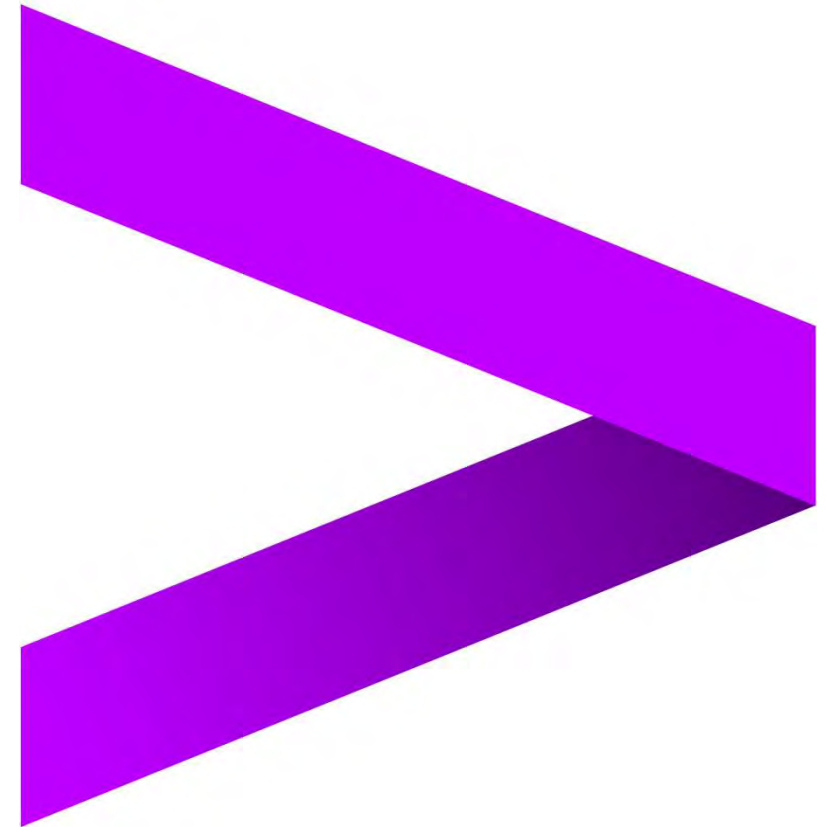


**WORKSHOP ON BUILDING A
COMMON DATA DICTIONARY
IN EU FINANCIAL SERVICES**

**BUILDING DATA
DICTIONARIES**

**Implementation and
technology perspective**

20th October 2023



accentureconsulting

DISCLAIMER: This presentation has been prepared by the speakers to best possible knowledge and quality standards. However, it cannot be understood as representing Accenture's position or views on these issues and does not bind Accenture in any way.

AGENDA



Data Dictionary Implementation

- What is data, metadata, data model and dictionary?
- Implementation considerations



Data Dictionary powering @ Automotive Data Space

- What is Catena-X?
- How does it work technically and organizationally?



Potential Lessons for a Financial Services Data Dictionary or Data Space

DATA DICTIONARY IMPLEMENTATION

Data is meaningless without context

A data dictionary captures data and context

DATA

| ID | date | EUR |
|----------|--------|-----|
| E6ft2xt2 | 231020 | 25 |
| e6ft2xt3 | 231020 | 22 |
| e6ft2xt4 | 231020 | 23 |
| e6ft2xt5 | 231020 | 37 |
| e6ft2xt6 | 231020 | 41 |
| e6ft2xt7 | 231020 | 55 |
| e6ft2xt8 | 231020 | 12 |
| e6ft2xt9 | 231020 | 13 |



CONTEXT

- Structure & Format
- Data Definition
- Business Context
- Source & Lineage
- Quality
- Relationships
- Storage
- Access
- etc.



INFORMATION

can be used
for insight
generation

but also for data
harmonization and
integration



A data dictionary enables a unified view and management of data assets and their context.

Context is described through Metadata

Metadata is the “Who, What, Where, Why, When & How” of Data

examples non-exhaustive

| WHO | WHAT | WHERE | WHY | WHEN | HOW |
|--|---|--|-----------------------------------|----------------------------------|---|
| Who created this data? | What is the business definition of this data? | Where is this data stored? | Why was this data sent / created? | When was this data created? | How is this data formatted? |
| Who “owns” this data? | What quality does this data have? | Where did this data come from? | Why did we store it? | When was this data last updated? | How is this data related to other data? |
| Who is using this data? | What is the privacy level of this data? | Where is this data used and/or shared? | Why can it be accessed? | How long should it be stored? | How can the data be accessed? |
| Who is regulating or auditing this data? | What are the technical names for this data element? | Where can it be used and where not? (regional context) | Why are there quality issues? | When does it need to be purged? | How many instances store this data? |

Business Metadata are e.g. the business definitions, rules, ownership and conditions of data.

Technical Metadata* are e.g. the structure, format, storage and accessibility of data.

