DATA GOVERNANCE AND MASTER DATA MANAGEMENT CONFERENCE EUROPE

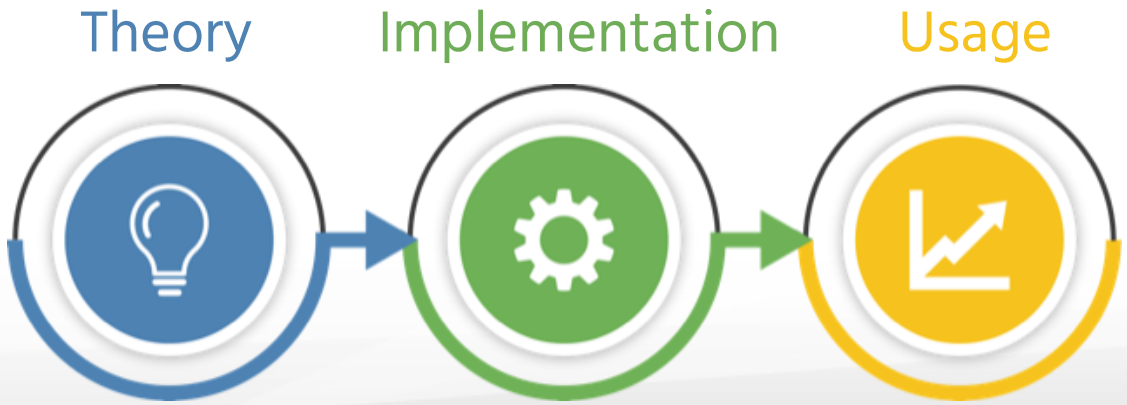
11 - 14 March 2024 |London, UK

Please score and comment on this session and speaker in the event mobile app

IRMUK

Establishing a Business Case for Metadata Management

3-hour Workshop



Irina Steenbeek | March 2024

Where Are You Now?

1

2

3

4

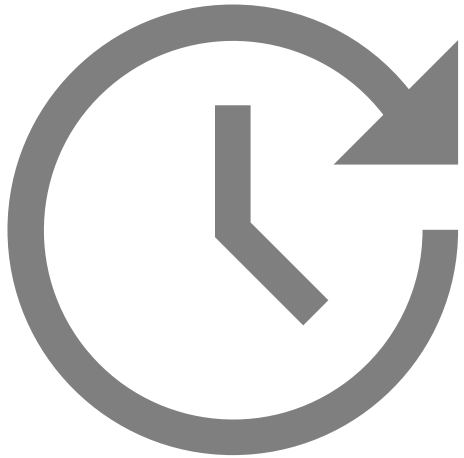
Where Do You Want to Be?

1

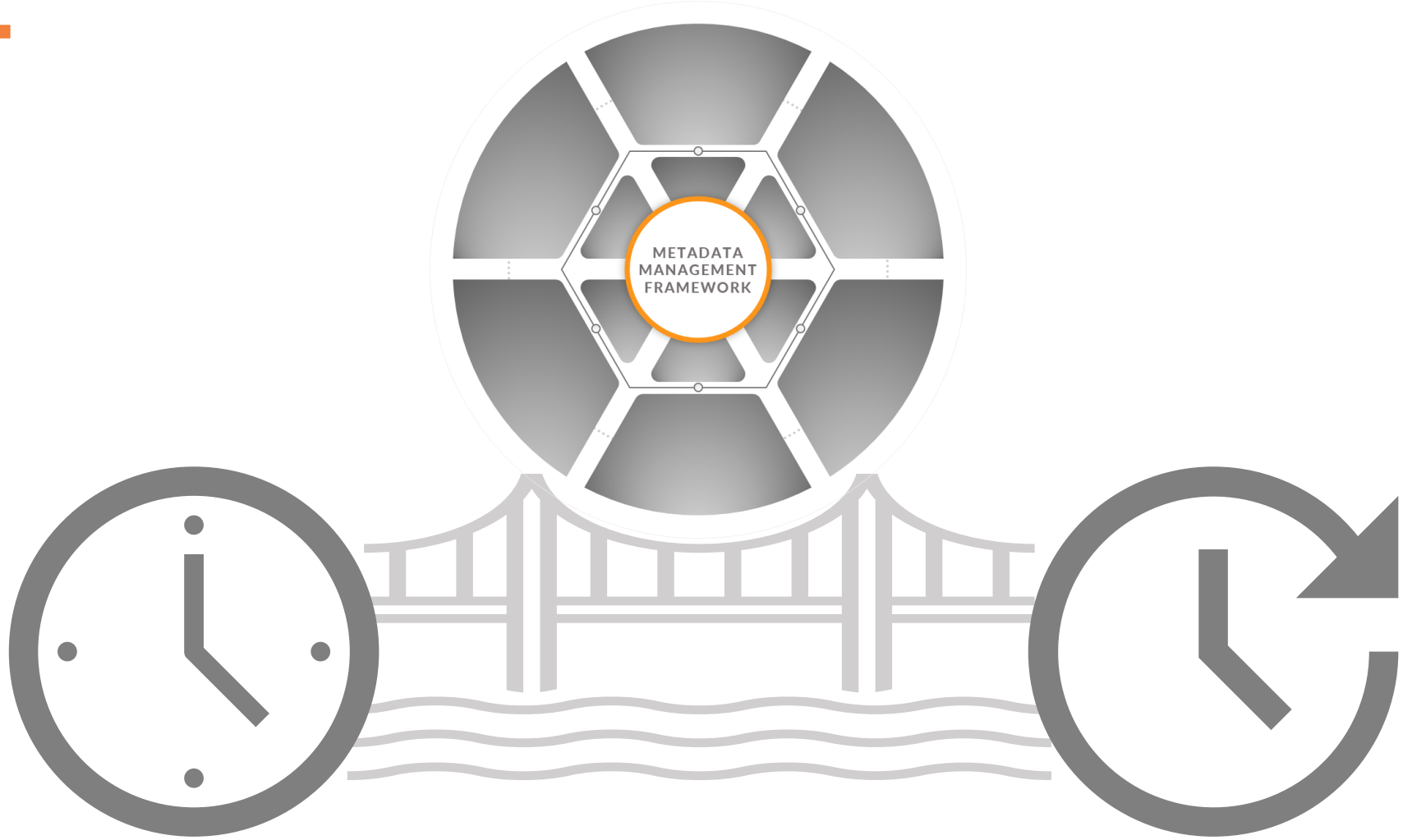
2

3

4



How Are You Going to Get There?



Why..

is it SO important?

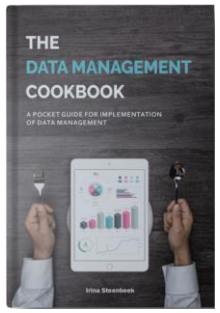
is it NOW?

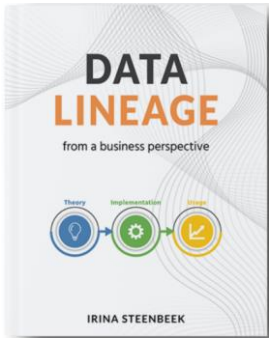
A Few Words about Me…

CIVIL ENGINEER
ACTIVE BLOGGER
INTERNATIONAL BANKS
DATA LINEAGE
DATA AND INFORMATION VALUE CHAIN
CONSULTANT
4 BOOKS
3 WHITEPAPERS
50 ARTICLES
SPEAKER AT INTERNATIONAL CONFERENCES
DATA MANAGEMENT FOR GLOBAL COMPANIES
OWNER DATA CROSSROADS
IMPLEMENTATION OF DATA MANAGEMENT
11 YEARS OF HANDS-ON EXPERIENCE
FINANCE & BUSINESS CONTROL
ERP IMPLEMENTATION
MANAGEMENT CONSULTANCY
DATA MANAGEMENT MATURITY ASSESSMENT (REVIEWS)

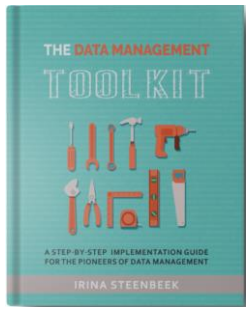
I´ve Shared my Experience in Several Books and Courses:

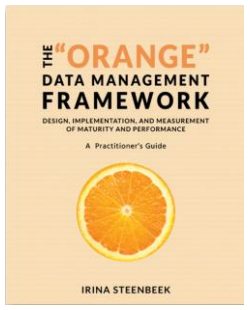
available at amazon

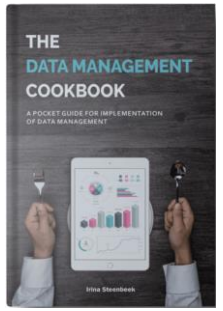




2018 | 2019 | 2021 | 2022 | 2023 | 2024

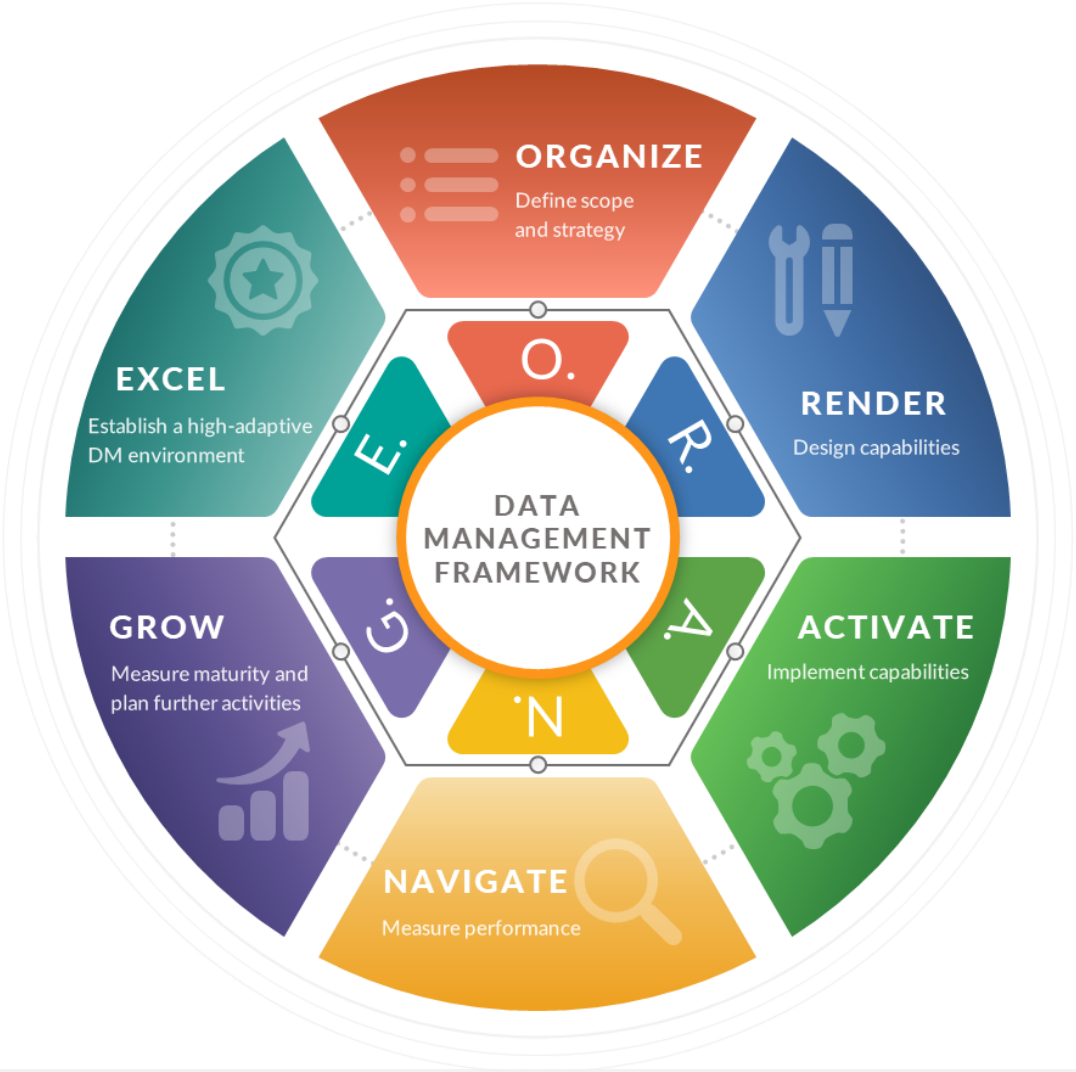




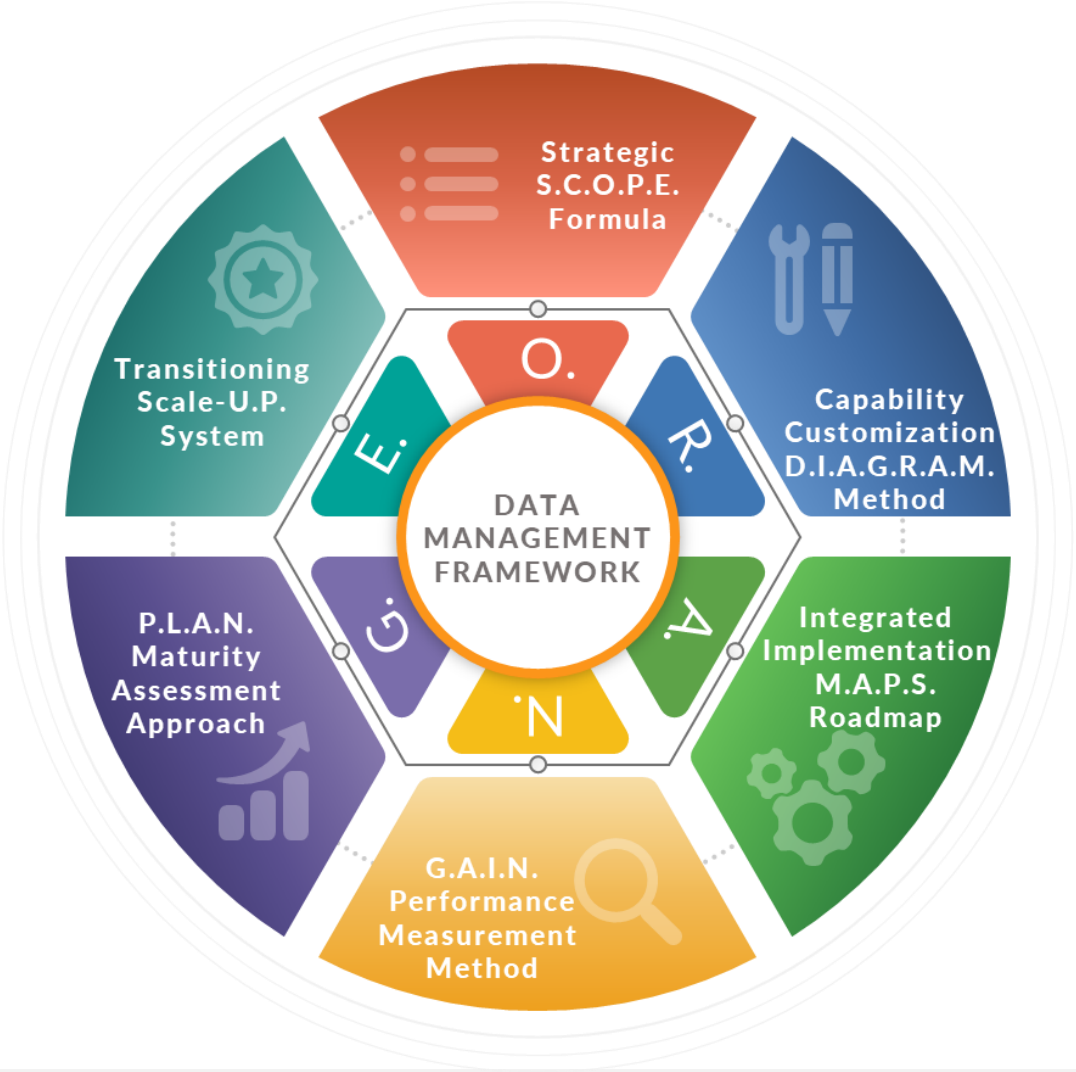


New Book

The O.R.A.N.G.E. Data Management Framework Assists in Setting Up a Metadata Business Case



This Framework Consists of Multiple Models and Methods



Please, Present Yourself…

- Name
- Company
- Current position
- Knowledge and/or experience with this subject
- Three key expectations from this workshop
- A business case: own or standard
- How did you get information about this training?

A Business Case for Metadata Management Should Include the Following:

1. Key Concepts and Terminology
2. Business Drivers
3. Sponsors and Stakeholders
4. Scope of an Initiative
5. (Meta) Data M./G. Framework
6. Situational Analysis
7. Implementation Approach & IT Tools
8. Initiative Roadmap
9. Established Program/Project/BaU

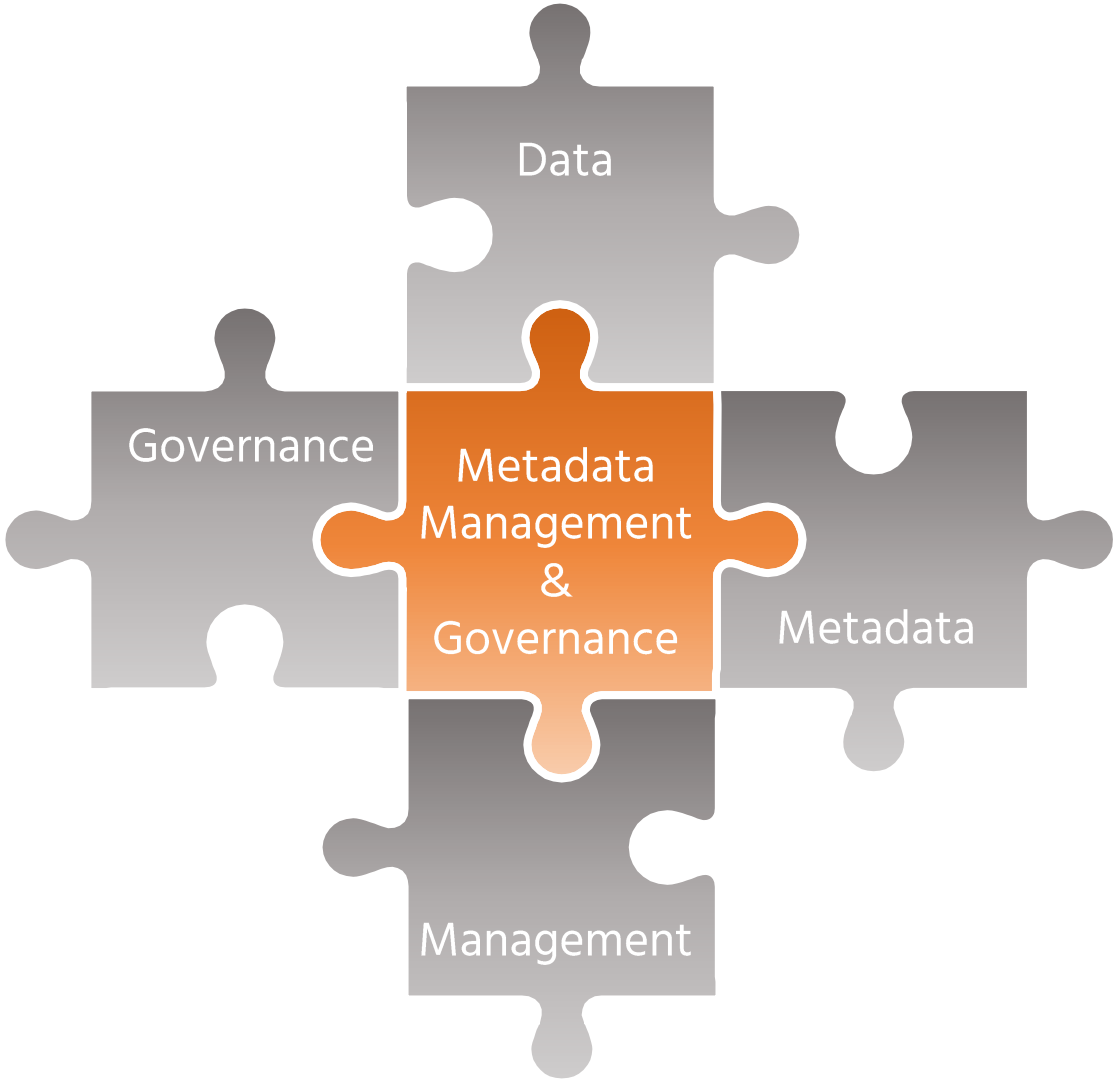
A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
3. **Sponsors and Stakeholders**
4. **Scope of an Initiative**
5. **(Meta) Data M./G. Framework**
6. **Situational Analysis**
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

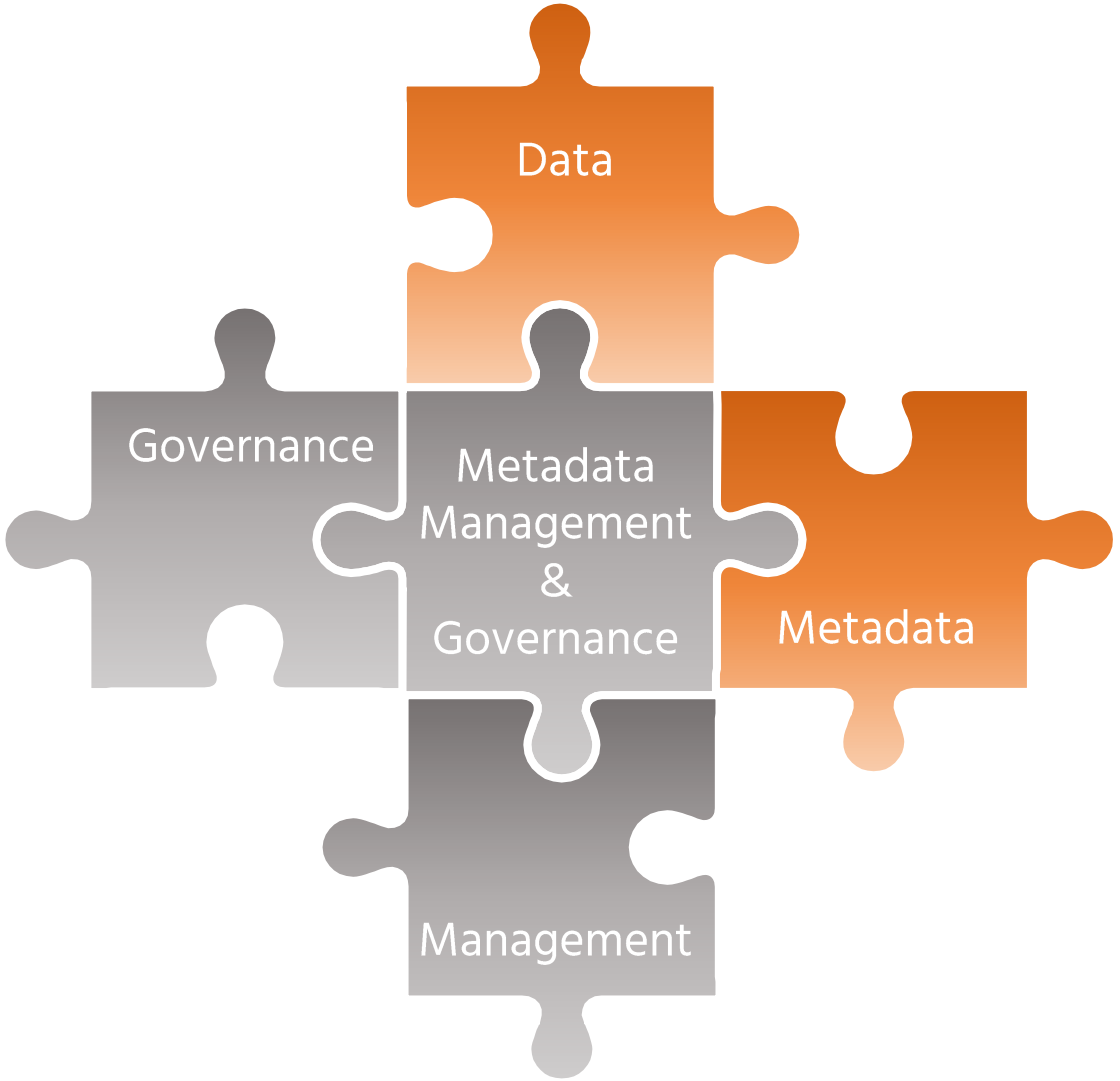
Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

To Be on the Same Page, We Need to Align Terminology



To Be on the Same Page, We Need to Align Terminology



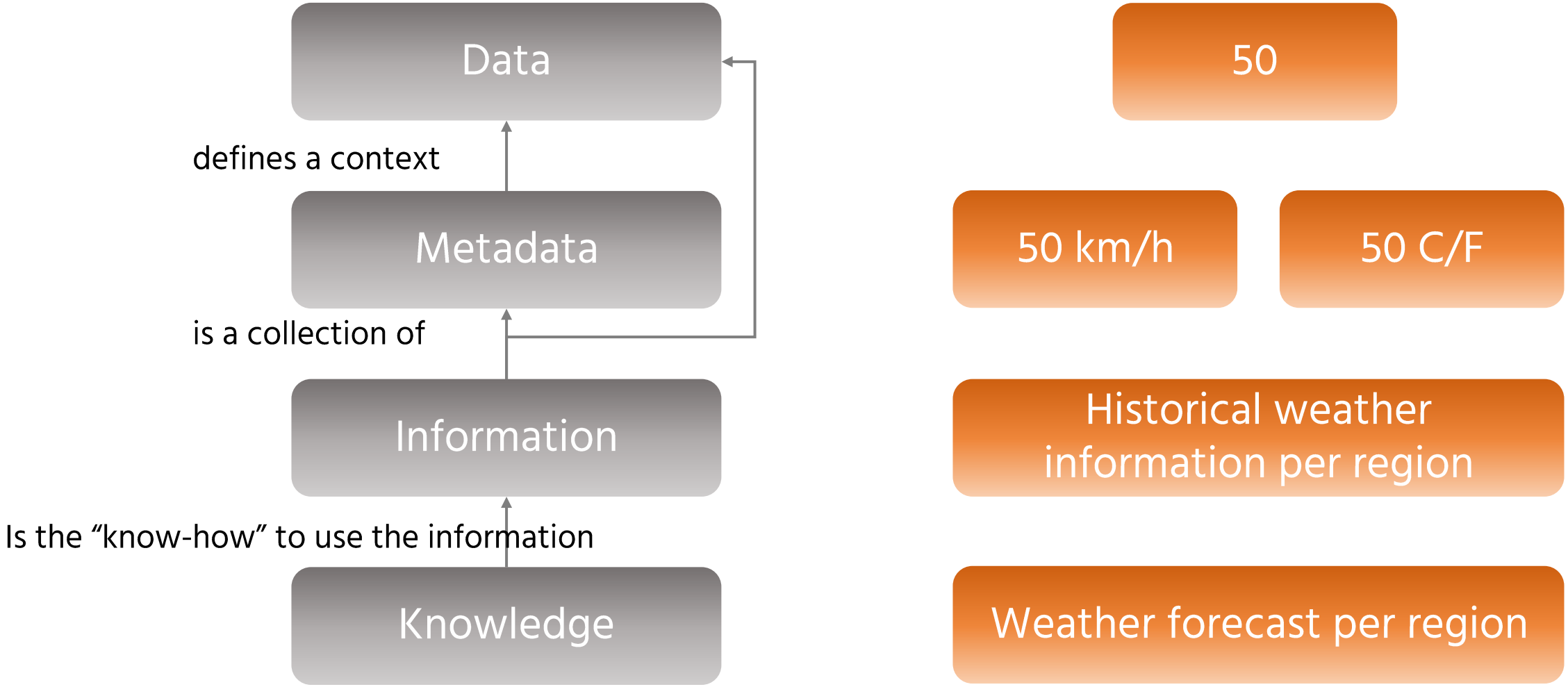
DEFINITION

Data

THE PHYSICAL OR ELECTRONIC REPRESENTATION OF SIGNALS “IN A MANNER SUITABLE FOR COMMUNICATION, INTERPRETATION, OR PROCESSING BY HUMAN BEINGS OR BY AUTOMATIC MEANS”

Source: United Nations Statistical Commission and Economic Commission for Europe. Terminology on Statistical Metadata. United Nations. Geneva, 2000., https://unece.org/fileadmin/DAM/stats/publications/53metadaterminology.pdf, p.8. Accessed 16 Feb.2021.

Data, Metadata, Information, and Knowledge Are All Subjects of Data Management



Metadata Defines the Context for Data

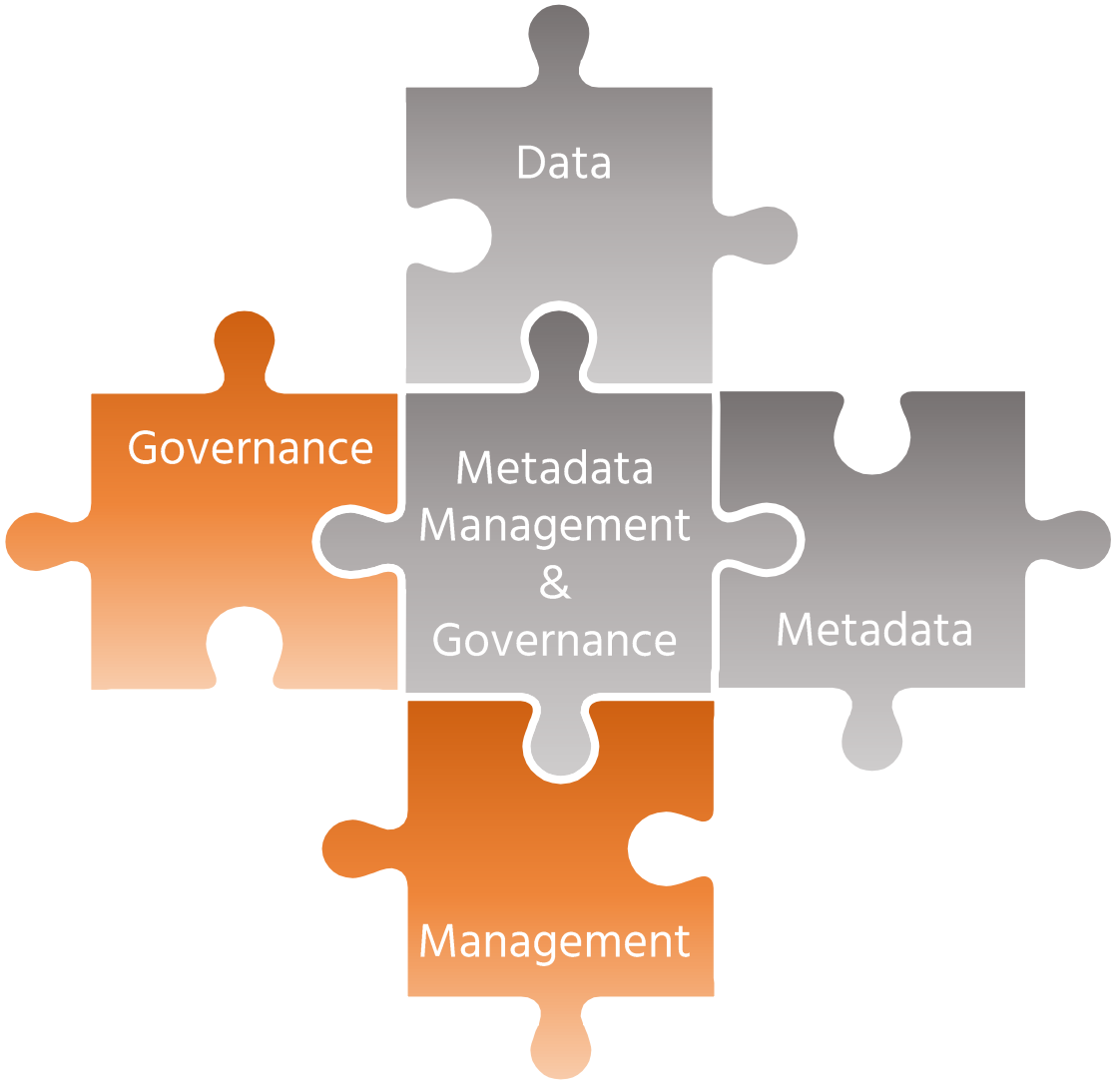
A name of a natural person	A customer internal identification number	A country where a person has or will have lived	A calculation of risk posed by a customer
Customer name	Customer ID	Country of residence	Internal risk rating
customerName	idCustomer	country	intRating
John Smith	CC-101010	USA	BBB
	Data	Metadata	

DEFINITION

Metadata

DATA THAT DEFINES AND DESCRIBES OTHER DATA IN A PARTICULAR CONTEXT

To Be on the Same Page, We Need to Align Our Language

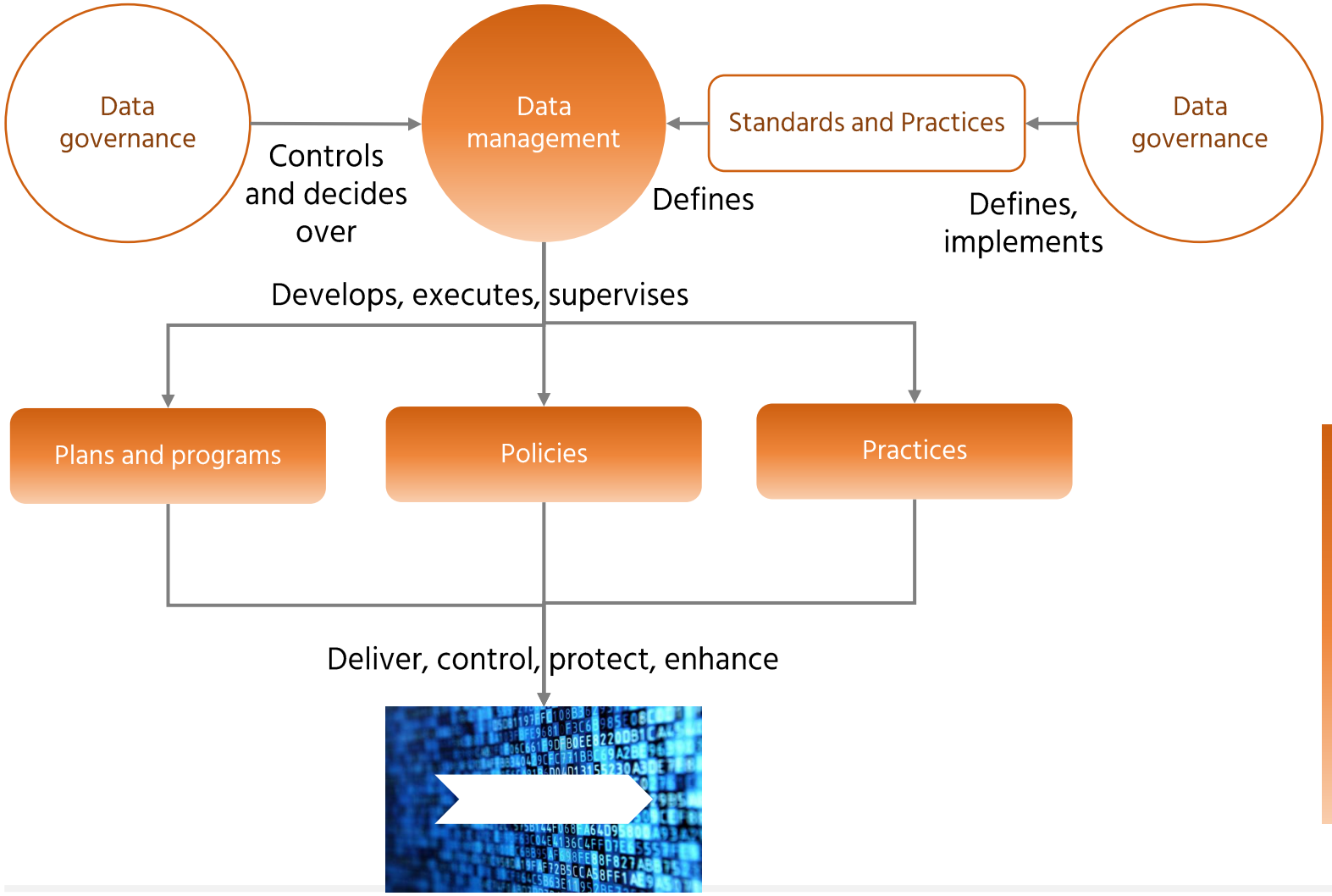


Let's Look at the DAMA-DMBOK2 and DCAM Definitions

DAMA-DMBOK2

Data governance is the *exercise of authority, control, and shared-decision making* (*planning, monitoring, and enforcement*) over **the management of data assets**

Data management is the *development, execution, and supervision* of *plans, policies, programs,* and *practices* that deliver, control, protect, and enhance the value of data and information assets throughout their lifecycles



DCAM

Data governance function is the function that *defines and implements the standards, controls and best practices* **of the data management** initiative in alignment with strategy.

Data management is the *development, execution and supervision of plans, policies, programs and practices* which deliver control and protection, and enhance the value of data and information assets throughout their lifecycles.

Data Governance Governs Data Management, NOT DATA

Data governance

I decide how you can decide, and then control how you do it

Data management

I decide how and when I will deliver, control, protect, and enhance data

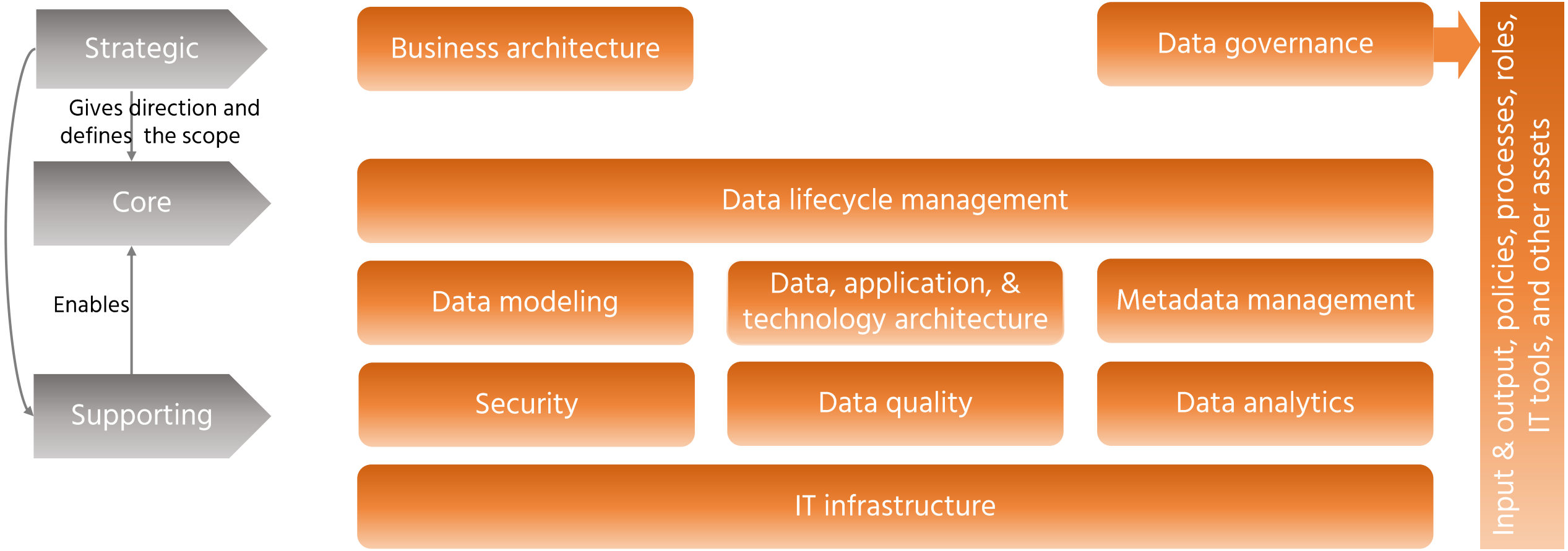
DEFINITION

Data Management Capability

A COMPANY'S ABILITY TO SAFEGUARD DATA ASSETS AND DELIVER VALUE FROM THEM

Data Management Consists of Multiple (Sub)-Capabilities

Data Governance is One of Them



DEFINITION

DM (Data) Governance Capability

A COMPANY'S ABILITY TO DESIGN A DATA MANAGEMENT FUNCTION, COORDINATE AND CONTROL ITS IMPLEMENTATION AND PERFORMANCE

DEFINITION

Metadata Management

"PLANNING, IMPLEMENTATION, AND CONTROL ACTIVITIES TO ENABLE ACCESS TO HIGH QUALITY, INTEGRATED METADATA."

Source: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.419.

Please, Note for Yourself, Which Terminology You Use in Your Company

Data

Metadata

Data Management

Data Governance

A Business Case for Metadata Management Should Include the Following:

1. ✓ **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. ✓ **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
4. **Scope of an Initiative**
5. **(Meta) Data M./G. Framework**
6. **Situational Analysis**
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

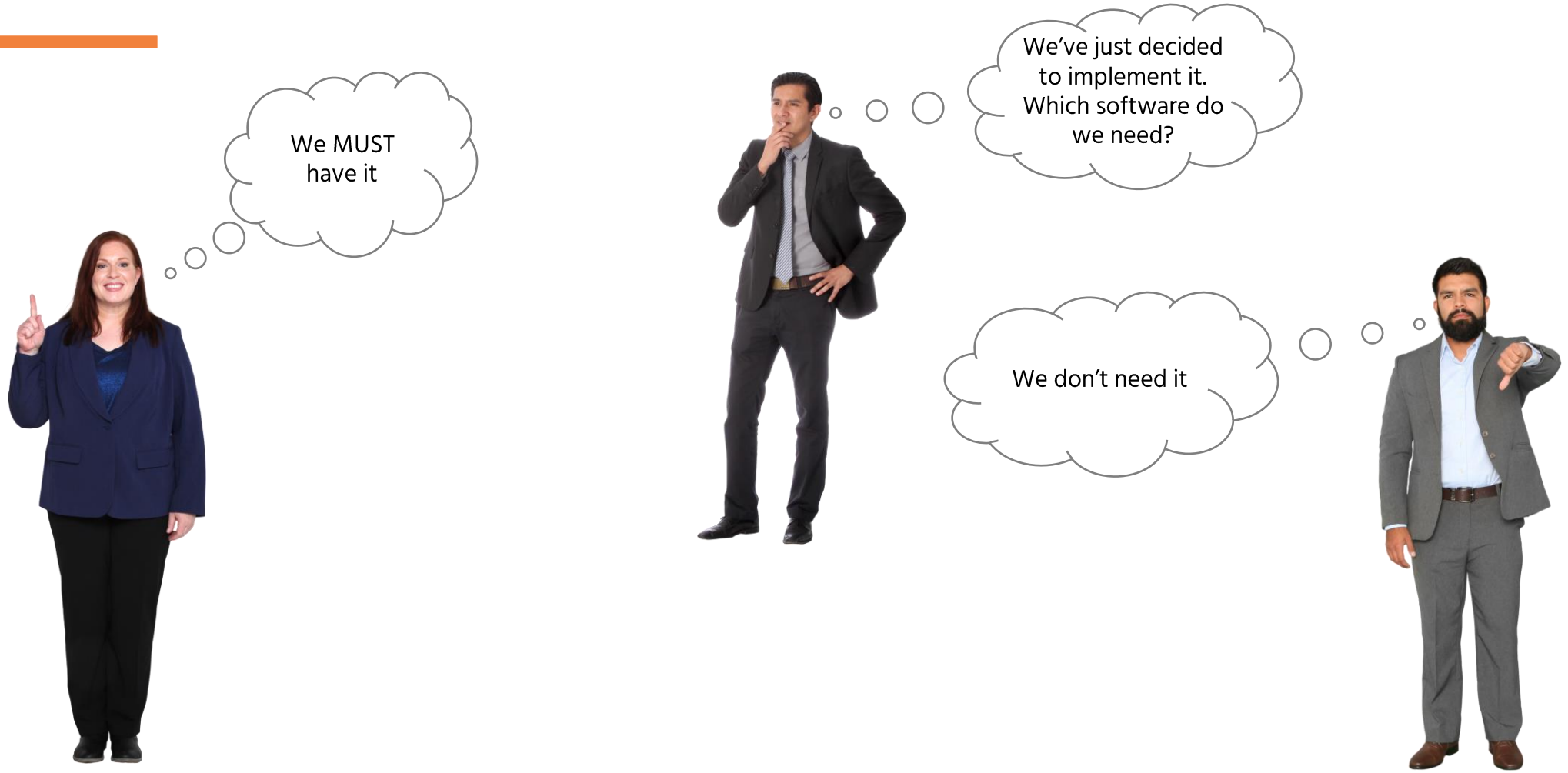
Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

Business Benefits is the Core Reason for Establishing a Metadata Business Case

S.	C.	O.	P.	E.
Stimulus	**Contributor**	**Outlook**	**Plan**	**Establishment**
Answer the question: "Why does your company need this initiative?"	Find out stakeholders that should support and benefit from this initiative	Make a scope feasible	Set up long-term plans	Establish a business case/ program/ project

