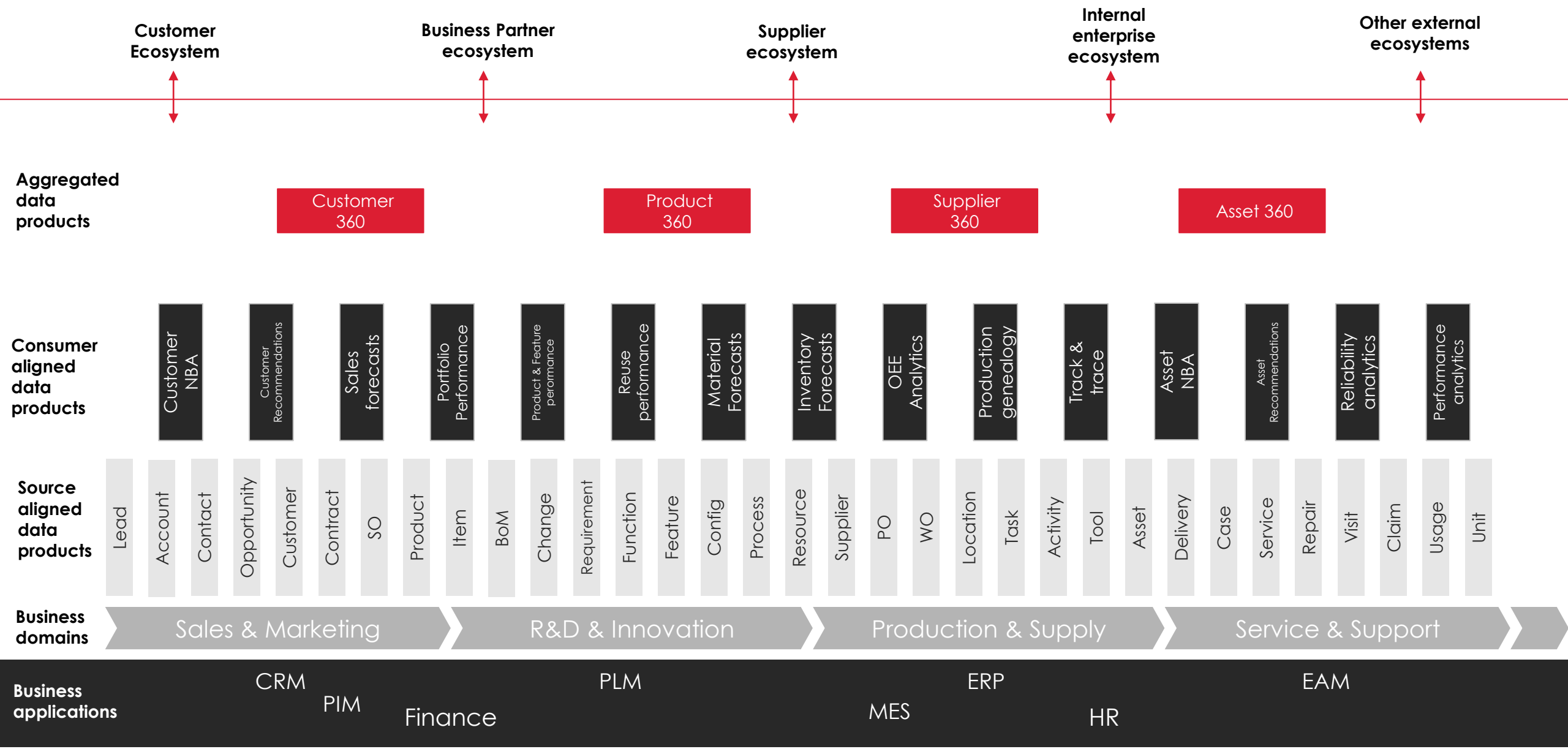
Establish governance, principles and ways of working that drive the change

HOLISTIC BUSINESS DEVELOPMENT FRAMEWORK BY SOLITA

Data ecosystem journey



DATA ECOSYSTEMS that need INTERACTION



Example of iterative approach to data products

Phase 1 Data Product

Findability & accessibility

- Ownership
- Technical metadata

Most of the exchanged data can be **easily** found and accessed

Phase 2 Data Product

Quality, availability & reusability

- Publish & feedback mechanisms
- Business metadata
- Access policy & management

Data with broader internal usage made available with good quality.