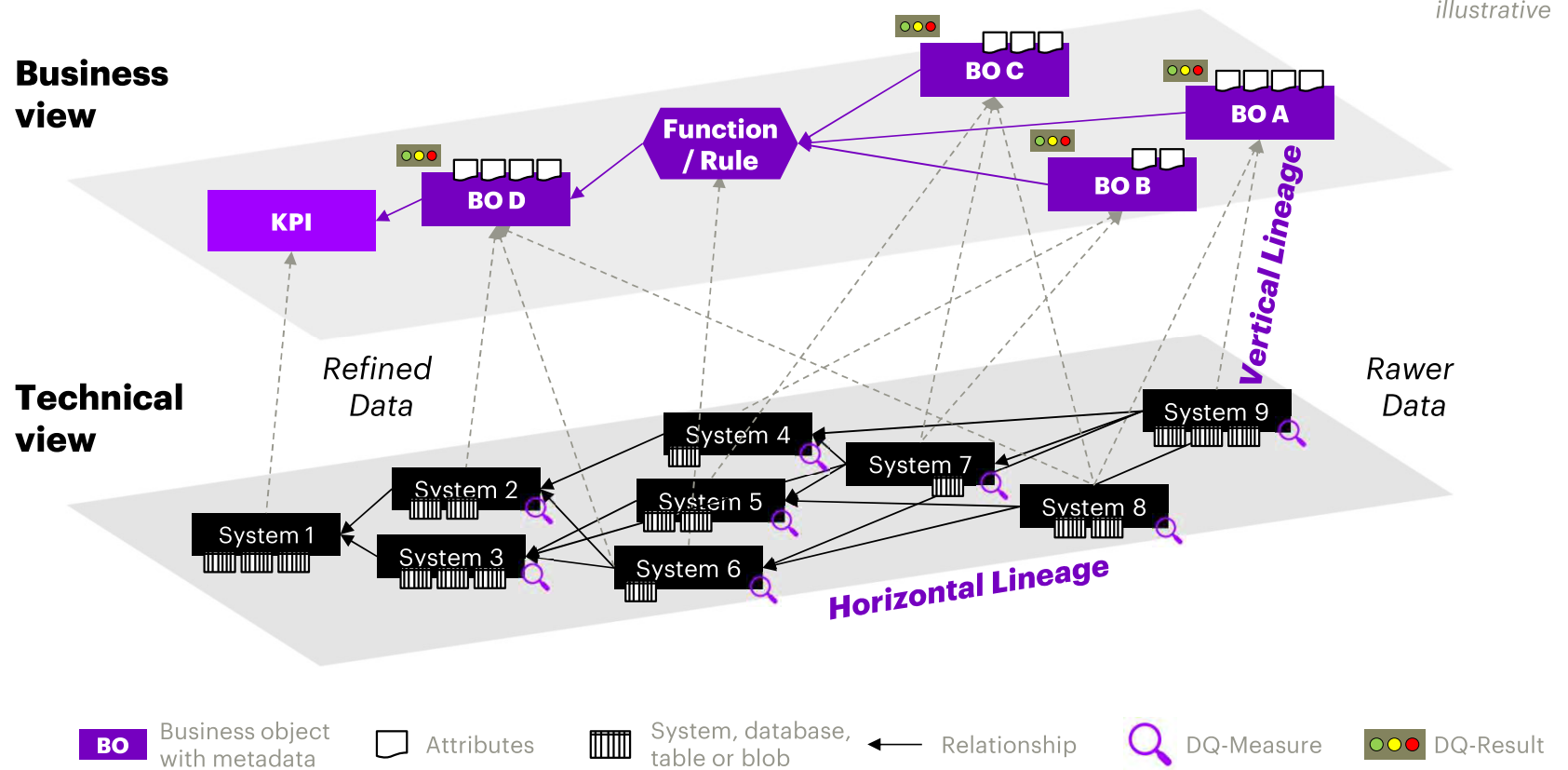
* sometimes also separated „Operational Metadata“ e.g. how often is data used, by whom and how



Metadata exists on business and technical level

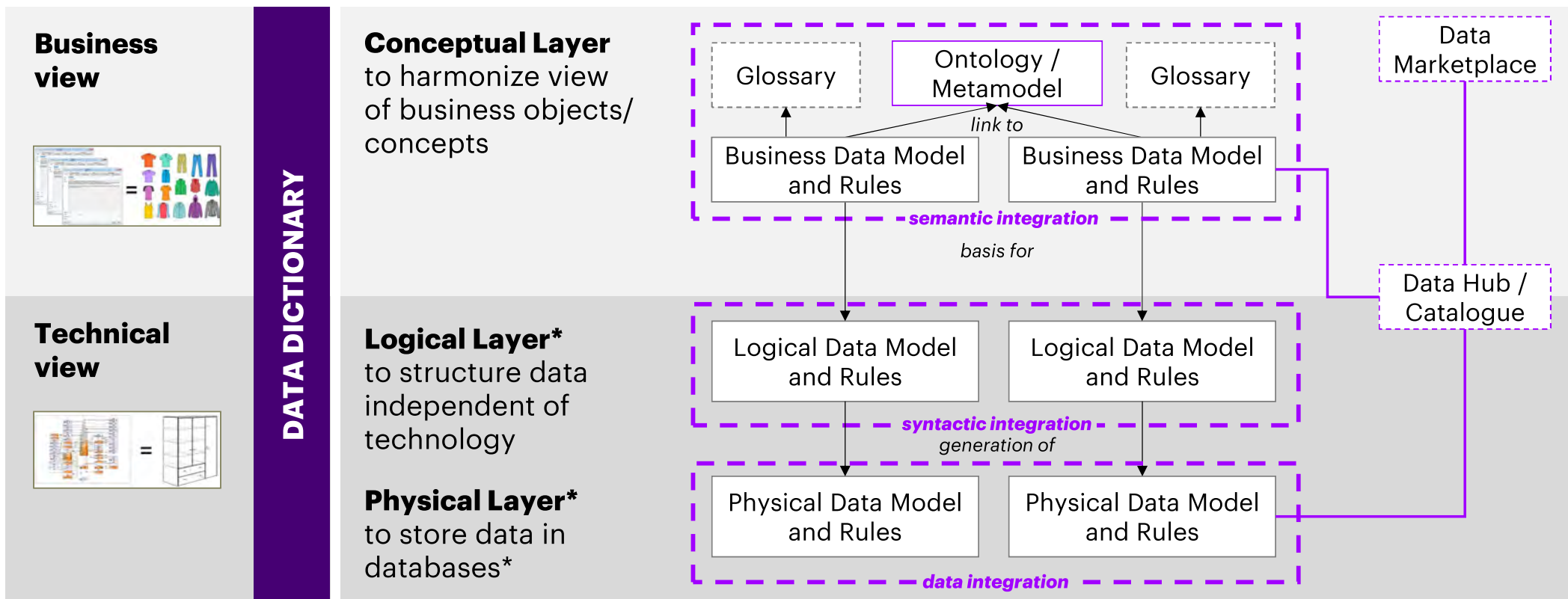
An integrated data dictionary enables capabilities like data lineage and quality management

Integrated metadata management on business and technical level is an essential capability of every data-driven organization or ecosystem.