Data Management Professionals Have Quite Different Views on Metadata Management



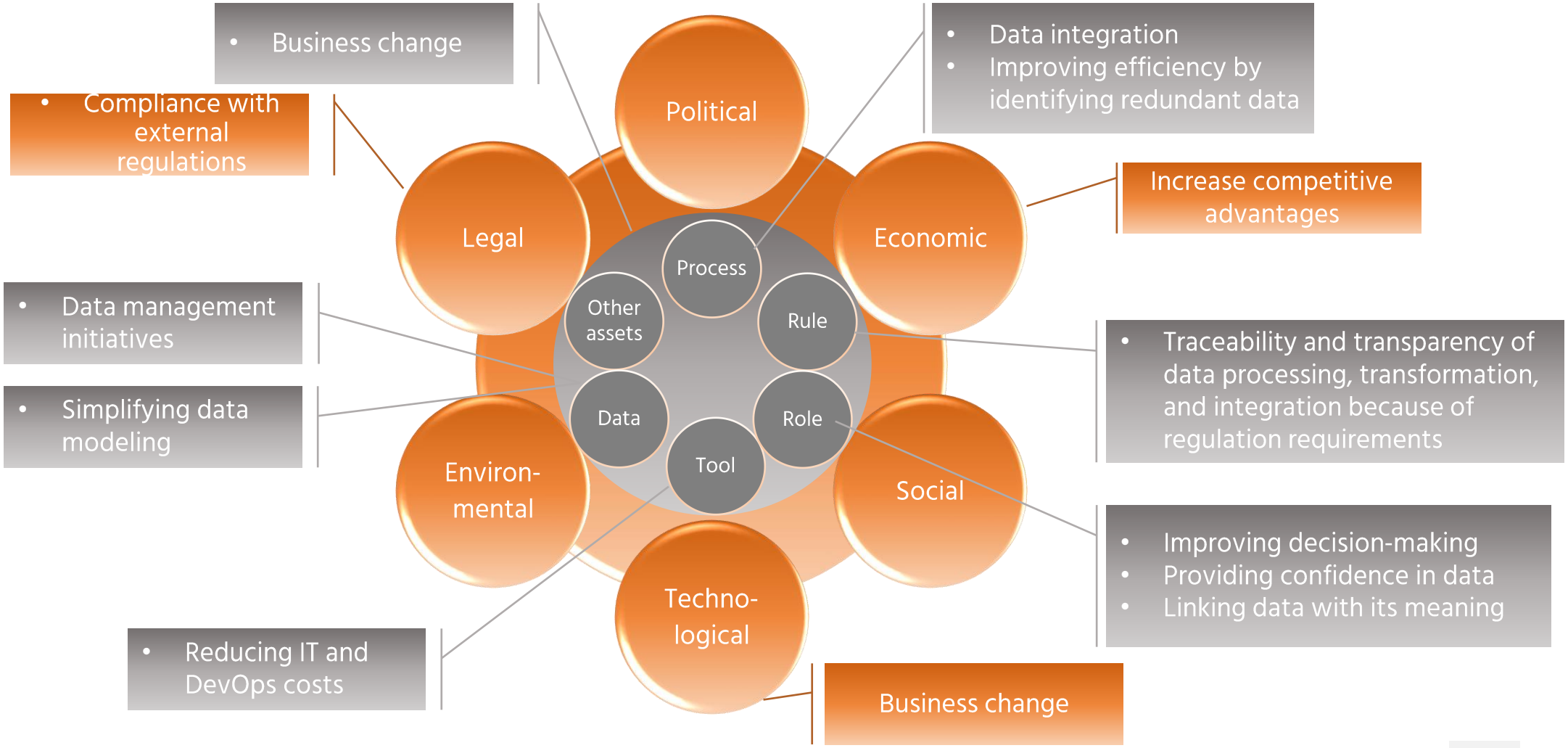
DEFINITION

Business Driver

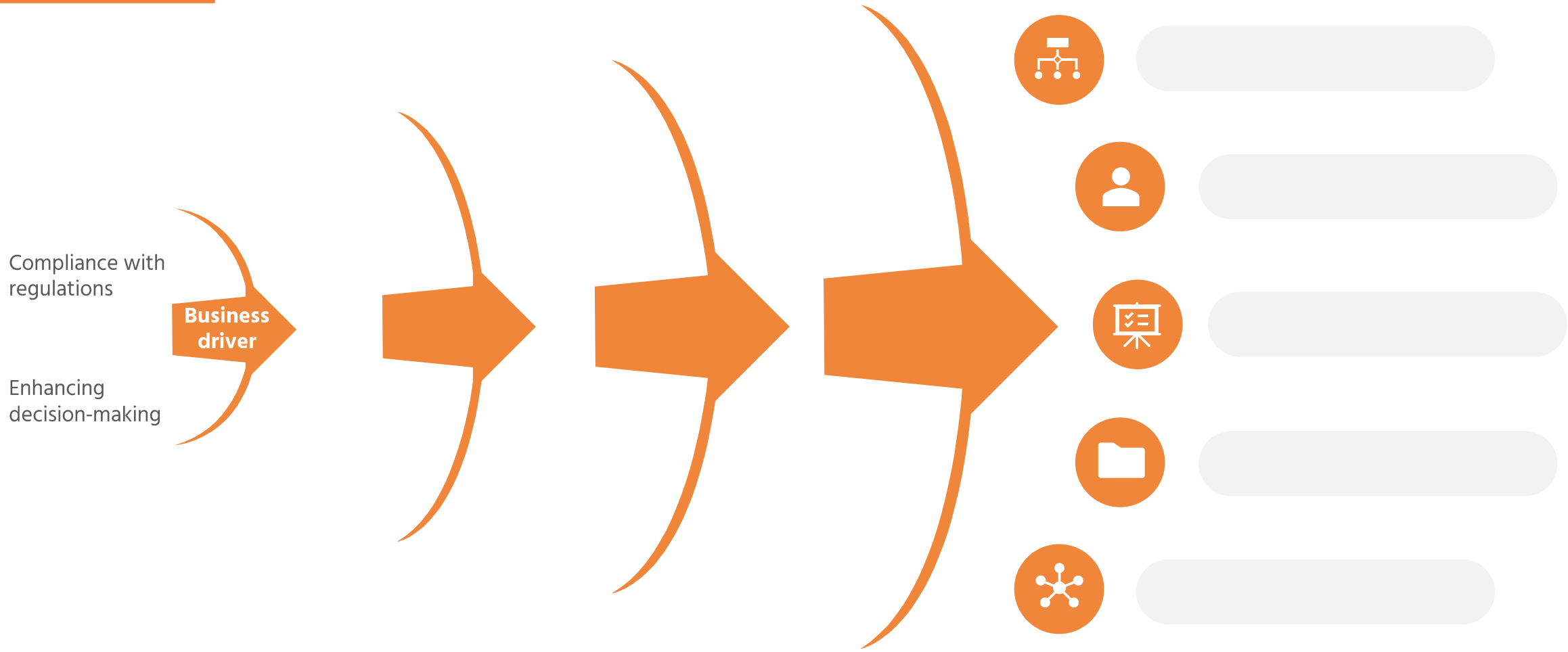
A COMPONENT OF THE INTERNAL OR EXTERNAL BUSINESS ENVIRONMENT THAT:

- ENSURES SUSTAINABLE SUCCESS AND GROWTH IN THE MAIN AREAS OF BUSINESS FOR WHICH THE BUSINESS WAS DESIGNED, AND
- AFFECTS A COMPANY'S EARNINGS OR THE PRICE OF ITS STOCK

Various External and Internal Business Factors Motivate a Company to Start a (Meta)data-Related Initiative



Any Data-Related Initiative Starts with The Most Significant Business Reasons



Let's Summarize the Most Common Business and (Meta)data Management Drivers

Tip: A company should limit its ambition to 1-2 drivers to make a DM initiative feasible

- ○ Implement business change
- ○ Improve decision-making
- ✓ Comply with regulations
- ✗ Improve customer experience and competitive advantage

→

- Integrate data of different formats and from multiple sources ○
- Ensure transparency and traceability of data movements and transformations ✓
- Reduce IT and DevOps costs by optimizing data architecture landscapes ○
- Migration projects and optimization of data pipelines ○

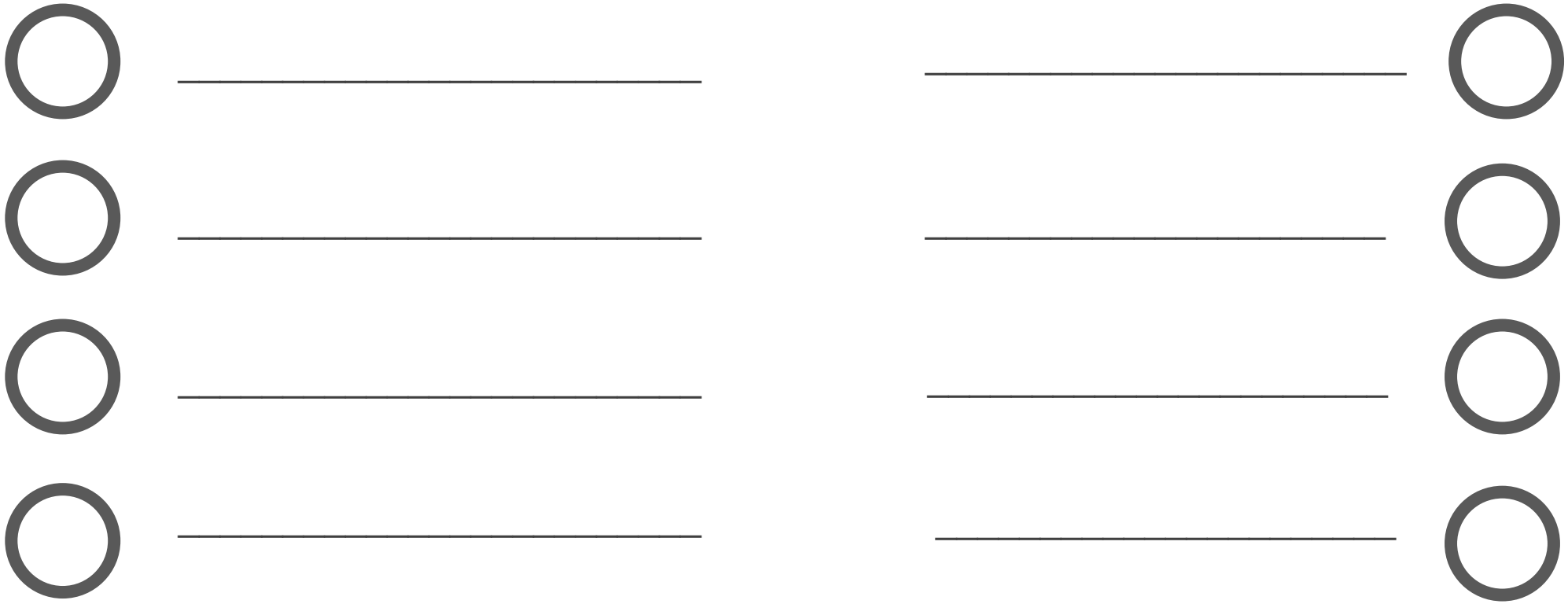
We Will Use the Example of a Made-Up Company XYZ across the Course

- XYZ Company develops software products and provides accompanying consulting services for the implementation of their software
- XYZ has two software product lines:
  - Product line Y focuses on the needs of corporate customers (“Corporate market segment”)
  - Product line Y serves the needs of individuals, including sole proprietors (“Retail market segment”)
- The head office of XYZ company is located in a country within the EU. The company has several subsidiaries in other EU countries and in the US.

XYZ Company, Example: Business Driver Prioritization

Business driver	Benefits: 0 (low) – 10 (high)							Total score
	Increase revenue	Reduce cost	Reduce risk	Improve process	Business continuity	Improve efficiency	Protect reputation	
Compliance with GDPR and PII (personal data)	2	8	10	10	10	10	5	55
Compliance with SOX regulation (reporting)	2	8	10	10	10	10	5	55
Enhance decision-making (Customer management)	2	5	8	10	10	10	10	55
Digital transformation (Finance reporting)	1	7	8	10	8	10	5	49
Staff skills upgrade	1	5	8	5	5	8	2	34
Movement to cloud	0	6	2	5	5	5	2	25

Exercise 1: Note the Business and Data Management Reasons for a Data Initiative in Your Company



A Business Case for Metadata Management Should Include the Following:

1. ✓ **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. ✓ **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. ✓ **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
5. **(Meta) Data M./G. Framework**
6. **Situational Analysis**
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

Business Drivers Define an Initiative's Sponsors and Stakeholders

S.	C.	O.	P.	E.
Stimulus	**Contributor**	**Outlook**	**Plan**	**Establishment**
Answer the question: "Why does your company need this initiative?"	Find out stakeholders that would support and benefit from this initiative	Make a scope feasible	Set up long-term plans	Establish a business case/ program/ project

DEFINITION

Business Stakeholder

AN INDIVIDUAL OR A GROUP OF INDIVIDUALS WITH PARTICULAR CONCERNS AND INTERESTS IN A BUSINESS

Each stakeholder has its concern, the level of involvement, and the level of impact/influence

DEFINITION

Sponsor

A BUSINESS STAKEHOLDER OR A GROUP OF STAKEHOLDERS THAT SUPPORT, PROMOTE, AND FUND A BUSINESS INITIATIVE

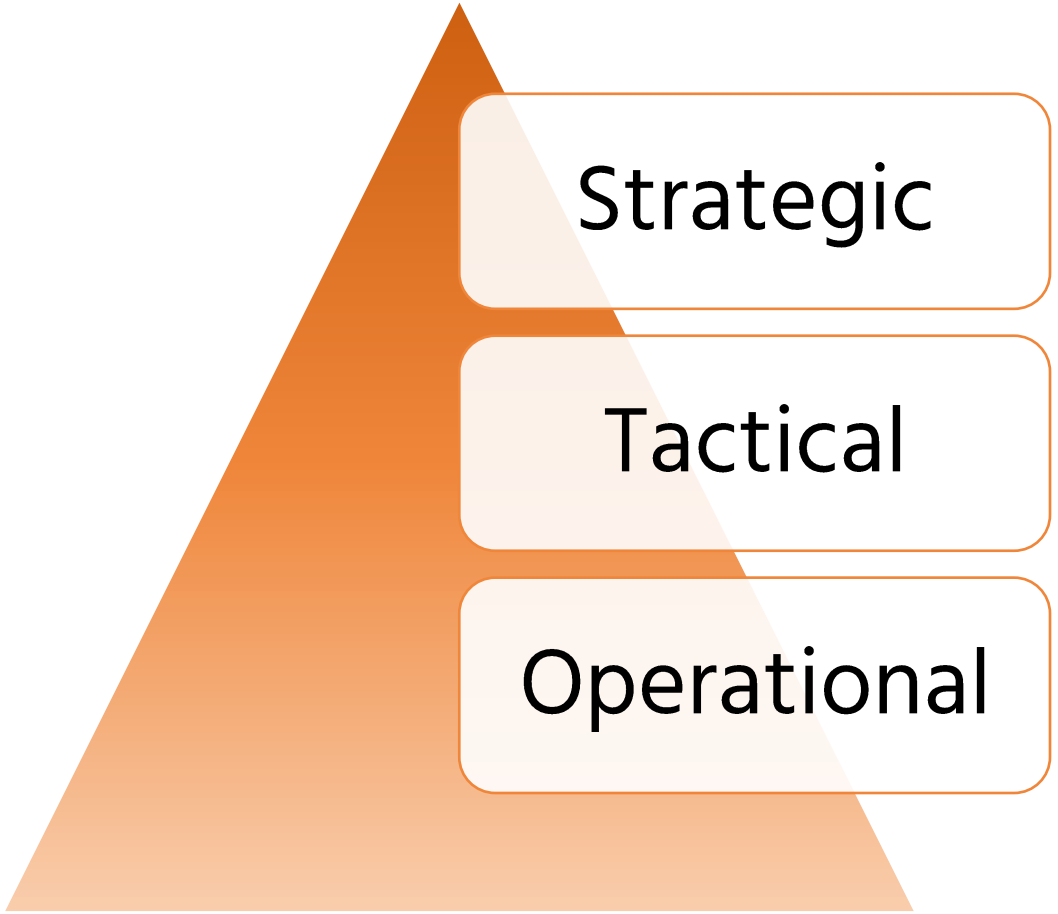
A company's leadership team should become a sponsor for strategic data management initiatives

Various Stakeholder Groups Have Different Needs, Benefits, and Roles in a Metadata Management Initiative

WHY do they need it?

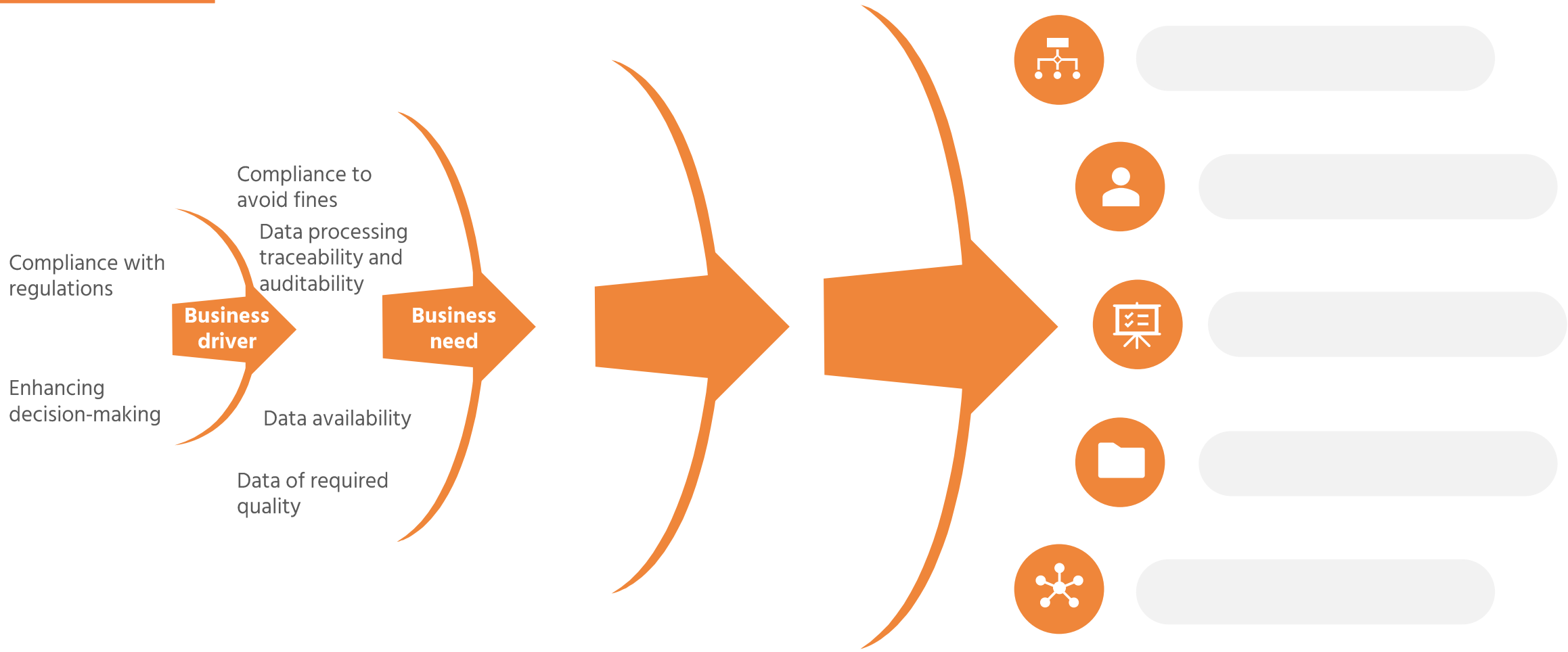
WHAT should they do?

HOW should they do it?



- A company's leadership team: CEO, CFO, CIO
- Middle management: Heads of business lines, units, and departments; CDO
- Business subject matter experts
- Data management and IT professionals

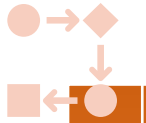
Business Drivers Must Be Translated into the Business Needs of Each Stakeholder Group



A Company's Leadership Team Must Act as a Sponsor of Every Strategic Data-Related Initiative

Needs

- Comply with regulations to avoid fines
- Decrease IT-related costs
- Reliable data for strategic decision-making
- Business optimization



Initiatives

- Compliance-related initiatives (GDPR, PERDARR, IFRS17, SOX)
- IT projects (Replacement of legacy software; Movement to Cloud)
- AI and ML initiatives, Customer-360
- Digital transformation

Benefits

- Reduce operational risks and avoid potential fines
- Reduce IT operational and maintenance costs

Company XYZ, Example: Stakeholder Map

Stakeholder group	Stakeholder position	Business driver 1 (Compliance)			Business driver 2 (Finance reporting)		
		Concerns	Level of influence (Low, High)	Level of involvement (Low, High)	Concerns	Level of influence (Low, High)	Level of involvement (Low, High)
Leadership team	Chief Executive Officer	Comply with regulations	H	L	Correct info for decision-making	H	L
	Chief Commercial Officer	Reputation with customers	H	L	Correct info for decision-making	H	H
	Chief Information Officer	Comply with regulations	H	H	IT costs reduction	H	H
	Chief Product Officer	Comply with regulations	H	L	No serious concerns	H	L
	Chief Financial Officer	Comply with regulations	H	L	Correct info for decision-making	H	H

Exercise 2: Note the Key Sponsors and Stakeholders of Your Initiative

1. Use Template 2: Stakeholder Map
2. Indicate key sponsors and stakeholders and their concerns
3. Assess the level of their influence and involvement
4. Present results

Time: 10 minutes

A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
6. **Situational Analysis**
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

Schedule

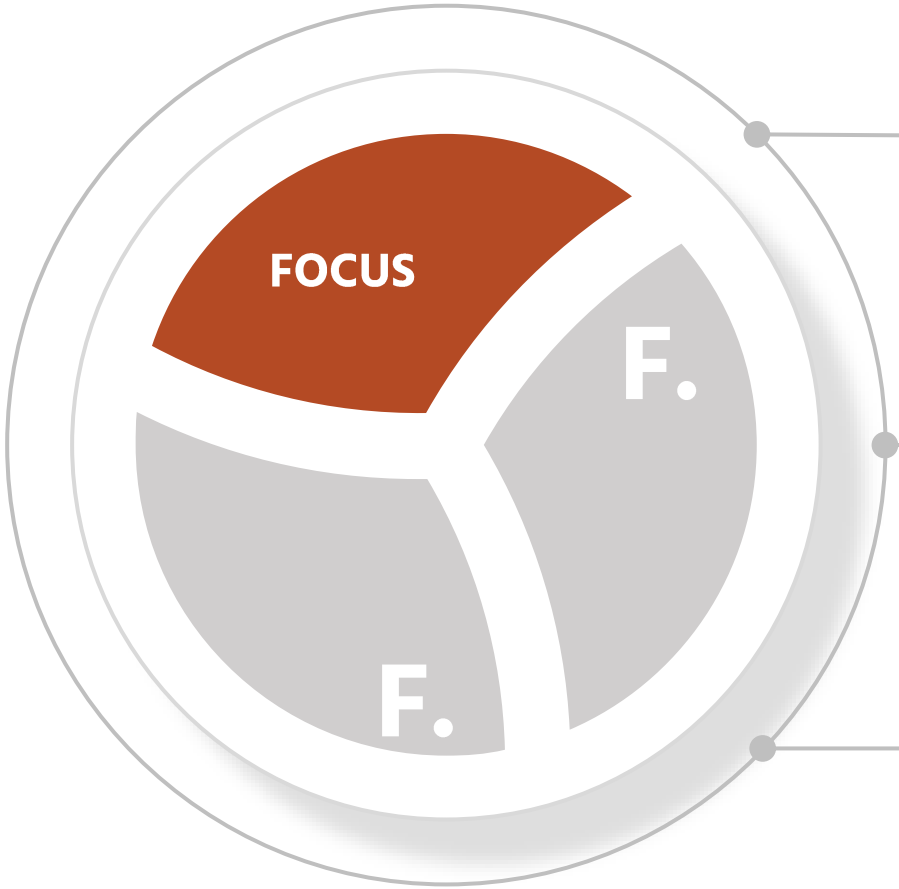
Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

A Feasible Scope is a Key Factor of a (Meta)Data Initiative Success:

S.	C.	O.	P.	E.
Stimulus	**Contributor**	**Outlook**	**Plan**	**Establishment**
Answer the question; "Why does your company need this initiative?"	Find out stakeholders that would support and benefit from this initiative	Make a scope feasible	Set up long-term plans	Establish a business case/ program/ project

3-F Feasibility Formula Limits the Scope to a Realizable Minimum

3-F Feasibility Formula Limits the Scope to a Realizable Minimum

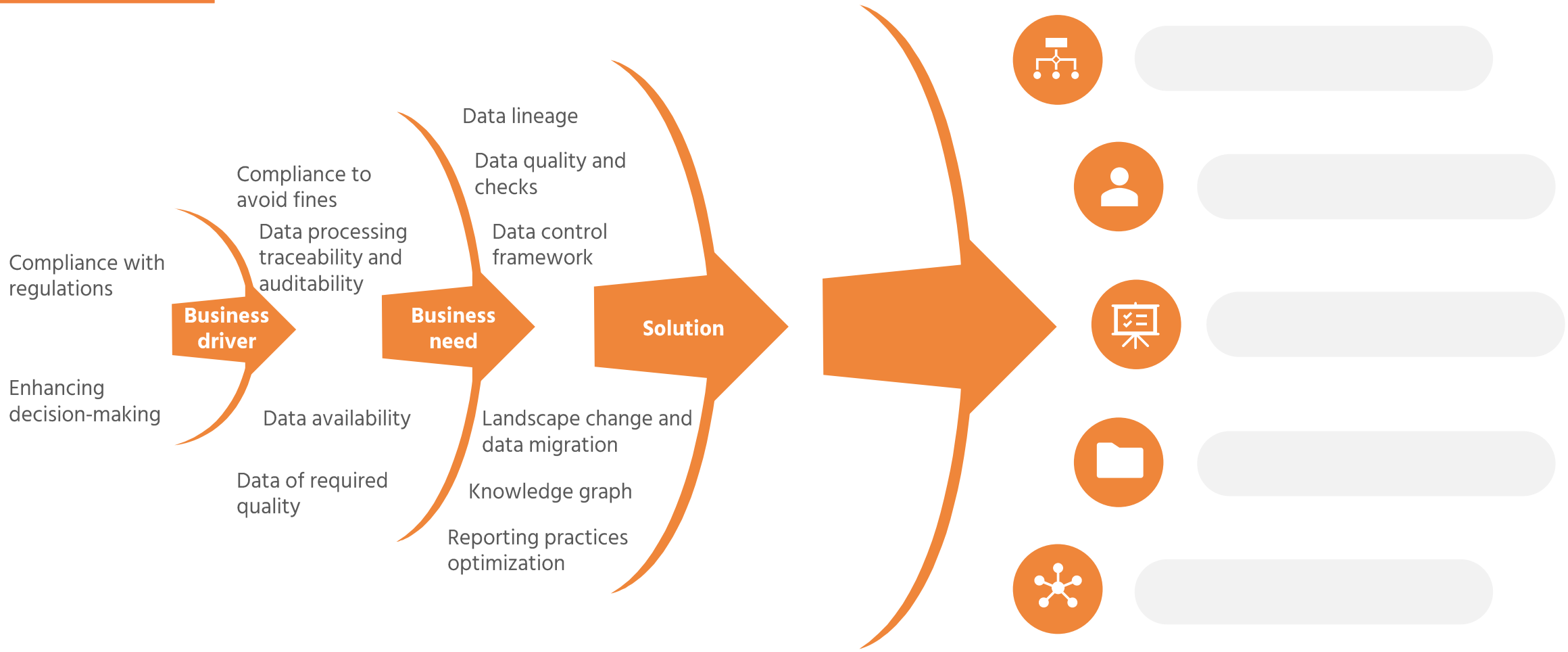


Critical business requirements & solutions

FACTOR

FRAMEWORK

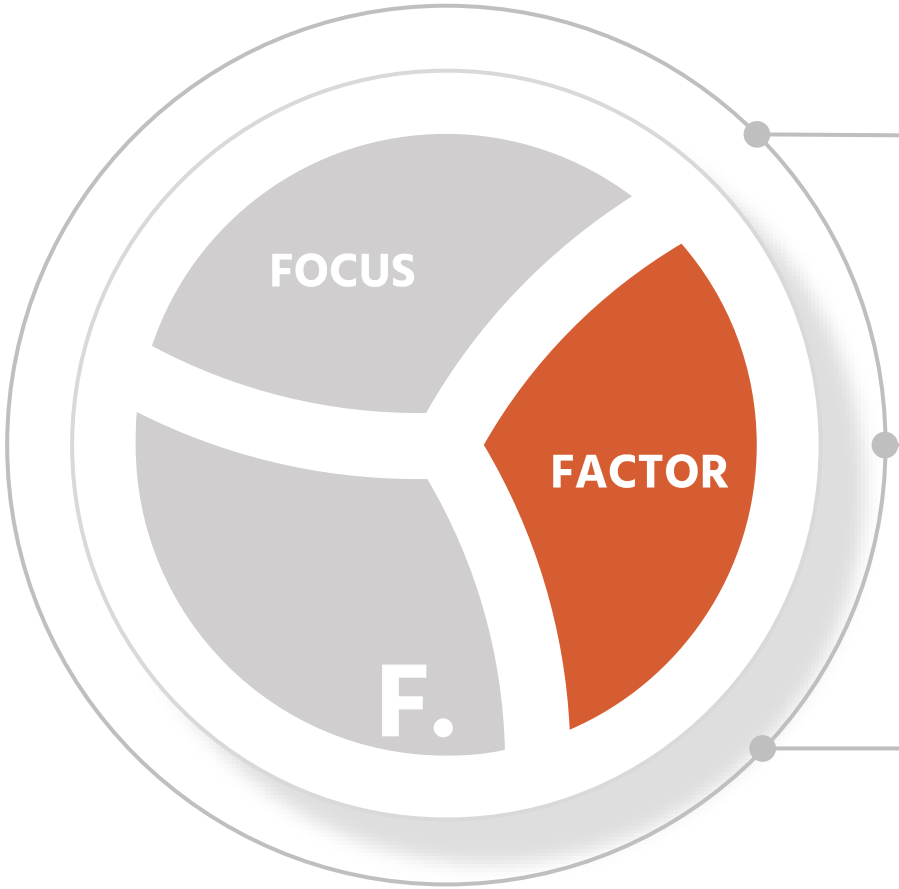
Business Needs Must Be Detailed into Possible Solutions



XYZ Company, Example: A Metadata Initiative Solutions

Solution	Business driver 1: Compliance	Business driver 2: Enhanced Decision-Making	Scope (Yes/No)
Data lineage			Yes
Data quality capability			Yes
Application landscape change and migration			Maybe
Optimization of reporting practices			Yes
Knowledge graph			No
Data observability			Maybe

3-F Feasibility Formula Limits the Scope to a Realizable Minimum

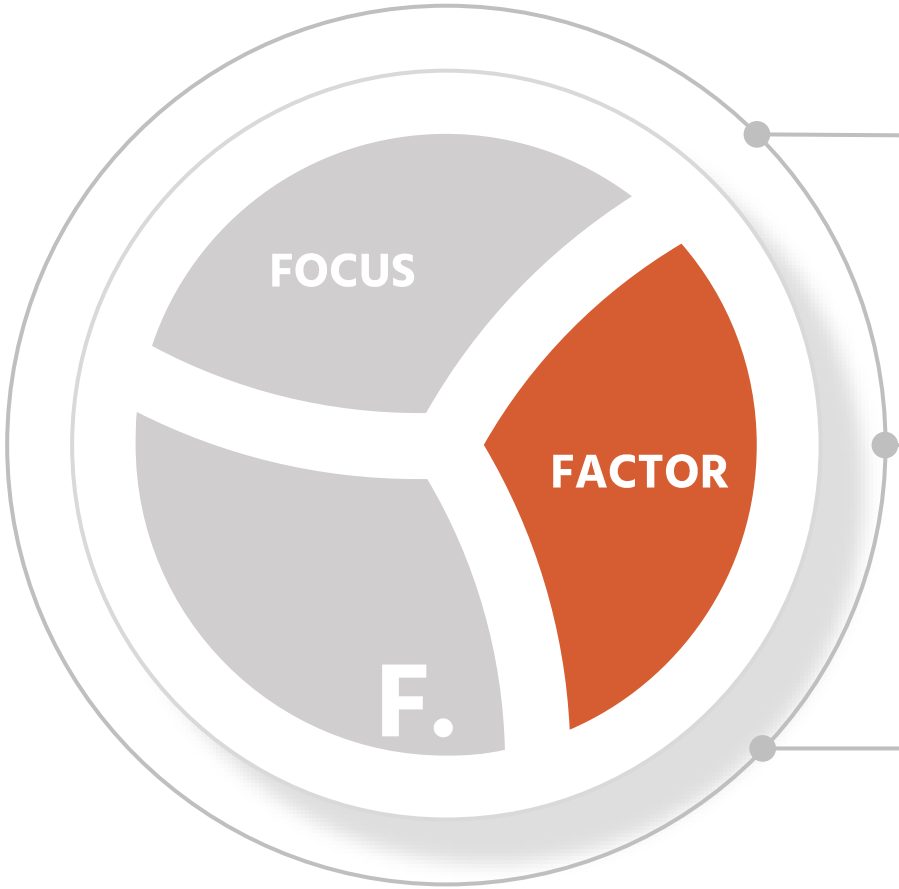


Critical business requirements & solutions

- Metadata & Sources
- Enterprise scope
- Critical chains
- Resources

FRAMEWORK

3-F Feasibility Formula Limits the Scope to a Realizable Minimum



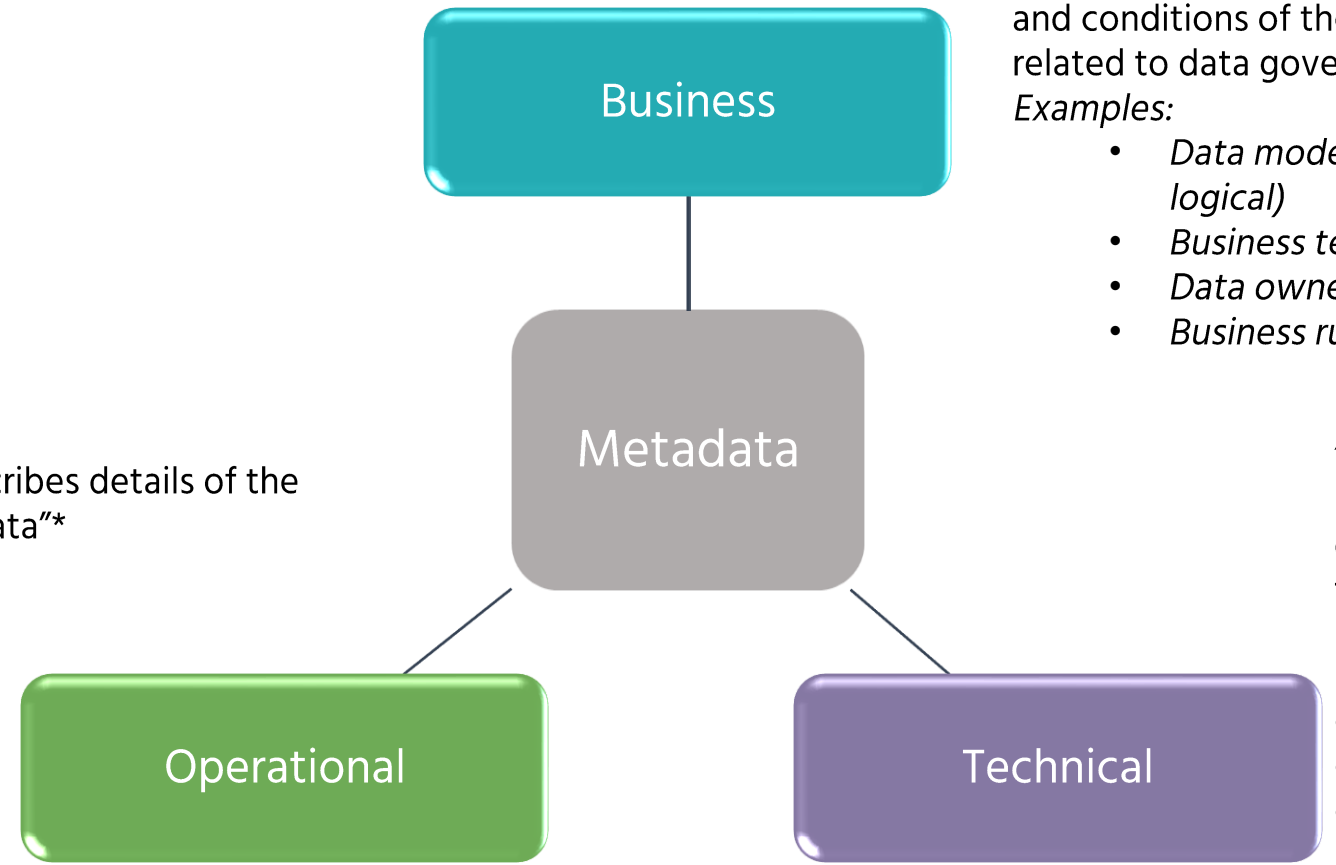
Critical business requirements & solutions

- Metadata & sources
- Enterprise scope
- Critical chains
- Resources

FRAMEWORK

Metadata Can Be of Various Types

The scope of a metadata initiative can be much broader than thought



"Business metadata focuses largely on the content and conditions of the data and includes details related to data governance"*

Examples:

- *Data model (conceptual/semantic, logical)*
- *Business term and definition*
- *Data owner*
- *Business rule*

"Operational Metadata describes details of the processing and accessing data"*

Examples:

- *Logs of jobs execution*
- *Error logs*

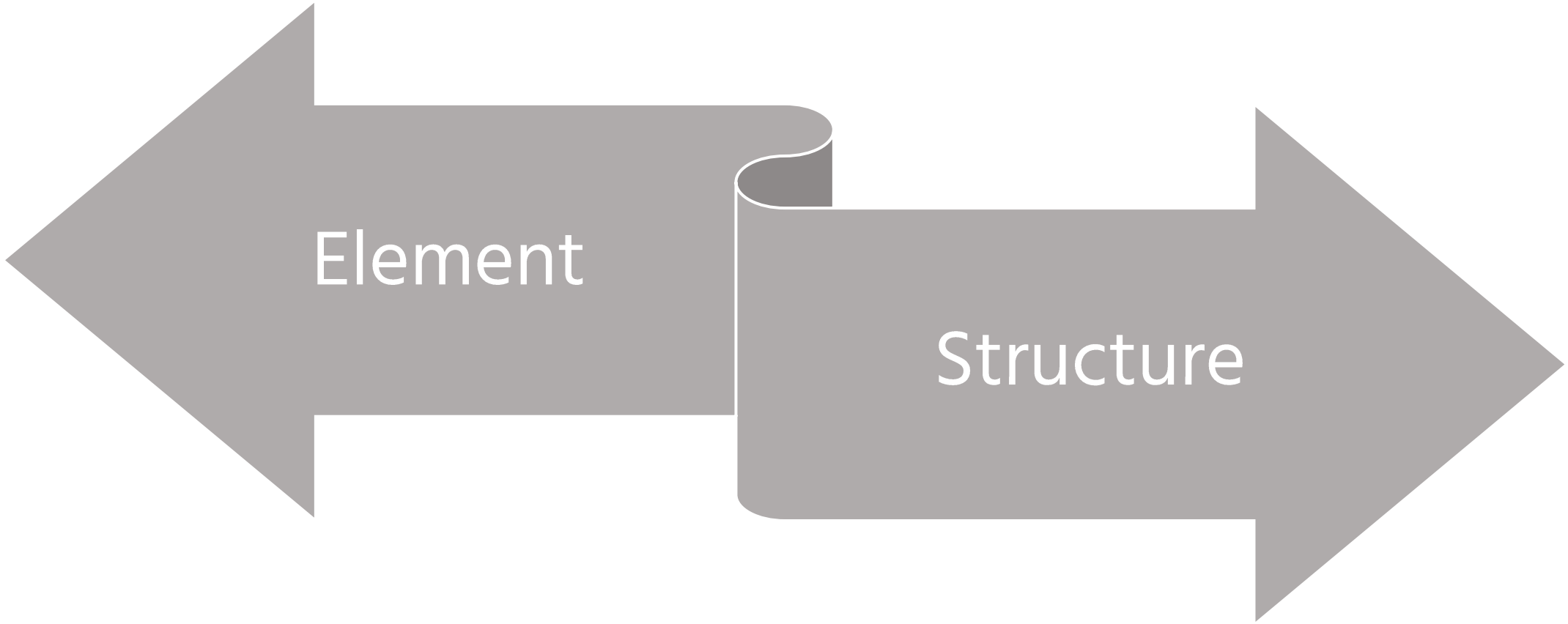
"Technical Metadata provides information about technical details of data, the systems that store data, and the processes that move it within and between systems"*

Examples:

- *Physical data models*
- *Table and column properties*
- *ETL jobs*

*Source: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.423.

Metadata Has Different Levels of Complexity



Business Metadata Consists of the Following Elements and Structures:

Elements

- Definitions and descriptions of data sets, tables, and columns
- Data owner, user, steward
- Security or privacy level of data
- Data issue
- Data usage
- Information about the system of records and/or golden sources for data elements

Structures

- Business and transformation rules, calculations, derivations
- Data quality rules
- Data models (conceptual and logical)
- Data quality measurement results
- Schedules to update data
- Data provenance and data lineage
- Valid value constraints

Source: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.423.

Technical Metadata Consists of the Following Elements and Structures:

Elements

- Physical names of a database and column
- Database object and column properties
- Assess permissions
- File format schema definitions
- Program and application names and descriptions
- Data access rights, groups, roles

Structures

- Data CRUD (create, replace, update, and delete) rules
- Physical data models, including data table names, keys, and indexes
- ETL jobs details
- Source-to-target mapping documentation
- Data lineage documentation, including upstream and downstream change impact documentation
- Recovery and back up rules
- Content update cycle job schedules and dependencies

Source: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.423.

Operational Metadata Consists of the Following Elements and Structures:

Elements

- Technical roles and responsibilities
- Data archiving and retention requirements

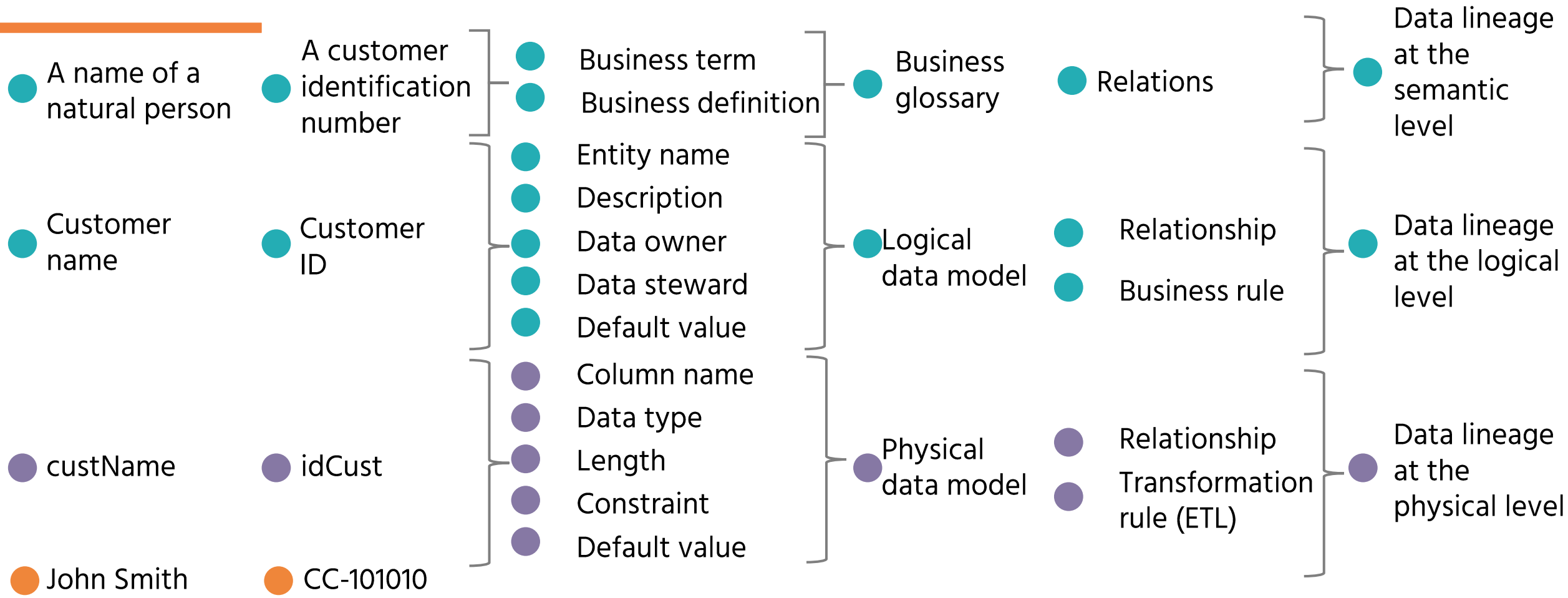
Structures

- Logs of jobs execution for batch programs
- History of extracts and results
- Schedule anomalies
- Results of audit, balance, control measurement
- Error logs
- Reports and query access patterns, frequency, and execution time
- SLA and Data sharing agreements
- Backup, retention, disaster recovery provisions

Source: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.423.