Phase 3 Data Product

Security, sustainability, & interoperability

- Classifications
- Data SLA & Contract
- Juridical usage agreement

Data with high-priority internal requirements or external usage might require more advanced components.

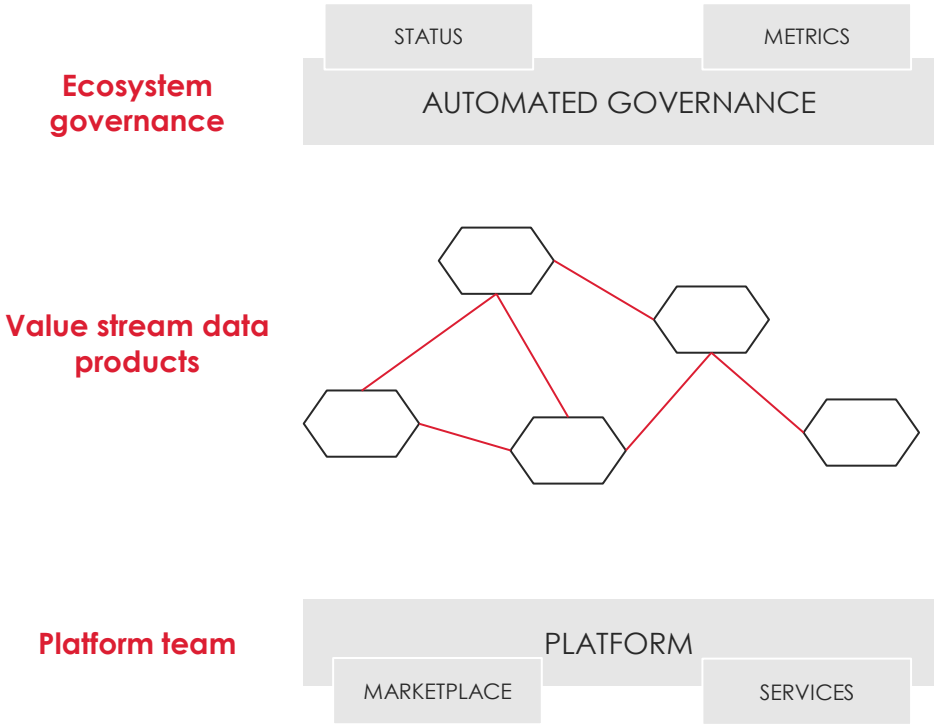
Data products as building blocks for data ecosystem

Data ecosystem

Having a systematic approach to managing data, that allows freedom, but demands responsibility, allows building completely new solutions in agile way.

Ecosystem needs to aim speeding up development of data products, makes them discoverable, allows securely utilizing them in different settings and makes ecosystem governable, transparent and visible.

Ecosystem aims to
→ Make all of the company's data usable
→ Has tools to speed up development of data products
→ Make it easy to use data in different context
→ Allows governing data products and services of the ecosystem



Biggest Data Product Obstacles – Case German Automotive

- There is a gap between the domain knowledge of data providers and data consumers.
- It is costly to (learn how to) create and maintain data products.
- Similar or identical business objects can lead to significantly different data products.
- It is challenging to understand data product semantics.
- Combining data from different sources is technically challenging.
- Sometimes data is not available but still desired.
- End users lack data engineering expertise.
- External organisations might use different standards.

Driessen, S., Monsieur, G., & van den Heuvel, W. J. (2023, March). Data Product Metadata Management: An Industrial Perspective. In *Service-Oriented Computing–ICSOC 2022 Workshops: ASOCA, AI-PA, FMCIoT, WESOACS 2022, Sevilla, Spain, November 29–December 2, 2022 Proceedings* (pp. 237-248). Cham: Springer Nature Switzerland.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