A Data Dictionary can include various data models

Data models add specific metadata at every layer



* different types of logical models (e.g. Relational ERM, UML, star-schema) and physical models (e.g. data vault, NoSQL, graph) depending on use case

☐ Related non-dictionary components



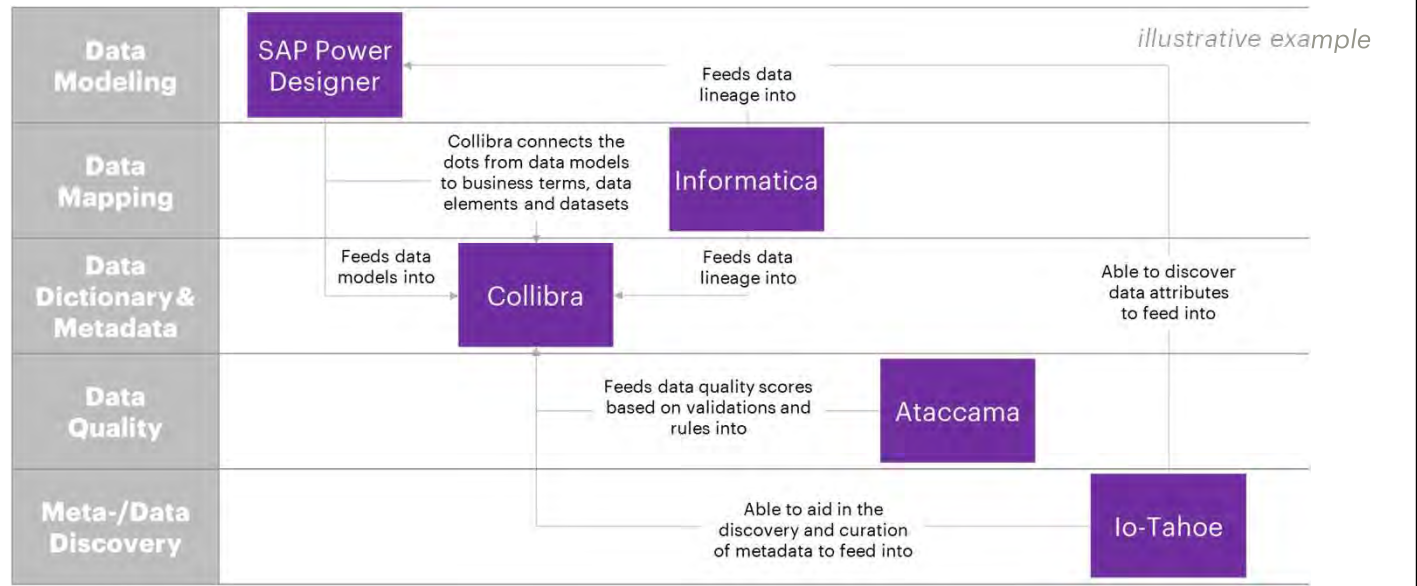
Tools support dictionary & metadata management

Extensive tool landscape supports integrated management of data dictionary, models and quality

Dictionary & Metadata Tools*



Integration of tools enables full suite of capabilities & automation



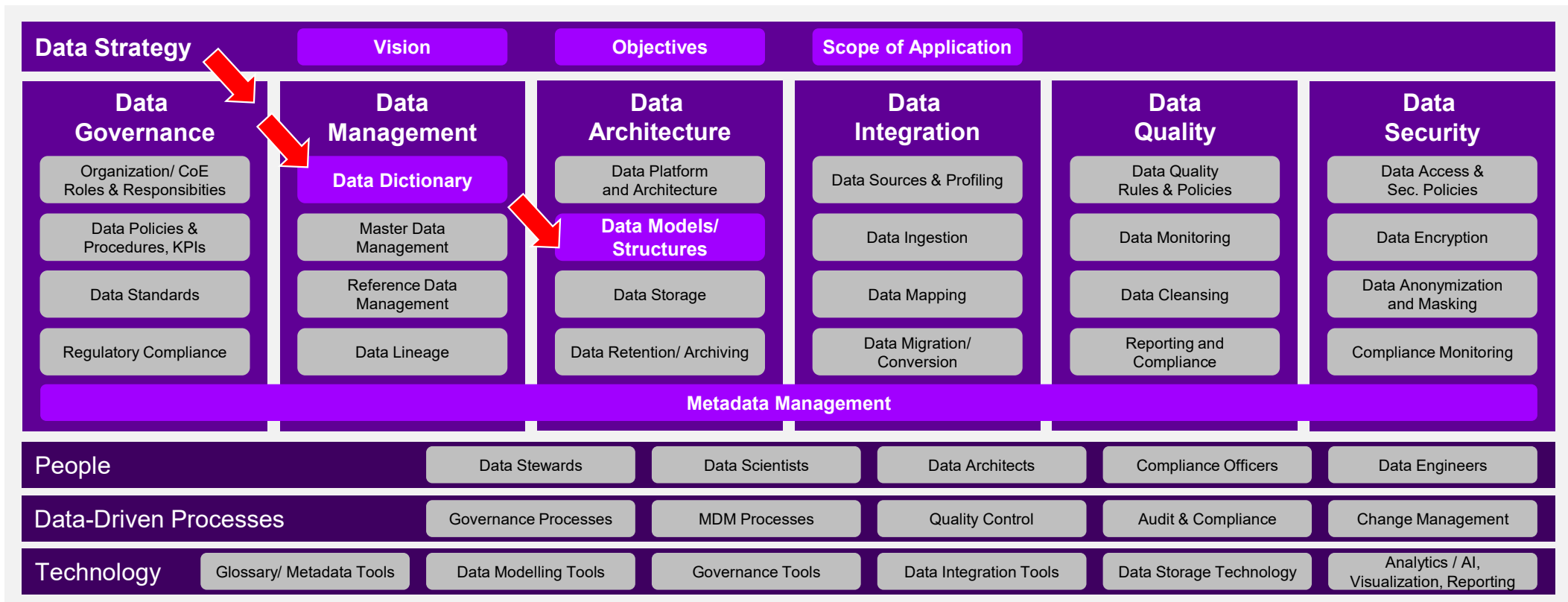
Leading vendors of DM solutions are augmenting and extending their tools' capabilities with machine learning and AI-features.