Metadata Elements Assemble into Metadata Structures

Example: Data lineage



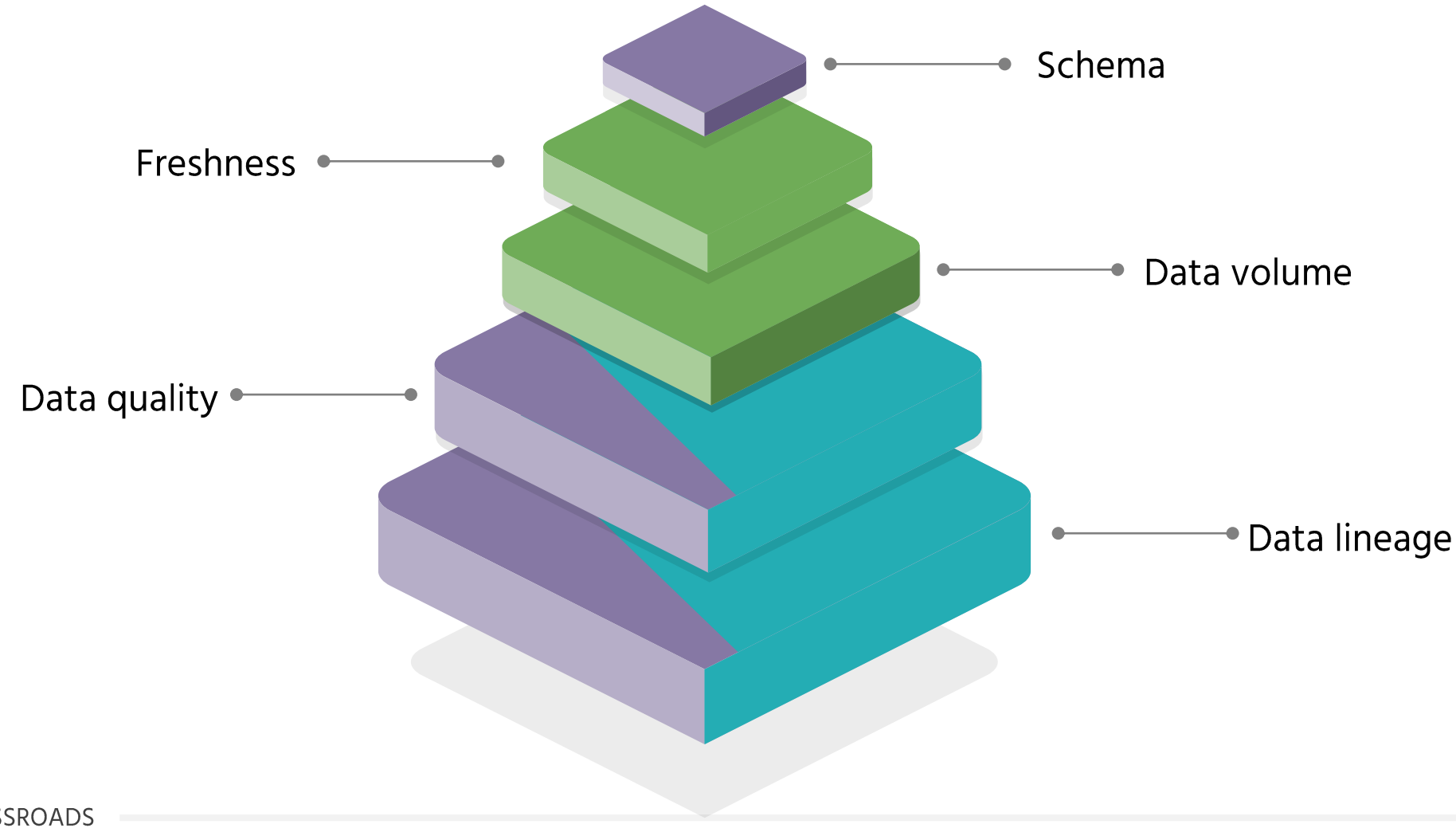
Metadata Elements Assemble into Metadata Structures

Example: Data quality

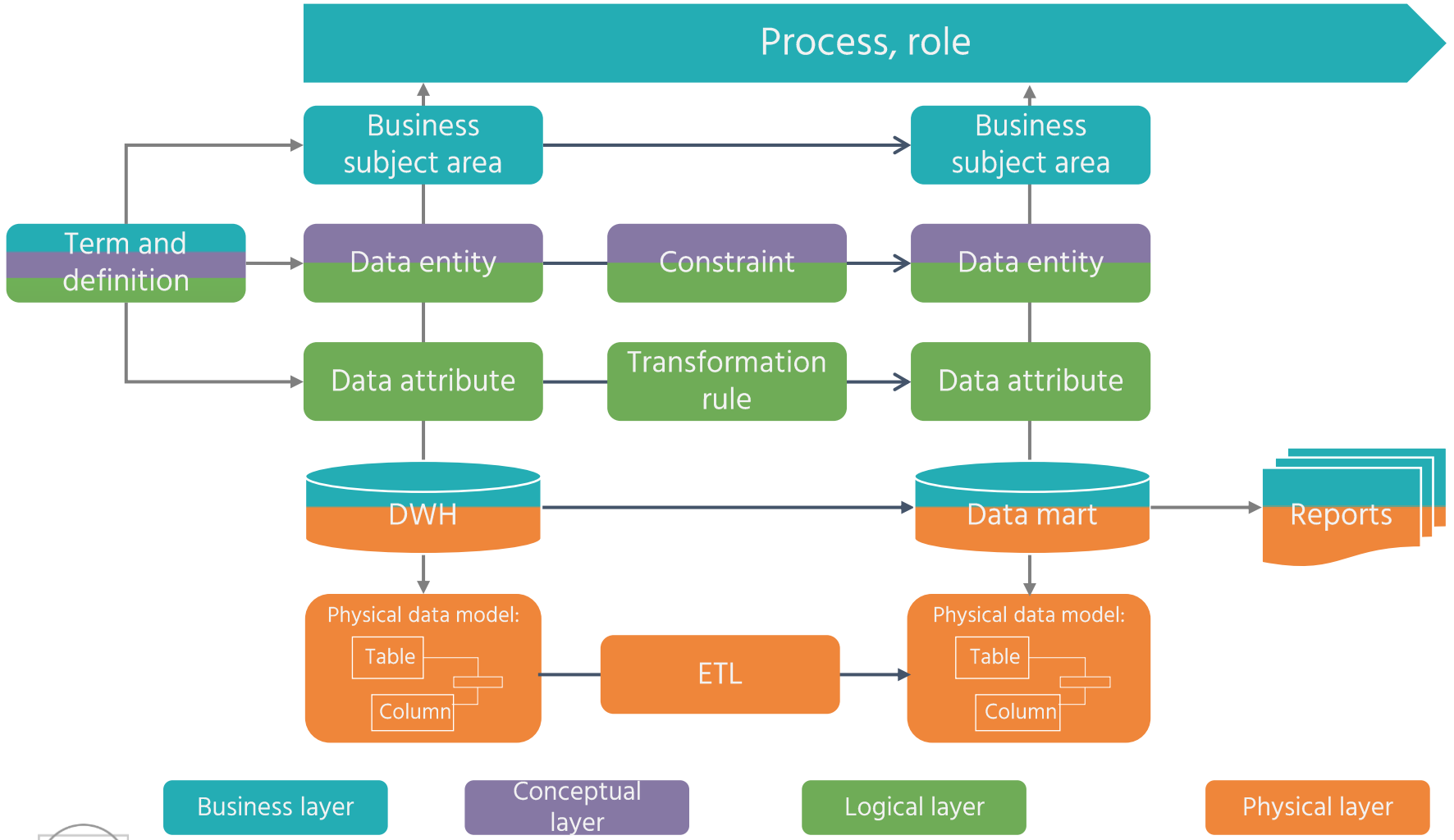
Data | Business metadata | Technical metadata | Operational

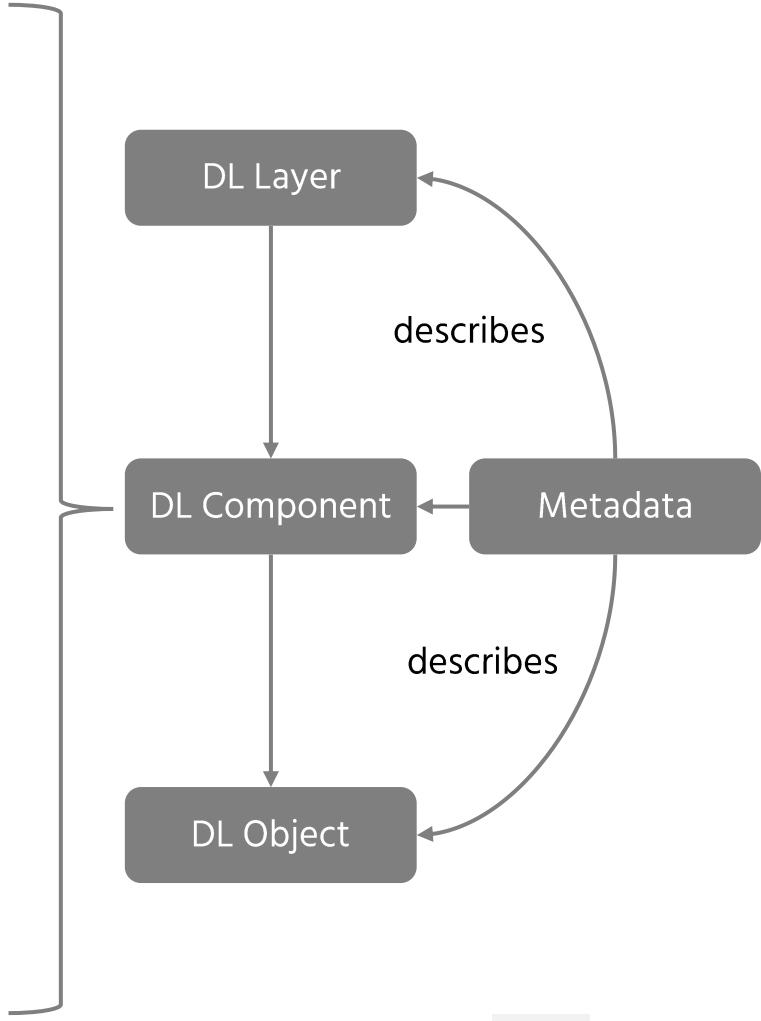
Metadata Structures Assemble into Other Metadata Structures

Example: Data observability



The Metamodel of Data Lineage (DL) Serves as a Basis for the Metamodel of Metadata





Company XYZ: Business Metadata for Different Solutions

Metadata type	Metadata examples	Data lineage	Data quality	Data observability
Business metadata	Data owner, user, steward	■		■
	IT asset-related metadata (name, vendor)	■		■
	Data entity and attribute names and properties	■		■
	Business term and definition	■		■
	Security & privacy level			■
	Data issue		■	■
	Data usage	■		■
	Business names of technical metadata	■		
	Business rules	■	■	■
	DQ measurement results		■	■

Company XYZ: Technical Metadata for Different Solutions

Metadata type	Metadata examples	Data lineage	Data quality	Data observability
Technical metadata	Physical data models and DB schemas: names and properties			
	Application and data access levels and permissions			
	IT-asset technical characteristics			
	Data access rights, groups, roles			
	Job details			
	Job schedules			
	Recovery and back-up rules			

Company XYZ: Operational Metadata for Different Solutions

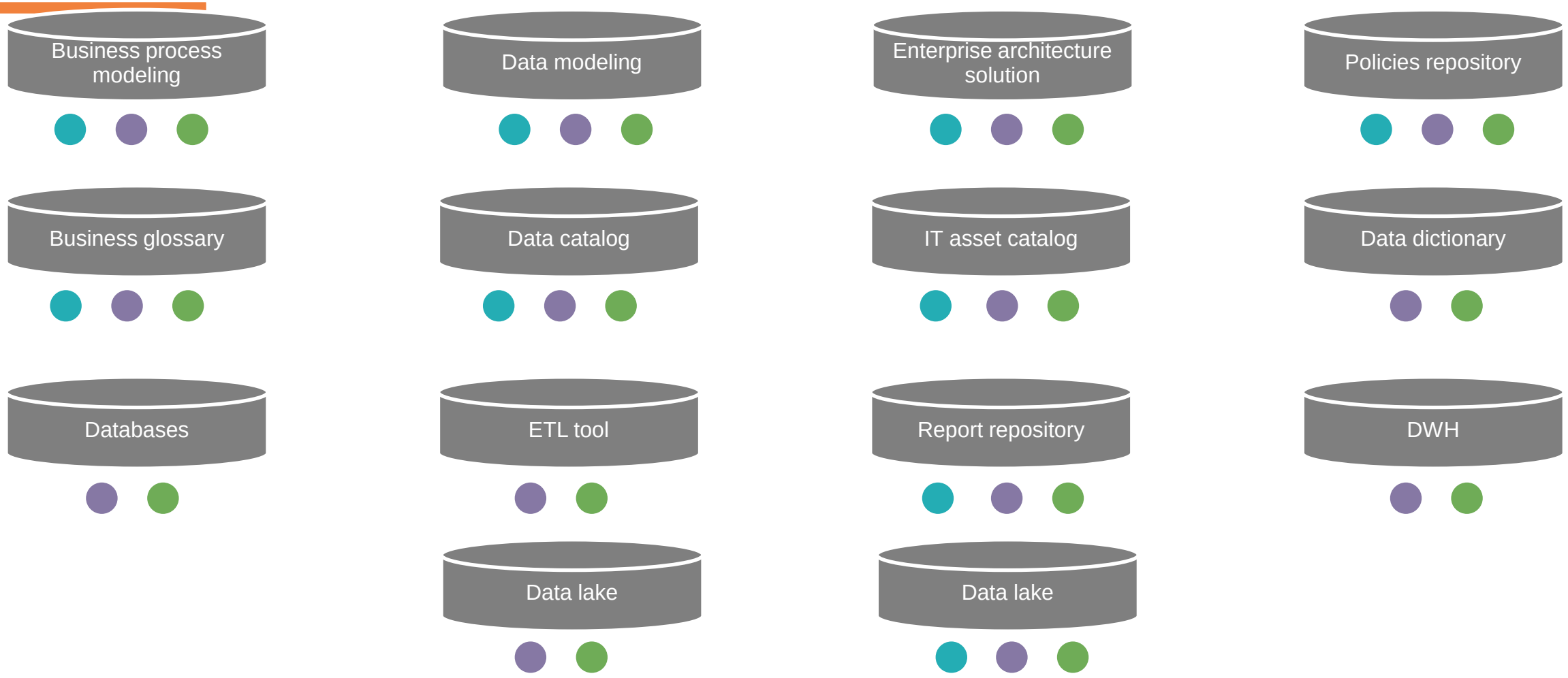
Metadata type	Metadata examples	Data lineage	Data quality	Data observability
Operational metadata	Data archiving and retention requirements			
	Logs of jobs execution for batch programs			
	History of extracts and results			
	Schedule anomalies			
	Results of audit, balance, control measurement			
	Error logs			
	Backup, retention, disaster recovery provisions			

Exercise 3: List (Meta)data for DM Initiatives in Your Company

1. Use Template 3: Analysis of Required Metadata
2. Indicate your company's needs in metadata and possible solutions
3. Present results

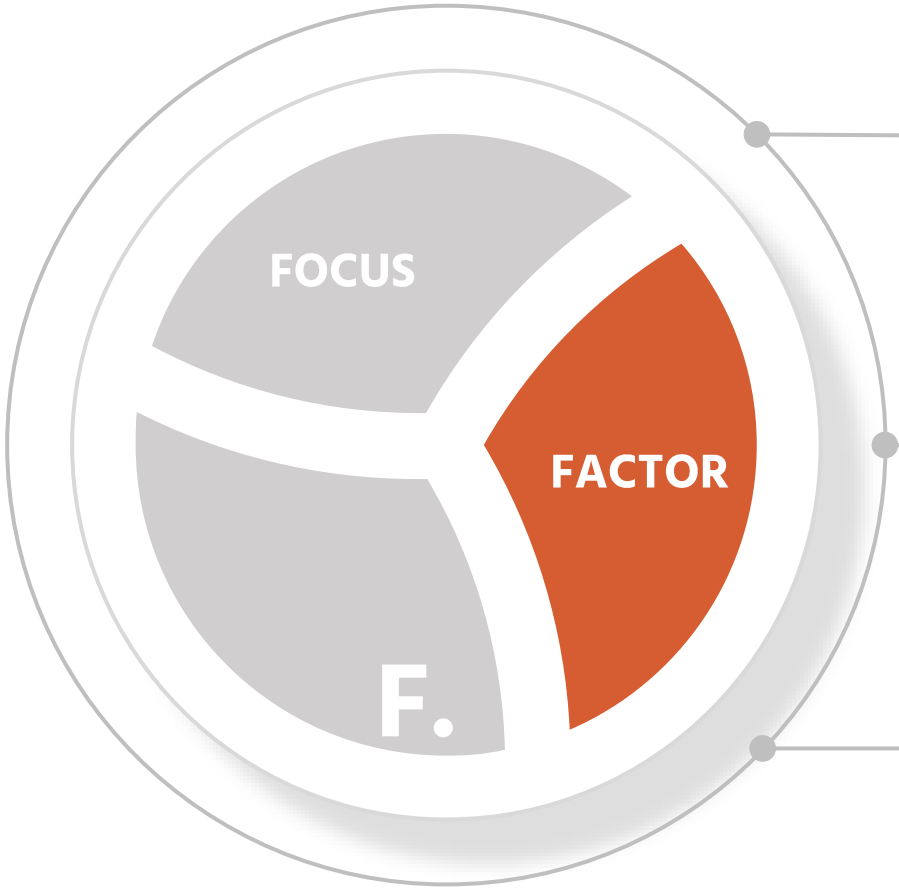
Time: 10 minutes

Different Applications Produce, Consume, and Share Metadata



Business metadata | Technical metadata | Operational

3-F Feasibility Formula Limits the Scope to a Realizable Minimum

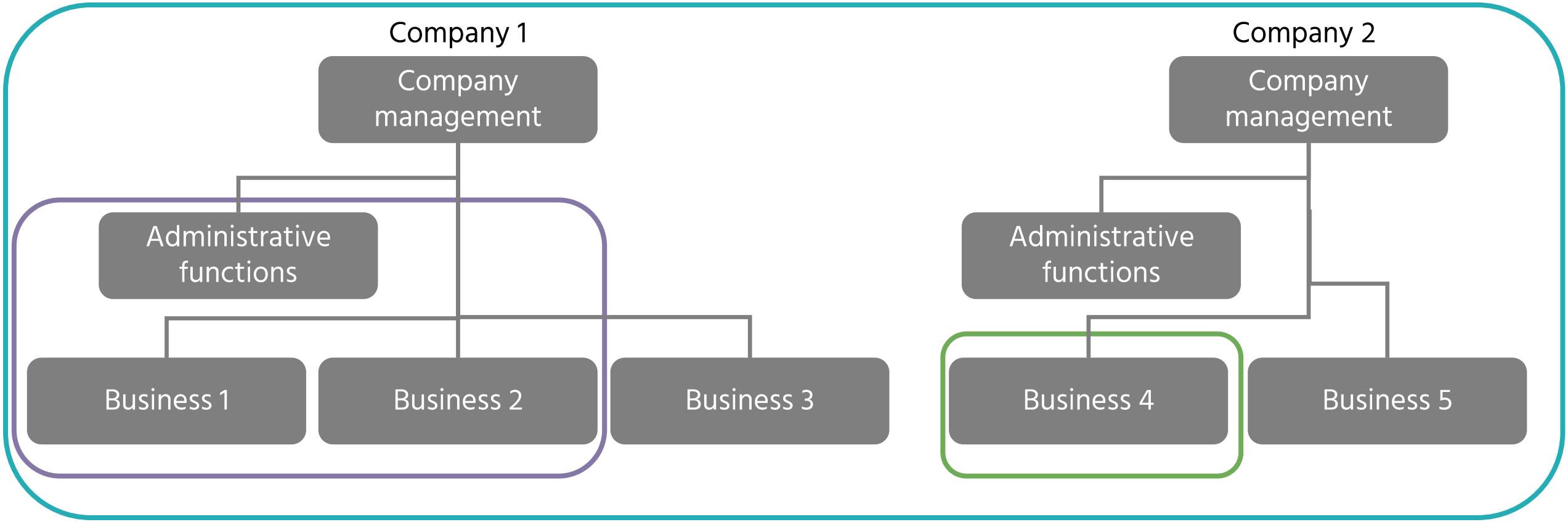


Critical business requirements & solutions

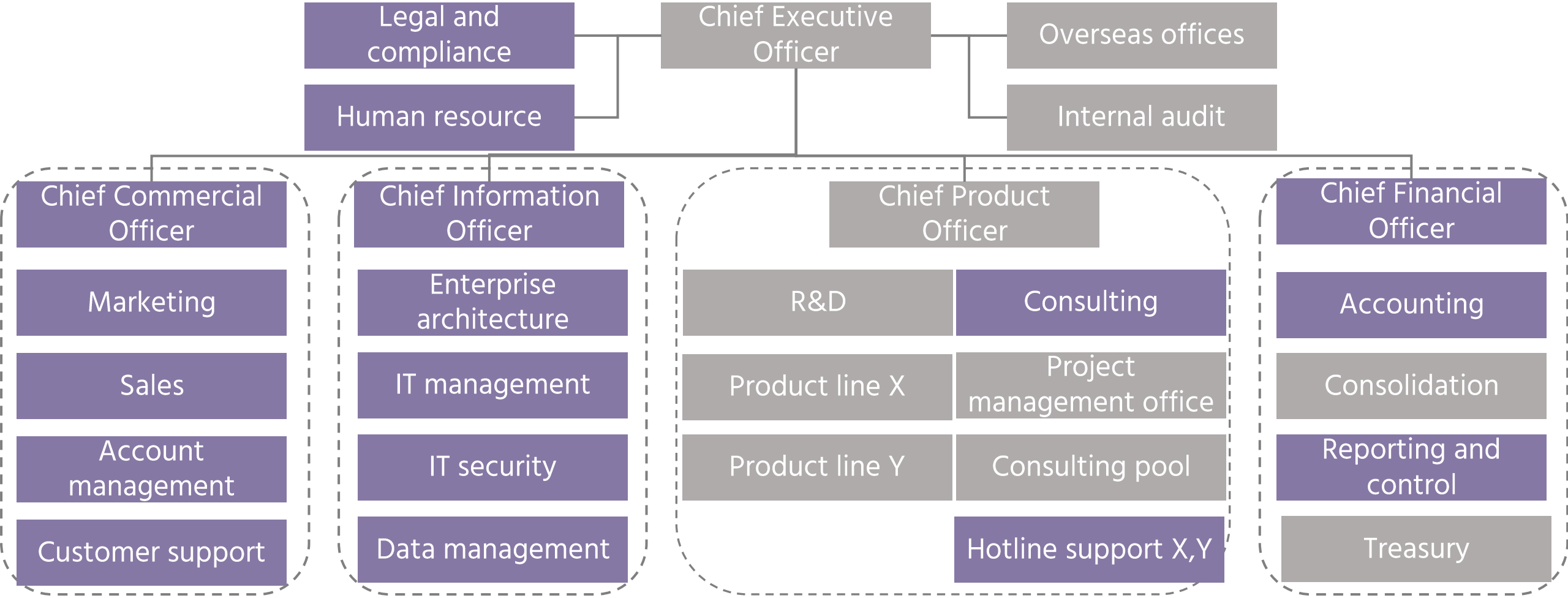
- Metadata & sources
- Enterprise scope
- Critical chains
- Resources

FRAMEWORK

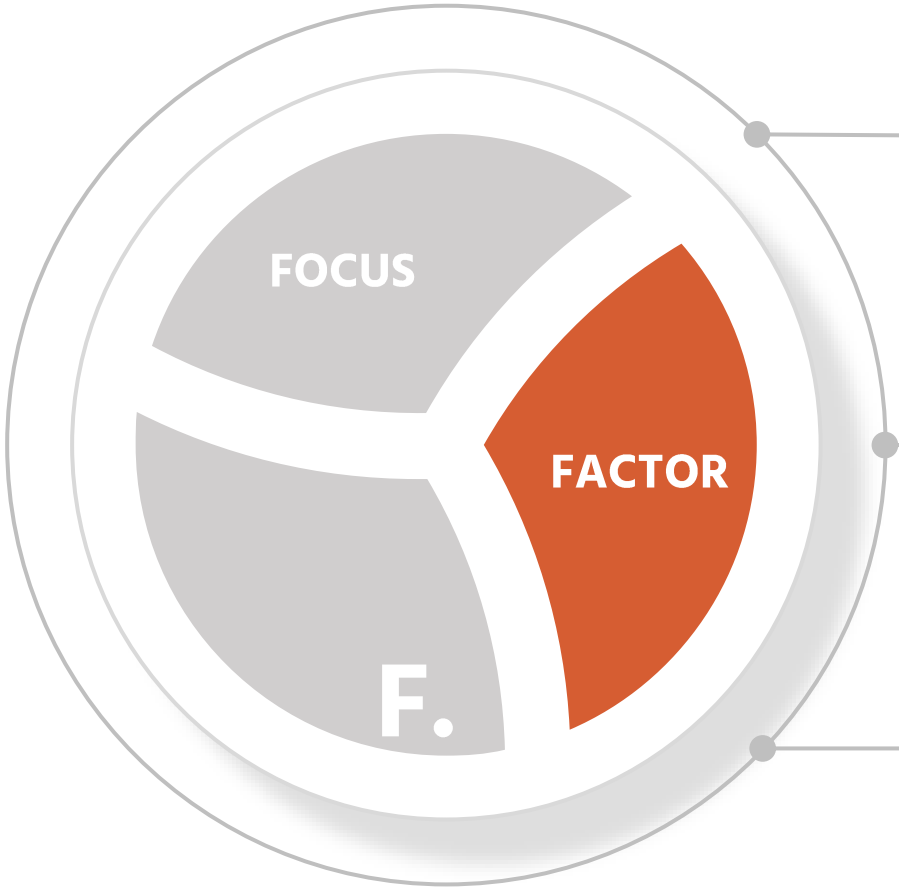
A Metadata Management Initiative Can Cover Various "Enterprise" Scopes



XYZ Company, Example: The “Enterprise” Scope (Compliance Driver)



3-F Feasibility Formula Limits the Scope to a Realizable Minimum

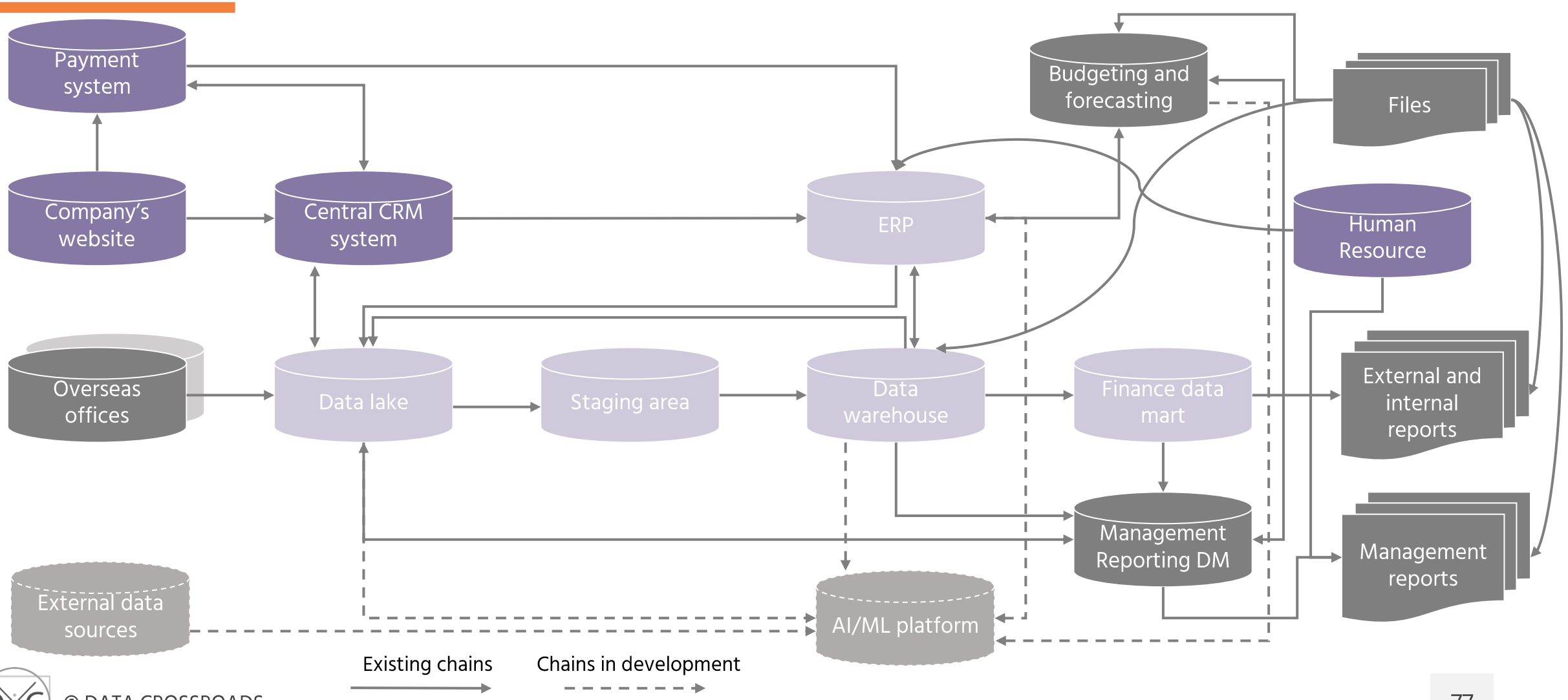


Critical business requirements & solutions

- Metadata & sources
- Enterprise scope
- Critical chains
- Resources

FRAMEWORK

XYZ Company: Applications that Process Personal Data (Business Driver 1)



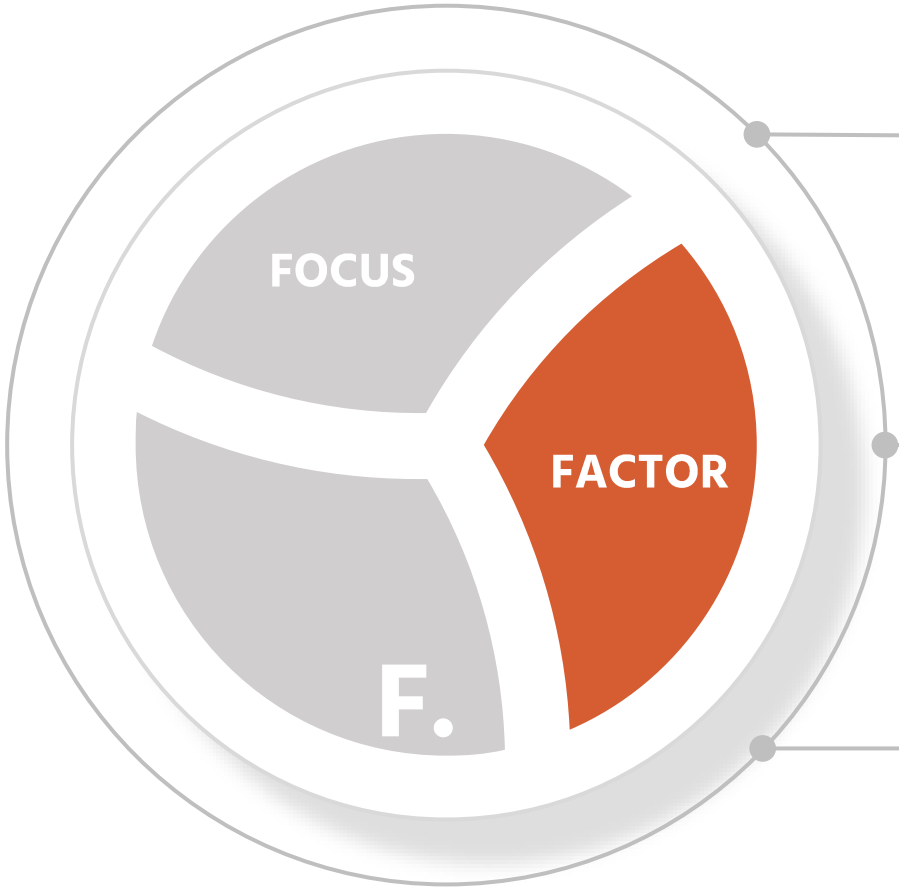
XYZ Company, Example: A Metadata Initiative Scope

Factor	Business driver 1: Compliance	Business driver 2: Enhance decision-making	Scope (Yes/No)
Enterprise scope:			
Marketing, sales, account management, customer support			Yes
Information Technology department			Yes
Product departments			Yes
Financial departments			Yes
Critical data	Personal data sets	Financial data sets	Yes
Data chains (IT assets):			No
Source applications with personal data			Yes
Source applications with financial data			Yes
Lake, DWH, ERP			Yes

Company XYZ: Metadata From Different Solutions

Metadata type	Metadata examples	Company web-site	Payment system	Central CRM System
Technical metadata	Physical data models and DB schemas: names and properties			
	Data access levels and permissions			
	Data access rights, groups, roles			
	Job details			
	Job schedules			
Operational metadata	Logs of jobs execution for batch programs			
	History of extracts and results			
	Schedule anomalies			
	Error logs			

3-F. Feasibility Formula Limits the Scope to a Realizable Minimum

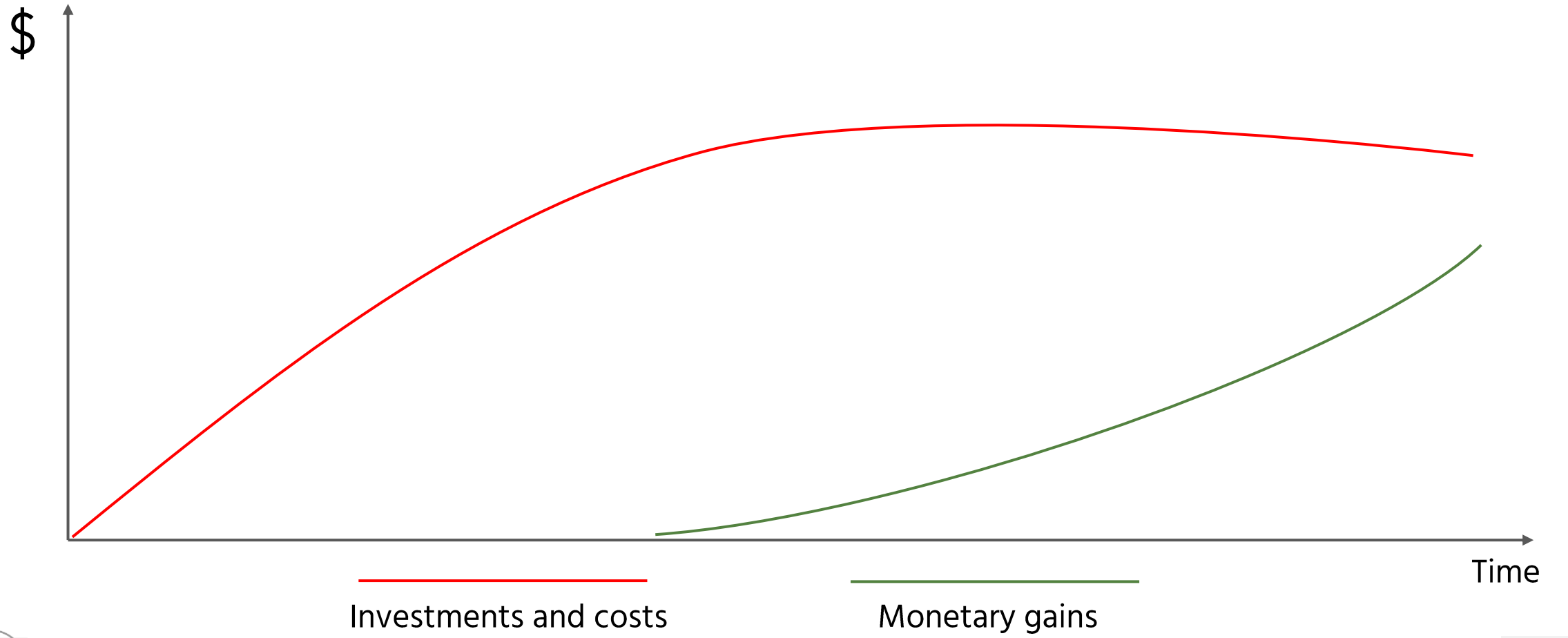


Critical business requirements & solutions

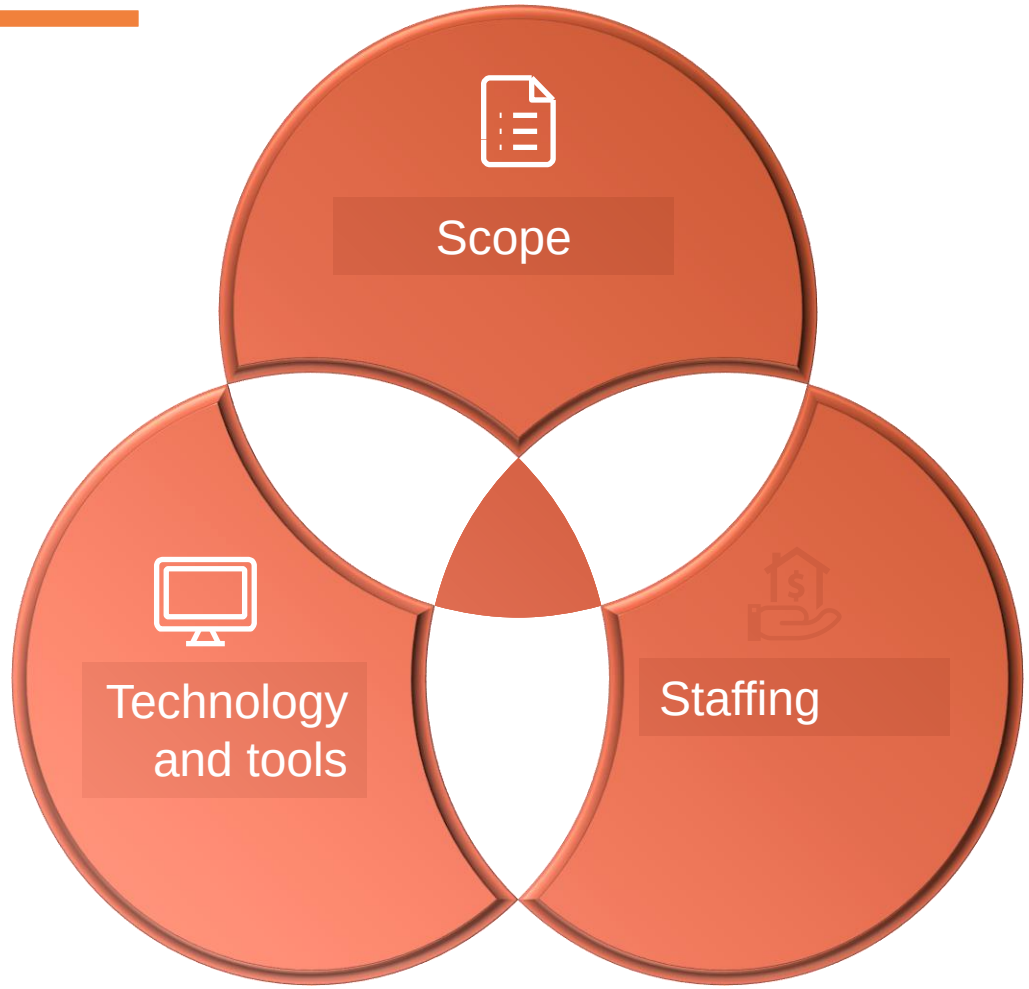
- Metadata & sources
- Enterprise scope
- Critical chains
- Resources

FRAMEWORK

A Company Starts Receiving Monetary Gains after Some Period of Initial Investments



Several Key Factors Define the Required Resources



Scope

- Enterprise scope
- Metadata sources
- Critical chains

Staff

- Internal vs External

Tools

- Data, application, and technology architecture

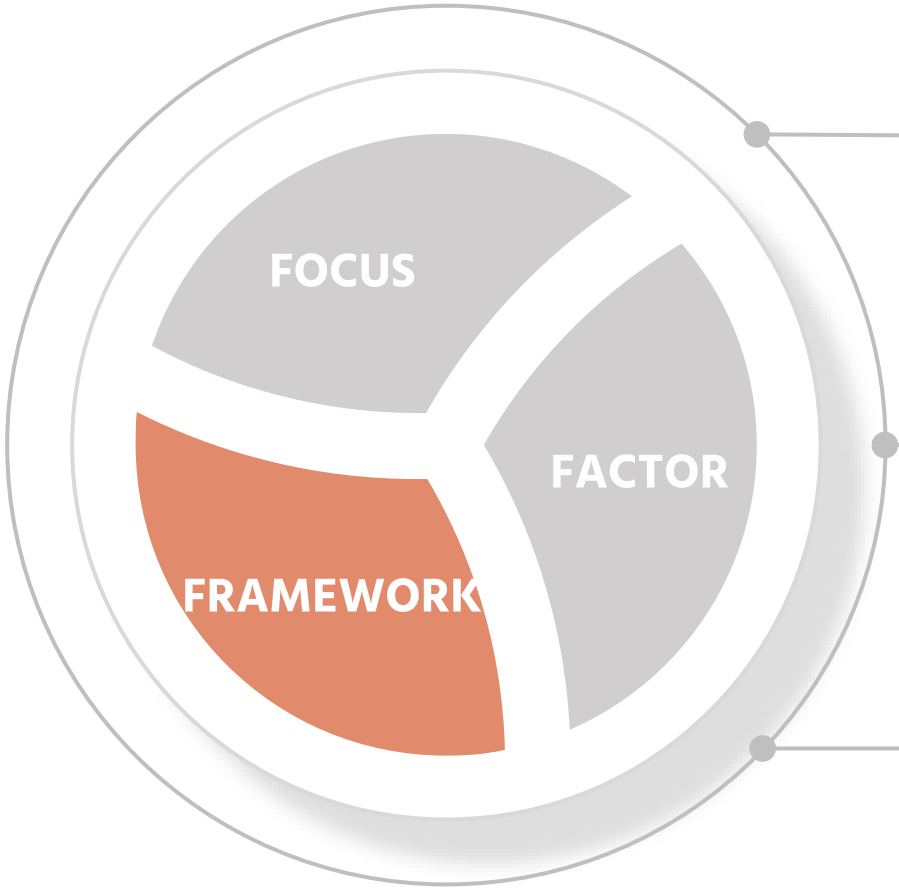
Can You Calculate the ROI of the Foundation for a Restaurant Building?

Exercise 4: Draft the Scope of a DM Initiative

1. Use Template 4: Scope of a Data Management Initiative
2. Draft the scope of an initiative considering different factors
3. Present results

Time: 10 minutes

3-F Feasibility Formula Limits the Scope to a Realizable Minimum

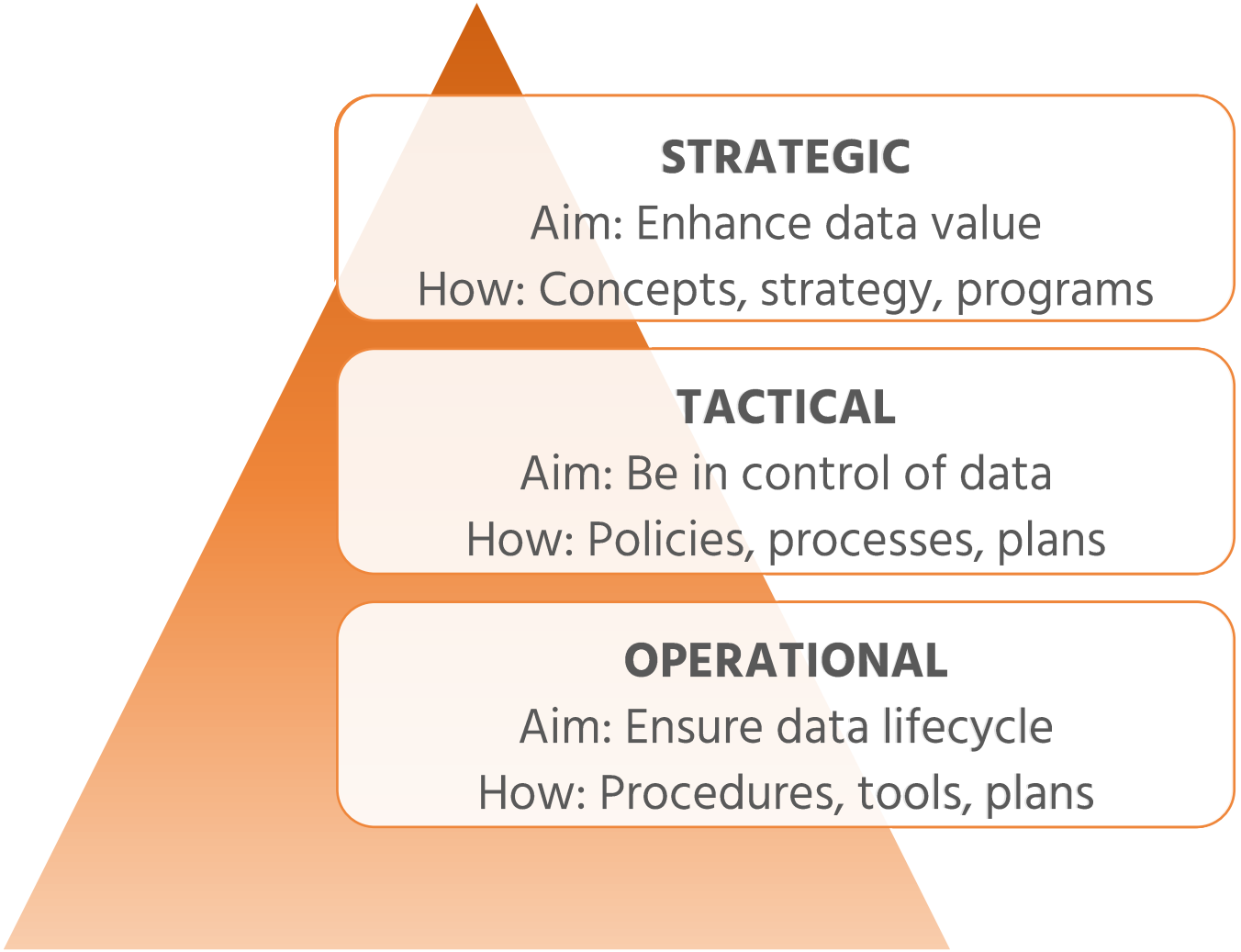


Critical business requirements & solutions

- Metadata & sources
- Enterprise scope
- Critical chain and data
- Resources

The chosen metadata management framework

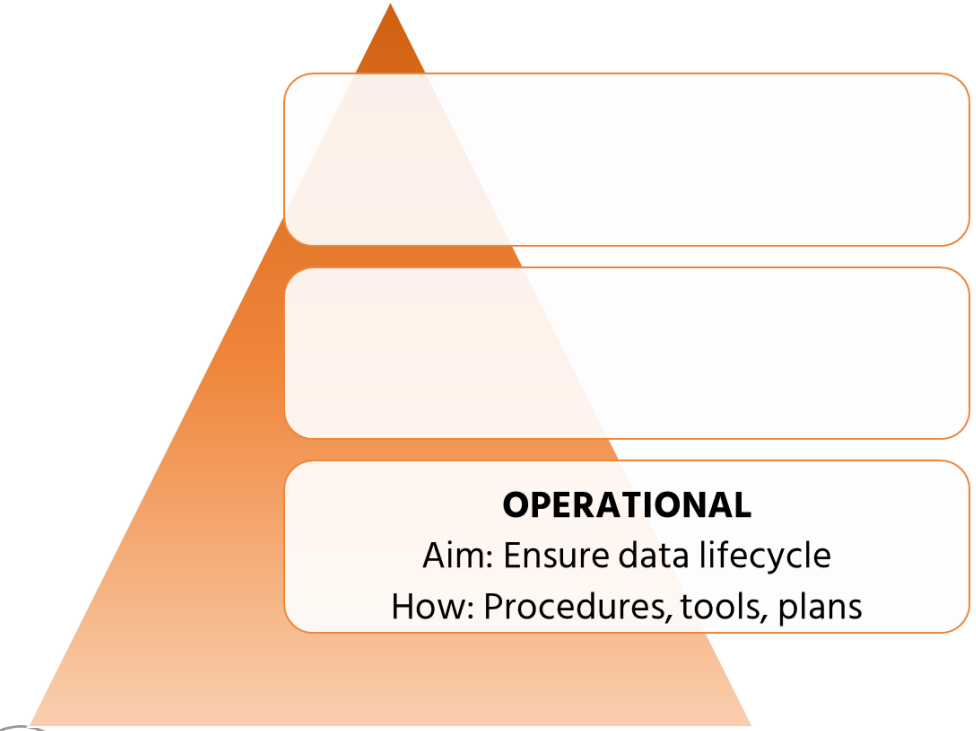
The Definition of Data Management Depends on the Organizational Level

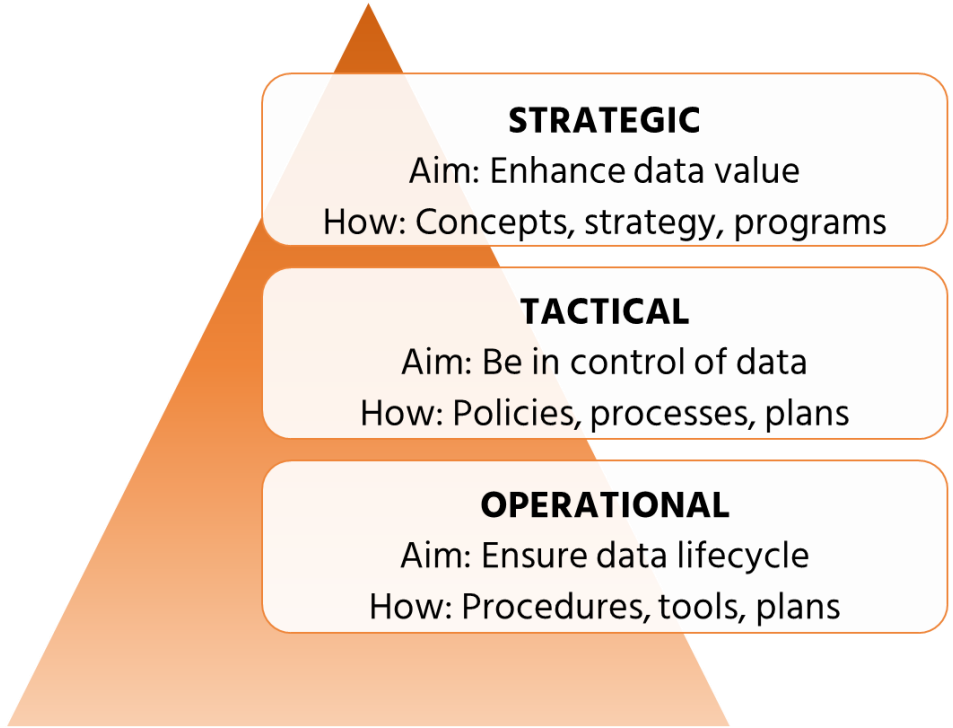


Moving from the “Ad-Hoc” to “Business Function” Means the Implementation of Metadata Management at All Organizational Levels

Ad-Hoc

Business Function





Data Governance and a Framework Assists in Transforming (Meta)Data Management Capability into a Business Function

OPERATIONAL
Aim: Ensure data lifecycle
How: Procedures, tools, plans

STRATEGIC
Aim: Enhance data value
How: Concepts, strategy, programs

TACTICAL
Aim: Be in control of data
How: Policies, processes, plans

OPERATIONAL
Aim: Ensure data lifecycle
How: Procedures, tools, plans

Data governance designs and controls the implementation and performance of the (meta)data management function

DEFINITION

(Meta)Data Management Framework (DMF)