*Gartner „Metadata Management“ 2020, Fraunhofer „Market Study Metadata Management Tools“ 2015, Accenture Research



Dictionary, Models & Metadata require governance

Data Strategy and governance define the scope of the data dictionary and hence metadata mgmt.



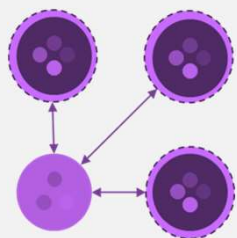
Accenture Data Capability Framework; similar frameworks e.g. DCAM, DAMA



Data (Dictionary) Governance Operating Models

Three archetypes for Data Dictionary Management

Decentralized

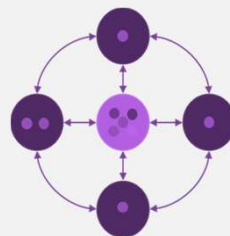


Individual **business units** or systems **control and manage their data independently** under some general conventions or policies

Benefits

- Business group has control of resources and investments
- Resources have better understanding of business opportunities

Federated Network

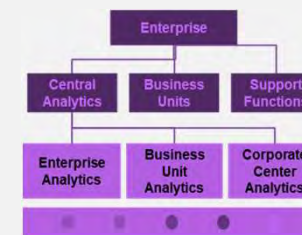


A **Hub and Spoke** strikes **balance of central management capabilities** versus those better deployed locally

Benefits

- Accommodates varying levels of capability maturity
- Central capabilities as enabler for change, efficiency and standardization

Centralized



A **single point of control** at the enterprise level for decision making, data dictionary management and even analytics

Benefits

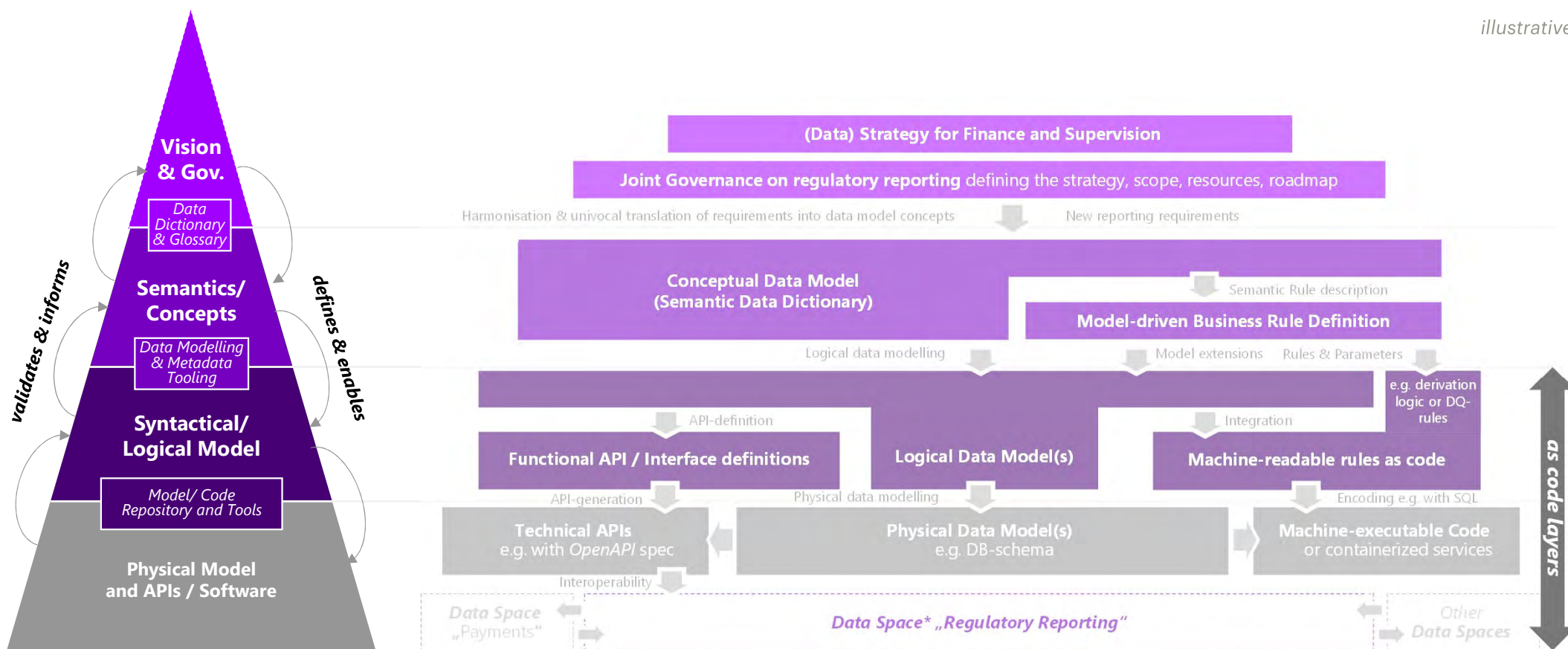
- All analysts reside in a central unit, enabling flexible resourcing
- Reduced variance in insight with minimal duplication of work



Bringing it all together

Common vision drives data dictionary and model capabilities

illustrative



* Data Spaces as defined by EU Data Strategy and/ or EU Digital Finance Package





CATENA-X AUTOMOTIVE DATA SPACE

Copyright © 2023 Accenture. All rights reserved.