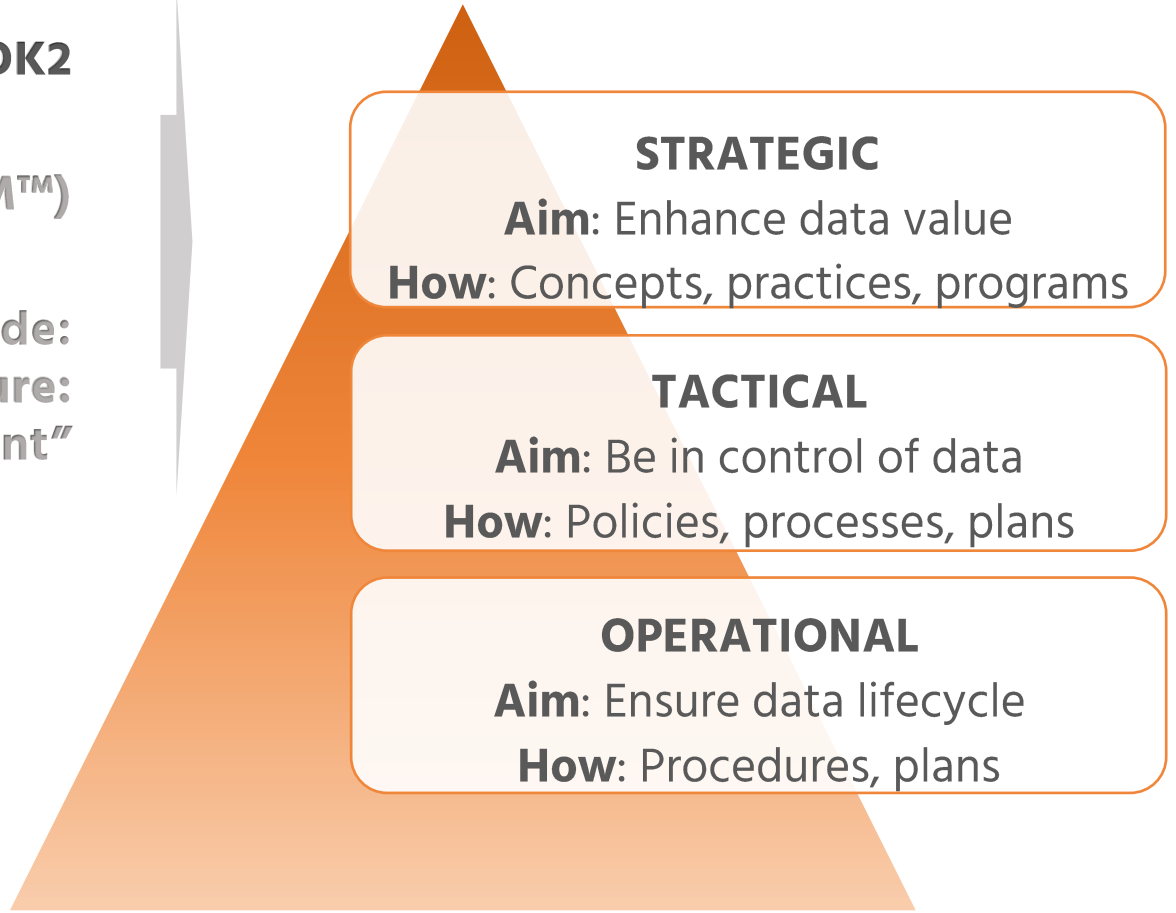
A COLLECTION OF INTERRELATED COMPONENTS (METHODS AND MODELS) THAT SHAPE (META)DATA MANAGEMENT CAPABILITY INTO A BUSINESS FUNCTION

Leading DM Frameworks Are Applicable at Various Organizational Levels, but Not All of Them Cover Metadata Management

DAMA-DMBOK2

(DCAM™)

TOGAF® Series Guide: "Information Architecture: Metadata Management"

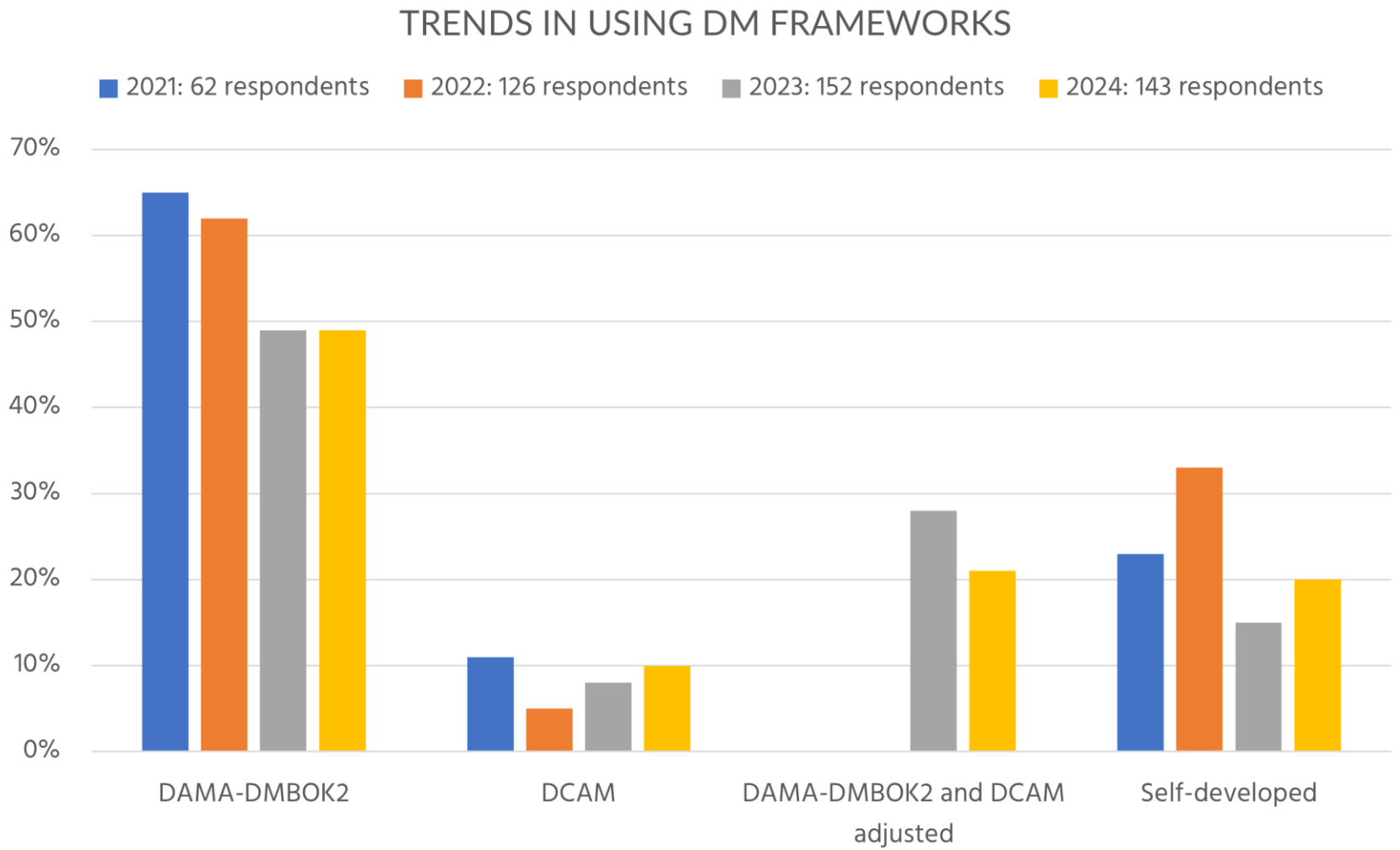


COBIT

ITIL

ISO/IEC 11179: Metadata registries

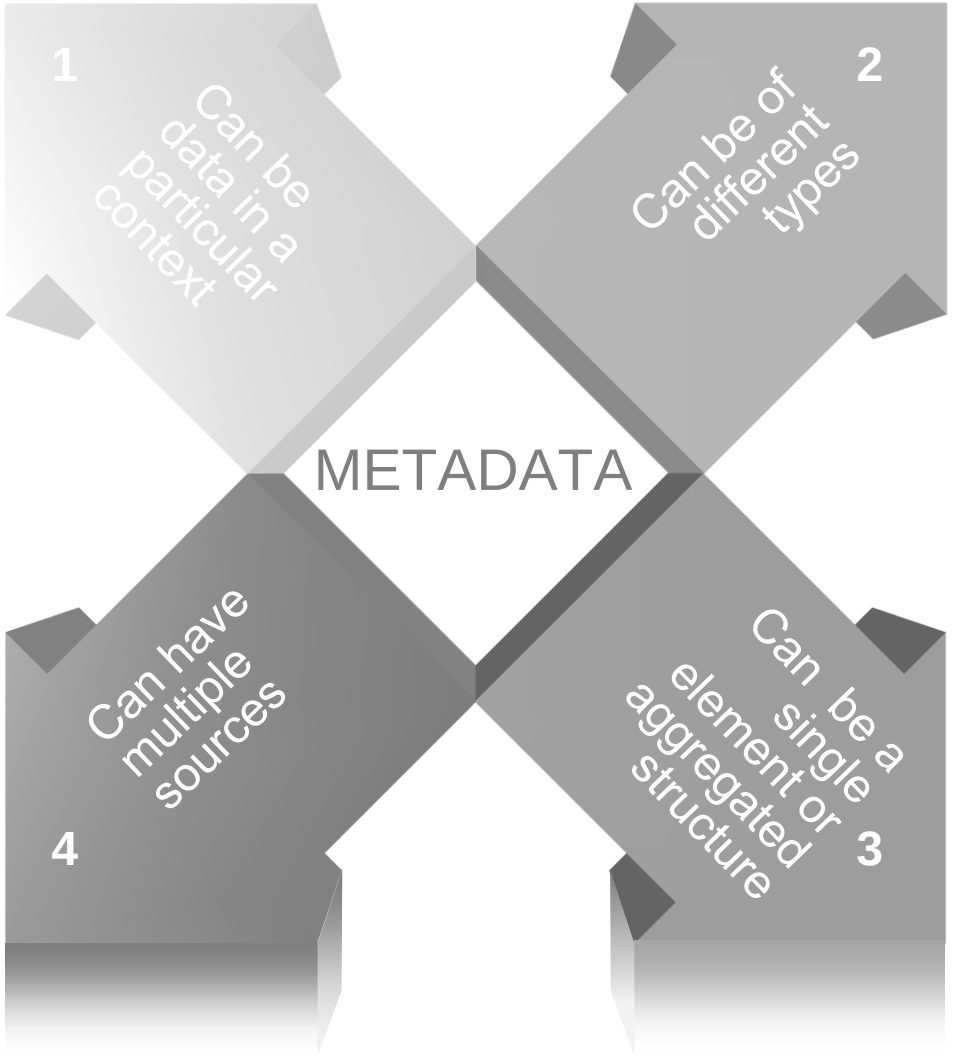
Trends Show the Increasing Number of Self-Developed or Adjusted Frameworks



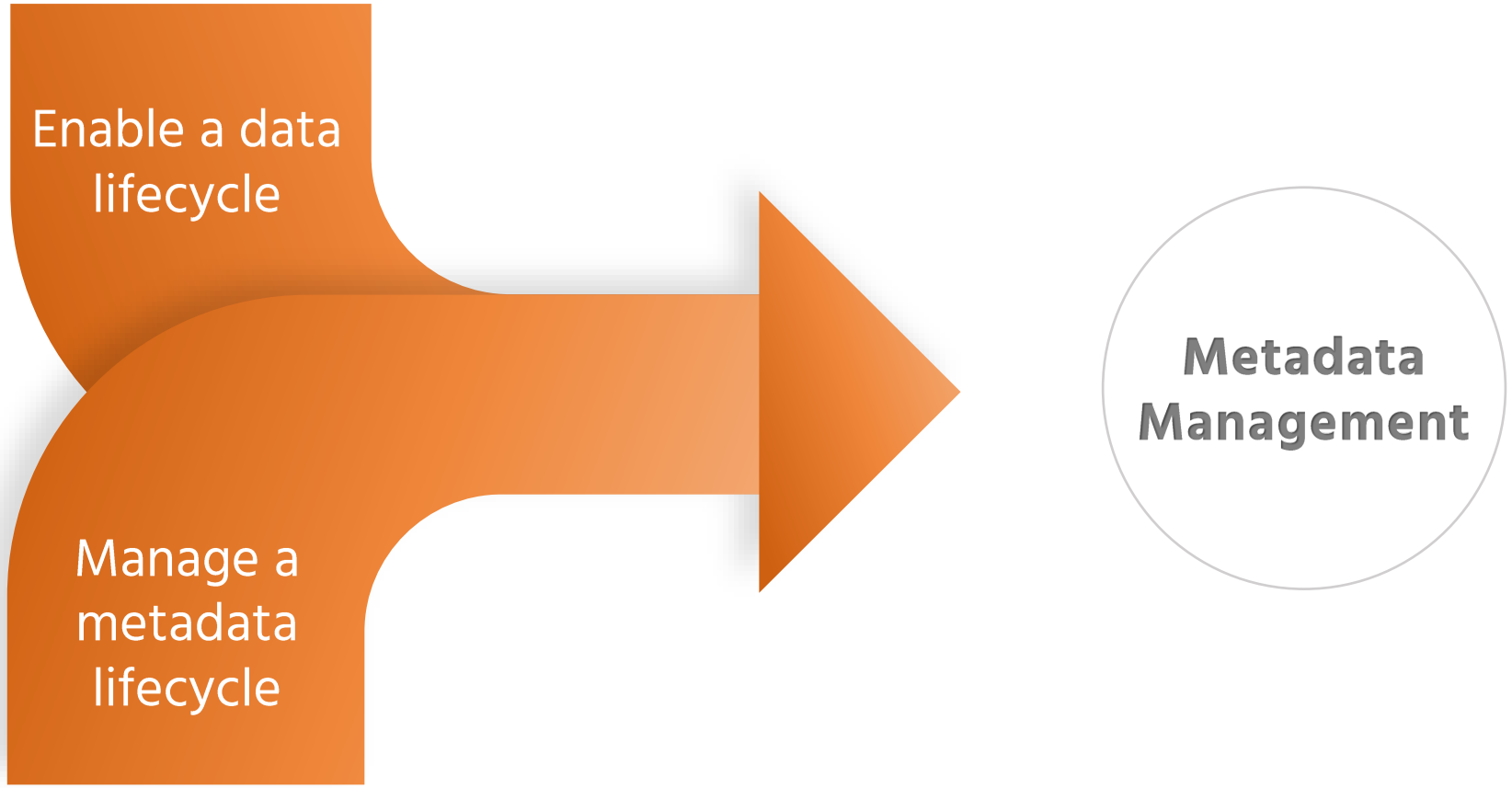
Group Discussion

Describe your experience in implementing various data management frameworks

We Identified 4 Core Challenges Associated with Metadata

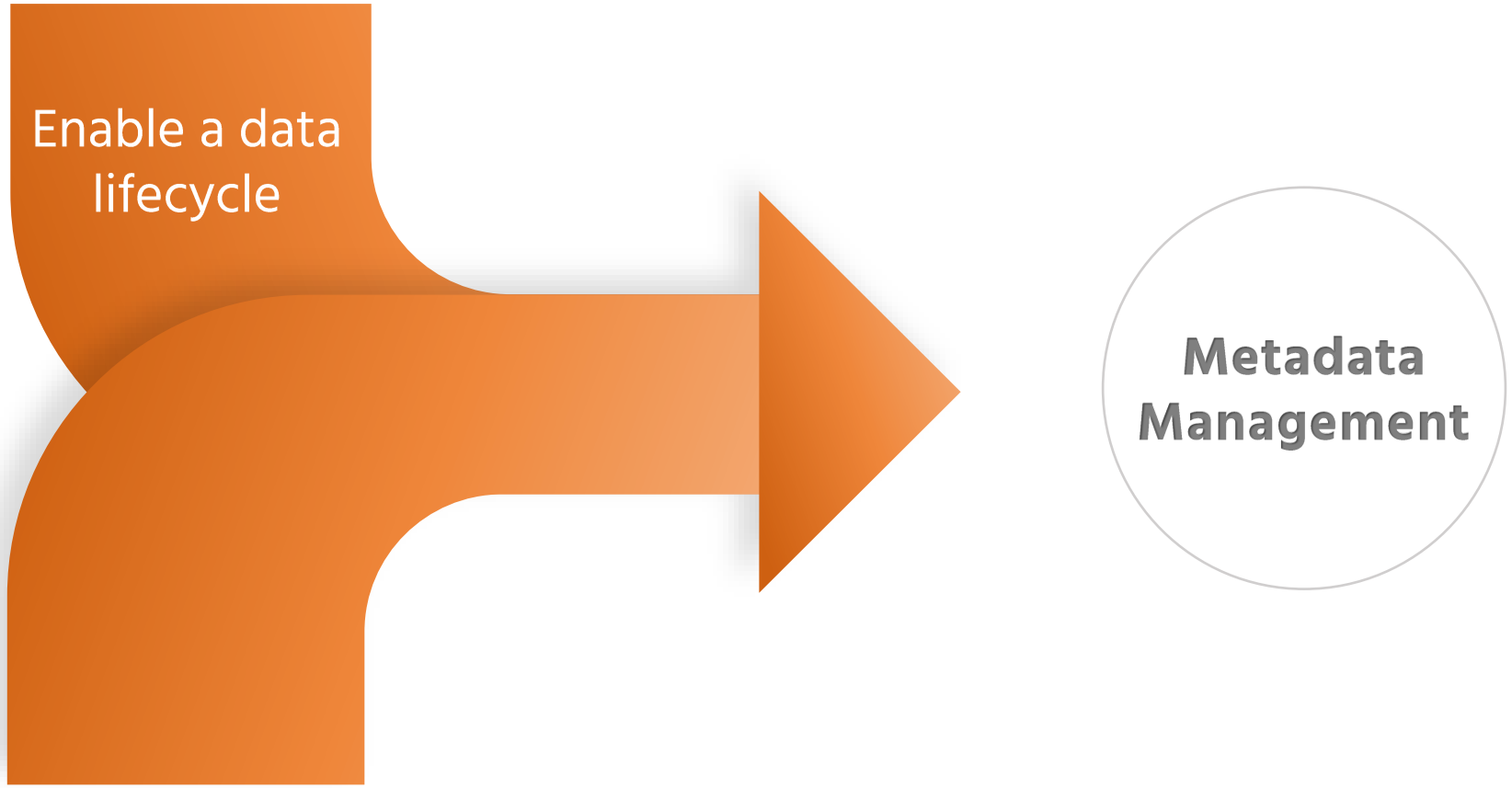


Metadata Management Has Two Core Goals

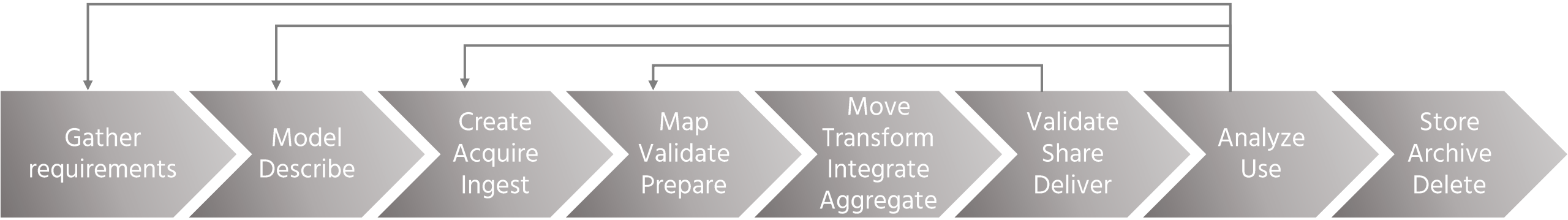


Providers of Leading Metadata Management Tools Allowed to Demonstrate Some Functionalities of Their Solutions

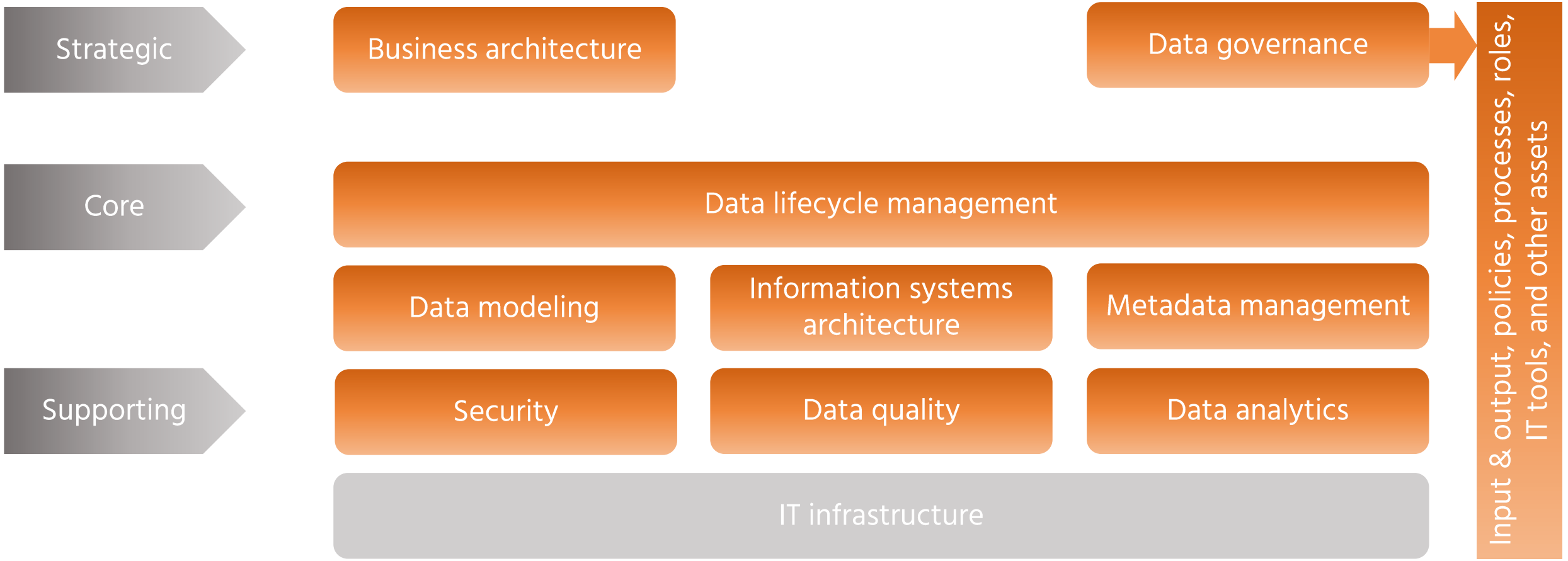
Metadata Management Has Two Core Goals



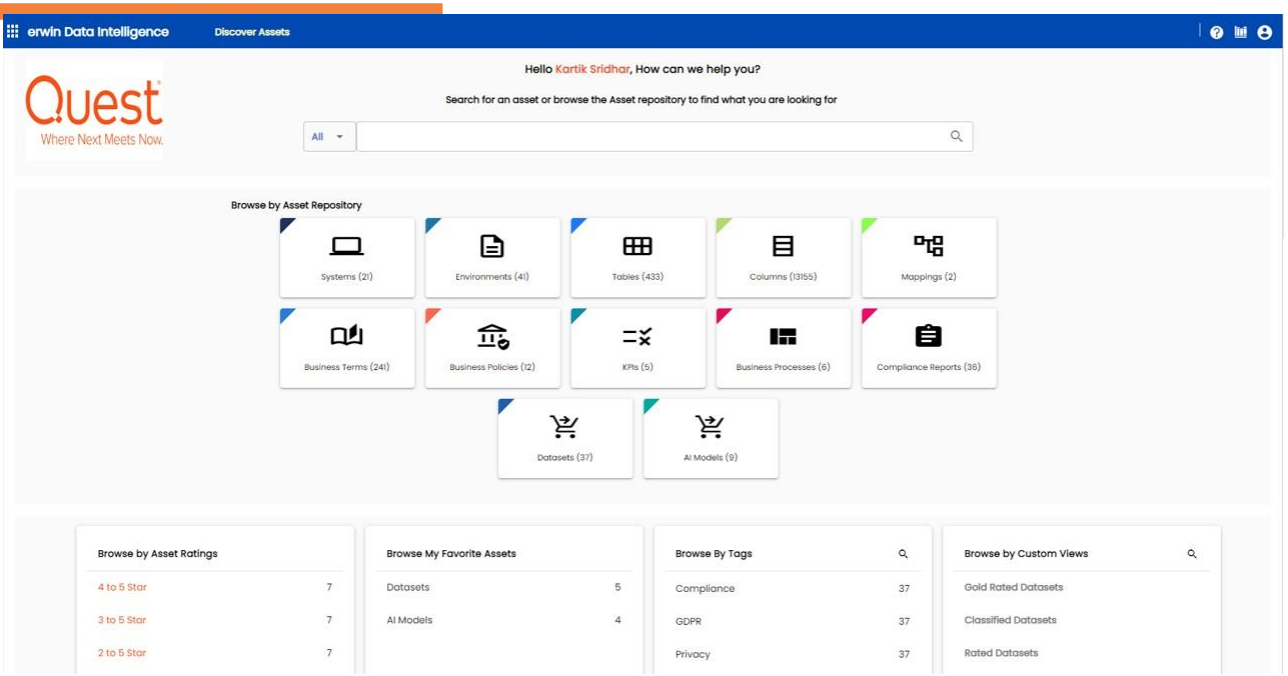
Let's Define Our Approach to Describing a Data Lifecycle

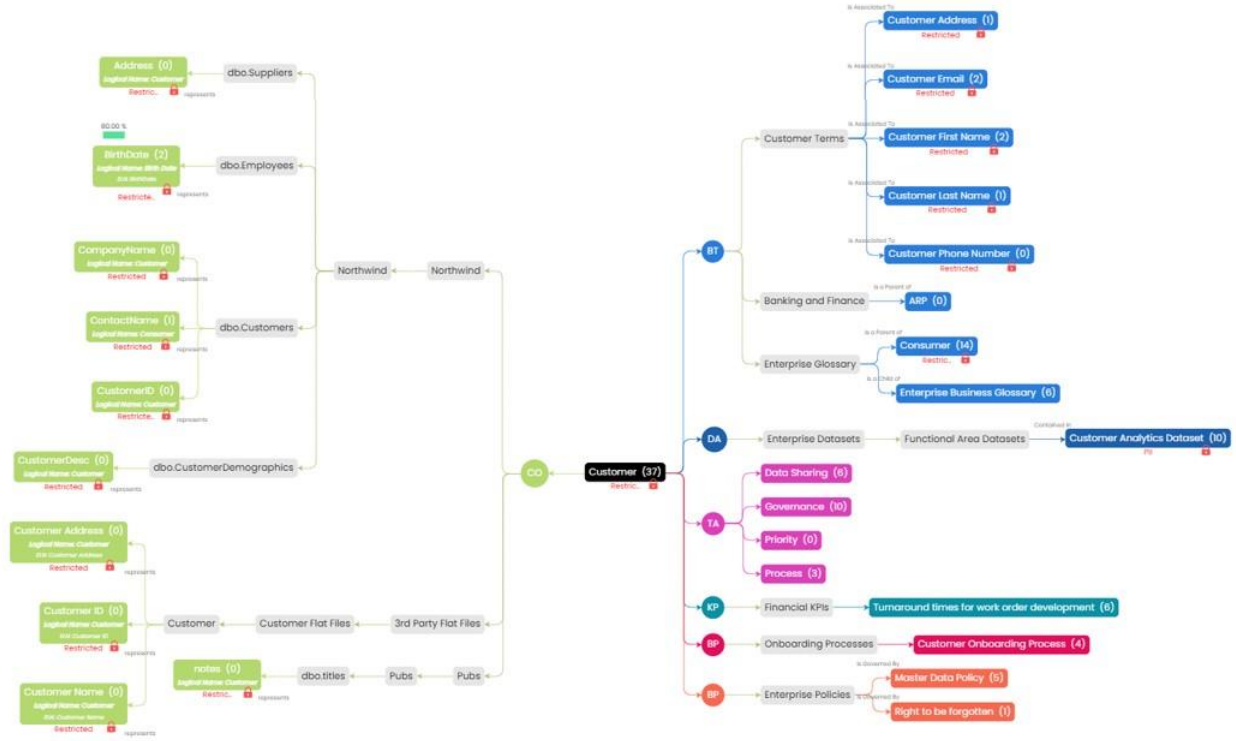


Various Data Management Capabilities Produce Metadata to Enable the Data Lifecycle

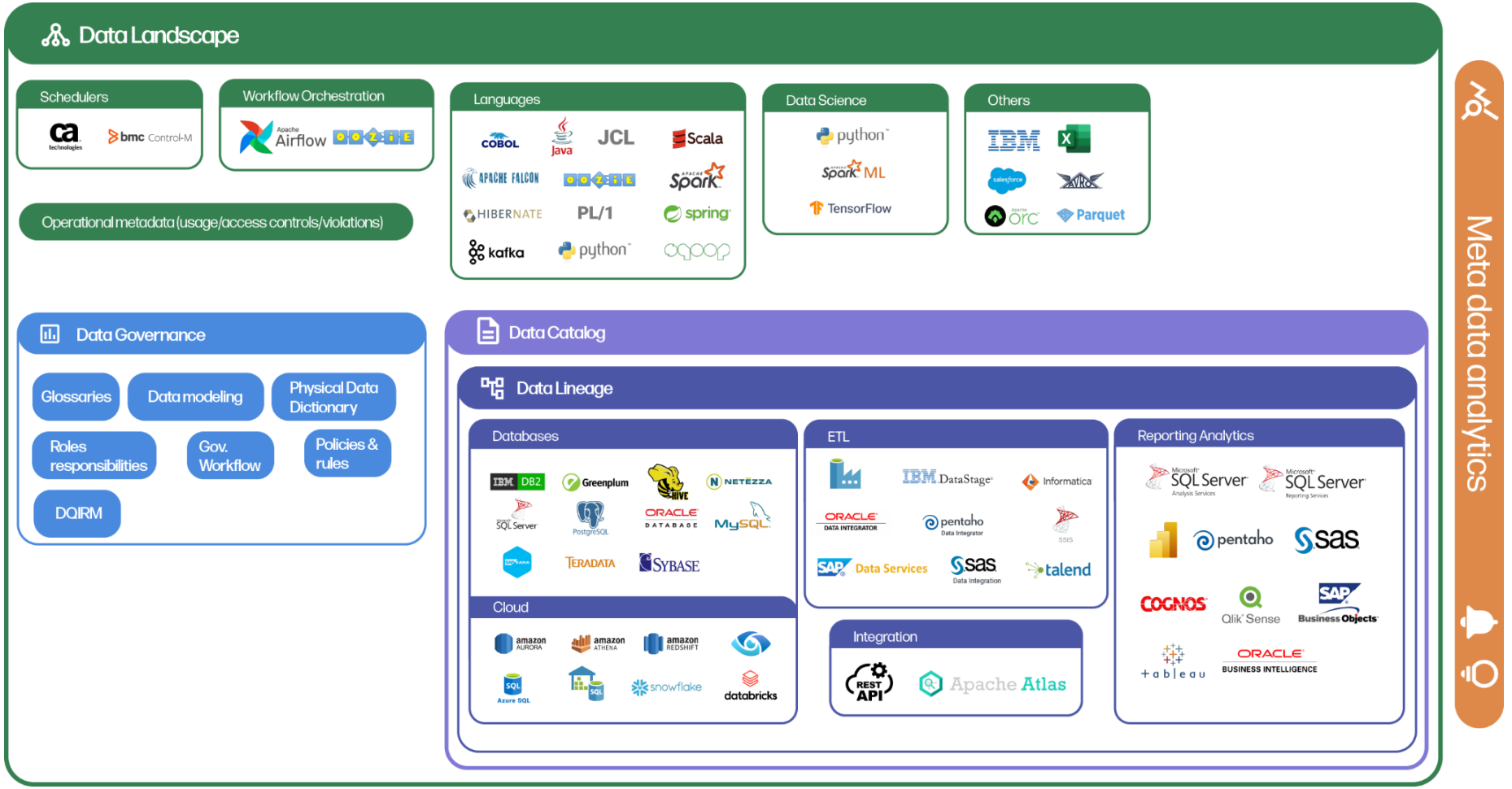


Metadata Management Solutions Integrate Multiple DM Capabilities





Metadata Management Solutions Integrate Multiple DM Capabilities



DEFINITION

Business Architecture

"A REPRESENTATION OF HOLISTIC, MULTI-DIMENSIONAL BUSINESS VIEWS OF: CAPABILITIES, END-TO-END VALUE DELIVERY, INFORMATION, AND ORGANIZATIONAL STRUCTURE; AND THE RELATIONSHIPS AMONG THESE BUSINESS VIEWS AND STRATEGIES, PRODUCTS, POLICIES, PROCESSES, INITIATIVES, AND STAKEHOLDERS."

SOURCE: "TOGAF® Standard — Introduction - Definitions." *Business Architecture*, pubs.opengroup.org/togaf-standard/introduction/chap04.html#tag_04_27. Accessed 3 Aug. 2022.

Business Architecture Enables Several Data Lifecycle Steps and Produces The Following Metadata

Business architecture

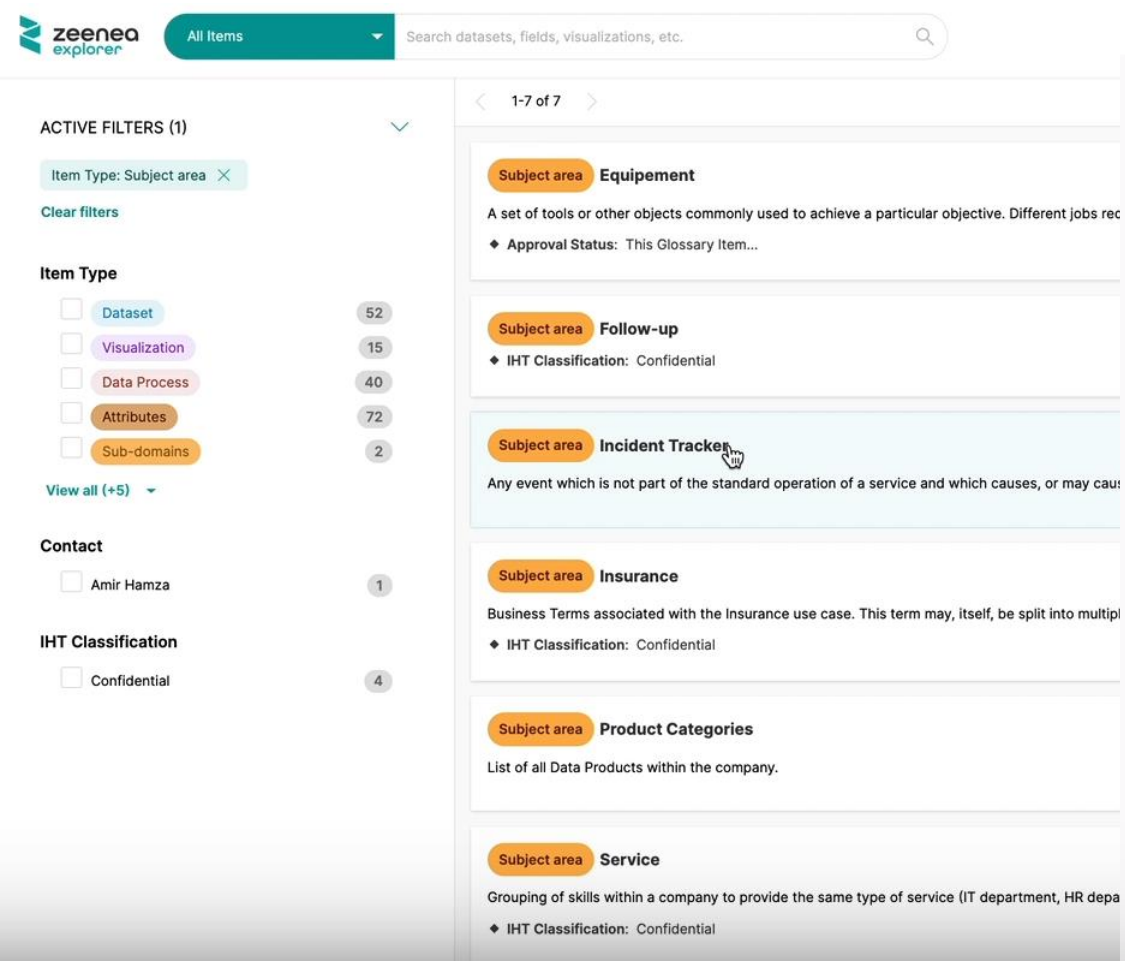
Business metadata

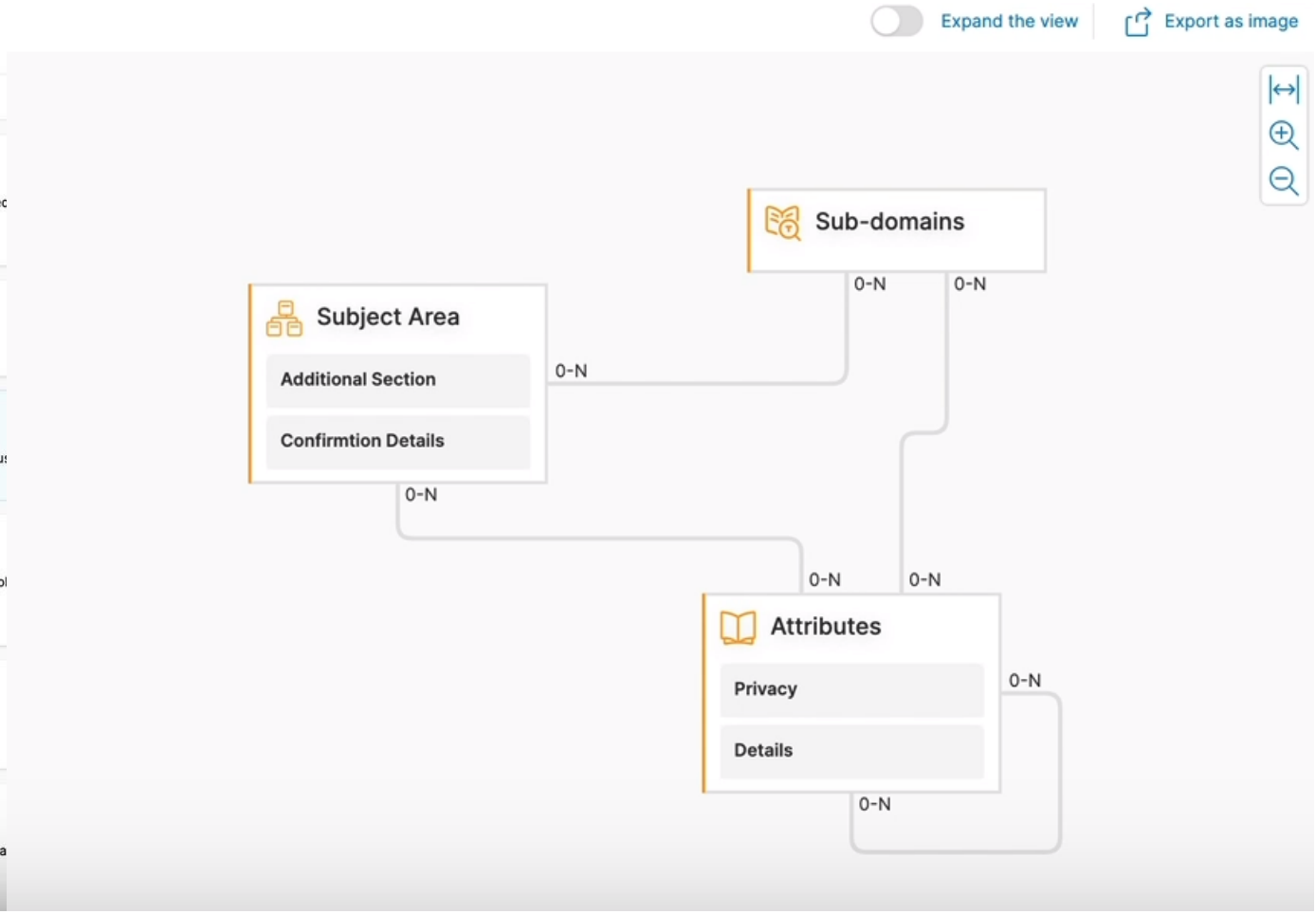
- Data domains

Technical metadata

Operational metadata

Metadata Solutions Allow for Defining Business Subject Areas/Domains and Data Domains





DEFINITION

DM (Data) Governance Capability

A COMPANY'S ABILITY TO DESIGN A DATA MANAGEMENT FUNCTION, COORDINATE AND CONTROL ITS IMPLEMENTATION AND PERFORMANCE

Data Governance Enables the Whole Data Lifecycle and Produces The Following Metadata

Data governance

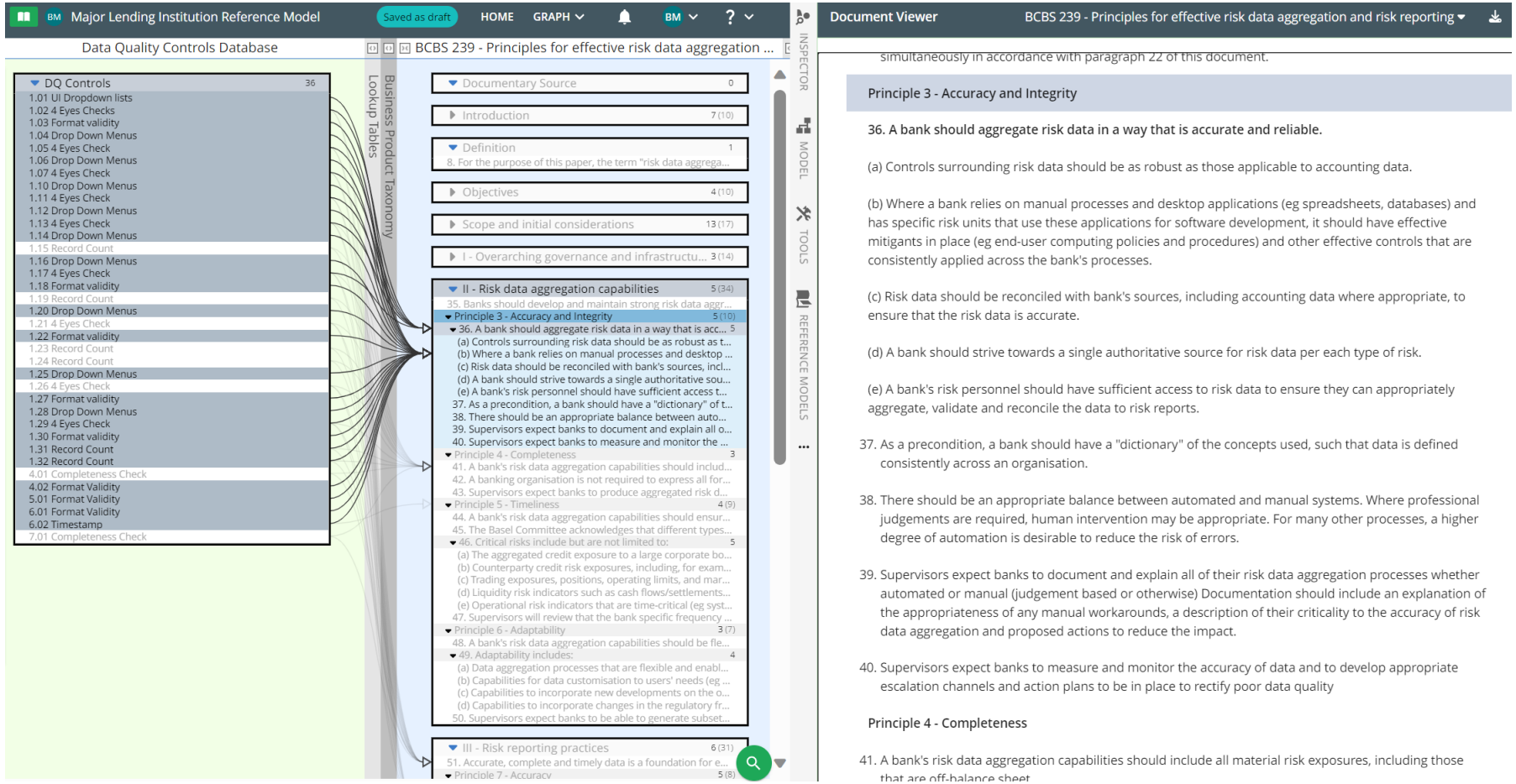
Business metadata

- Data owner, user, steward
- DSA and SLA agreements
- Regulations
- Security levels
- Data usage

Technical metadata

Operational metadata

Data Governance Functionalities Include Data-Related Policies



Data Governance Functionalities Allow for Maintaining and Linking Multiple Policies

Orion Governance

dq-policies

AdventureW... > Ban... > I.

Data quality policies

Availability

Glo... > Sh... > Reportin...

DAMA DQ Assessment

The degree to which data can be consulted or retrieved by data consumers or a process.

GDPR - Accuracy

Retail ... > Inventory ... > (

GDPR - Article 5 Regulation

The data you collect or store should be accurate and up to date. Holding inaccurate data on any individual ...

Retail Policy

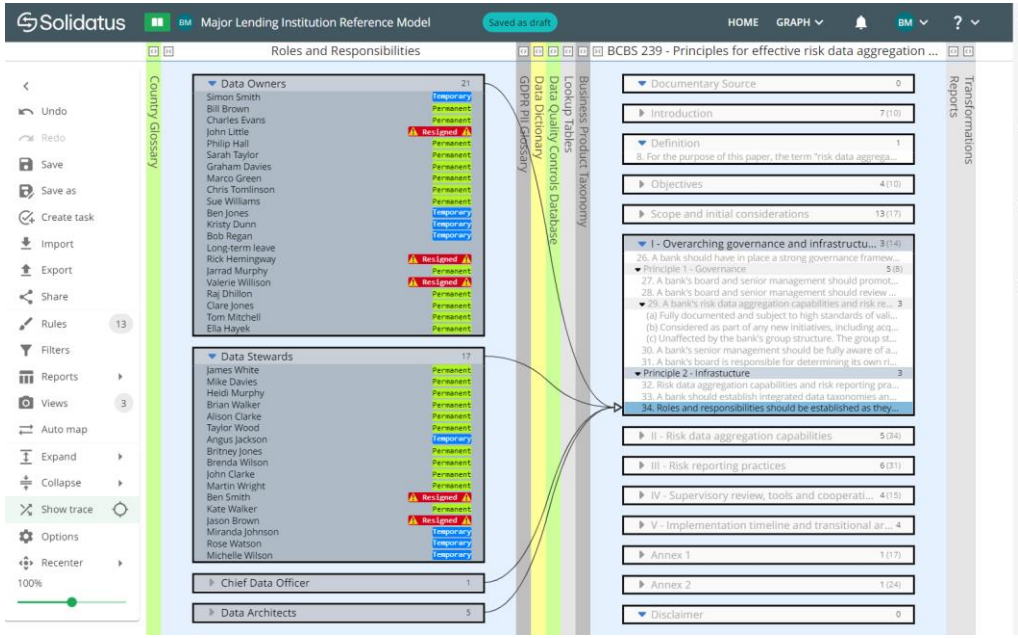
Retail ... > Inventory ... > (

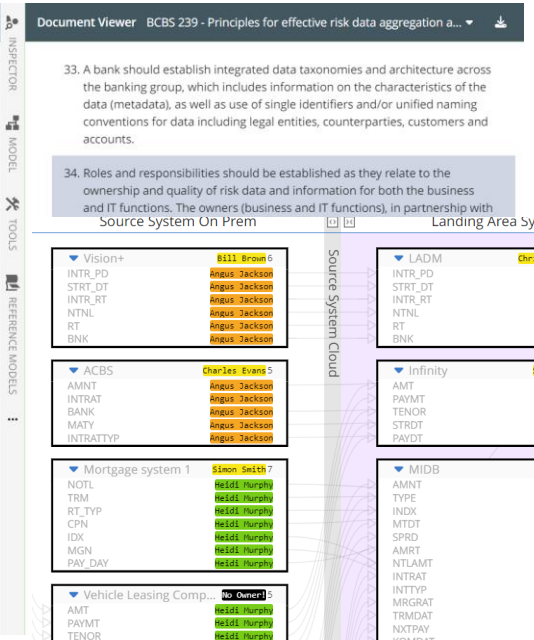
Set of policies and rules defined in Retail sector

Data Governance Functionalities Include Data Management Roles Linked to:

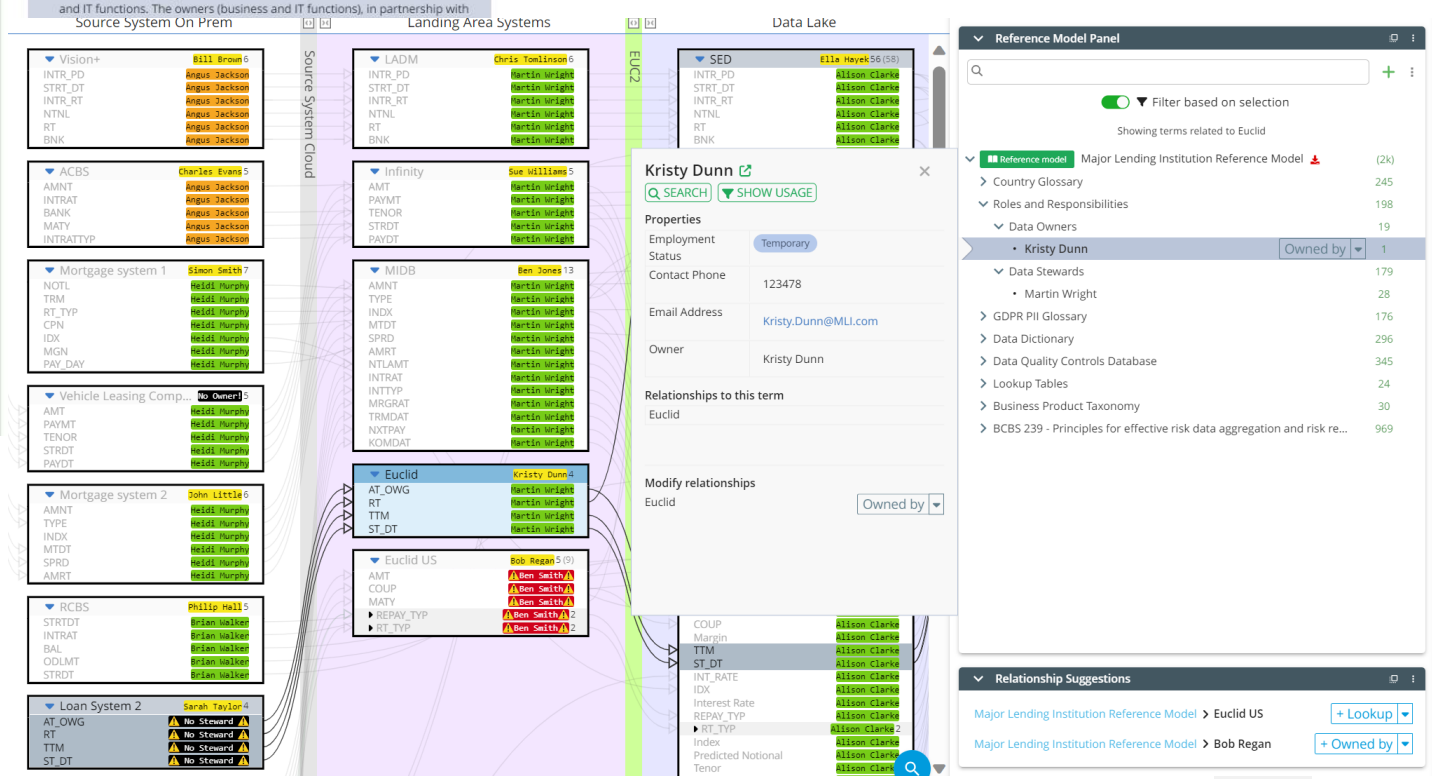
Solidatus

BCBS 239 Principles

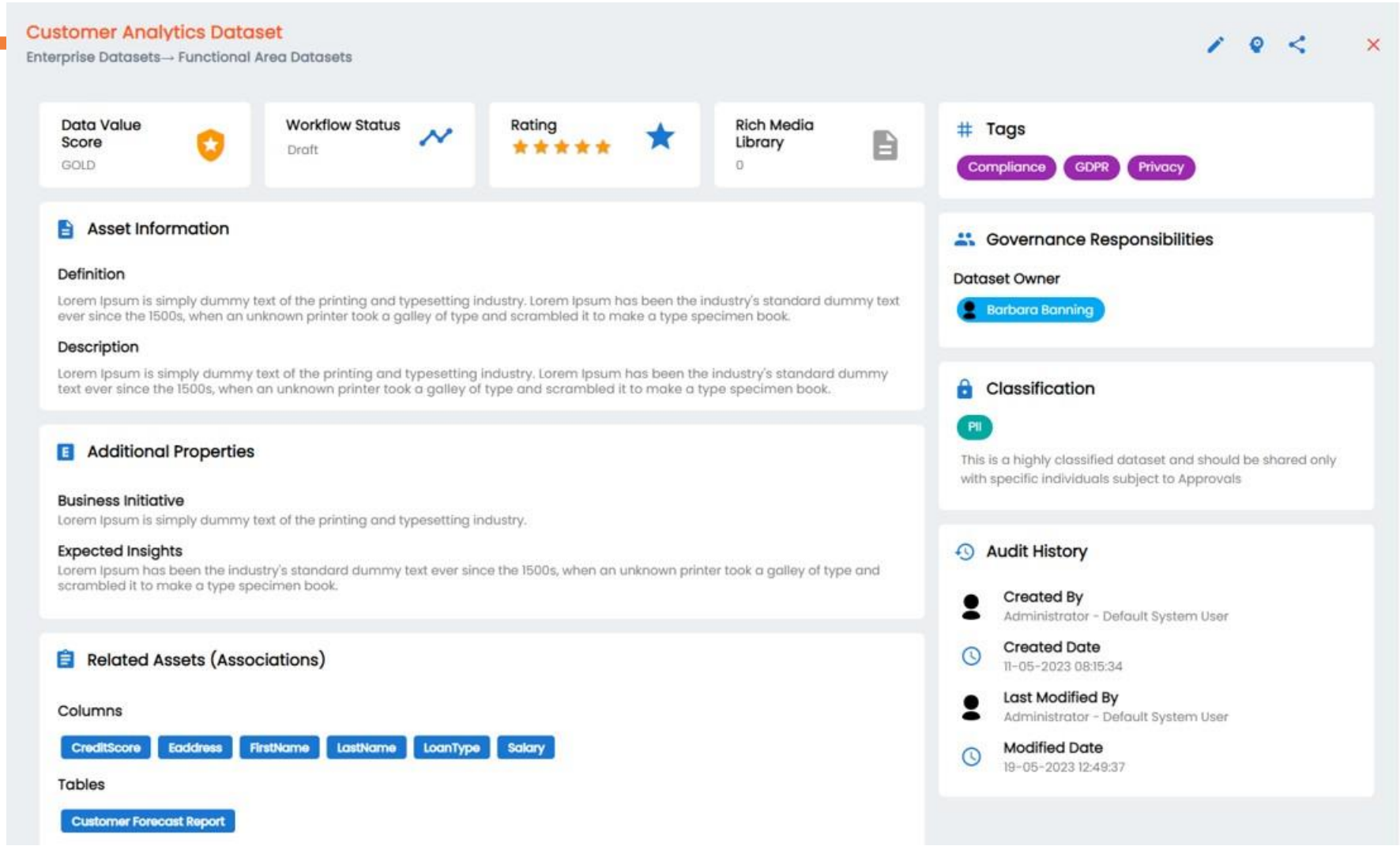




Data Lineage



Data Governance Functionalities Include Data Management Roles



DEFINITION

Data Modeling Capability

A COMPANY'S ABILITY TO DELIVER, MAINTAIN, AND MANAGE DATA MODELS TO "[…] A) TO DEFINE AND ANALYZE DATA REQUIREMENTS, B) DESIGN LOGICAL AND PHYSICAL STRUCTURES THAT SUPPORT THESE REQUIREMENTS, AND C) DEFINE BUSINESS AND TECHNICAL META-DATA"

Source: DAMA International. The DAMA Dictionary of Data Management, Second Edition: Technics Publications, 2011, p.81.

Data Modeling Enables the Whole Data Lifecycle and Produces The Following Metadata

Data modeling

Business metadata

- Business terms and definitions
- Information reg.
- Conceptual/ semantic & logical models
- Owners

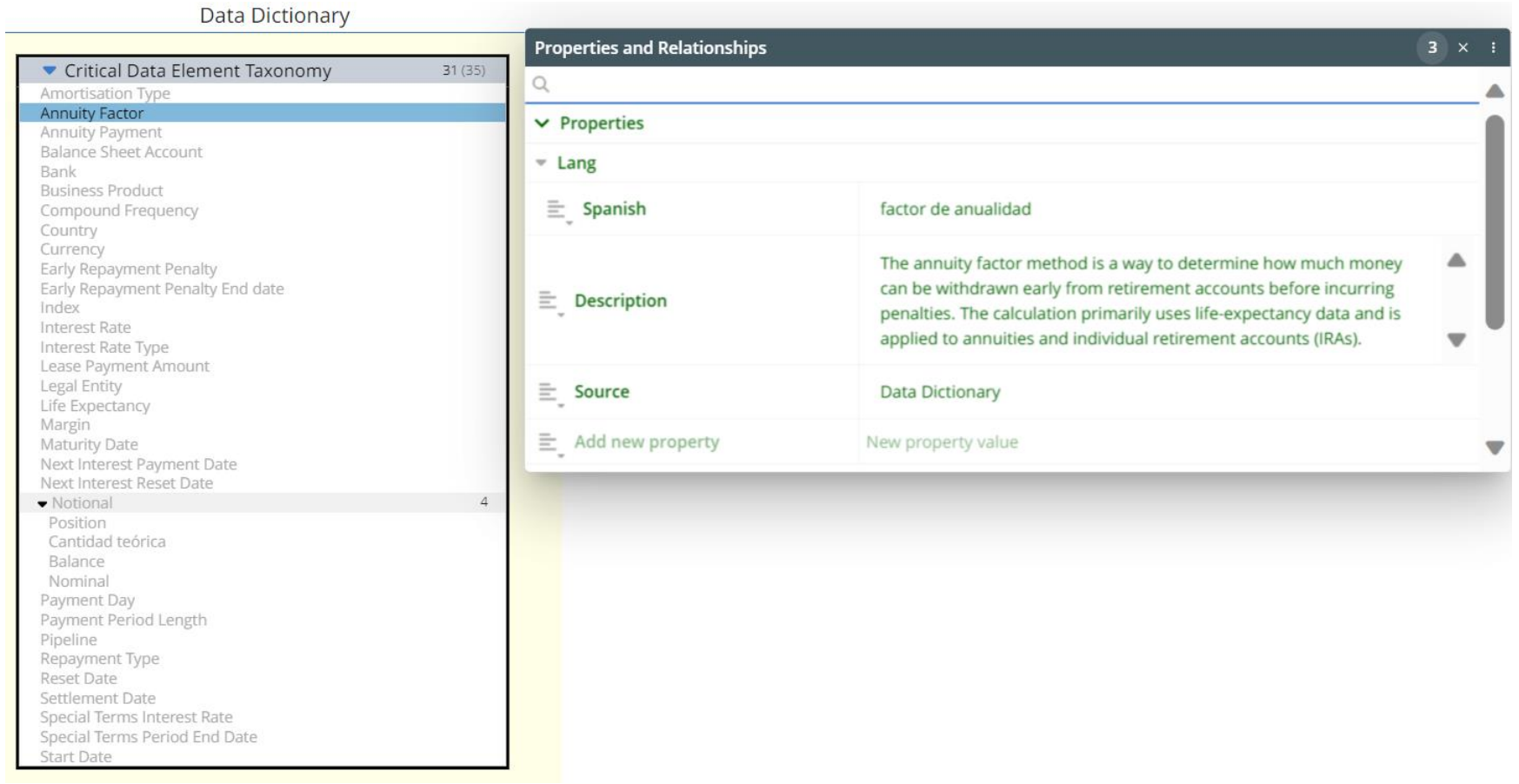
Technical metadata

- Data requirements
- Data models
- Validation and transformation rules

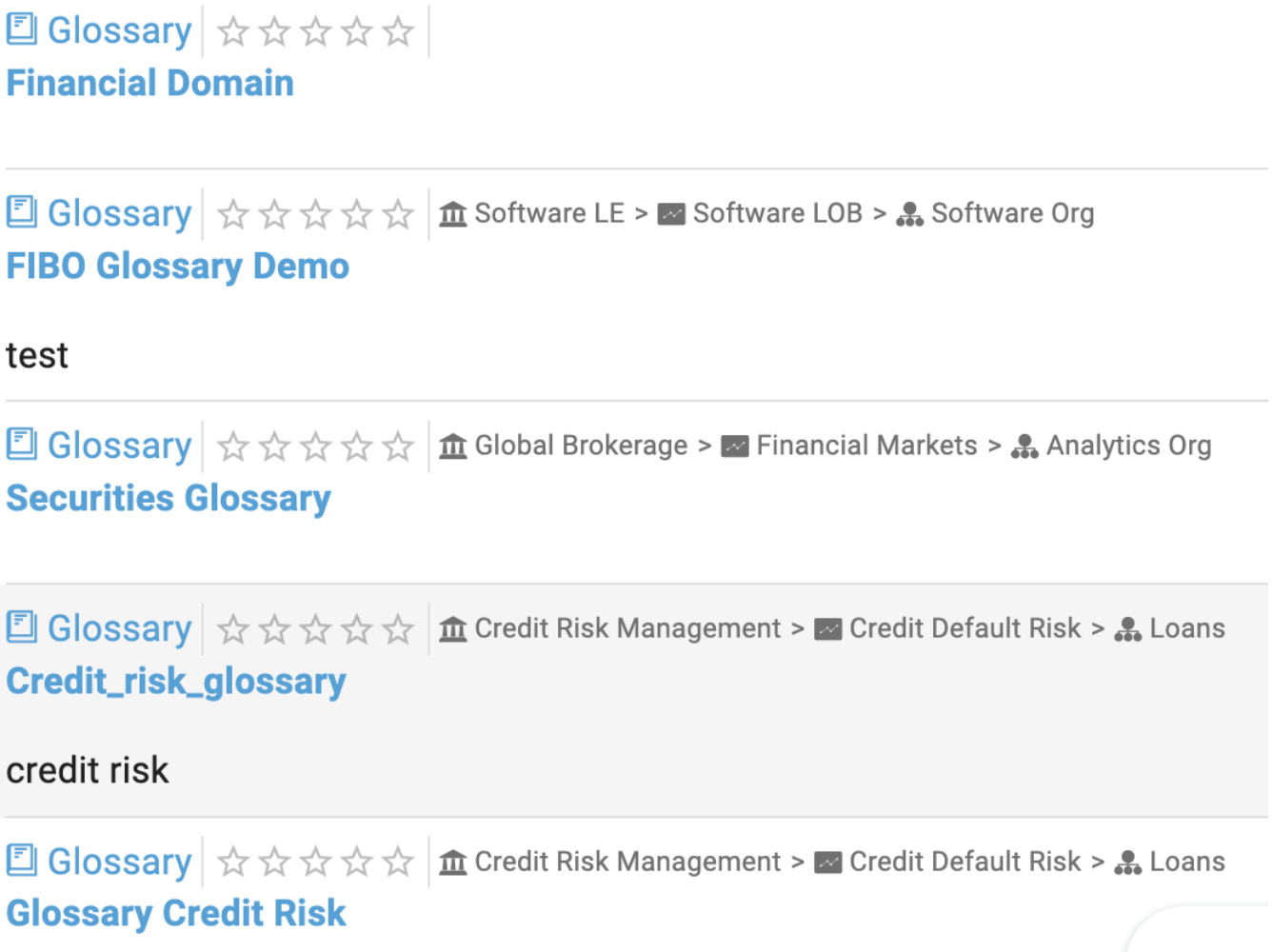
Operational metadata

Metadata Management Solutions Provide Business Glossaries and Data Dictionaries

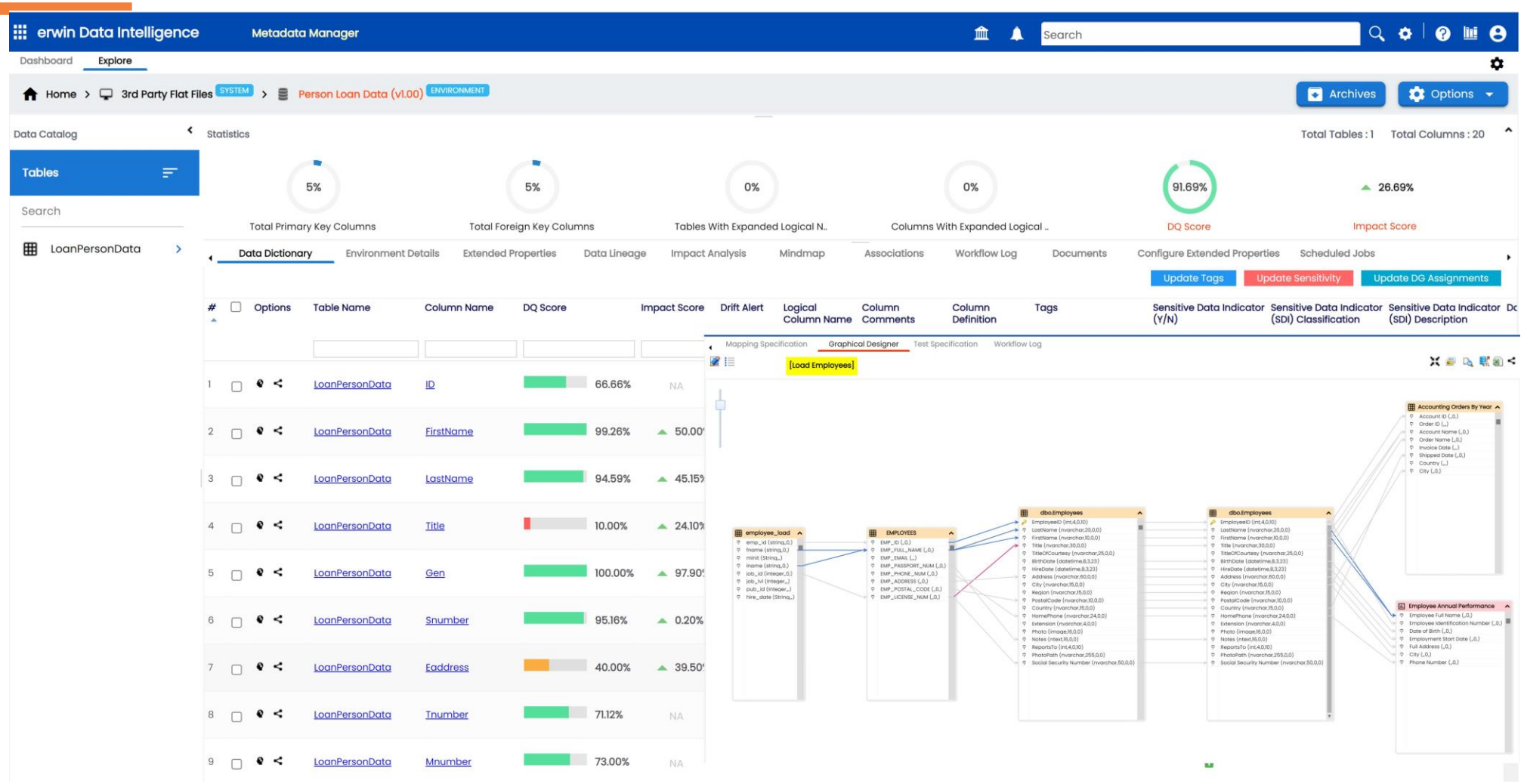
Solidatus



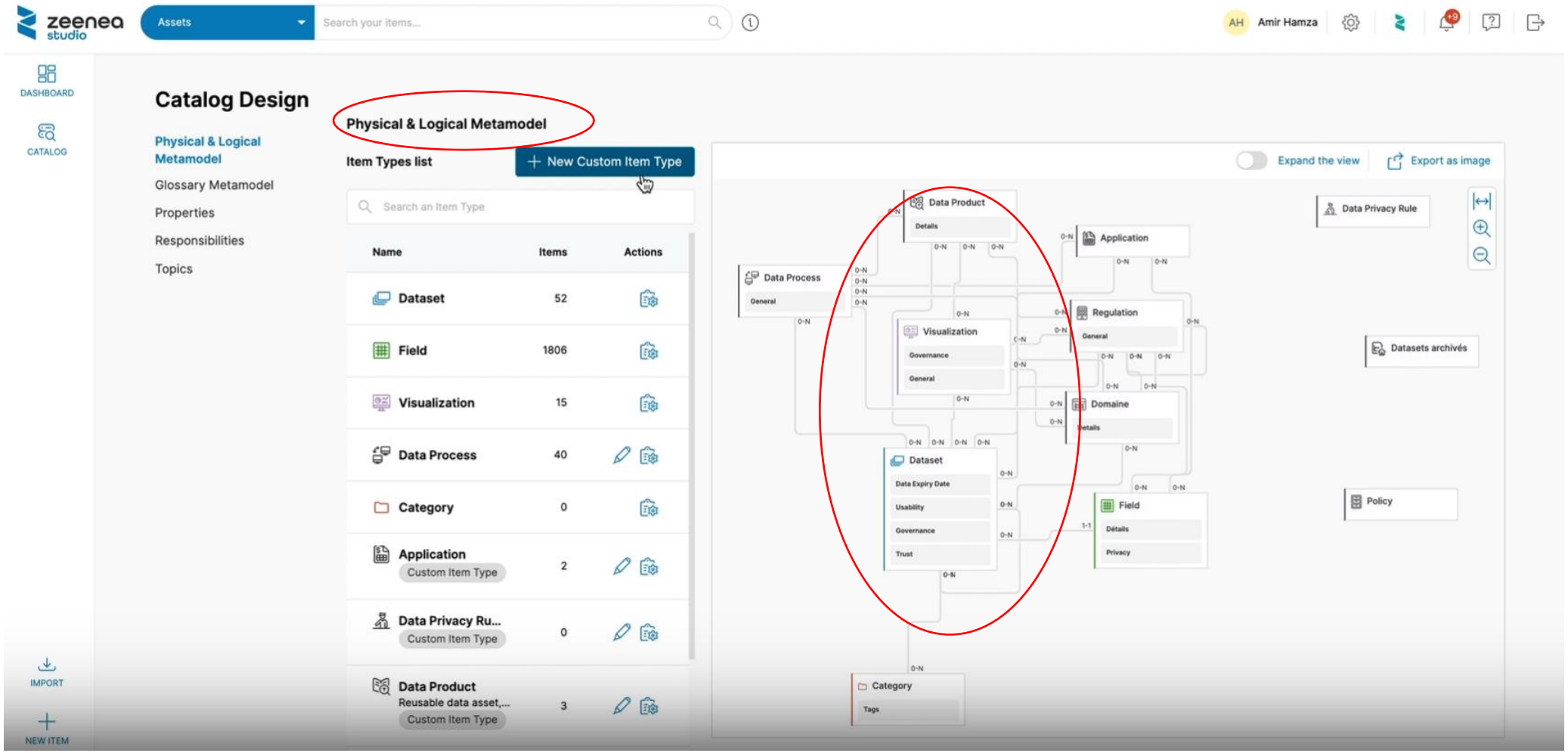
Metadata Management Solutions Should Include Multiple Glossaries and Link Them (Semantic Layer)



Metadata Solutions Include Data Dictionaries



Metadata Solutions Can Demonstrate Logical & Physical Data Models



DEFINITION

Information Systems Architecture

A DESCRIPTION OF THE STRUCTURE OF DATA AND IT ASSETS AND INTERACTION OF IT ASSETS THAT MANAGE DATA AND ENABLE KEY BUSINESS CAPABILITIES

IS Architecture Enables Multiple Lifecycle Steps and Produces The Following Metadata

Information Systems Architecture

Business metadata

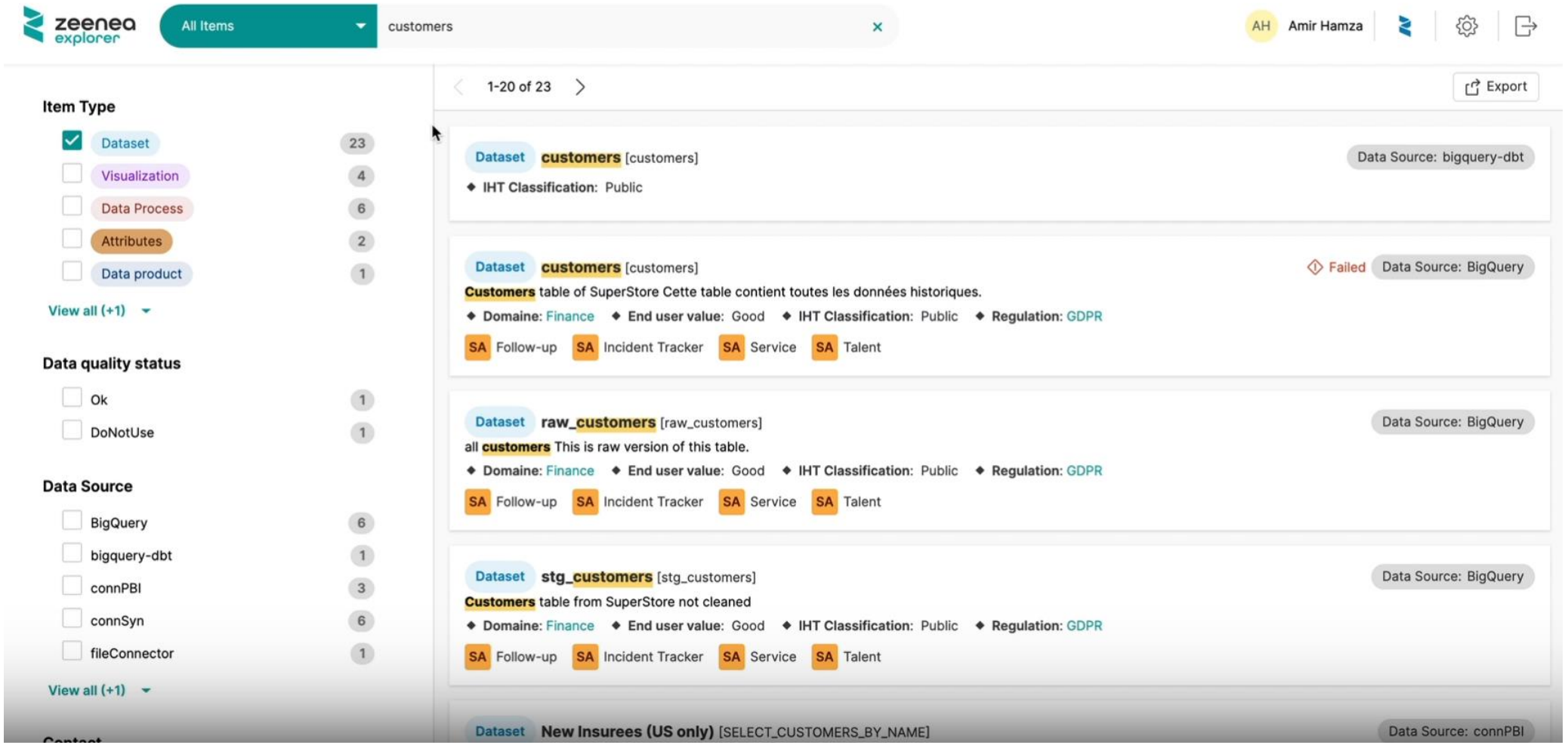
- Catalogs, matrices, and flows of data and IT assets at the semantic/ logical levels

Technical metadata

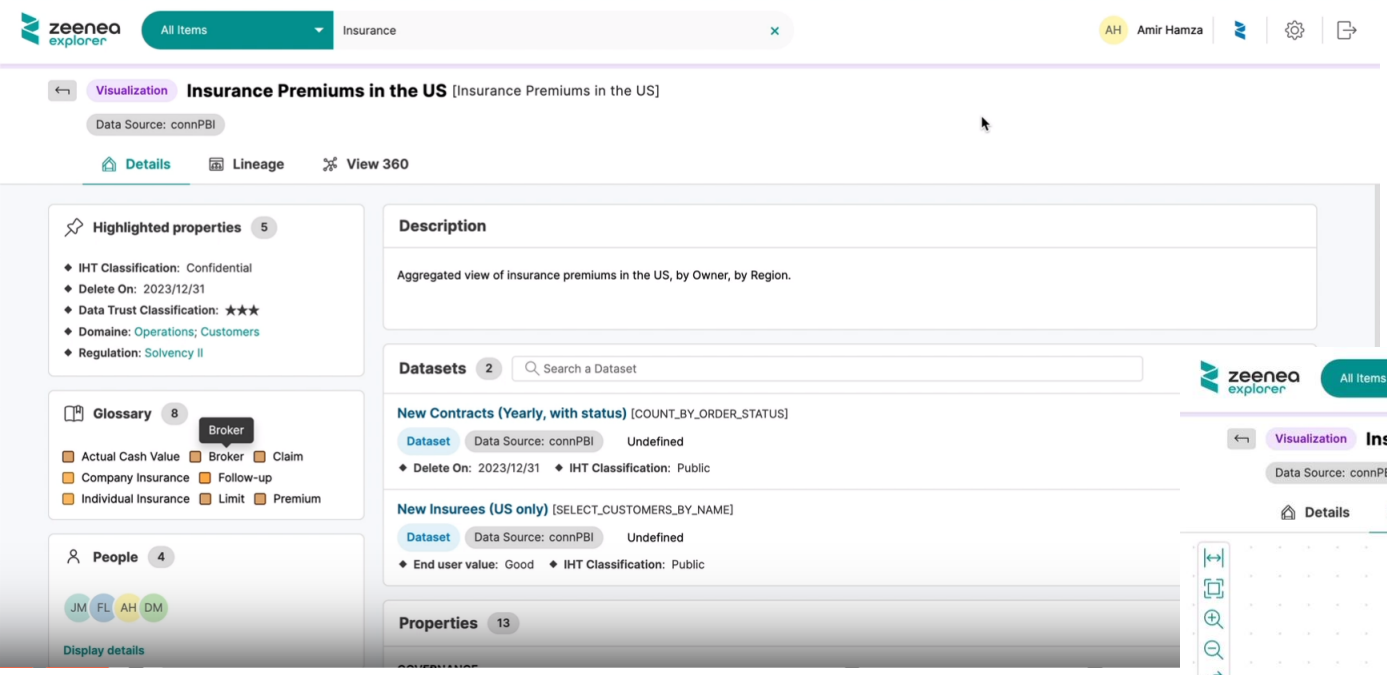
- Catalogs, matrices, and flows of data and IT assets at the physical level

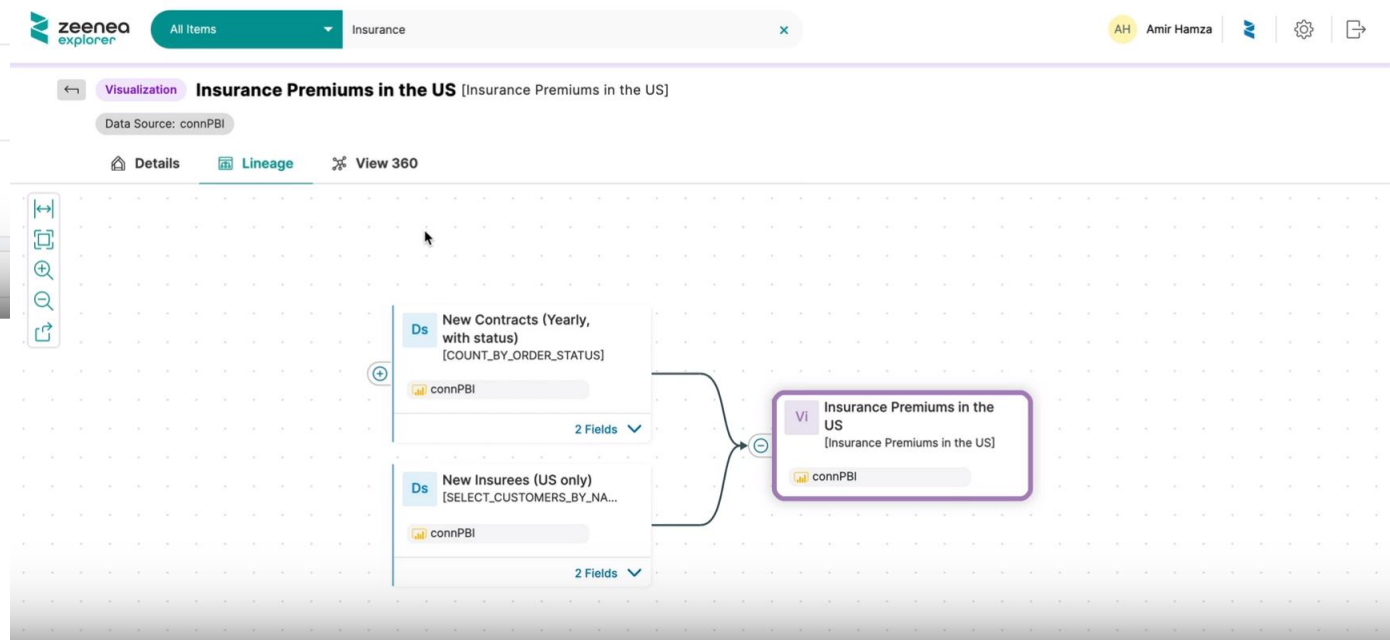
Operational metadata

Metadata Solutions Document and Link Data Assets at Various Abstraction Levels



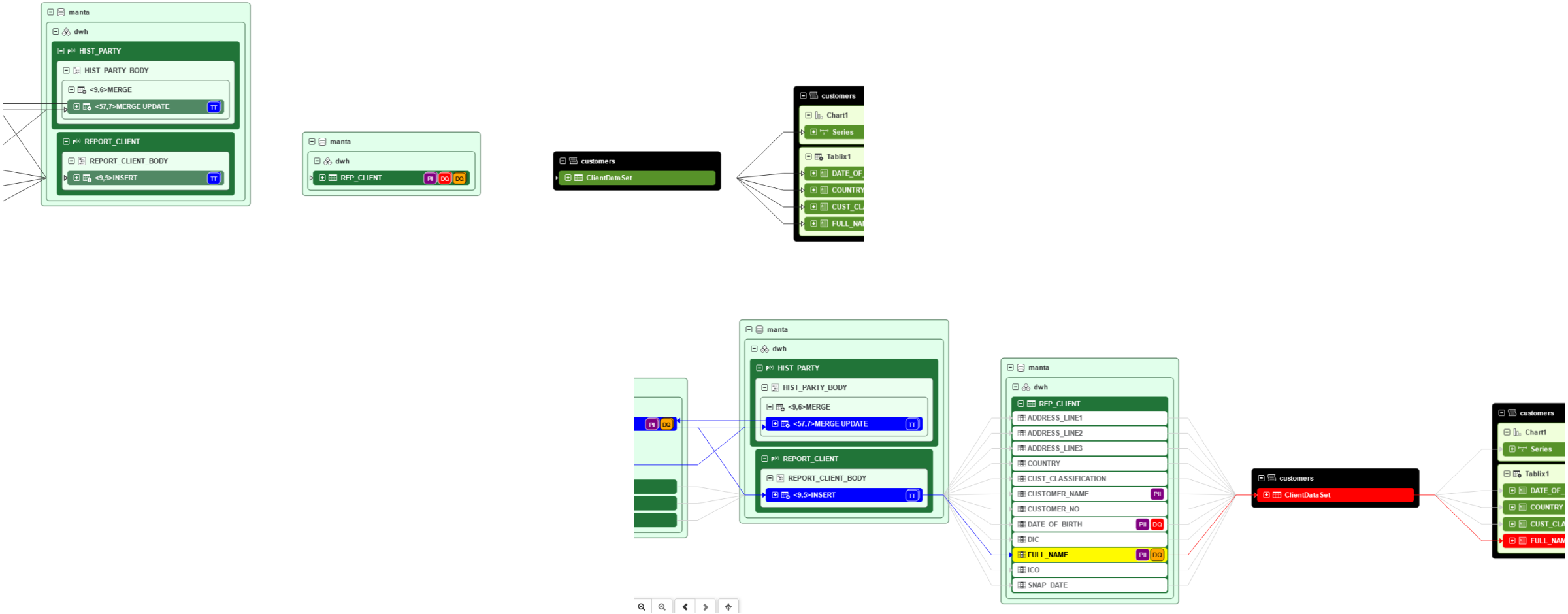
Metadata Solutions Enable the Creation of a Report Catalog and Backward Data Lineage Analysis



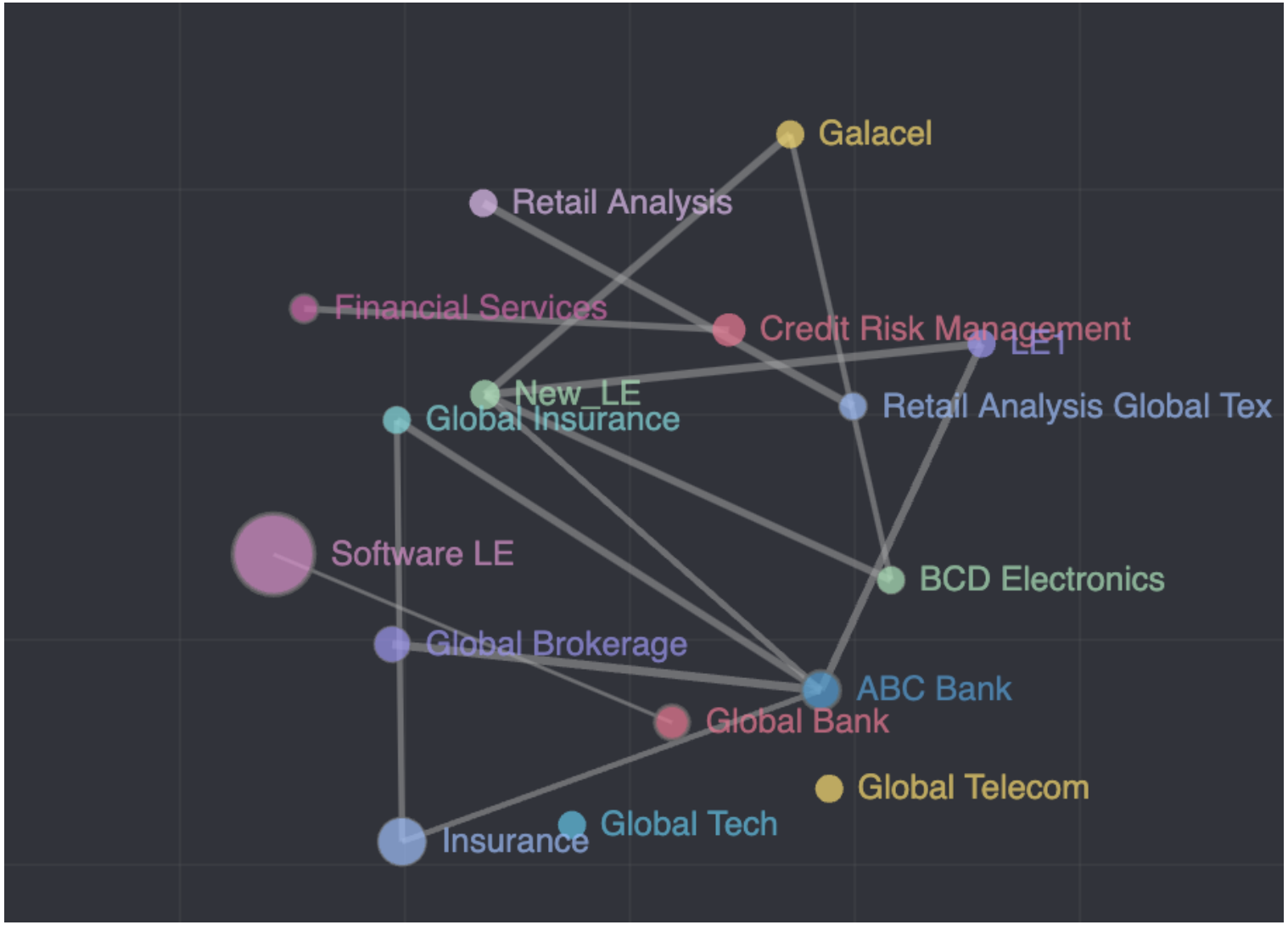


Two Approaches to Document Data Lineage at the Physical Level Exist

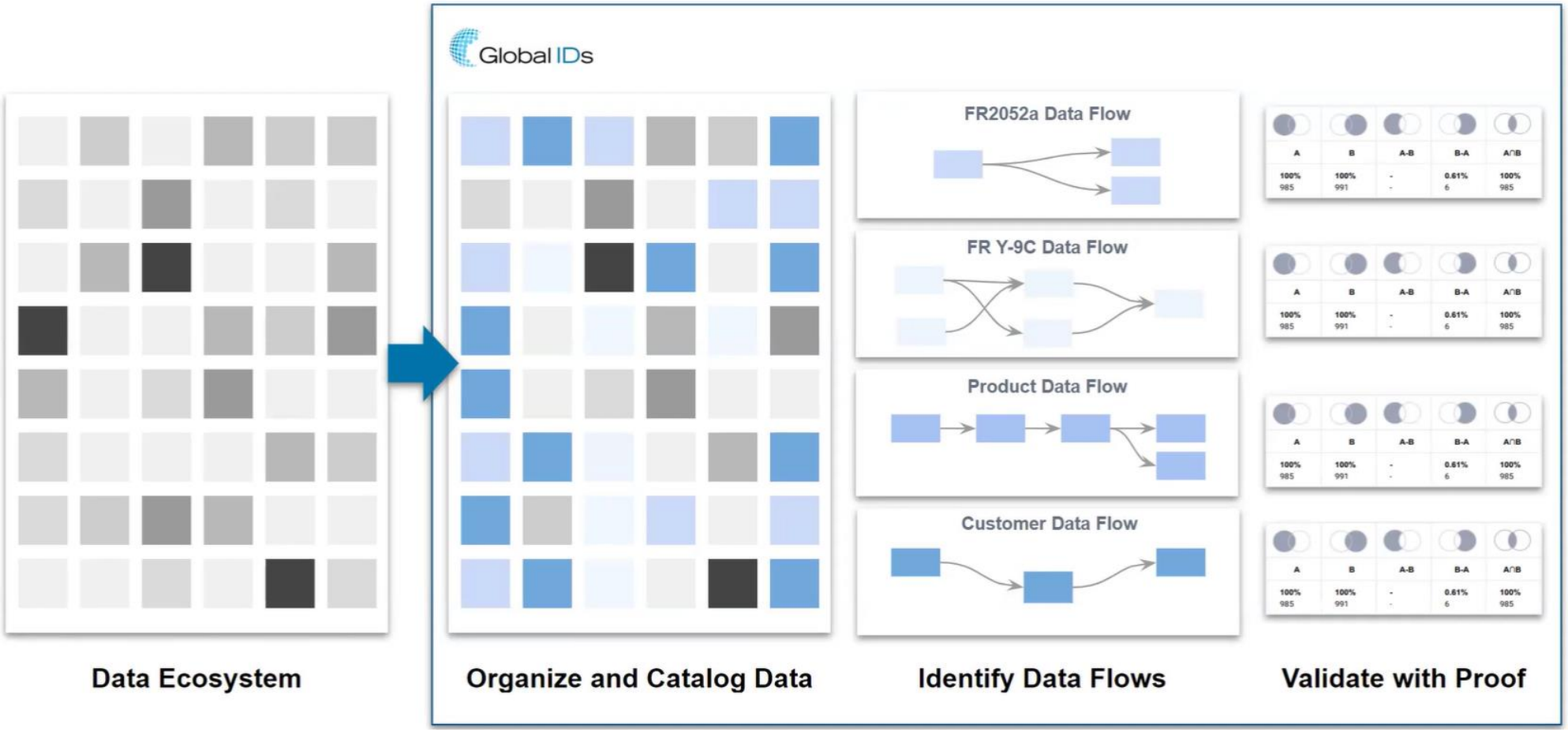
Scanning Technical Metadata Along Data Pipelines Provides Precise Detailed Data Lineage



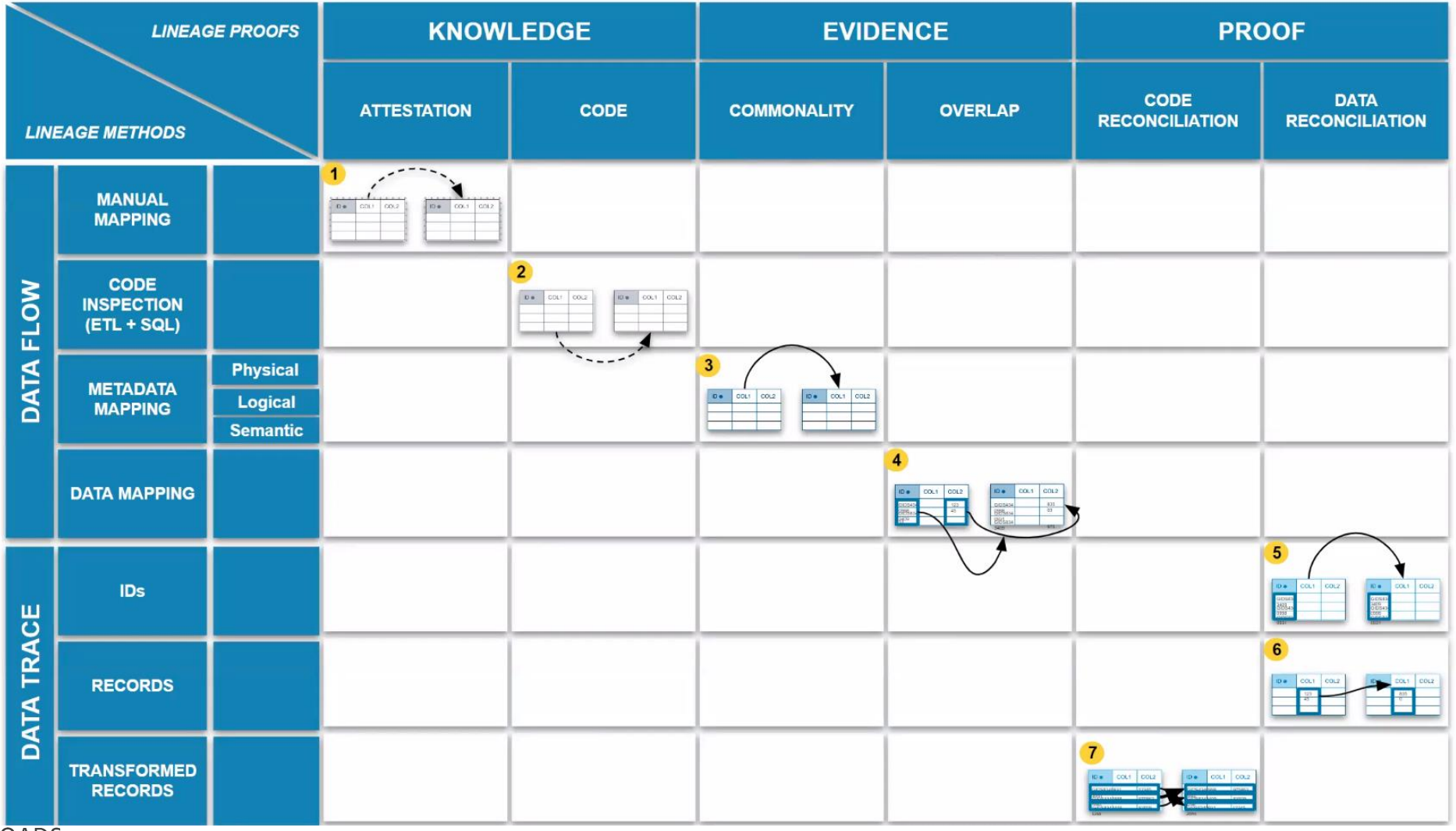
Metadata Solutions Can Capture Data Lineage Using Two Different Manners



Capturing Metadata for Data Lineage Purposes Can Be Enriched by Analyzing Data Sets