THE FIRST COLLABORATIVE DATA ECOSYSTEM ALONG THE AUTOMOTIVE VALUE CHAIN ENABLING MULTI-STAKEHOLDER DATA EXCHANGE



What is Catena-X about?





- > Industry platform enabling **E2E data chains** across the automotive value chain for sustainability innovation
- > Increasing pressure on **sustainability as main driver** for Catena-X foundation

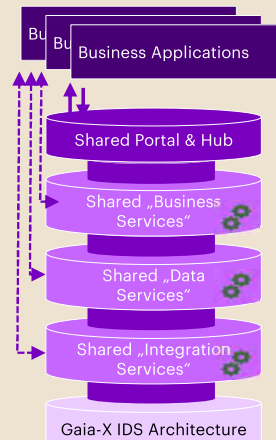
How is it realized technically?

Data Sovereignty & Interoperability (European architecture)

- Decentralized data spaces 
- Competition at business application level 

One Technology Stack (decentralized, federated, open source)

- Repository on GitHub 
- Plug and Play - Standardized APIs 



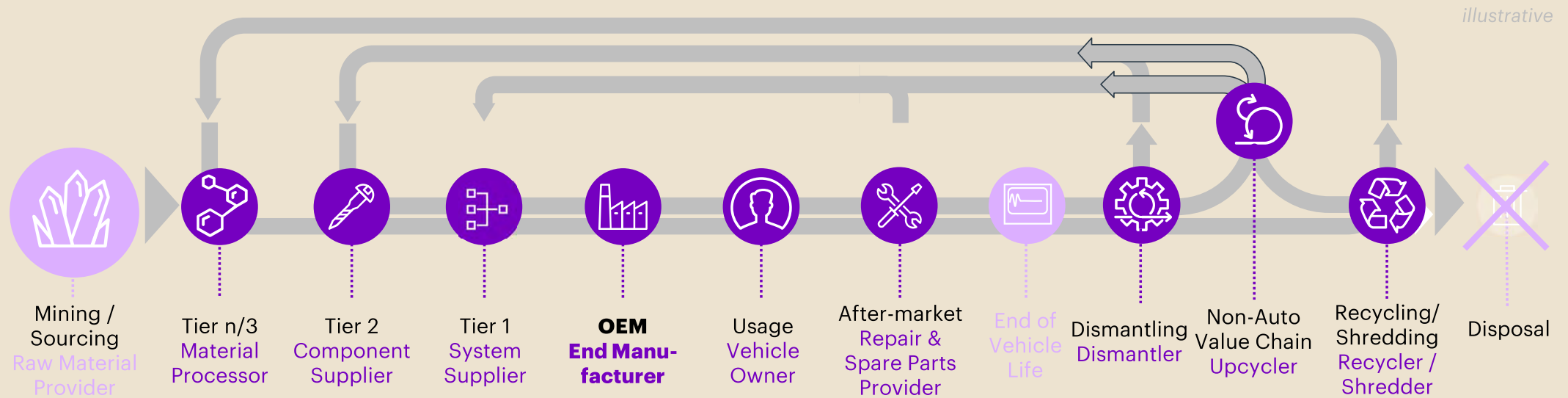
Who is involved?



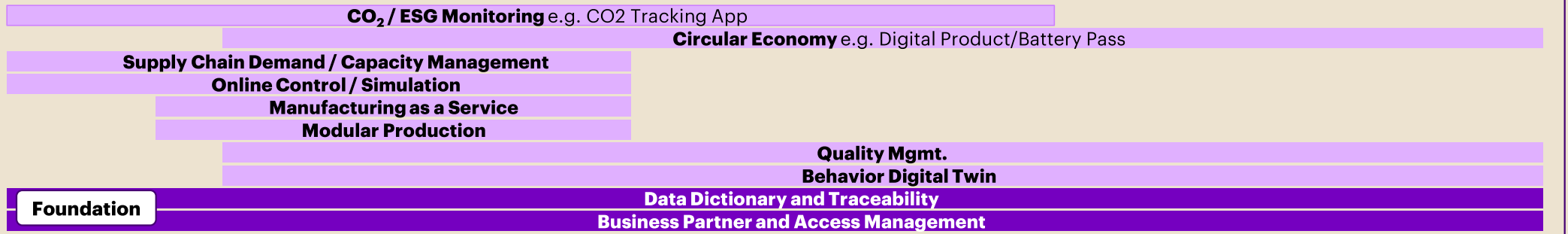
- > **28 consortium members**, growing network of **> 140 association members**, **10 OpCo Joint Venture partners**
- > Aim for **2000+ partners in next 2-3 years**
- > Focus on **integrating SMEs from tier-n suppliers** to leverage full value of cross-value-chain data products
- > Funded by **NextGenerationEU**