Combining Metadata Scanning and Data Analytics Methodologies Ensures Complex View of Data Movements and Transformations



DEFINITION

Data Quality Capability

A COMPANY'S ABILITY TO DELIVER DATA AND INFORMATION OF THE REQUIRED QUALITY AND FOR INTENDED USE

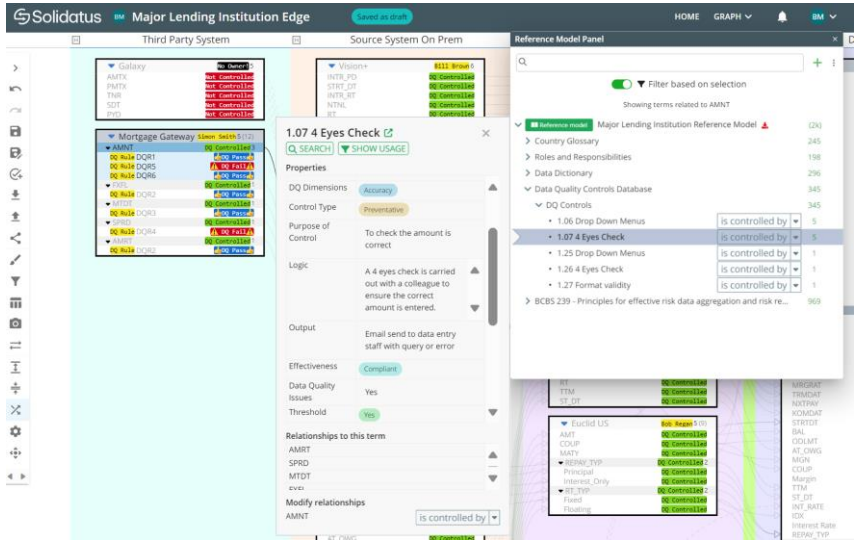
Data Quality Enables Multiple Lifecycle Steps and Produces The Following Metadata

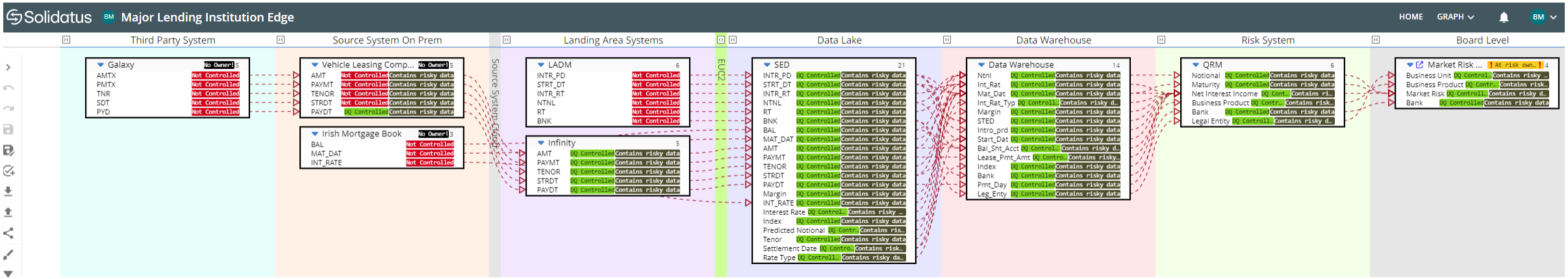
Data Quality

Business metadata	Technical metadata	Operational metadata
• DQ requirements and rules • Data issues • DQ measurement results	• DQ checks	

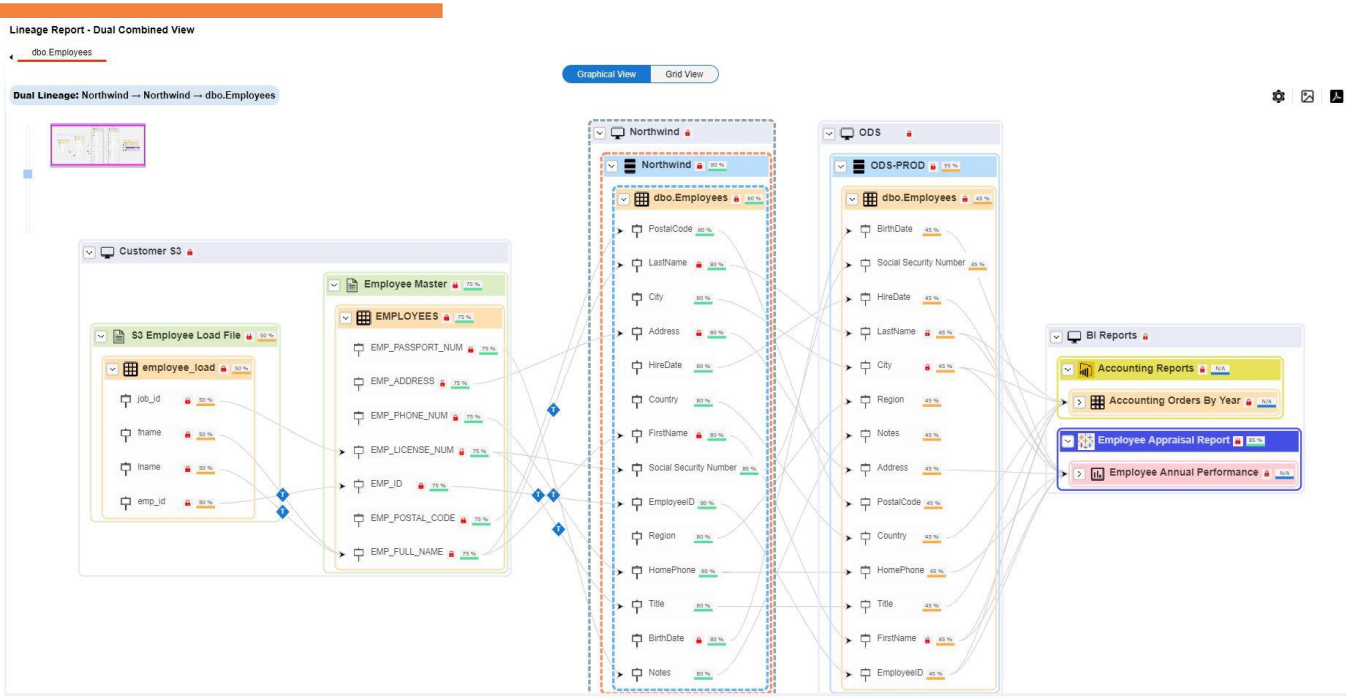
Data Quality Can Be Measured Along Data Pipelines by Applying DQ Rules

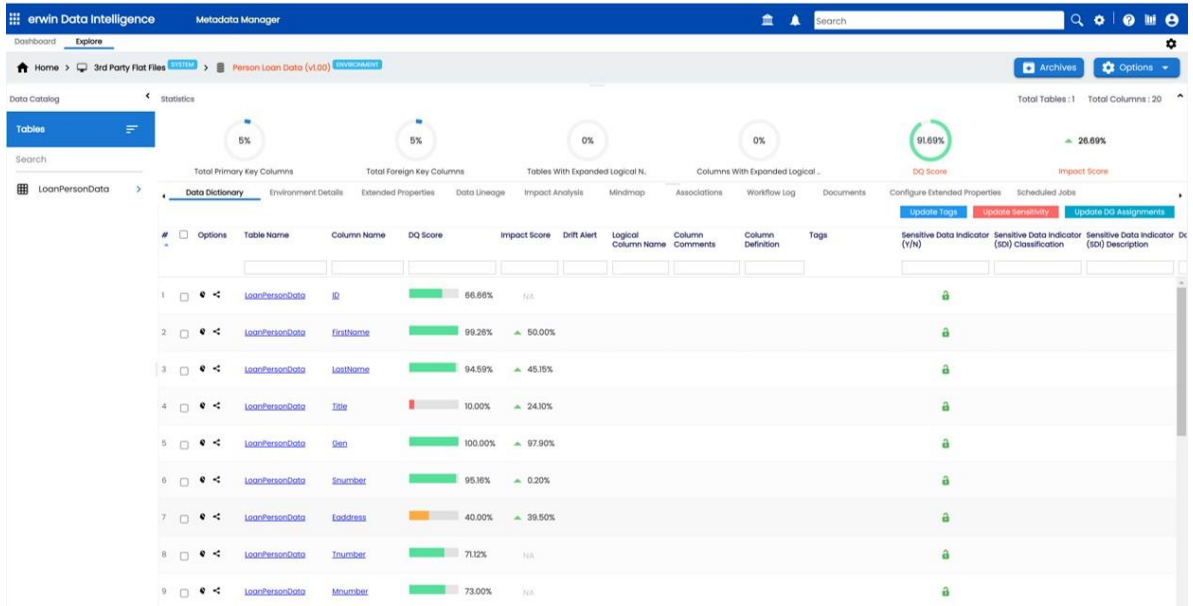
Solidatus



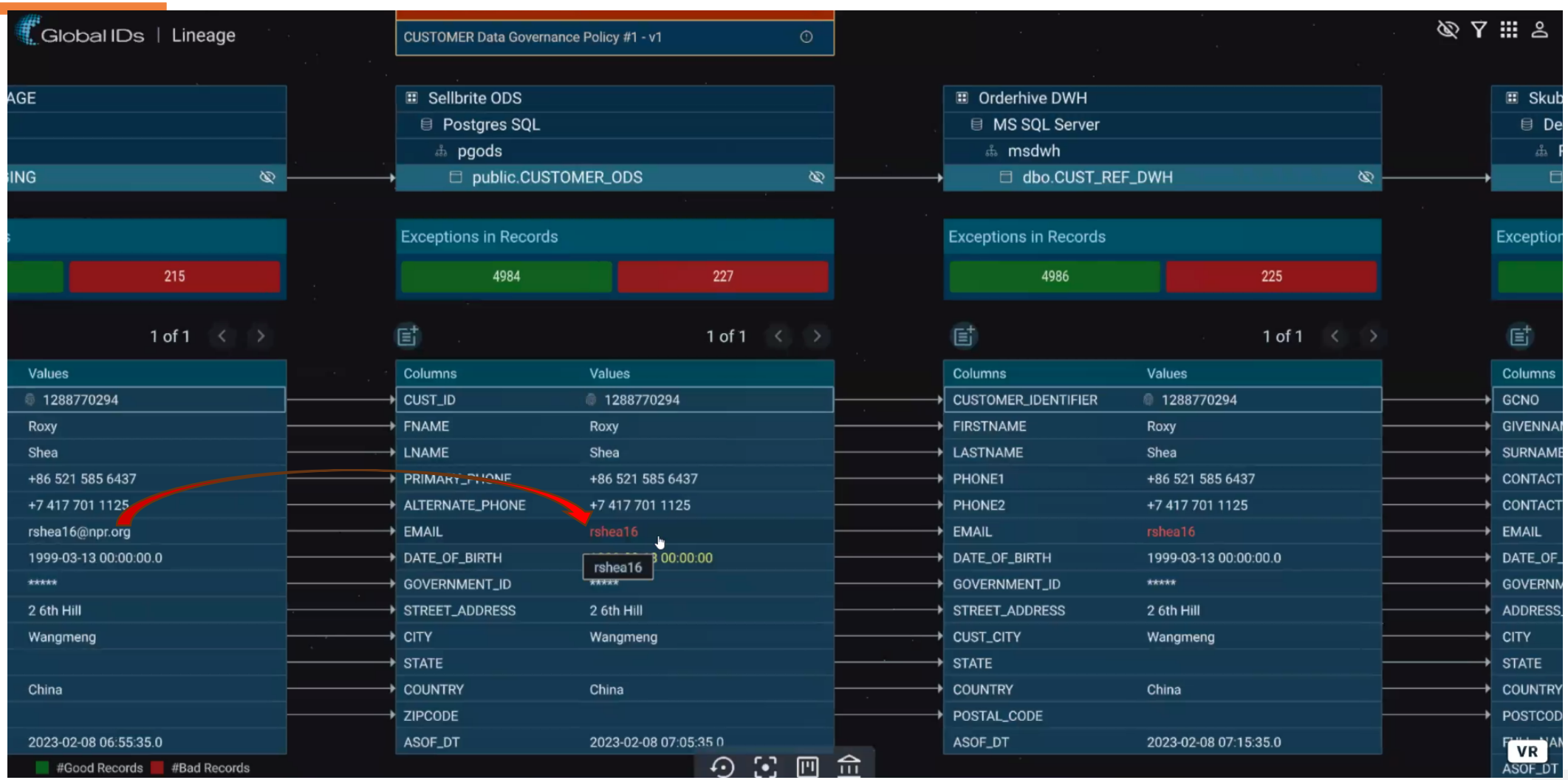


Data Quality Can Be Measured Along Data Pipelines by Applying DQ Rules





Graph Technologies Enable Tracing Data Quality at the Data Instance Level



DEFINITION

Data Security

A COMPANY'S ABILITY TO MANAGE "SECURITY POLICIES AND PROCEDURES TO PROVIDE PROPER AUTHENTICATION, AUTHORIZATION, ACCESS, AND AUDITING OF DATA [...]" AND IT ASSETS

SOURCE: DAMA International. DAMA-DMBOK: Data Management Body of Knowledge, Second Edition. Bradley Beach, N.J.: Technics Publications, 2017, p.219.

Data Security Enables Multiple Lifecycle Steps and Produces The Following Metadata

Data Security

Business metadata

- Security and privacy levels

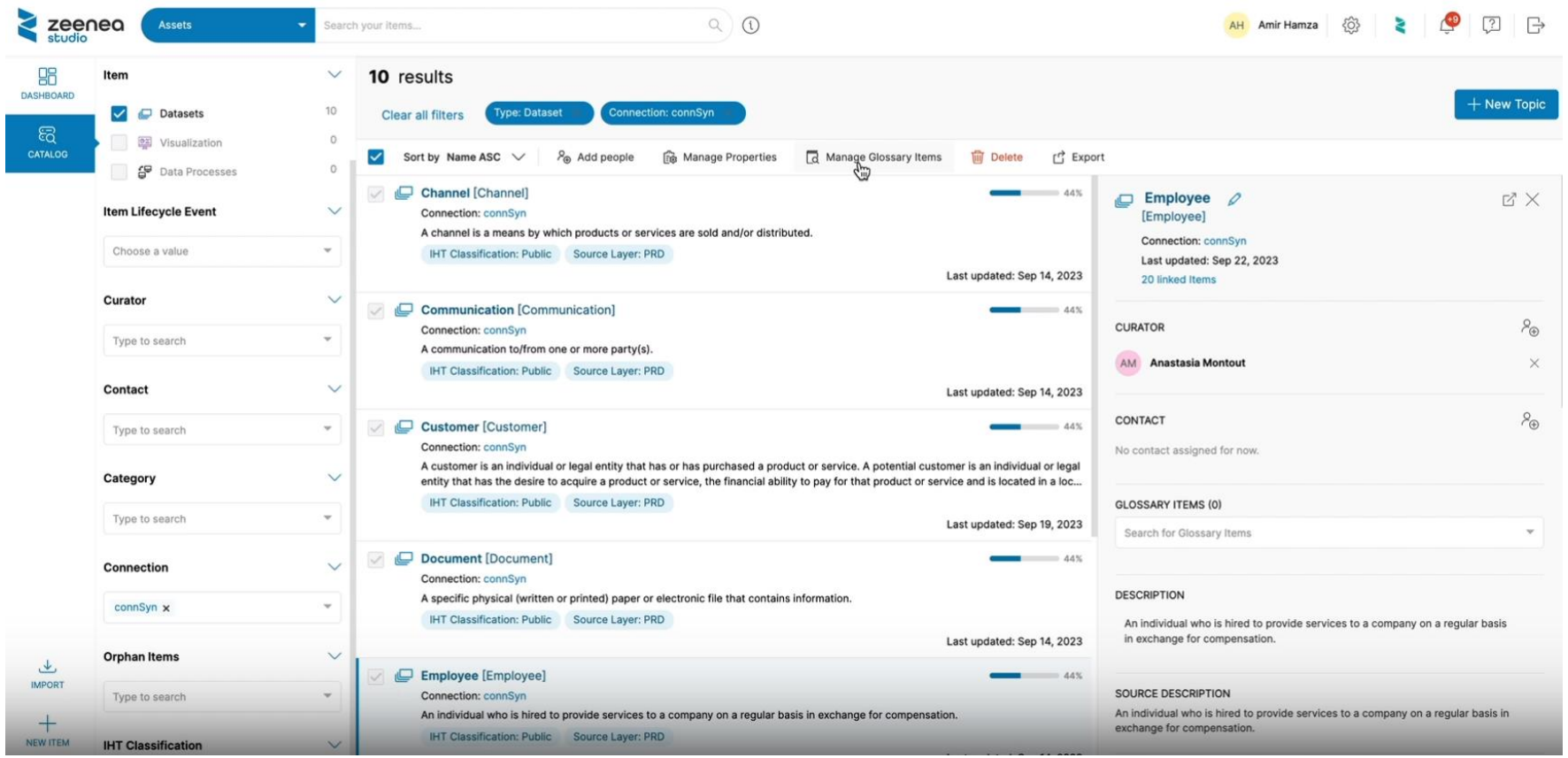
Technical metadata

- Data access rights, groups, roles
- Data CRUD rules

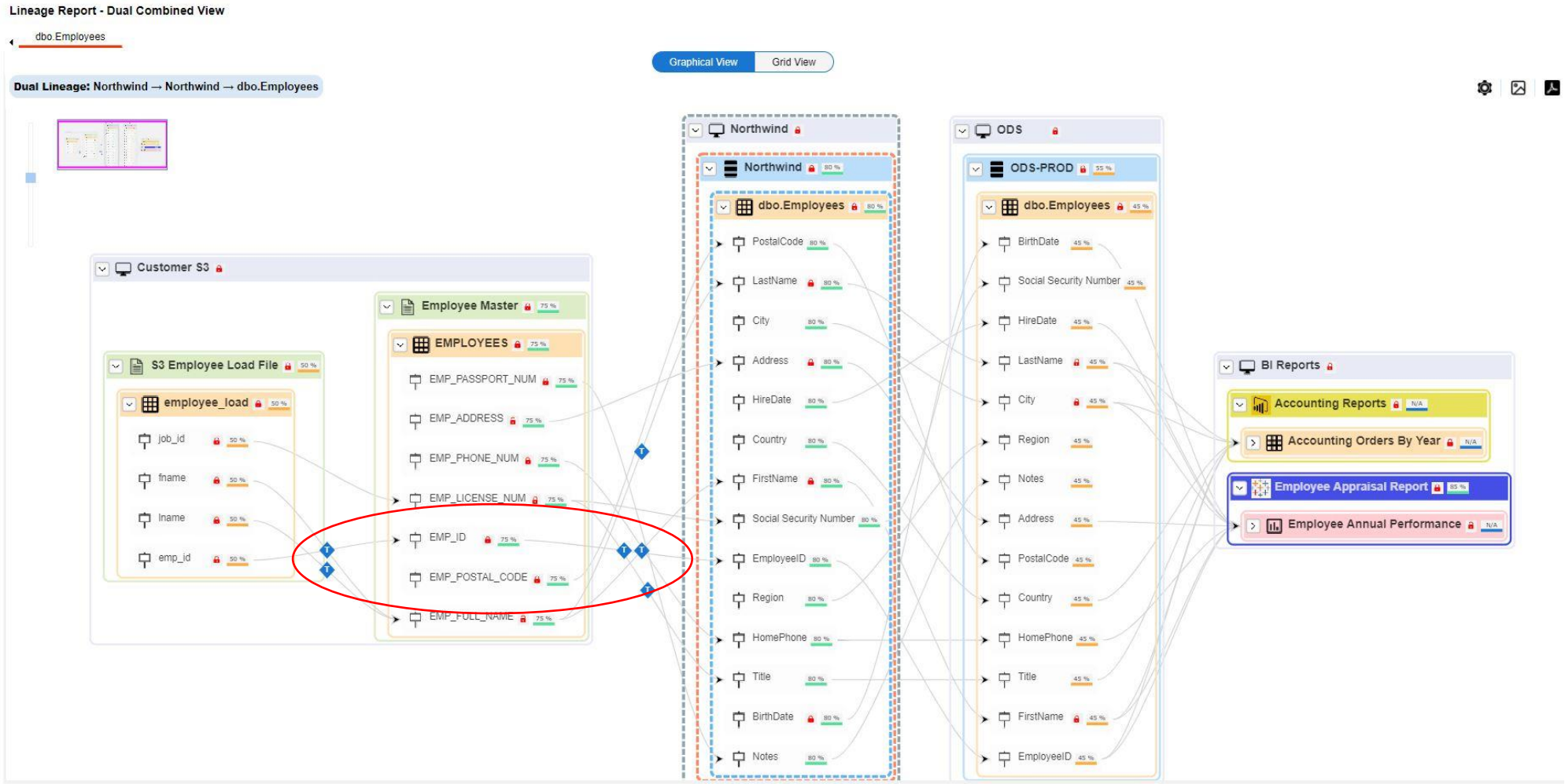
Operational metadata

- Results of audit, balance, control measurement

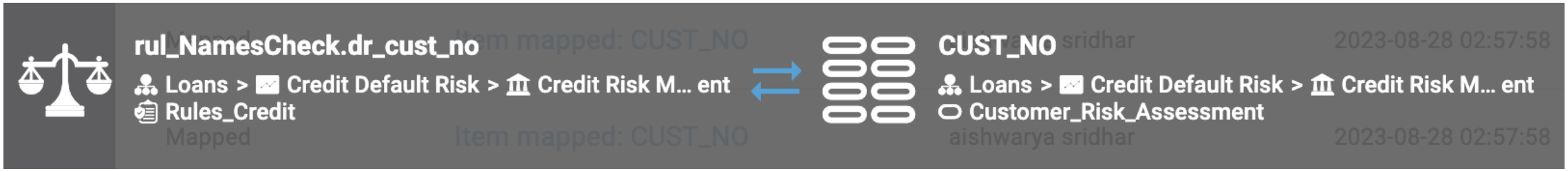
Metadata Solutions Support Defining Data Privacy Levels



Metadata Solutions Support Data Sensitivity Analysis Along a Data Chain



Metadata Solutions Should Ensure Access Control



DEFINITION

Data Analytics

A COMPANY'S ABILITY TO ENHANCE BUSINESS DECISION-MAKING AT VARIOUS ORGANIZATIONAL LEVELS BY PROVIDING INSIGHTS FROM DATA AND INFORMATION USING MULTIPLE DATA ANALYTICS METHODOLOGIES

Data Analytics Enables the Data Lifecycle and Produces The Following Metadata

Data analytics

Business metadata

- Use case catalog

Technical metadata

Operational metadata

DEFINITION

Data Lifecycle Management

A COMPANY'S ABILITY TO PLAN, DESIGN, IMPLEMENT, COORDINATE, AND CONTROL PERFORMANCE OF DATA LIFECYCLE-RELATED PROCESSES

Data Lifecycle Management Enables Multiple Data Lifecycle Steps and Produces The Following Metadata

Data lifecycle management

Business metadata

- Schedules for data updates

Technical metadata

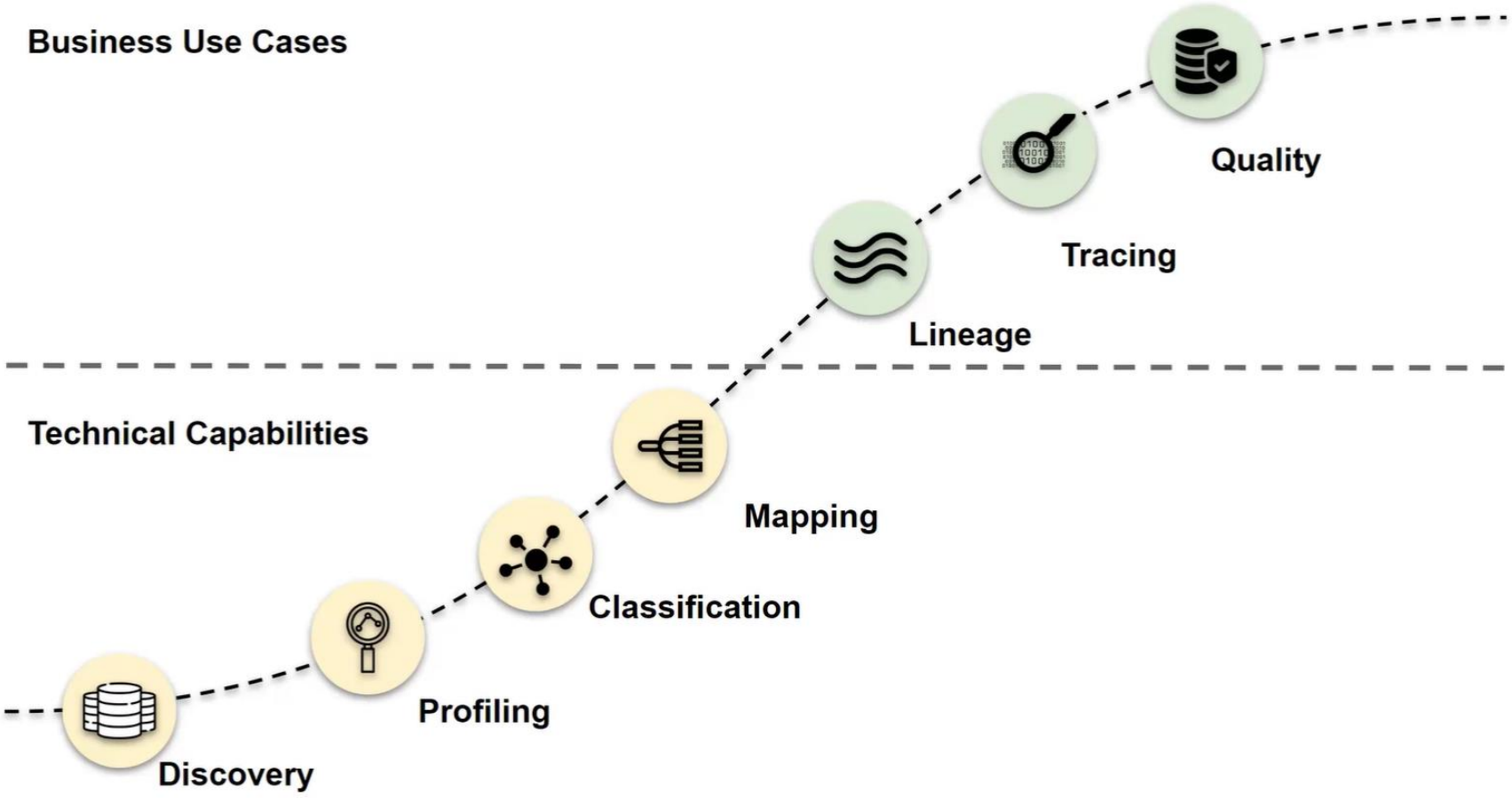
- Recovery and back up rules
- Content update cycle
- Orchestration

Operational metadata

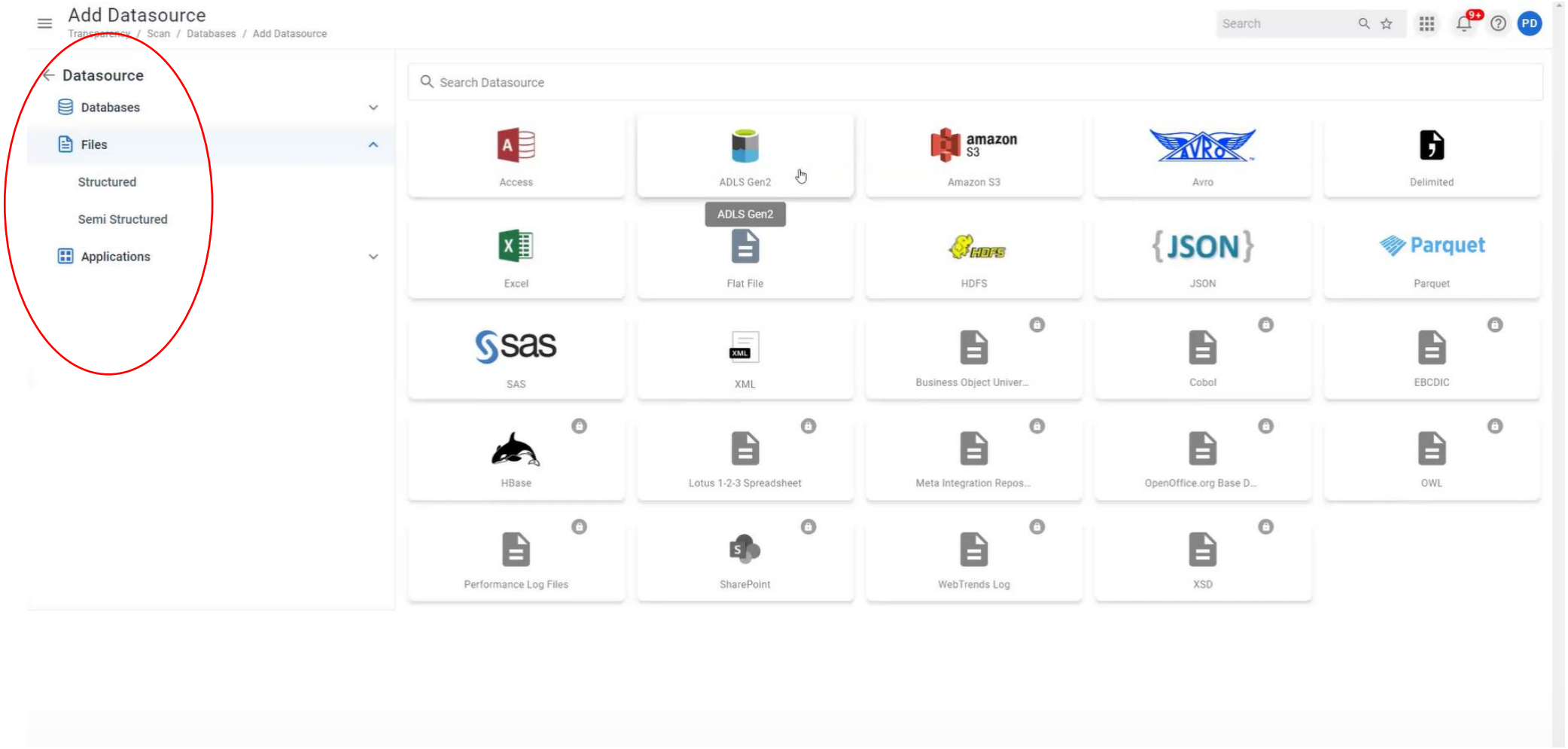
- Execution logs
- Error logs
- Backup, retention, disaster recovery provisions

Metadata Solutions Several Core Steps of a Data Lifecycle

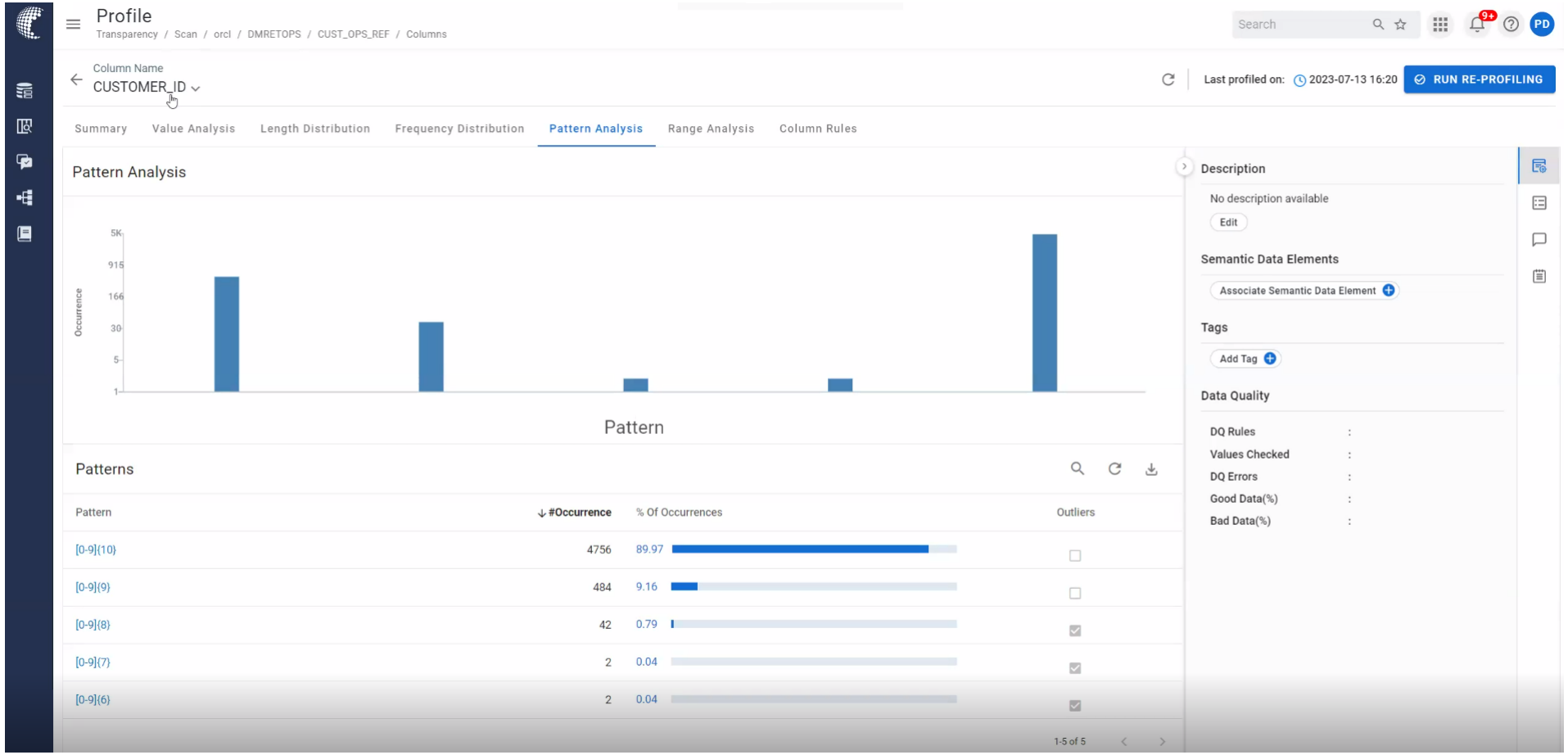
Business Data Flow Methodology (contd.)



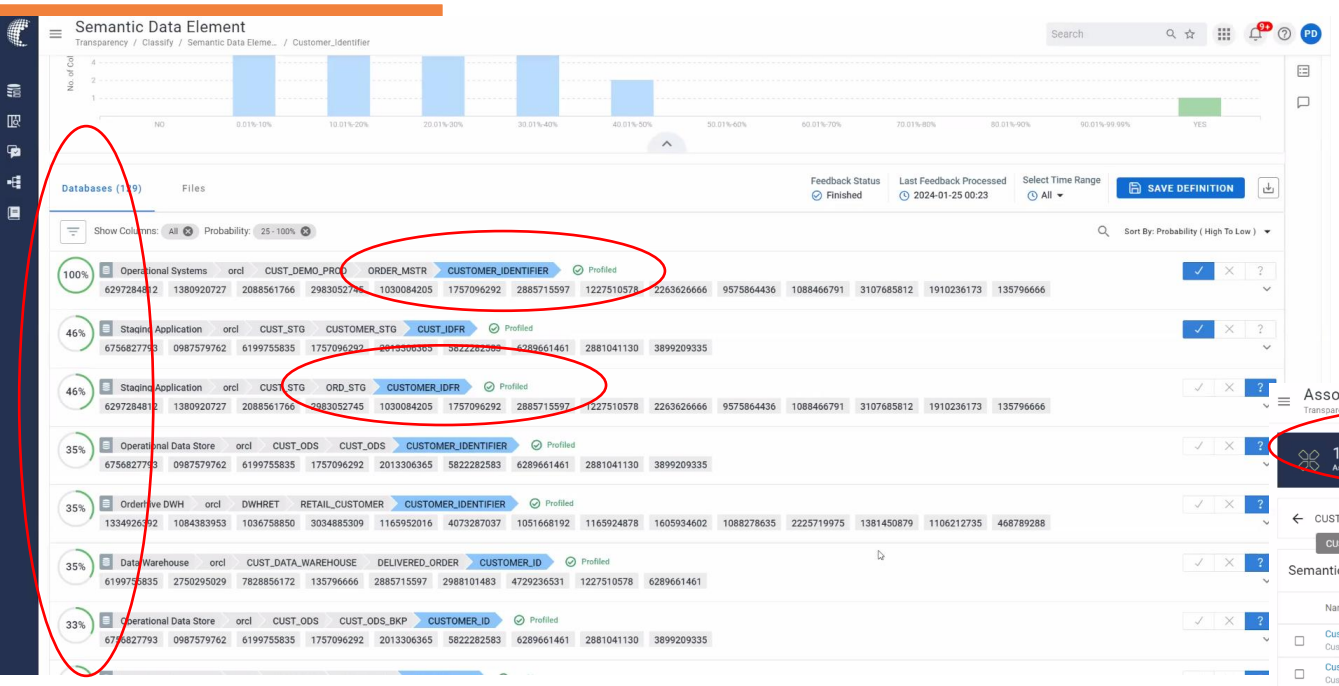
Metadata Solutions Provide Multiple Scanners for Data Discovery for Various Applications, Languages, and Data Types

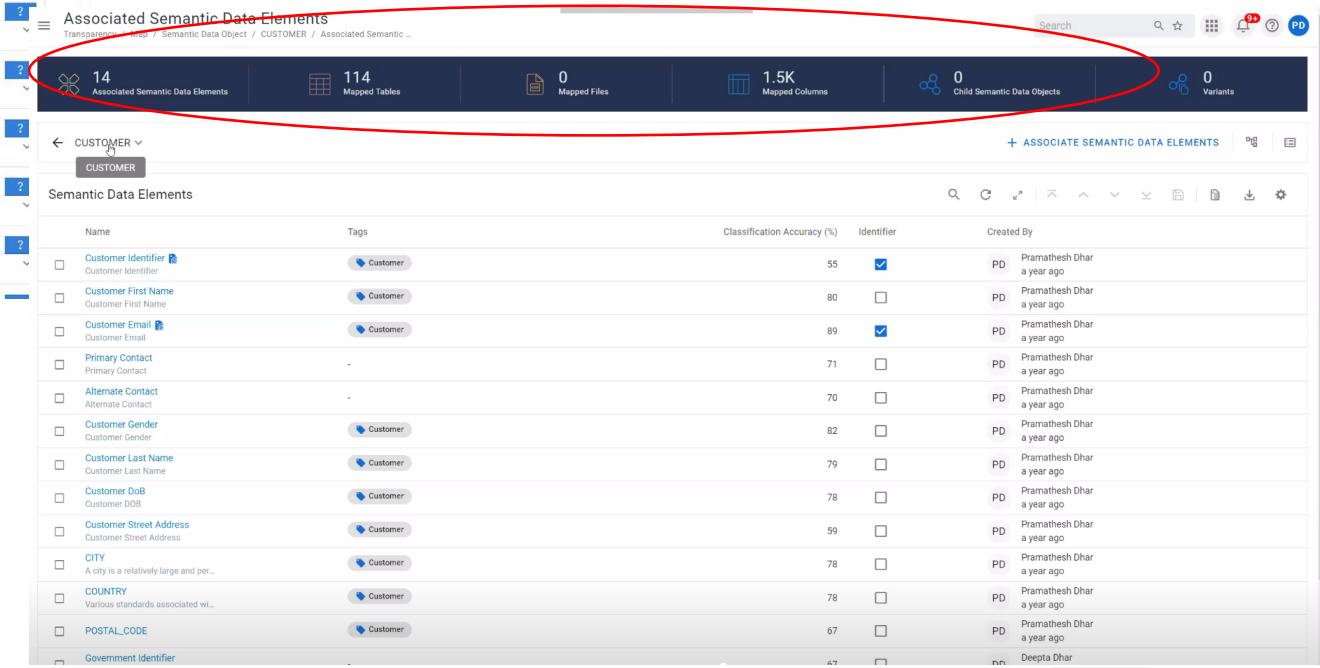


Data Profiling Allow for Detecting Data Patterns and Anomalies



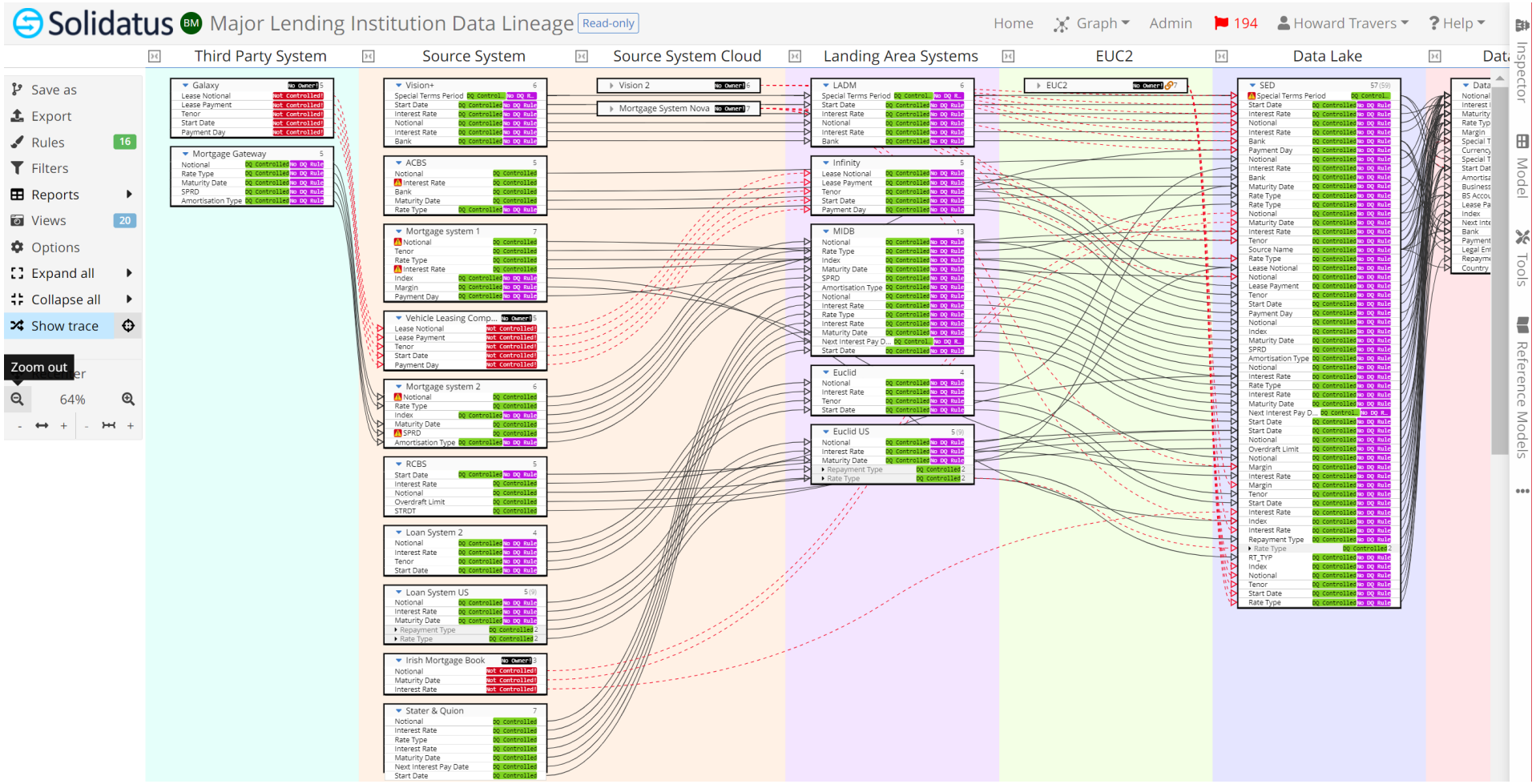
ML Technologies Ease Mapping Data Elements (Tables/Attributes) at the Semantic Layer





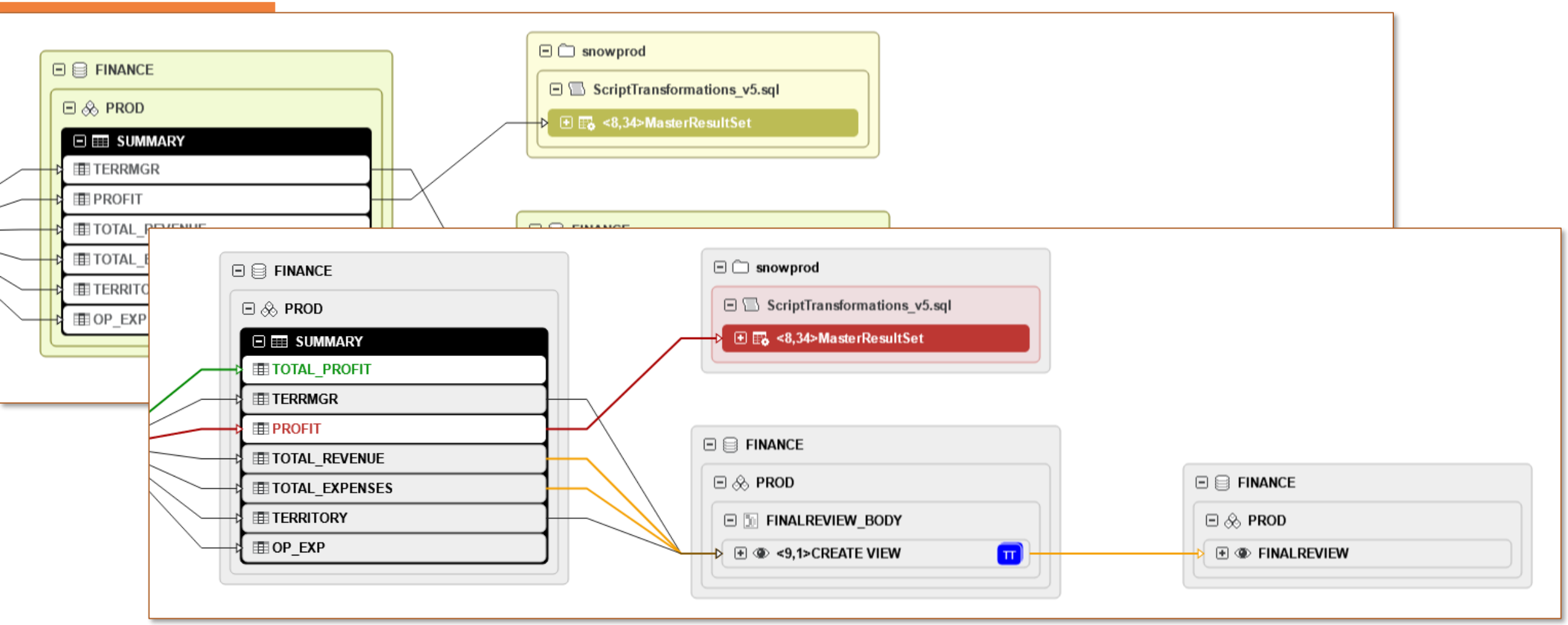
Data Lineage Should Assist in Tracing Links between Metadata Objects in two Directions