THE E2E DATA EXCHANGE ENABLES USE CASES IN THE AREA OF SUSTAINABILITY, COMPLIANCE, EFFICIENCY THROUGH INTEROPERABILITY

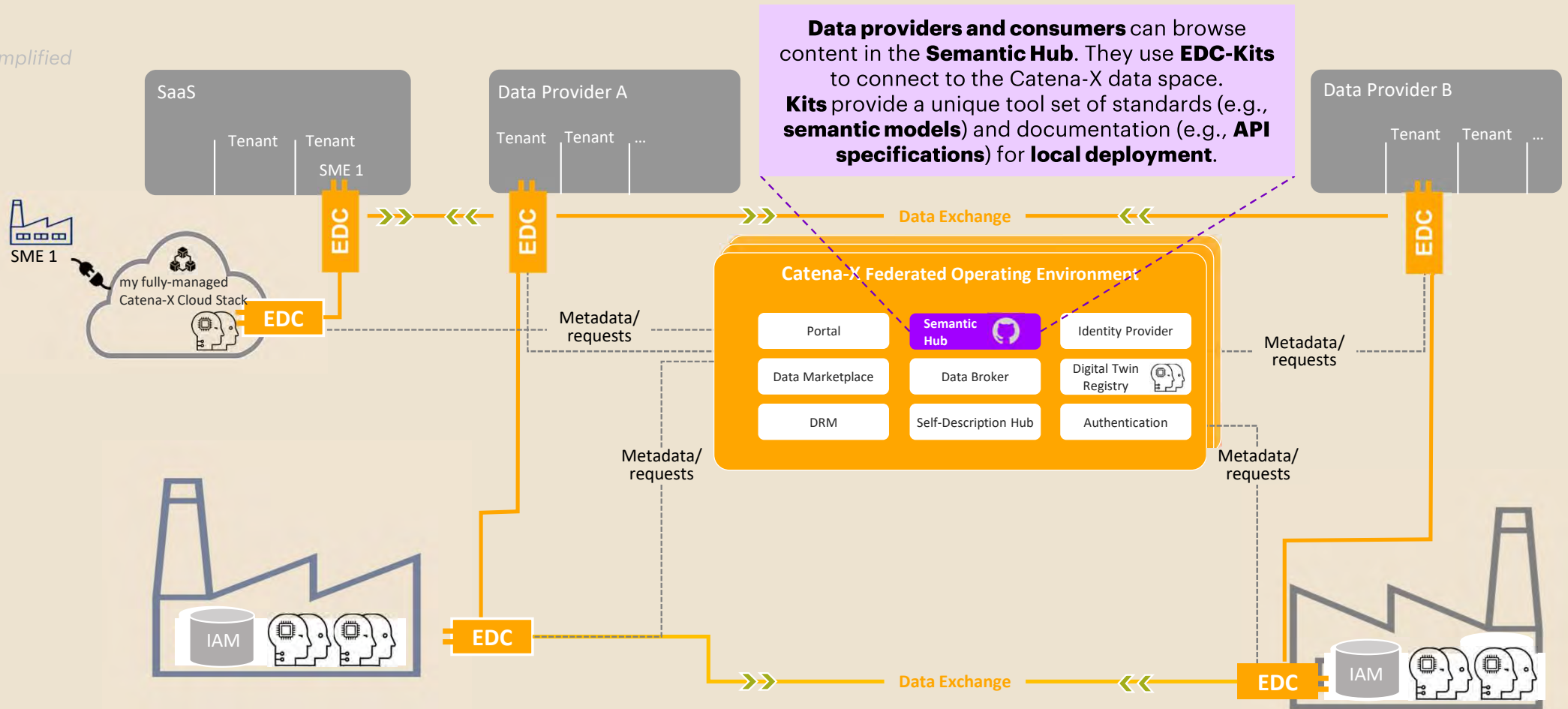


Business-Critical E2E Use Cases



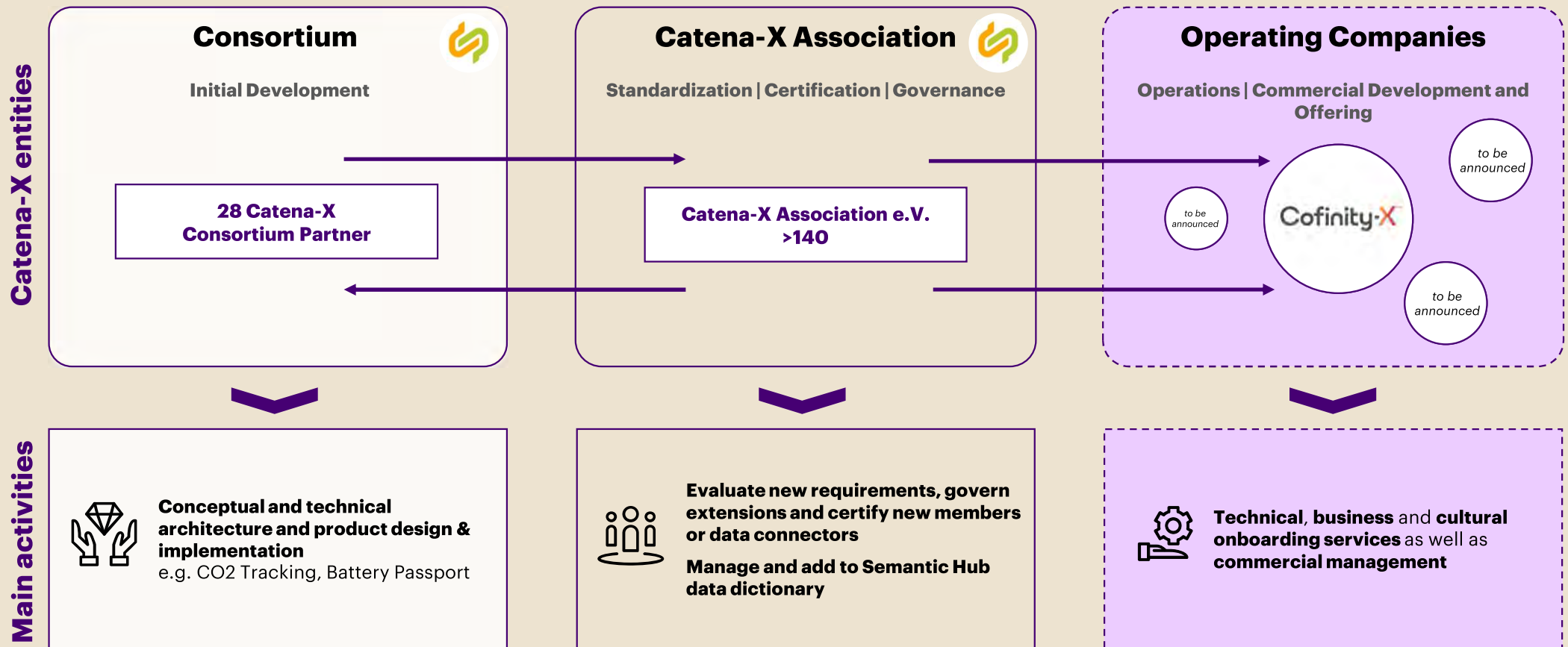
CATENA-X IS BASED ON GAIA-X ARCHITECTURE WITH A SET OF COMMON FEDERATED COMPONENTS AND DECENTRAL DATA CONNECTORS

simplified



EDC: Eclipse Data Connector

THREE ENTITIES MANAGE THE EXPANSION AND ENHANCEMENT OF THE DATA SPACE, ITS ARCHITECTURE AND DICTIONARY OF DATA SERVICES



POTENTIAL LESSONS FOR A EU FINANCIAL DATA SPACE?

Topic of data standards is globally relevant

Various jurisdictions are searching for solutions

EUROPE

excerpt



common themes

DATA STANDARDS
MORE GRANULAR DATA
REDUCING BURDEN

APAC

excerpt



National Level

UK: Future of Finance & Data Collection (restarted)
UK: Digital Regulatory Reporting on ISDA data standard
AT: Shared Service and data model for banks
IT: Common data model for banks & supervisors
NL: Common Logical Data Model for statistical reporting
DE: Feasibility Study on Regulatory Reporting

SG: Data Collection Gateway
SG: Machine-readable Regulation on ISDA data standard
HK: Common data dictionary for loans & mortgages
PH: Realtime feedback to banks

Supra Level

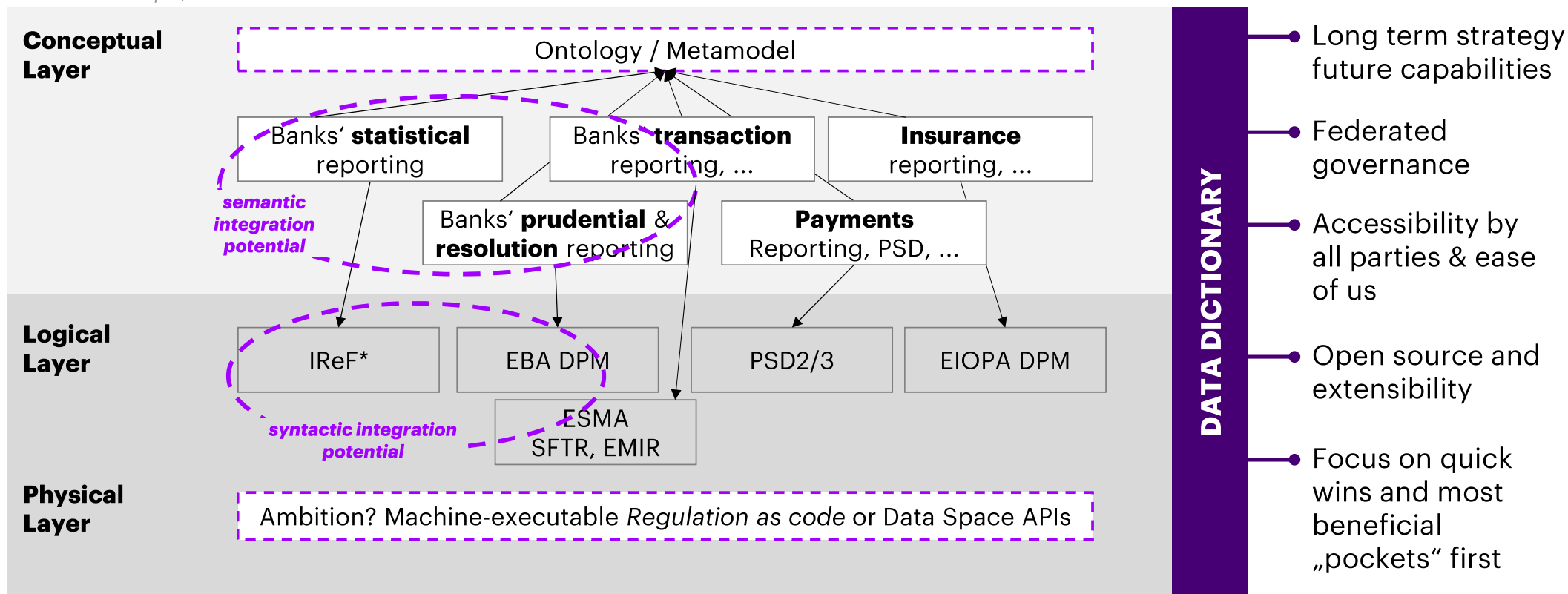
EU European Data Strategy
EU Digital Finance & Supervisory Data Collection Strategy
EUCOM Fitness Check on Regulatory Reporting
EBA Cost of Compliance Study
EBA Integrated Reporting Feasibility Study
ECB BIRD / IReF Regulatory Data Model

BIS/FSI SupTech generations
BIS Ellipse supervisory data platform
FSB Sup- & RegTech Market Developments
World Government Summit 2023 Data Economies
IDSA International/ Industrial Data Space Association

Hybrid Approach for Financial Data Space?