Solidatus

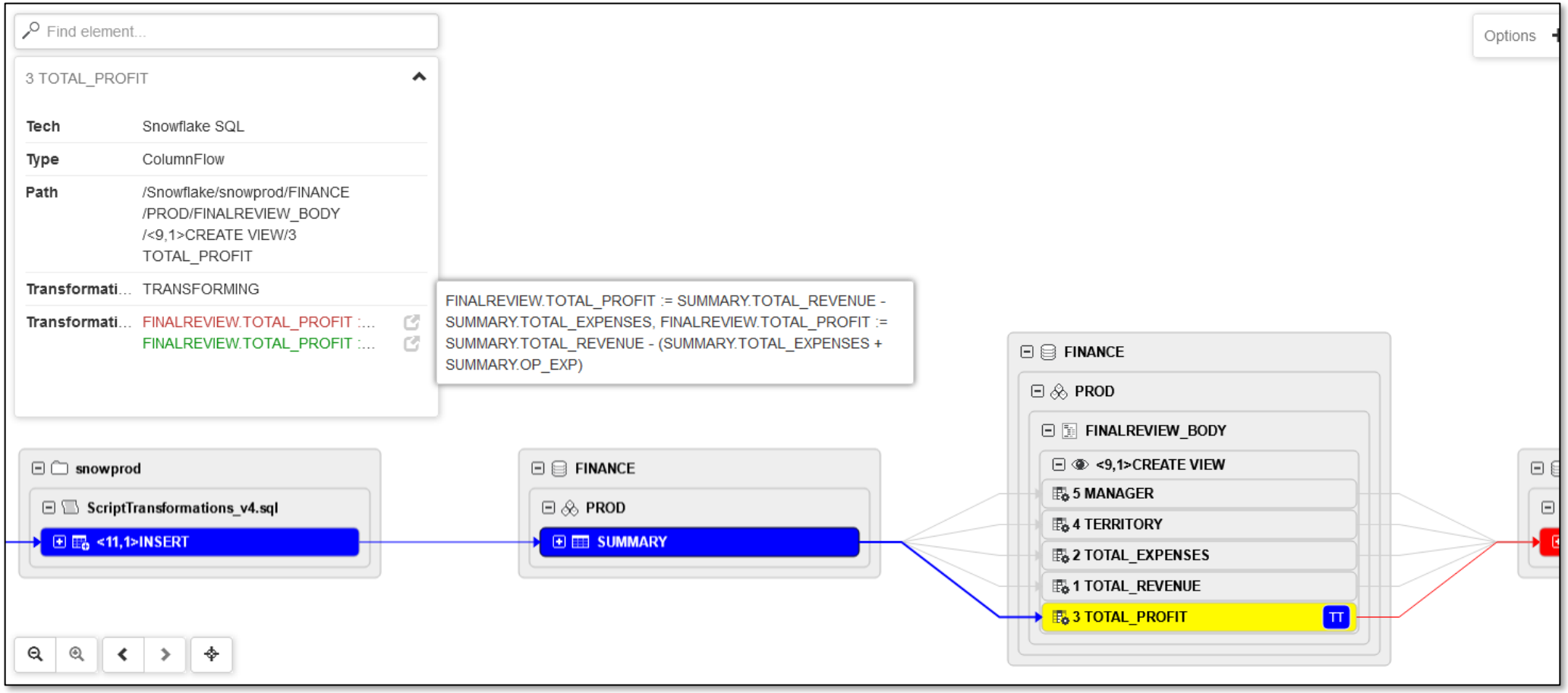


Metadata Solutions Should Provide Versioning Control for Schema Changes

manta
an IBM Company

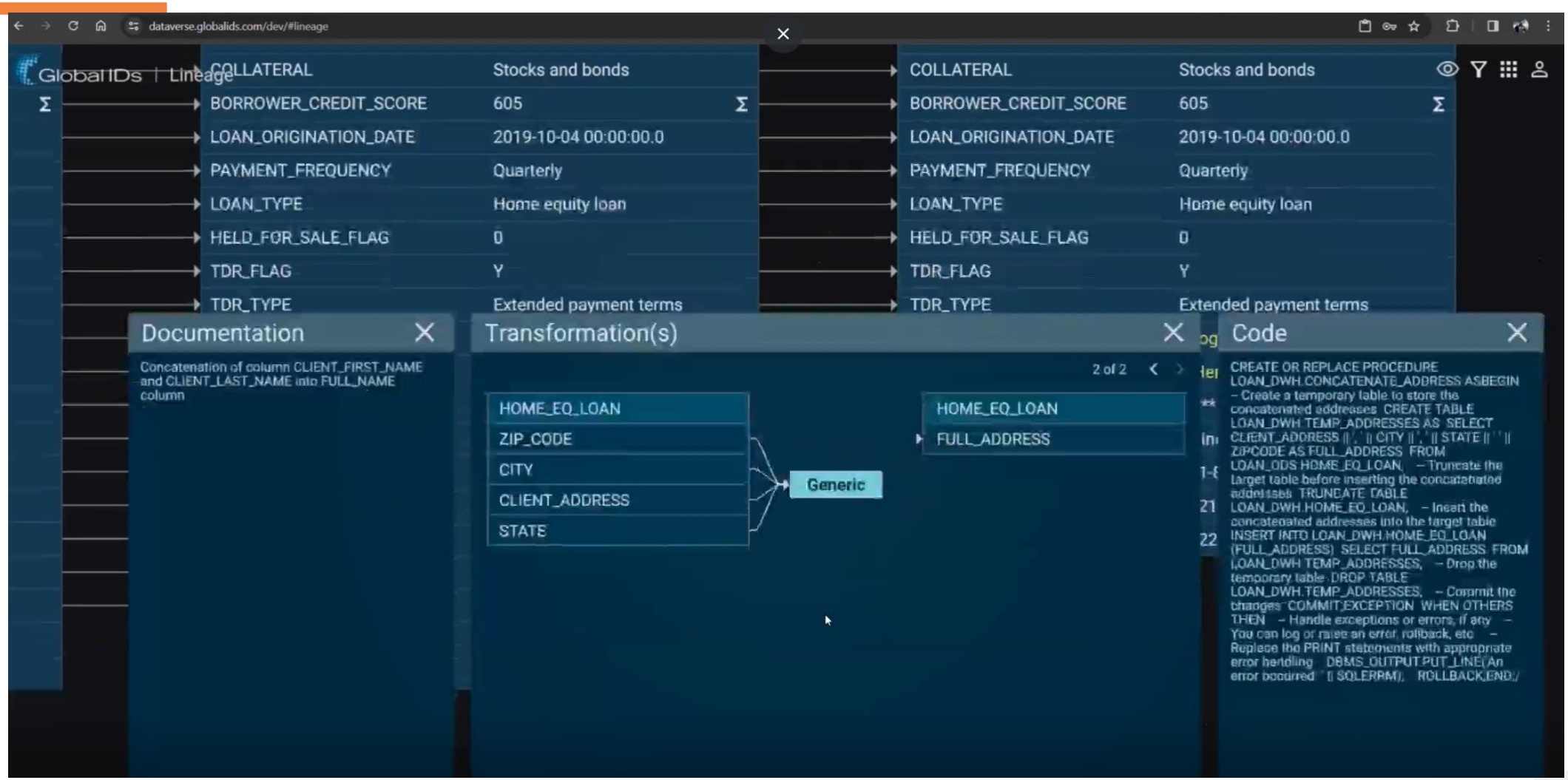


A Solution Should Provide Versioning Control for Business Rule Changes

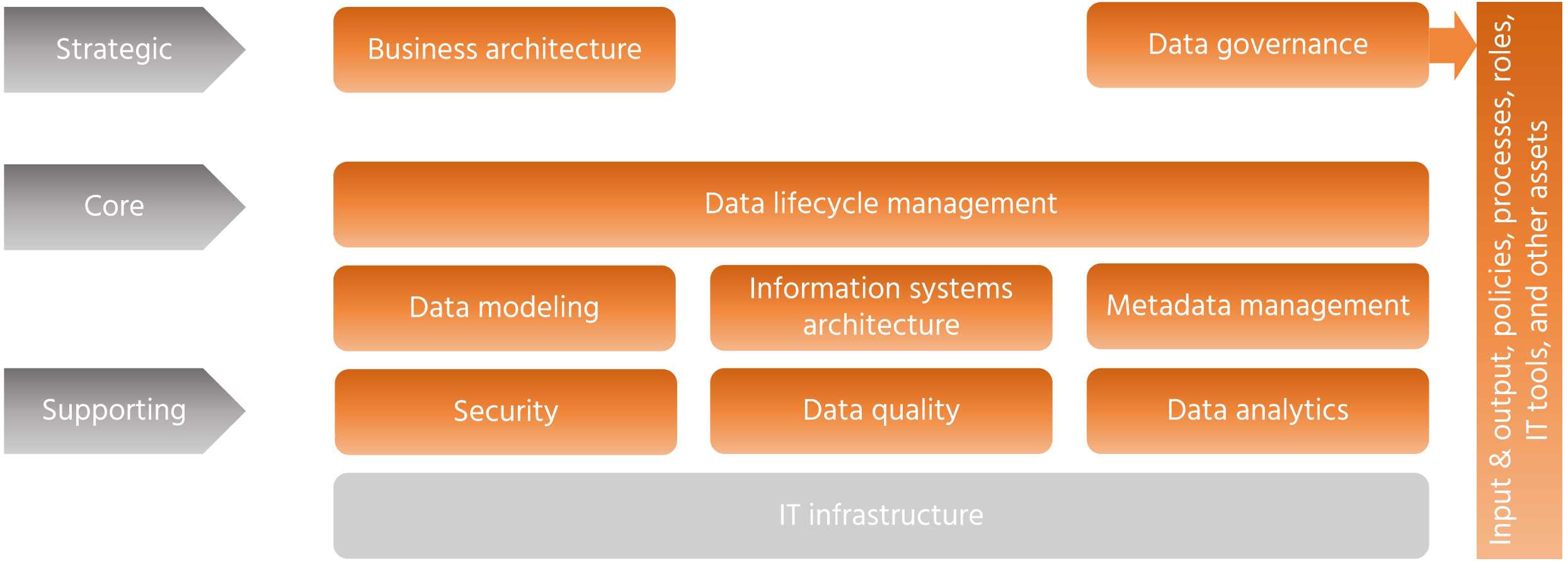


Source: manta.io

Business Rules Should Be Translated from a Business to Technical Language

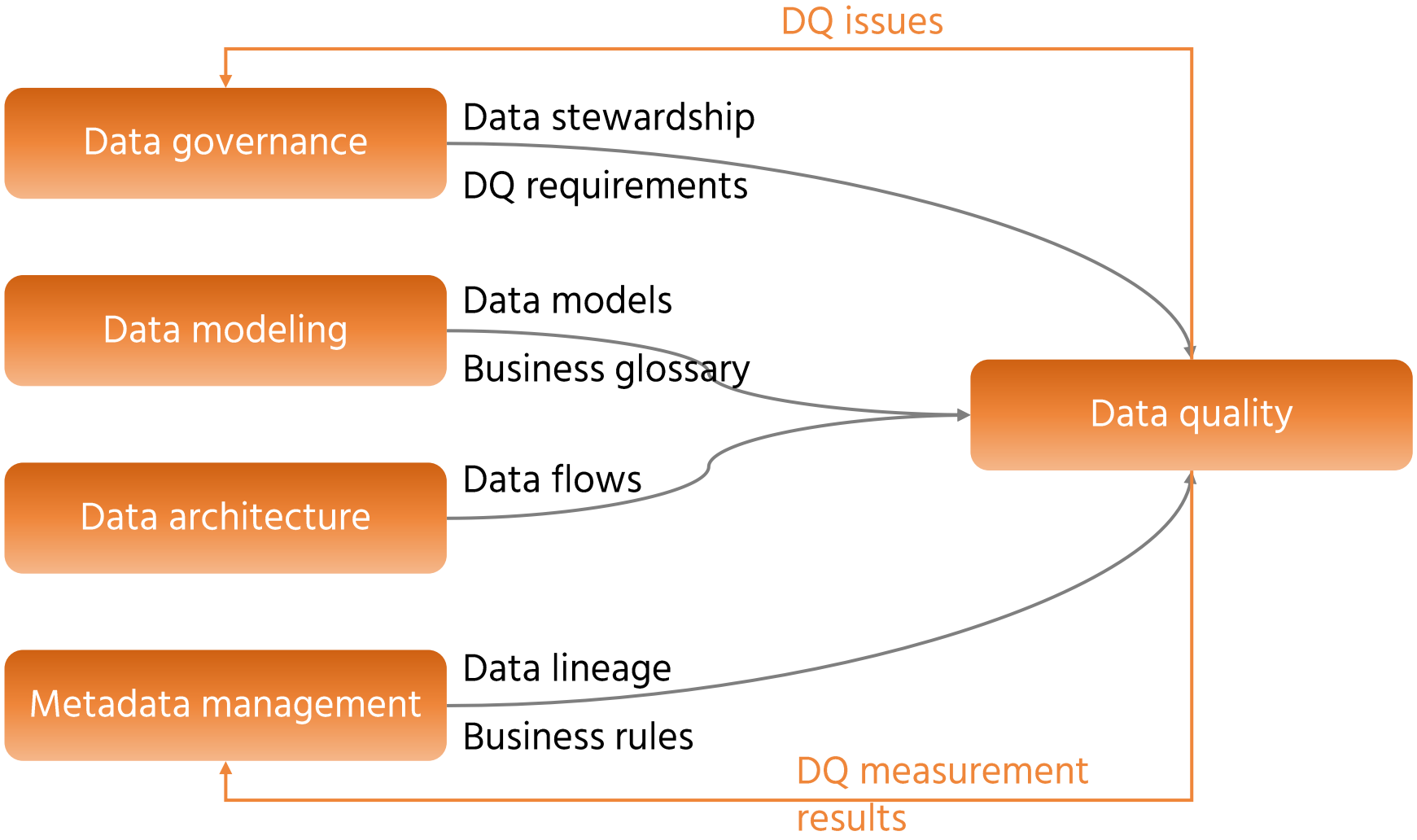


Various Data Management Capabilities Not Only Produce, but Also Consume and Exchange Metadata

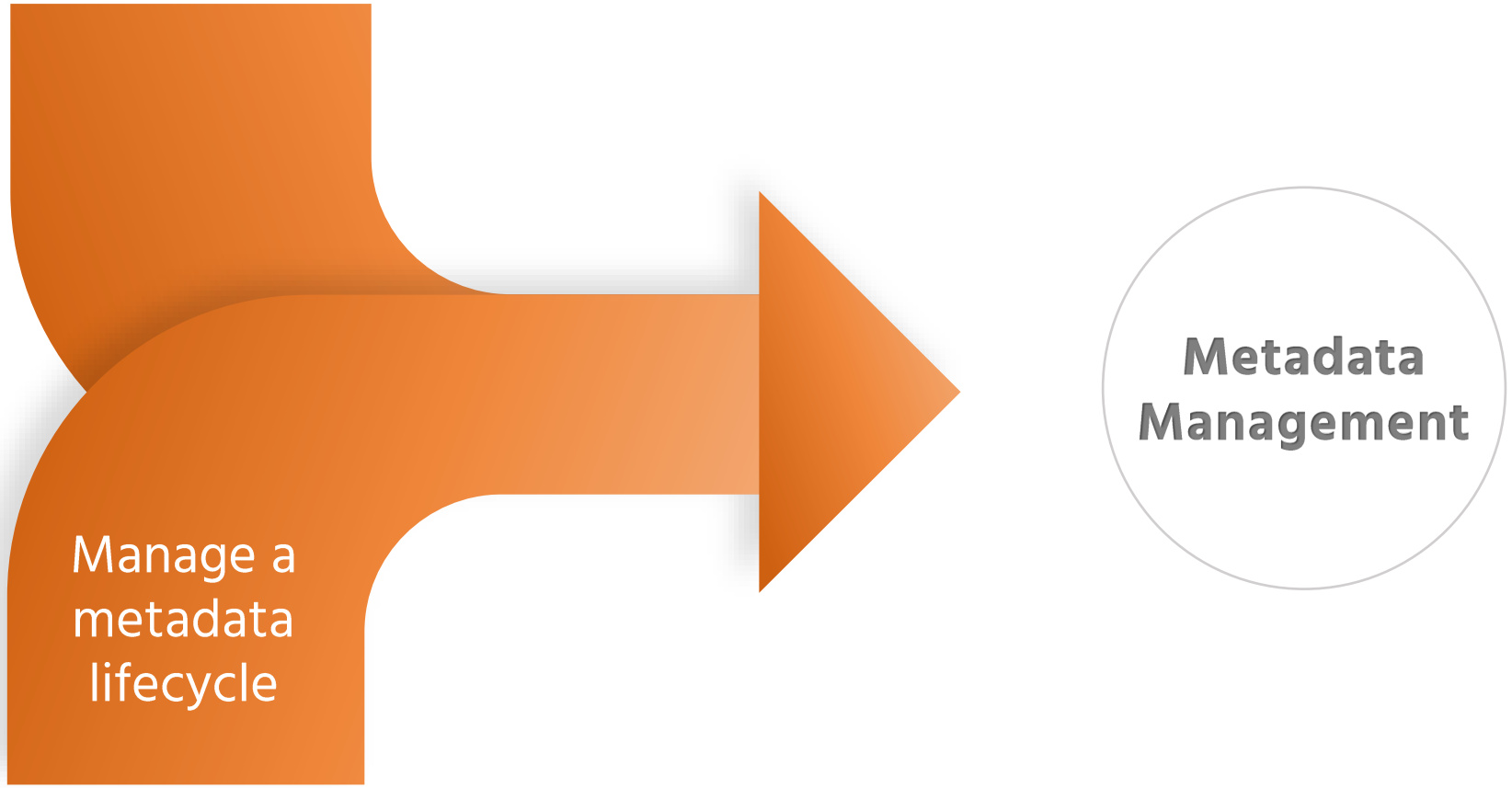


Various Data Management Capabilities Not Only Produce, but Also Consume and Exchange Metadata

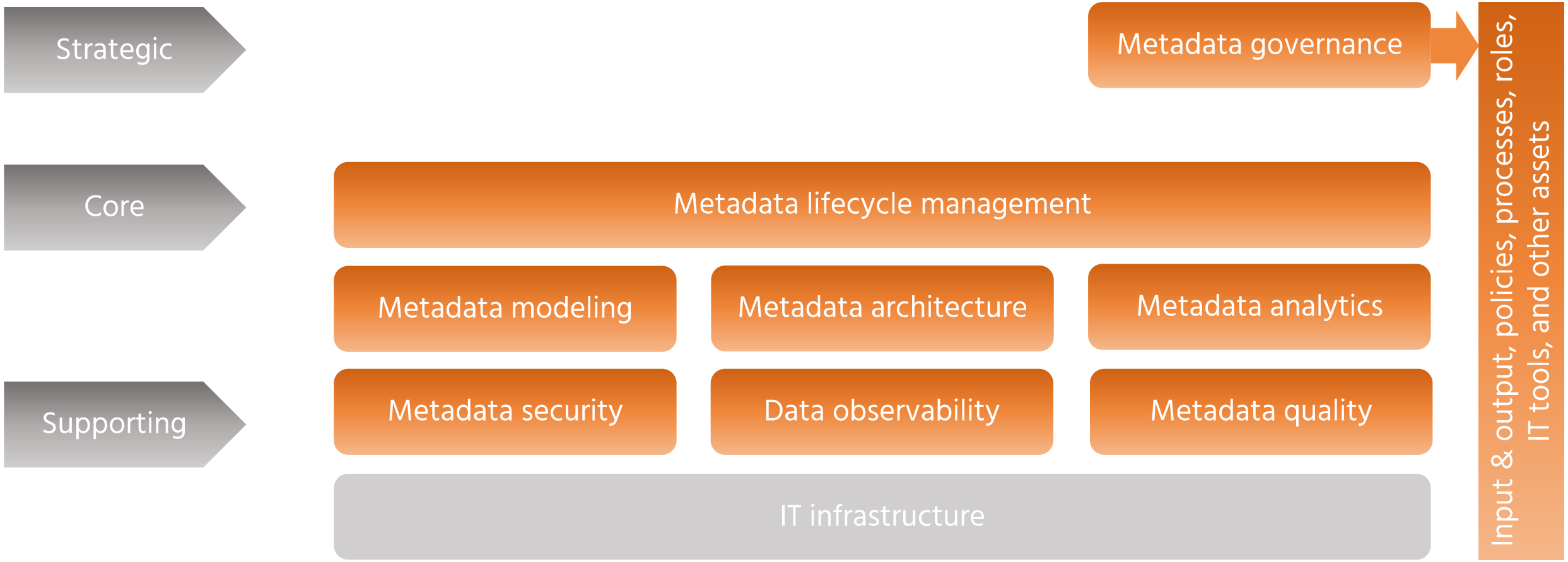
Example: Data Quality



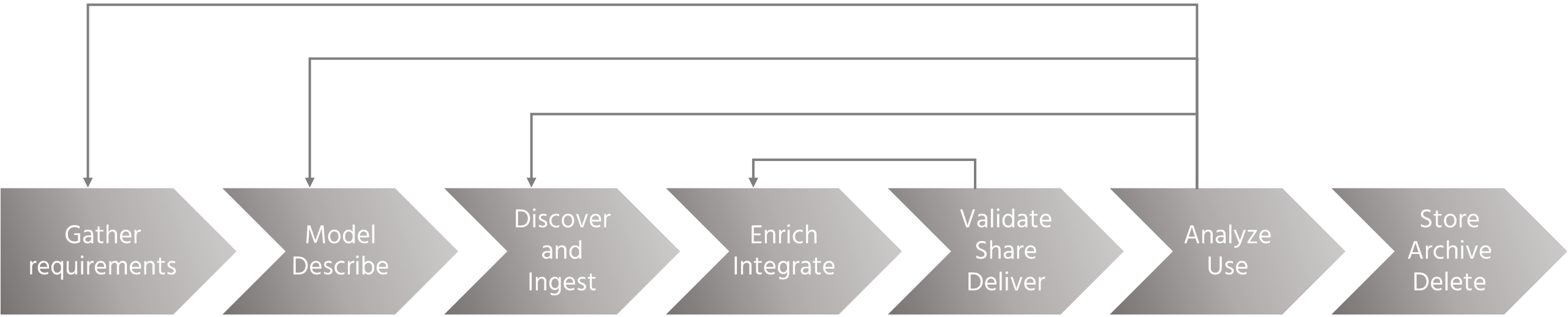
Metadata Management Has Two Core Goals



Various Metadata Management Capabilities Manage Metadata and Its Lifecycle



Let's Define Our Approach to Describing a Metadata Lifecycle

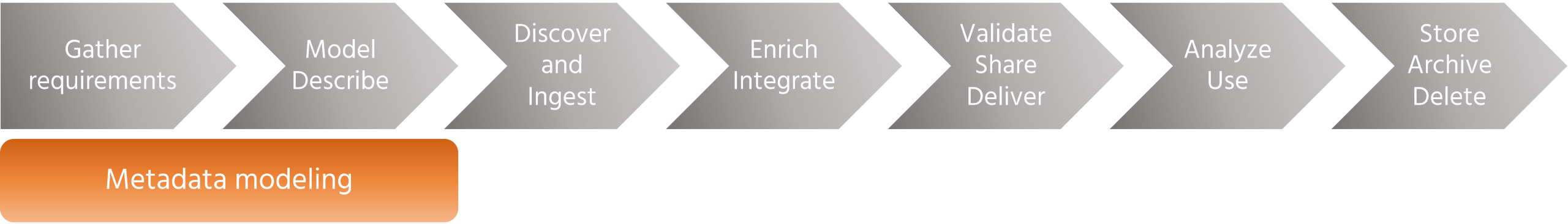


DEFINITION

Metadata Modeling

A COMPANY'S ABILITY TO DELIVER, MAINTAIN, AND MANAGE METADATA MODELS

Metadata Modeling Enables the Metadata Lifecycle and Produces The Following Metadata



Business metadata

- Metamodel of metadata at the semantic / logical levels

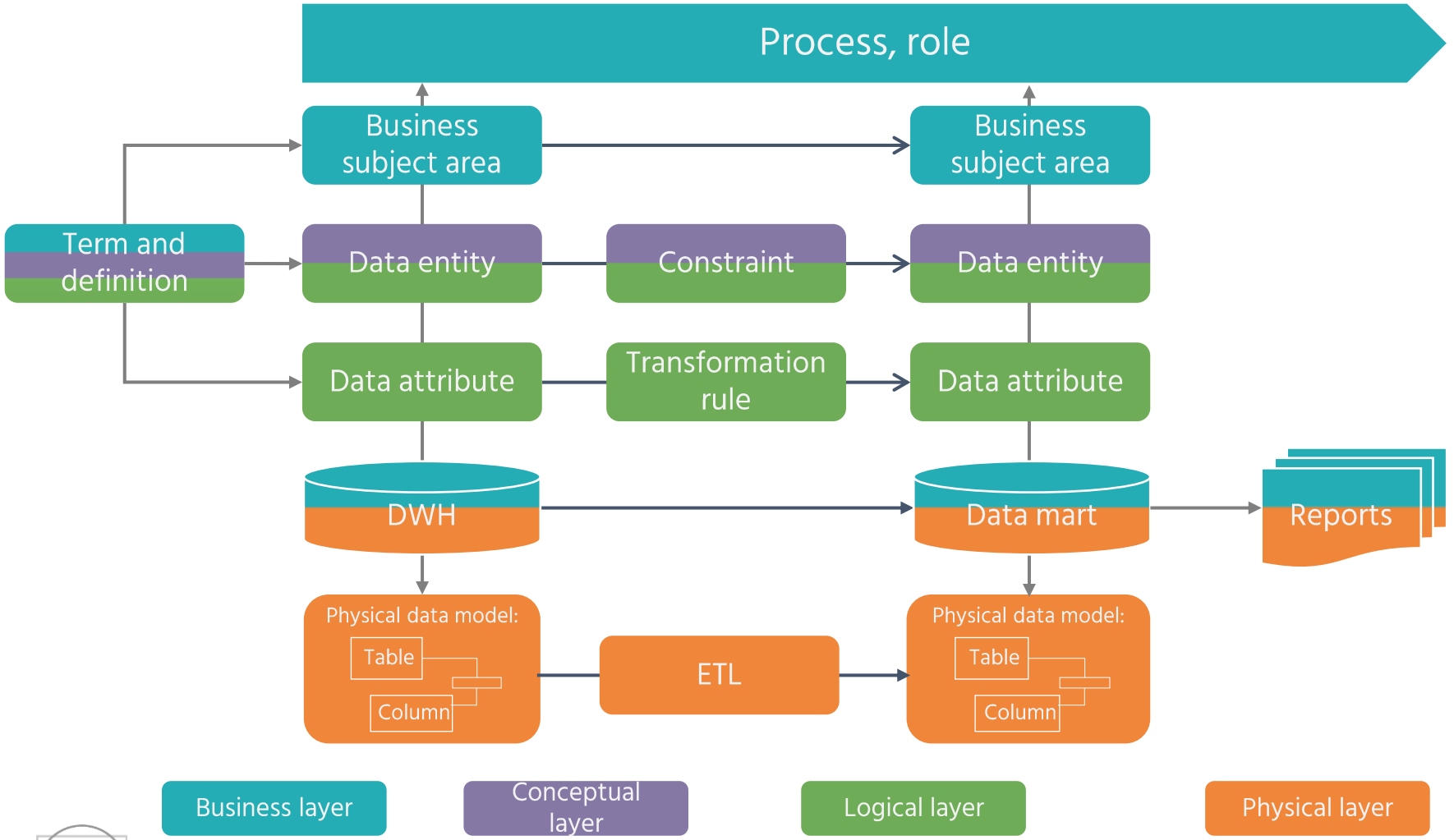
Technical metadata

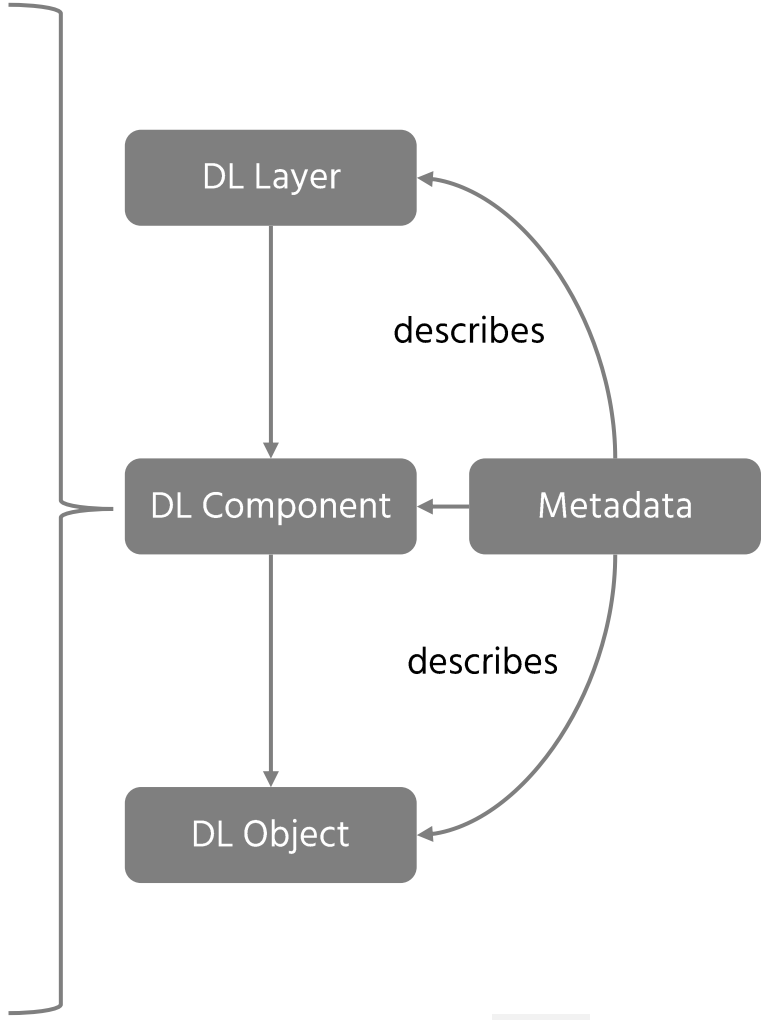
- Metamodel of metadata at the physical level

Operational metadata

- Metamodel of operational metadata

The Metamodel of Data Lineage (DL) Serves as a Basis for the Metamodel of Metadata



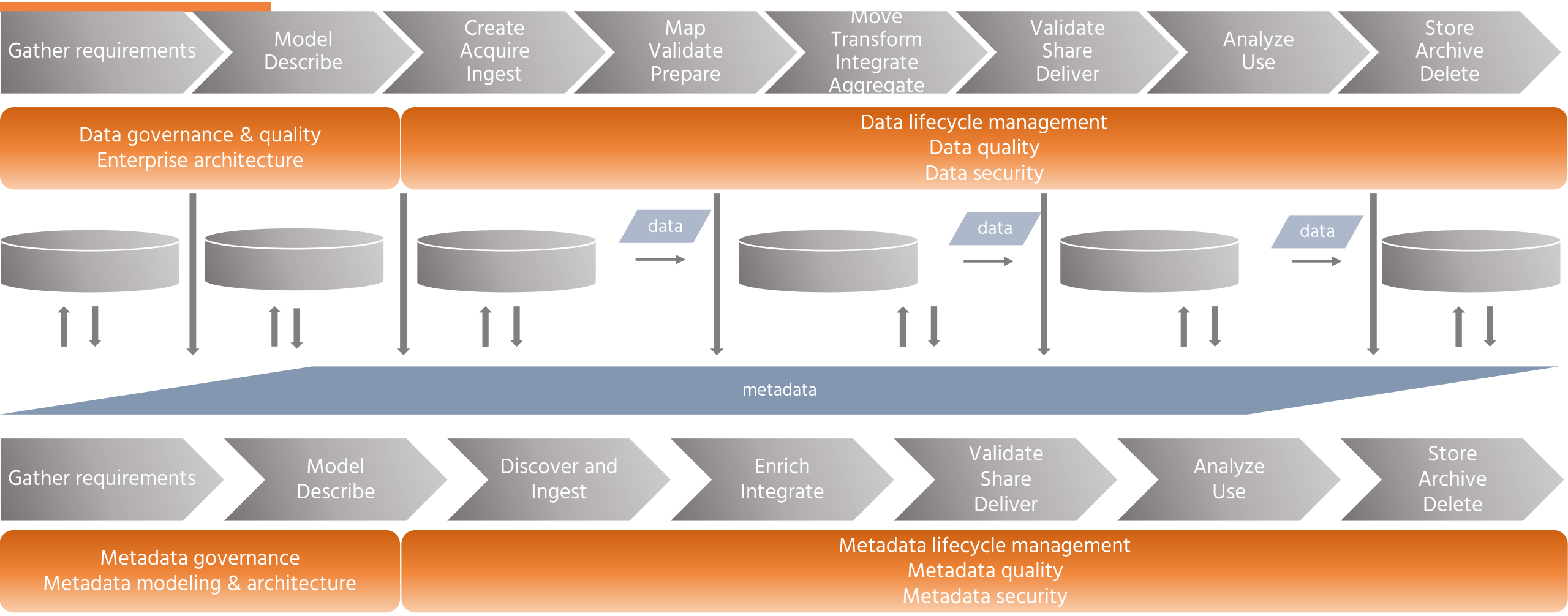


DEFINITION

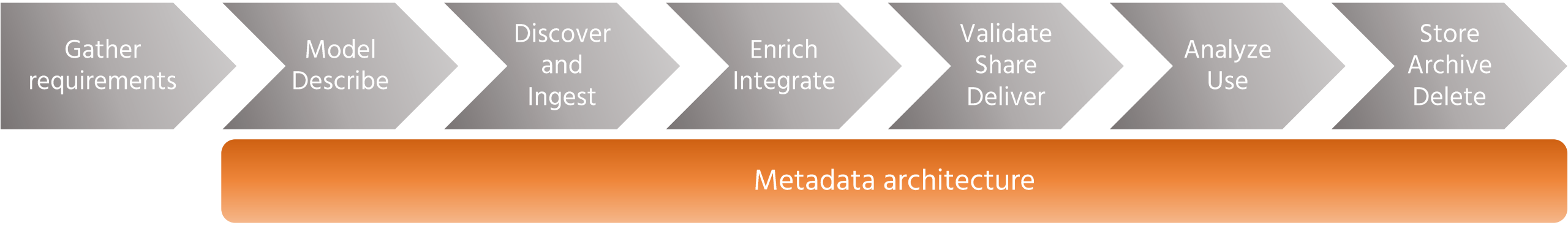
Metadata Architecture

A DESCRIPTION OF THE STRUCTURE OF METADATA AND IT ASSETS AND INTERACTION OF IT ASSETS THAT MANAGE METADATA AND ENABLE KEY DATA MANAGEMENT CAPABILITIES

Managing Data and Metadata Lifecycles Together Delivers Synergy Effect



Metadata Architecture Enables the Metadata Lifecycle and Produces The Following Metadata



Business metadata

- Catalogs, matrices, and flows of metadata and IT assets at the semantic/ logical levels

Technical metadata

- Catalogs, matrices, and flows of metadata and IT assets at the physical levels

Operational metadata

DEFINITION

Passive Metadata Management

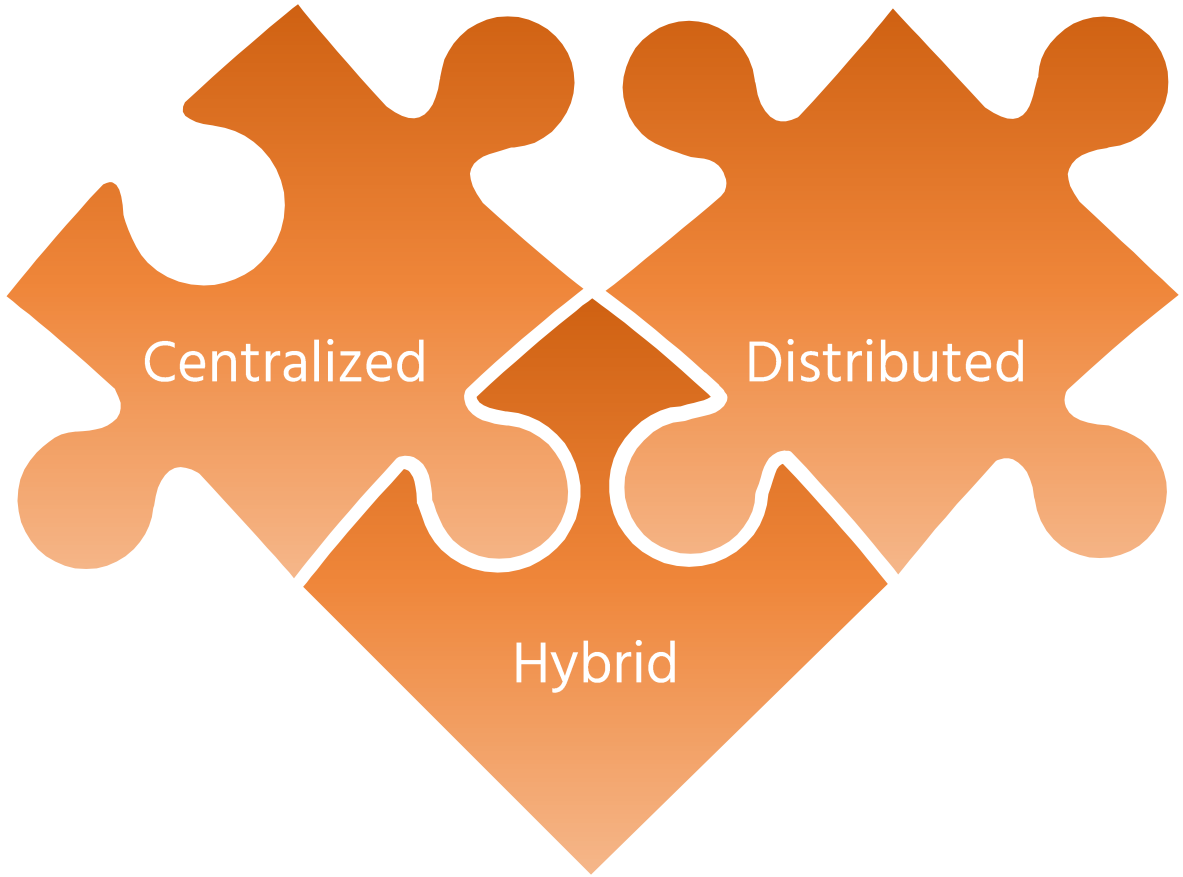
A COMPANY'S ABILITY AUTOMATICALLY COLLECT, INGEST, AND STORE METADATA AS DATA PROCESSES OCCUR WITHOUT ACTIVE (REAL-TIME) INTERVENTION

DEFINITION

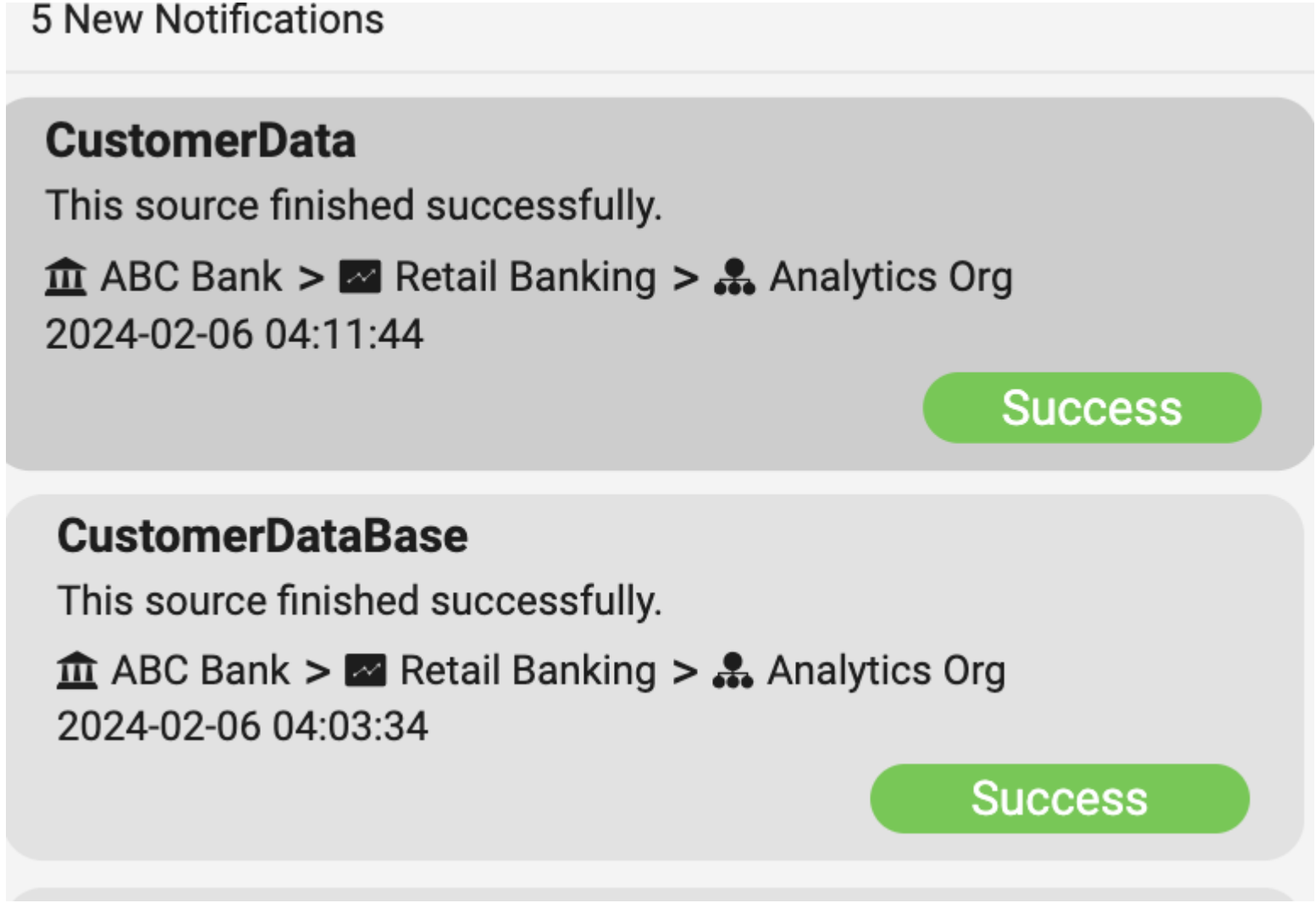
Active Metadata Management

A COMPANY'S ABILITY AUTOMATICALLY COLLECT, INGEST, AND STORE METADATA AS DATA PROCESSES OCCUR IN REAL-TIME INTERACTION

The Ability to Manage Metadata “Actively” or “Passively” Depends on Metadata Architecture

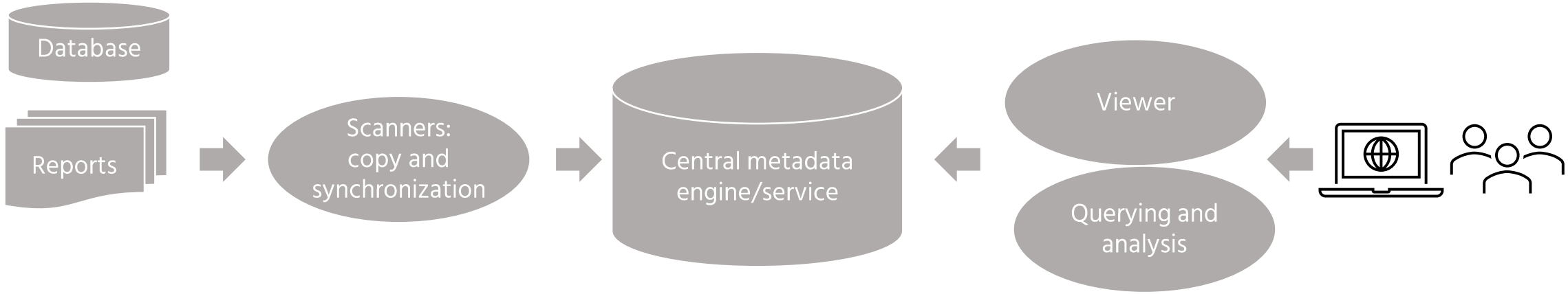


Metadata Solutions Should Support Near-Real Metadata Update Functionalities



Metadata Solutions Should Notify Users on Changes in Metadata

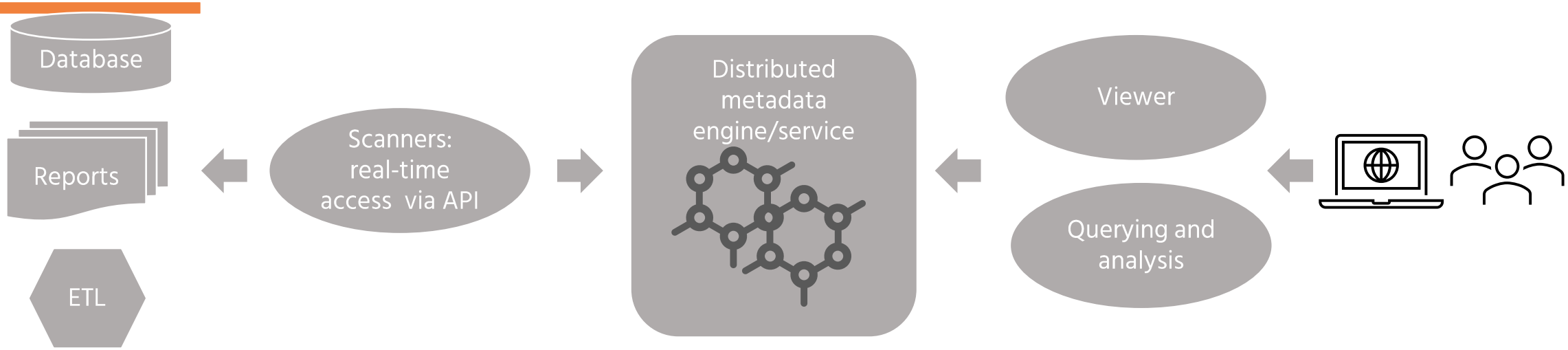
Centralized Metadata Systems Architecture Has Advantages and Disadvantages



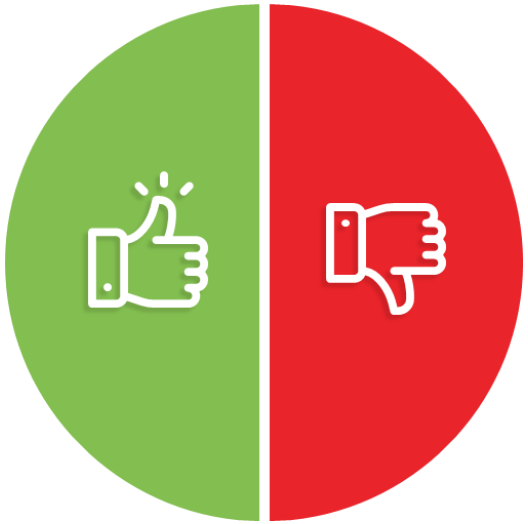
- ✓ Efficient access to metadata
- ✓ Independence from source systems
- ✓ Ability to capture additional metadata
- ✓ Enhanced performance
- ✓ Not much infrastructure required
- ✓ One team

- ✗ Complex implementation and maintenance
- ✗ Reduced metadata quality
- ✗ Metadata freshness
- ✗ Metadata pipeline fragility
- ✗ "Passive" metadata management

Distributed Metadata Systems Architecture Has Advantages and Disadvantages

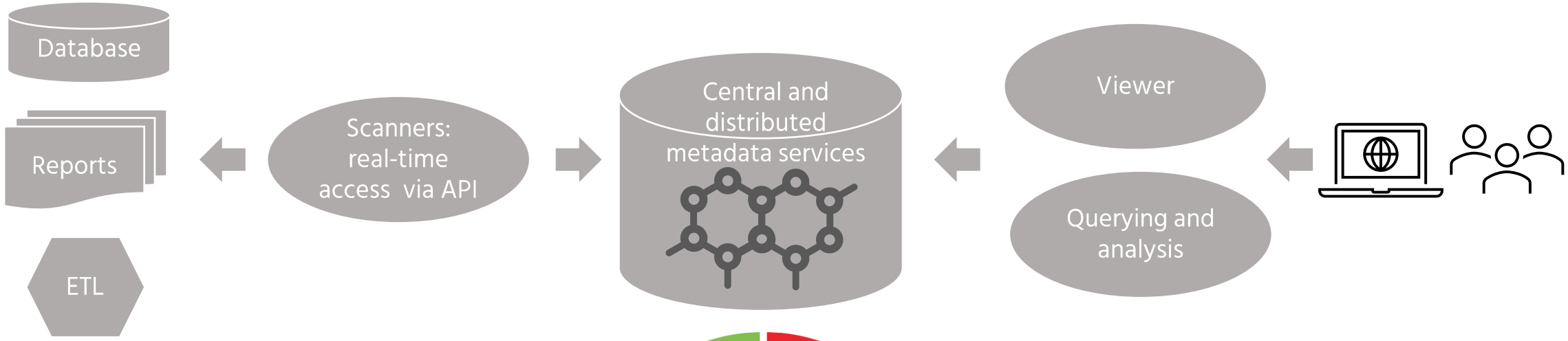


- Efficient access to metadata
- Increased productivity
- Good metadata quality
- Programmatic use cases enabled