Potential “pockets” for integration and common dictionary depending on overall strategy and scope

Illustrative example, non-exhaustive

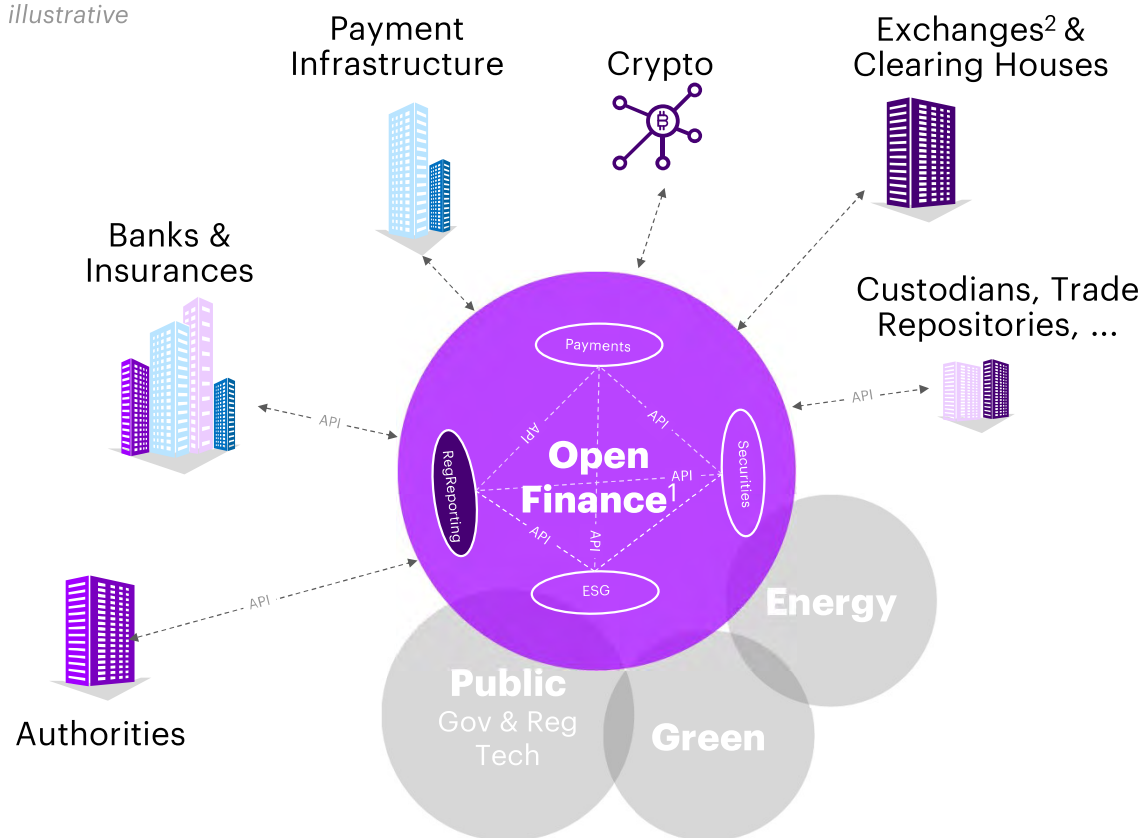


* Assuming full integration of statistical reporting

Data is the fuel of the Digital Economy

To leverage its full potential a strategic approach for a common data dictionary is required

illustrative



FIVE STRATEGIC IMPERATIVES

1. **Vision, strategy, right incentives and appropriateness**
2. **Collaboration and Interoperability**
3. **Legal Framework and Joint Governance**
4. **Change Management**
5. **Modular, future-proof architecture**

**THINK BIG,
... START SMALL,
... COLLABORATE**

¹ EU Data Strategy defines sectoral data spaces in strategic key sectors under common principles (e.g. FAIR), governance and legal frameworks

² EU Digital Finance strategy details goals and requirements for Financial Data Space and Infrastructure incl. tokenization of assets and DLT-enabled exchanges

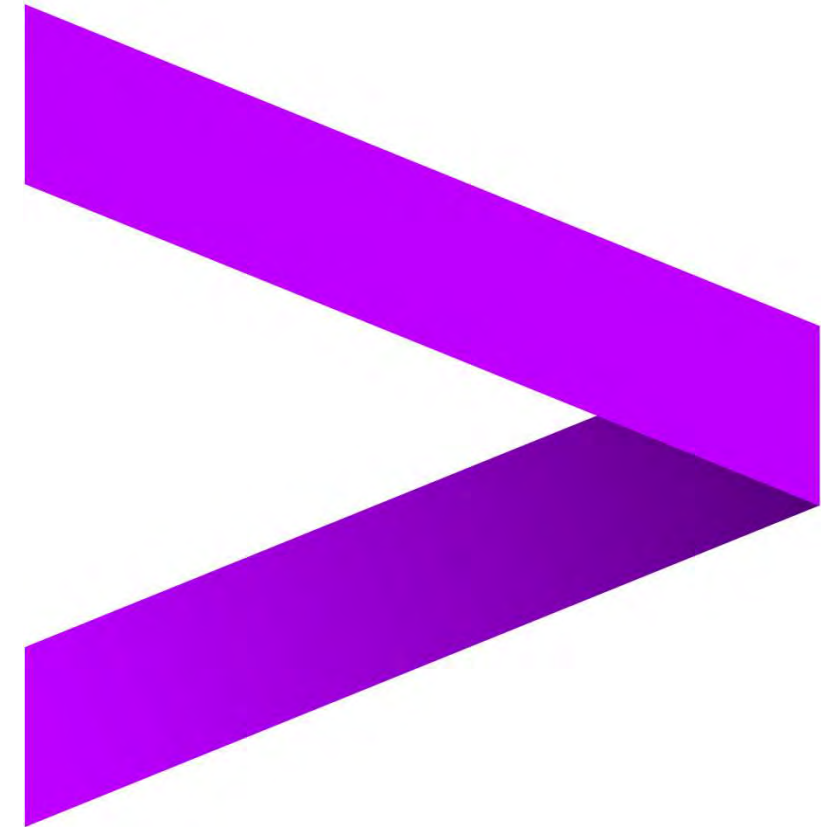
THANK YOU

Alexander Michalew

alexander.michalew@accenture.com
+49 175 57 67 168

Dr. Nils Beier

nils.beier@accenture.com
+49 175 57 68 256



accentureconsulting