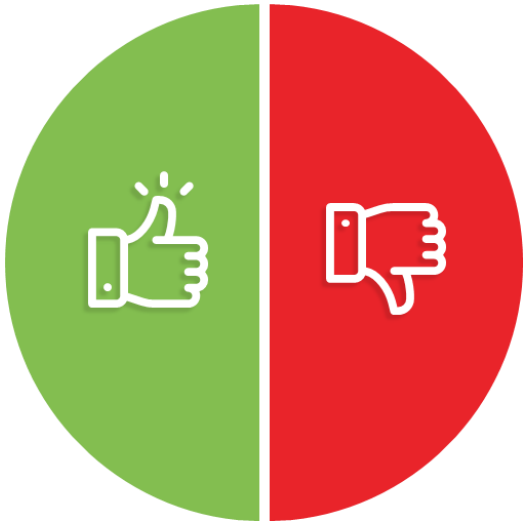


- Dependent on source systems availability
- Inability to capture additional metadata
- No change log
- Problems with centralized teams
- "Active" metadata management

Hybrid Metadata Systems Architecture Has Advantages and Disadvantages

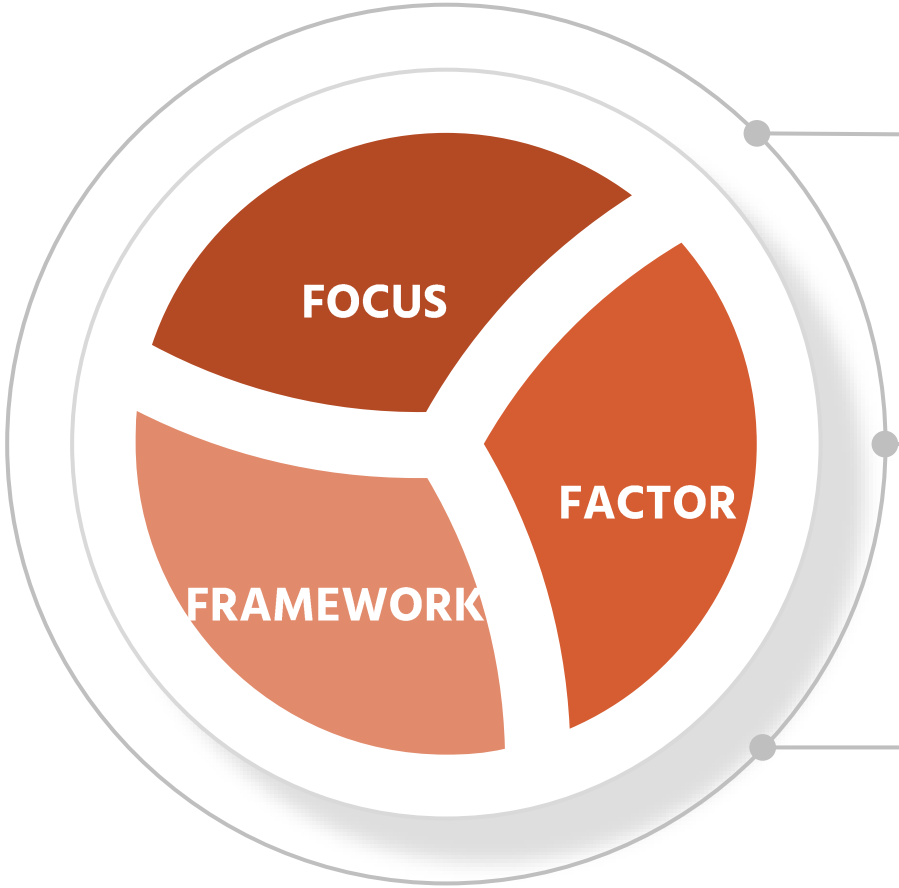


- Efficient access to metadata
- Increased productivity
- Good metadata quality
- Enhanced performance



- Dependent on source systems availability
- "Passive" and "active" metadata management

3-F. Feasibility Formula Limits the Scope to a Realizable Minimum



Critical business requirements & solutions

- Metadata & sources
- Enterprise scope
- Critical chains and data
- Resources

The chosen metadata management framework

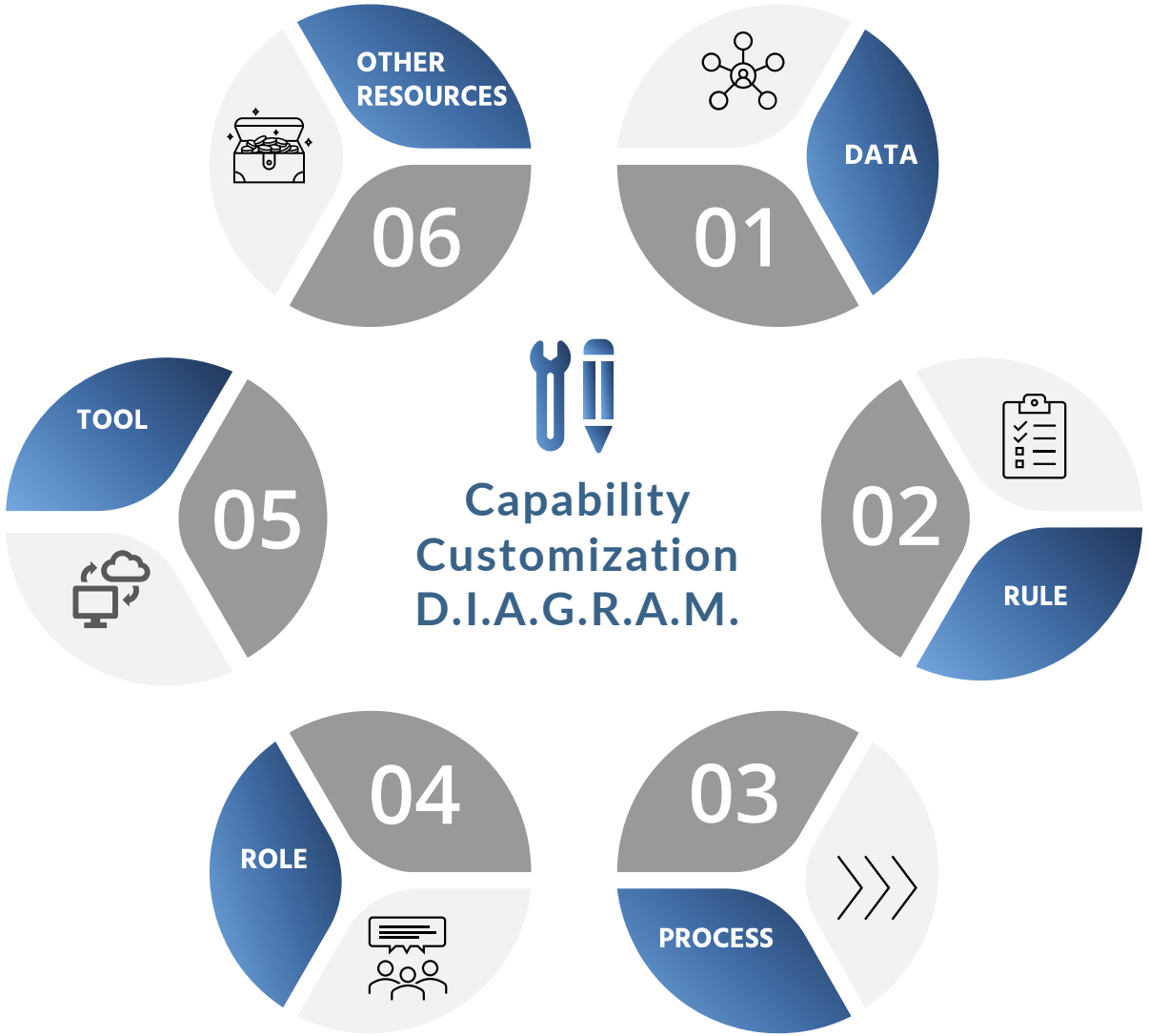
A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
   Capability Customization D.I.A.G.R.A.M.
6. **Situational Analysis**
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

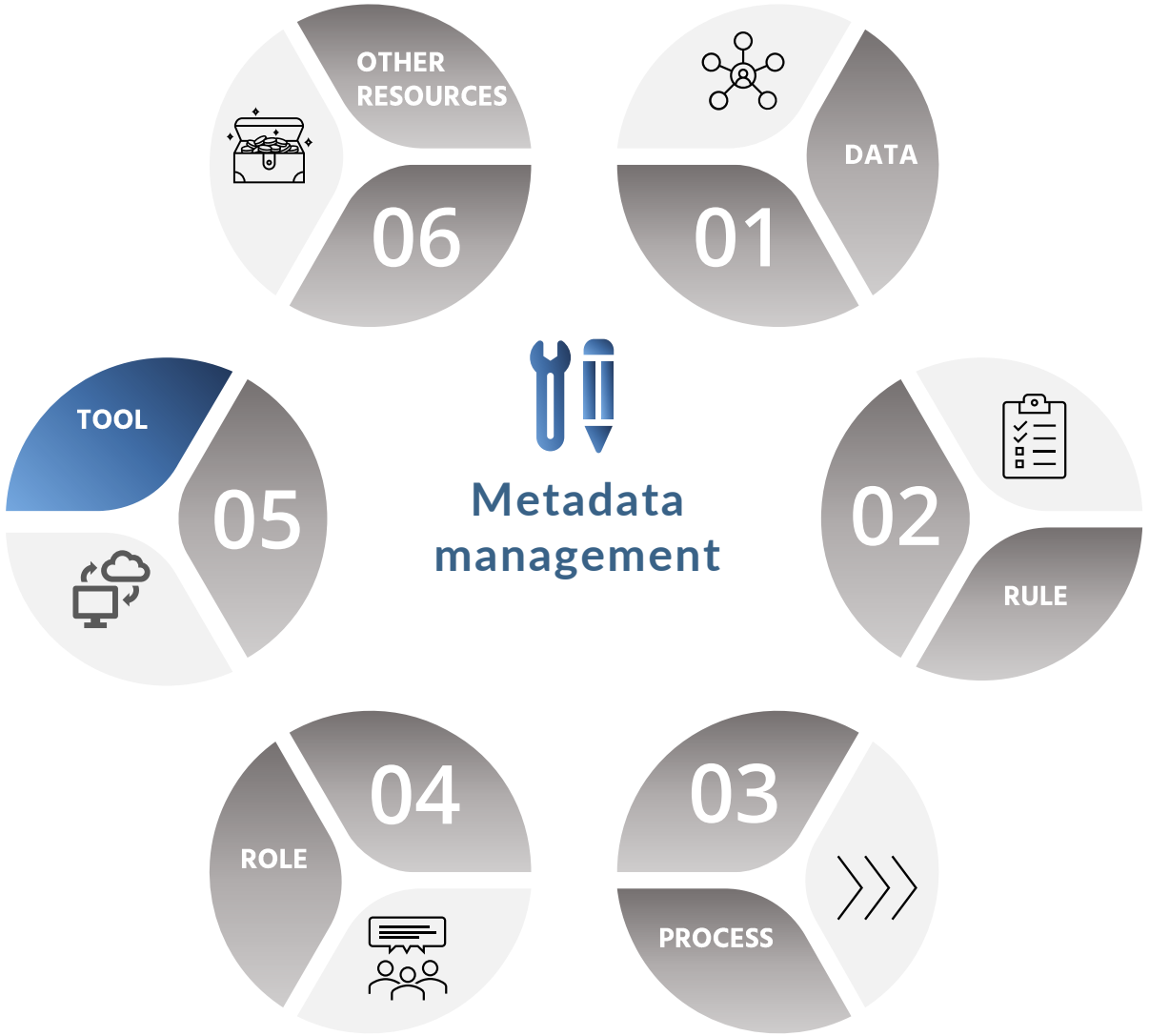
Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Template	198-203		

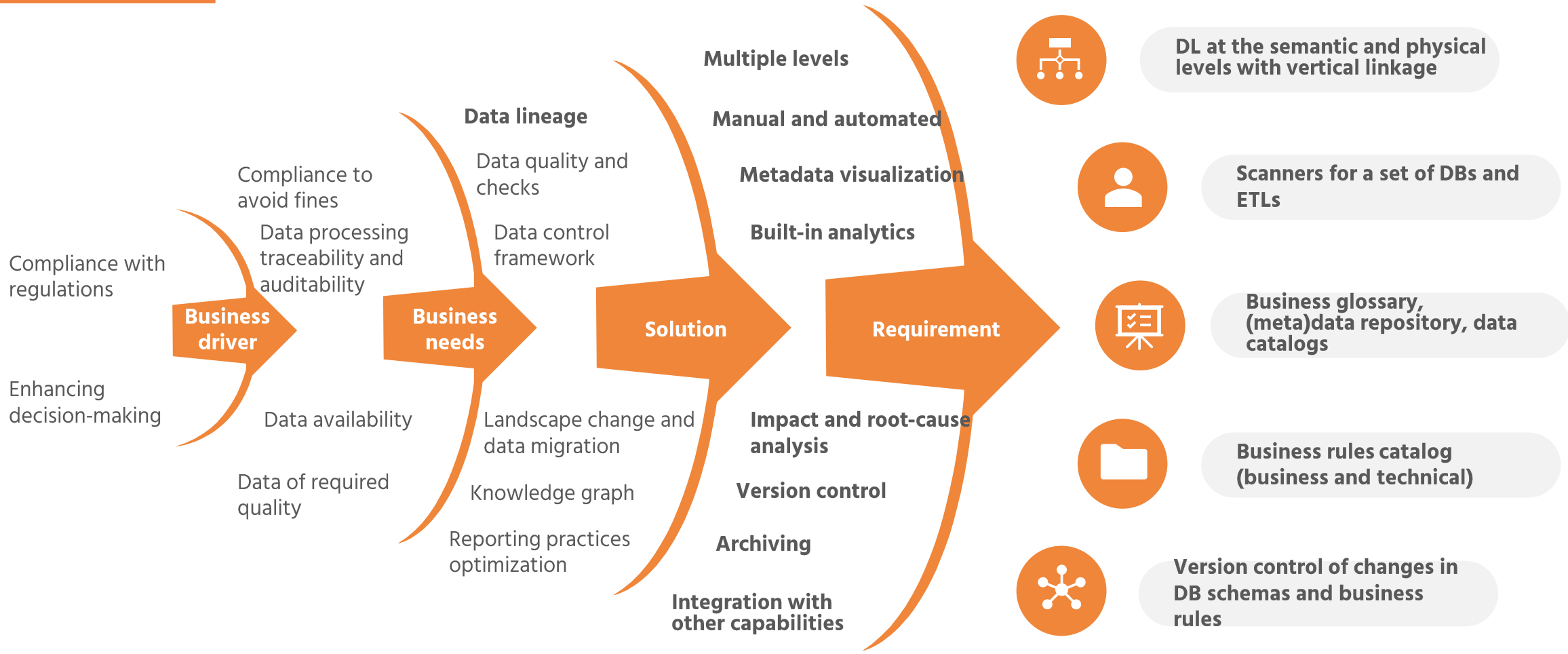
Each (Meta)data Management Capability Consists of Six Components



Each (Meta)data Management Capability Consists of Six Components



Solutions Must Be Translated into Requirements and IT Tools Functionalities



A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
   Capability Customization D.I.A.G.R.A.M.
6. **Situational Analysis**
   P.L.A.N. Maturity Assessment Approach
7. **Implementation Approach & IT Tools**
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Template	198-203		

Measuring Maturity is a Tool to Define Plans for Further Development:

P.	L.	A.	N.
Purpose	**Level**	**Analysis**	**Next**
Define the goal and method	Define maturity for "Now" and "To Be" Situations at the Defined Organizational Level	Perform GAP analysis and benchmarking	Set up plans for an identified period

XYZ Company, Example: Data Management Preliminary Maturity Assessment

Capability	Current maturity level	Currently performed by	Targeted period	Desired maturity level	To be performed by
Business architecture		NA	1 year		Data governance
Data governance		NA	1 year		Enterprise architecture
Data modeling		IT department	1 year		Enterprise architecture
Information systems architecture		IT department	1 year		Enterprise architecture
Data security		IT department	1 year		IT department
Data quality		NA	1 year		Enterprise architecture
Data analytics		Enterprise architecture	1 year		Enterprise architecture
Data lifecycle management		IT department	1 year		EA and IT

Ad-hoc | Emerged | Coordinated | Established | Optimized

XYZ Company, Example: Metadata Management Preliminary Maturity Assessment

Capability	Current maturity level	Currently performed by	Targeted period	Desired maturity level	To be performed by
Metadata governance		NA	1 year		Enterprise architecture
Metadata modeling		IT department	1 year		Enterprise architecture
Metadata architecture		IT department	1 year		Enterprise architecture
Metadata security		IT department	1 year		IT department
Metadata quality		NA	1 year		Enterprise architecture
Metadata analytics		IT department	1 year		Enterprise architecture
Metadata lifecycle management		IT department	1 year		EA and IT

Ad-hoc | Emerged | Coordinated | Established | Optimized

Exercise 5: Perform a Preliminary Maturity Assessment

1. Use Template 5: A Capability Preliminary Maturity Assessment
2. Assess the current and target maturity levels of required data and metadata capabilities
3. Present results

Time: 10 minutes

A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
   Capability Customization D.I.A.G.R.A.M.
6. **Situational Analysis**
   P.L.A.N. Maturity Assessment Approach
7. **Implementation Approach & IT Tools**
   Integrated Implementation R.O.A.D. Maps
8. **Initiative Roadmap**
9. **Established Program/Project/BaU**

Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

Any (Meta)Data Initiative Requires a Roadmap and Integrated Implementation Plan

M.	A.	P.	S.
Method	**Approach**	**Plan**	**Set of Artifacts**
Identify the method of implementation	Define an approach	Create an integrated implementation plan	Deliver the set of integrated artifacts

Any (Meta)Data Initiative Requires an Integrated Implementation Plan:

M.	A.	P.	S.
Method	**Approach**	**Plan**	**Set of Artifacts**
Identify the method of implementation	Define an approach	Create an integrated implementation plan	Deliver the set of integrated artifacts

A Centralized Approach Has Its Advantages and Disadvantages

Central DM function

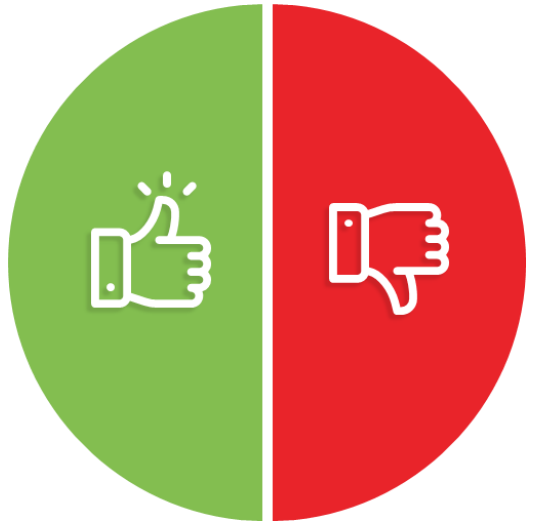
- Standardized approach, incl. policies, models, tools
- Control function

Local DM functions

- Implementation

Resource optimization ✓

(Meta)data artifacts produced at different parts of an organization can be easily linked ✓



✗ Time-consuming

✗ Dependencies on a vendor

A Decentralized Approach Has Its Advantages and Disadvantages

Central DM function

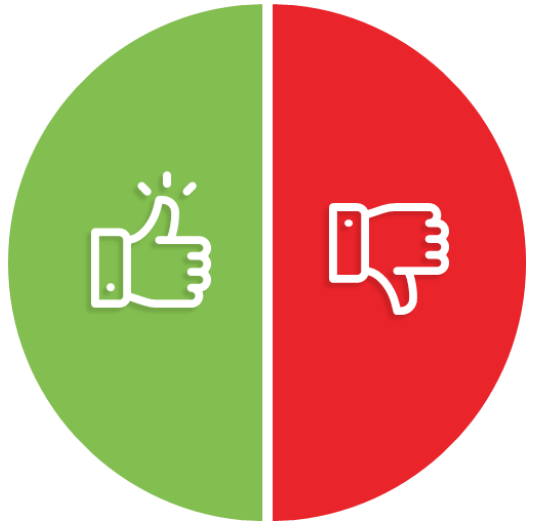
- Advisory and observer role

Local DM functions

- Local approach, incl. policies, models, tools
- Implementation

Shorter time delivery ✓

(Reduced dependency on a vendor ✓



✗ Lack on a complete overview of metadata artifacts across the organization

A Hybrid Approach Has Its Advantages and Disadvantages

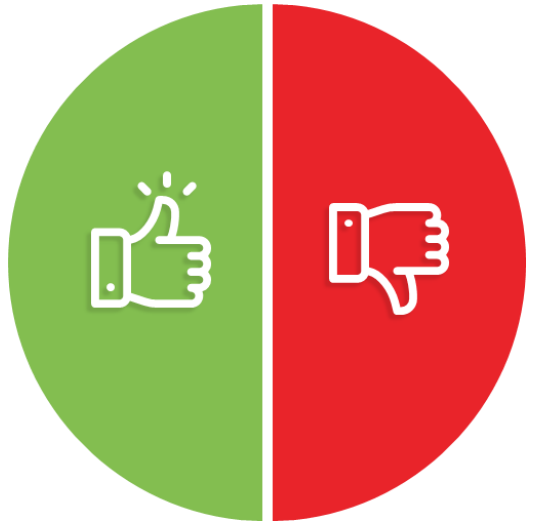
Central DM function

- Policies and standards
- Coordination role

Local DM functions

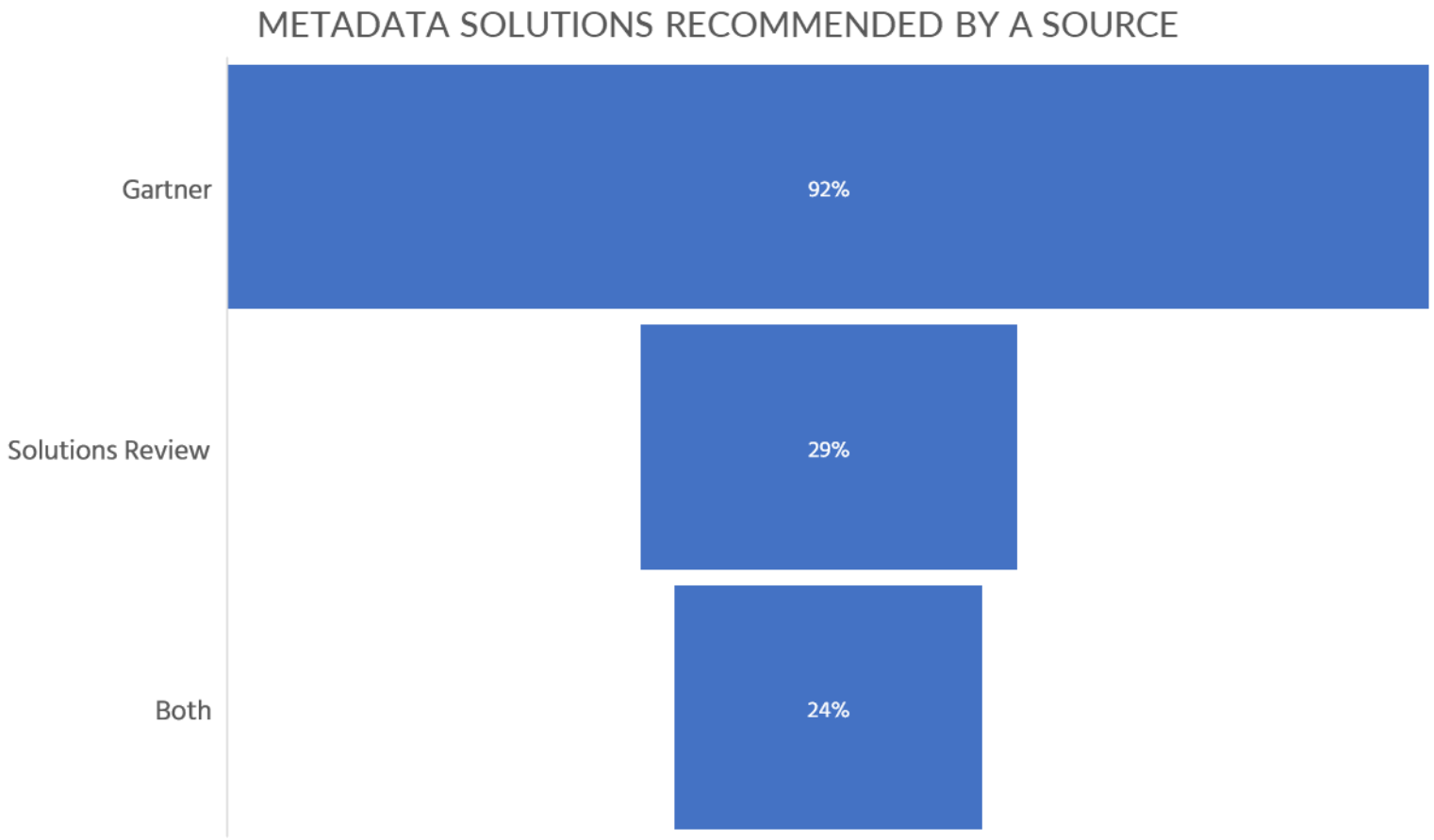
- Local approach, incl. solutions and implementations

Case-by-case analysis ✓

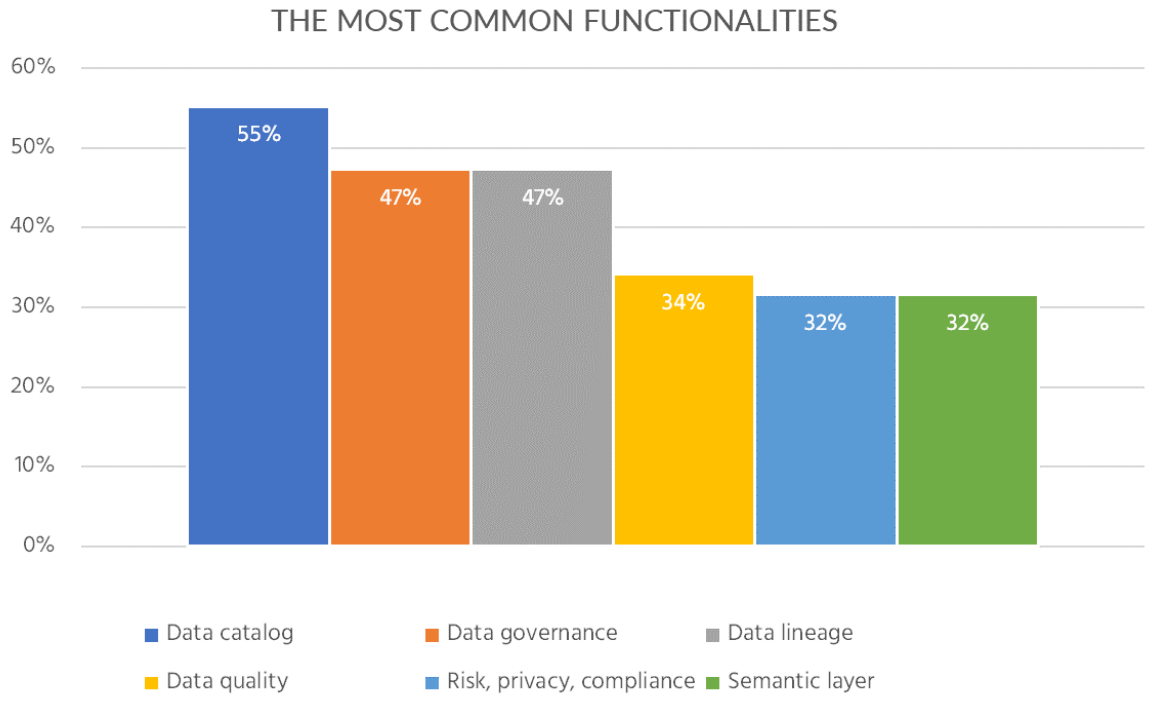


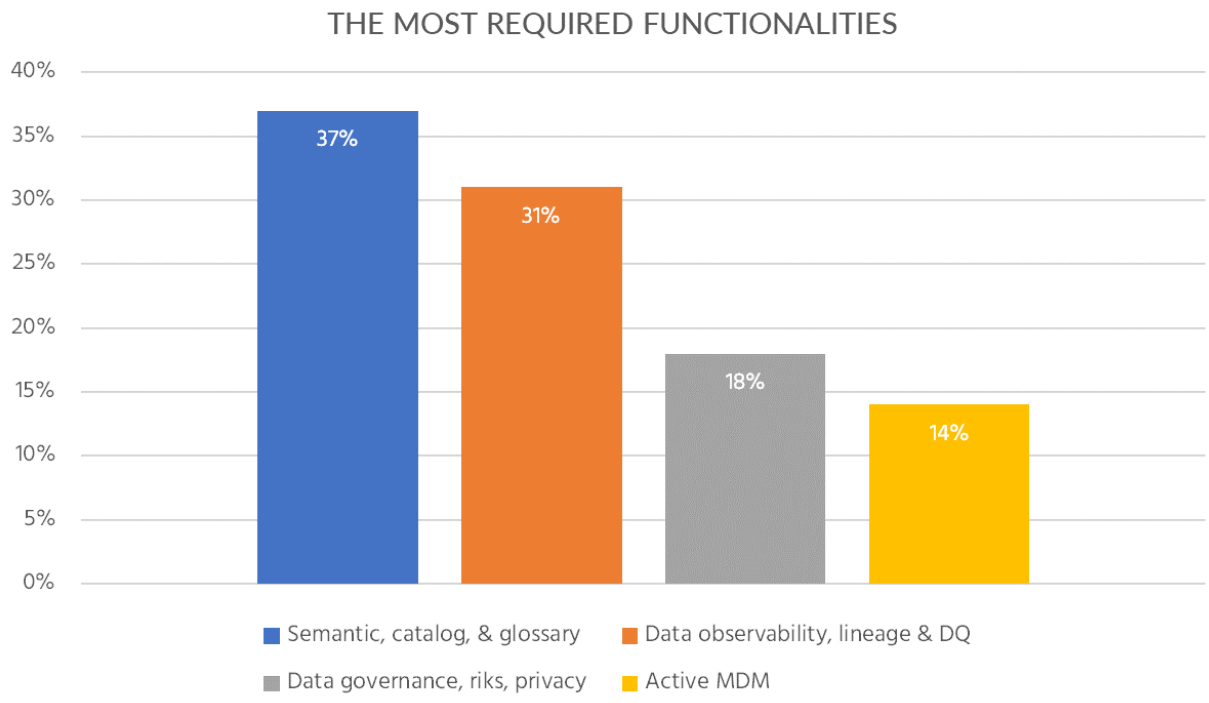
✗ Case-by-case analysis

The Analysis of Metadata Management Tools in 2024 Included 38 Solutions

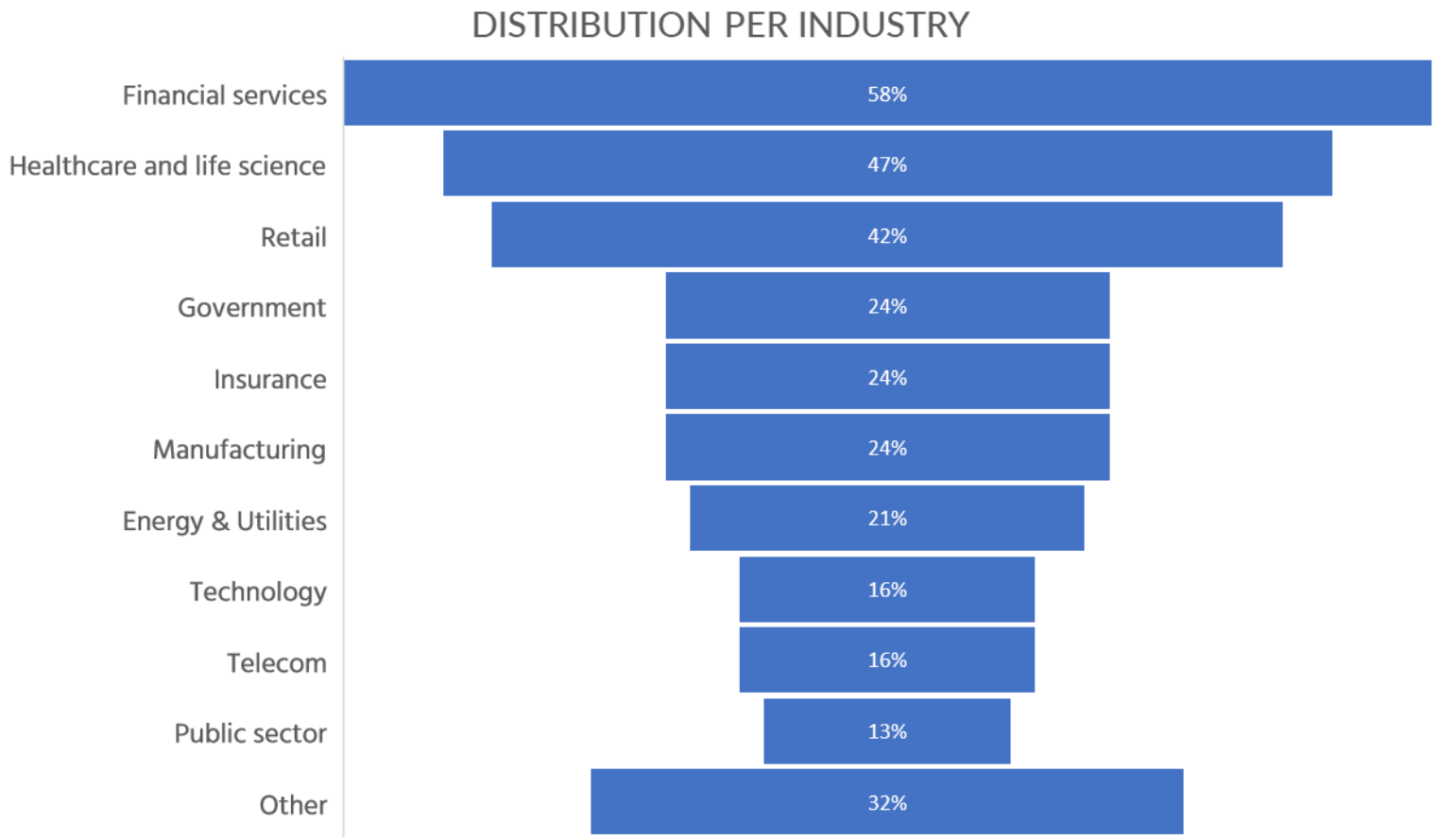


38 Solutions Offered 42 Different Functionalities, from Which the Most Common and Demanded Are:





The Following Industries Implement Metadata Solutions



A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
   Capability Customization D.I.A.G.R.A.M.
6. **Situational Analysis**
   P.L.A.N. Maturity Assessment Approach
7. **Implementation Approach & IT Tools**
   Integrated Implementation R.O.A.D. Maps
8. **Initiative Roadmap**
   Strategic S.C.O.P.E. Formula
9. **Established Program/Project/BaU**

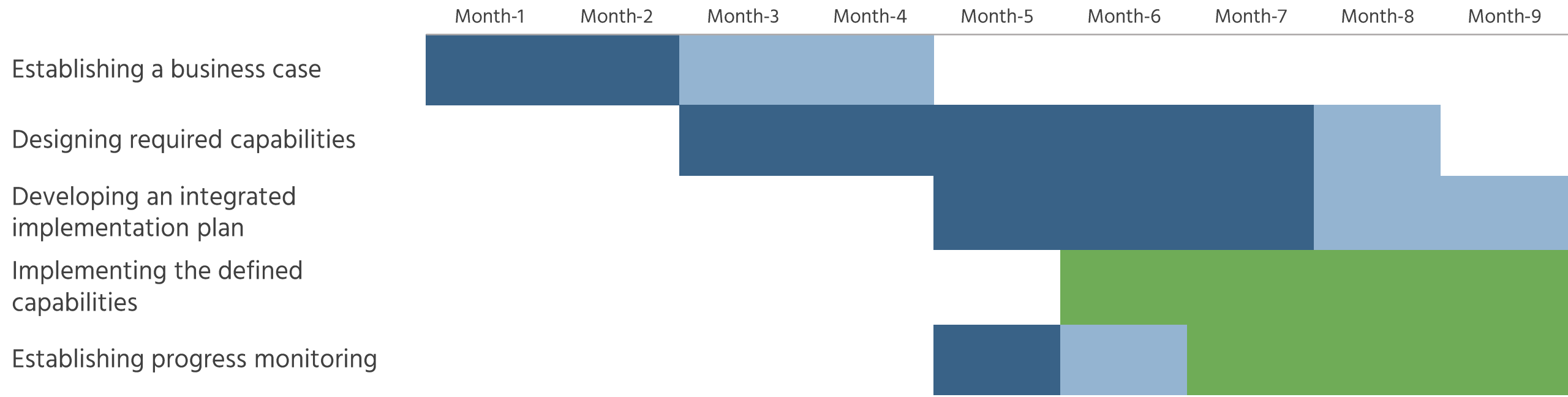
Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198+203		

A Feasible Scope is a Key Factor of a (Meta)Data Initiative Success

S.	C.	O.	P.	E.
Stimulus	**Contributor**	**Outlook**	**Plan**	**Establishment**
Answer the question why does your company need this initiative	Find out stakeholders that would support and benefit from this initiative	Make a scope feasible	Set up long-term plans : • Strategy • Roadmap	Establish a business case/ program/ project

A Business Case for Metadata Management Must Include Design and Implementation Phases



Design: minimum duration

Design: maximum duration

Implementation

XYZ Company, Example: Detailed Implementation Plan

Capability	Action and deliverable	1	2	3	4	5	6	7	8	9	Accountable	Responsible
Data governance	1. Map required data management capabilities, processes, deliverables, and roles										CDO	CDO Office
ISA	2. Document and analyze reports										Business DS	DM stewards
Data modeling	3. Identify information requirements										Business DS	DM stewards
Data modeling	4. Identify critical reports and information elements										Business DS	DM stewards
Metadata management	5. Define the scope of metadata to document										CDO	DM stewards
Data modeling	6. Design a business glossary										Business DS	DM stewards
Business modeling	7. Design business models										Chief Architect	DM stewards
Business modeling	8. Document business processes										Business DS	Business DS
Data modeling	9. Design data models										Chief Architect	DM stewards
ISA	10. Document data and application flows										Chief Architect	DM and Technical stewards
Metadata management	11. Document data lineage										CDO	Technical stewards

XYZ Company, Example: Detailed Implementation Plan

Capability	Action and deliverable	1	2	3	4	5	6	7	8	9	Accountable	Responsible
Data modeling	12. Define data requirements										CDO	DM and Technical stewards
DQ	13. Gather information and data quality requirements										CDO	Business and DM Stewards
DQ	14. Perform data profiling and analysis										CDO	DM and Business Data Stewards
DQ	15. Identify and resolve data quality issues										Business Data Stewards	Business Data and DM Stewards
DQ	16. Build data quality checks and controls											

A Business Case for Metadata Management Should Include the Following:

1. **Key Concepts and Terminology**
   The O.R.A.N.G.E. Terminology
2. **Business Drivers**
   Strategic S.C.O.P.E. Formula
3. **Sponsors and Stakeholders**
   Strategic S.C.O.P.E. Formula
4. **Scope of an Initiative**
   Strategic S.C.O.P.E. Formula
5. **(Meta) Data M./G. Framework**
   Capability Customization D.I.A.G.R.A.M.
6. **Situational Analysis**
   P.L.A.N. Maturity Assessment Approach
7. **Implementation Approach & IT Tools**
   Integrated Implementation R.O.A.D. Maps
8. **Initiative Roadmap**
   Strategic S.C.O.P.E. Formula
9. **Established Program/Project/BaU**
   Strategic S.C.O.P.E. Formula

Schedule

Time, CET	Topic	Presentation slides	Exercise	Templates
14.00-14.15	Introduction	1-11		
14.15-14.30	Key concepts and terminology	12-28		
14.30-14.45	Define business drivers	29-39	Exercise 1	Template 1
14.45-15.00	Identify sponsors and stakeholders	40-49	Exercise 2	Template 2
15.00-16.45	Scope an initiative (including break)	50-166	Exercises 3,4	Templates 3,4
16.45-16.50	Define the (meta)data management framework	167-171		
16.50-16.55	Perform a situational analysis	172-177	Exercise 5	Template 5
16.55-17.00	Develop an implementation approach	178-187		
17.00-17.10	Draft the initiative roadmap	188-193		
17.10-17.15	Establish a program/project/BaU processes	194-197		
	Templates	198-203		

A Feasible Scope is a Key Factor of a (Meta)Data Initiative Success:

S.	C.	O.	P.	E.
Stimulus	**Contributor**	**Outlook**	**Plan**	**Establishment**
Answer the question why does your company need this initiative	Find out stakeholders that would support and benefit from this initiative	Make a scope feasible	Set up long-term plans	• Assess Risk and develop mitigation actions • Define the Case Format

Analyze Your Company's Risk Factors and Turn the Mitigation of these Risks into Success Factors

01 | Risks

- ❑ Implementation is time- & resource consuming
- ❑ Multiple business priorities
- ❑ Unclear ROI and business wins
- ❑ No staff with required skills

02 | Mitigation Actions

- ➢ Top management support
- ➢ Feasible scope oriented on critical business needs
- ➢ Start "small" and deliver quick wins
- ➢ Active involvement of businesspeople
- ➢ Upskill internal staff

Templates

List

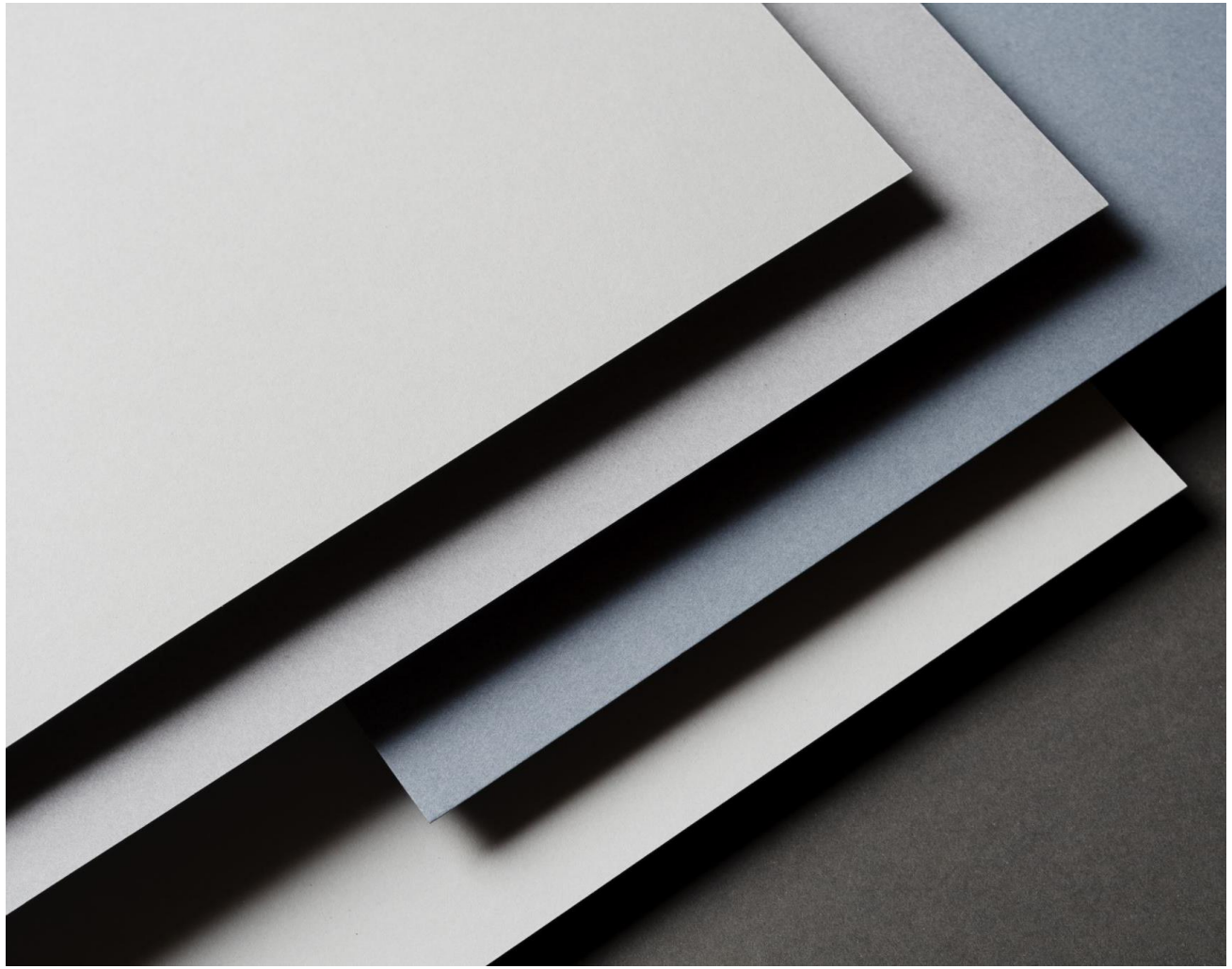
Template 1: Business Driver Prioritization

Template 2: Stakeholder Map

Template 3: Analysis of Required Metadata

Template 4: Scope of a DM Initiative

Template 5: A Capability Maturity Assessment



Template 1: Business Driver Prioritization

Business driver	Benefits: 0 (low) – 10 (high)							Total score
	Increase revenue	Reduce cost	Reduce risk	Improve process	Business continuity	Improve efficiency	Protect reputation	

Template 2: Stakeholder Map

Stakeholder group	Stakeholder position	Business driver 1			Business driver 2		
		Concerns	Level of influence (Low, High)	Level of involvement (Low, High)	Concerns	Level of influence (Low, High)	Level of involvement (Low, High)

Template 3: Analysis of Required Metadata

Metadata type	Metadata examples	Solution 1	Solution 2	Solution 3

Template 4: Scope of a Data Management Initiative

Factor	Business driver 1: Compliance	Business driver 2: Enhance decision-making	Scope (Yes/No)
Enterprise scope:			
Critical data			
Data chains (IT assets)			No

Template 5: A Capability Maturity Assessment

Capability	Current maturity level	Currently performed by	Targeted period	Desired maturity level	To be performed by
Business architecture					
Data governance					
Data modeling					
Information systems architecture					
Data security					
Data quality					
Data analytics					
Data lifecycle management					
Metadata architecture					
Metadata modeling					
Data lineage					

Ad-hoc | Emerged | Coordinated | Established | Optimized

THANK YOU!

Do you have any questions?
Get in touch with us at

DATACROSSROADS.NL

https://datacrossroads.nl/free-strategy-session/

Or let's connect on LinkedIn:

www.linkedin.com/in/irina-steenbeek

DATA GOVERNANCE AND MASTER DATA MANAGEMENT CONFERENCE EUROPE

11 - 14 March 2024 |London, UK

Please score and comment on this session and speaker in the event mobile app

IRMUK