



# **SAP MaxAttention Innovation Workshop**

## **Data-Driven Path to Business Resilience and Sustainability**

September 28, 2023

PUBLIC

# Agenda

- [Welcome & Introduction by Manfred Neskudla and Christian Baehr](#)
- [Building a Solid Data-Driven Foundation by Marco van Horck](#)
- [Cultivating a Data-Driven Culture: Adopting Data Management Best Practice by Robert Stam](#)
- [Unleashing the Power of Business Data with Business Data Fabric by Torsten Ammon](#)
- [Advanced Exploration: Utilizing Data Products Beyond the Scope of Traditional Analytics by Habeebuddin Mohamed and Steffen Thibaut](#)
- [How SAP Premium Engagements can help You in Journey of Data and Analytics by Peter Schmidt](#)





# **SAP® MaxAttention™ Innovation Workshop**

## **Data-Driven Path to Business Resilience and Sustainability**

Manfred Neskudla and Christian Bähr, SAP  
September 28<sup>th</sup>, 2023

# SAP MAXATTENTION

## Speakers



**Manfred Neskudla**

Vice President

Head Premium Hub - COE EMEA

Customer Success | Cloud Success Services |

Success Delivery Center

[Manfred.Neskudla@sap.com](mailto:Manfred.Neskudla@sap.com)



**Christian Bähr**

Head of Premium Hub – COE for Analytics,

Data Warehousing, Analytics and Data Management

Customer Success | Cloud Success Services |

Success Delivery Center

[Chirsitian.Baehr@sap.com](mailto:Chirsitian.Baehr@sap.com)



# The need for a platform

**A platform from SAP must ...**

... offer tools, that enable customers to efficiently develop around their SAP landscapes

**Digital platform eases the software development**

... integrate customers SAP landscapes

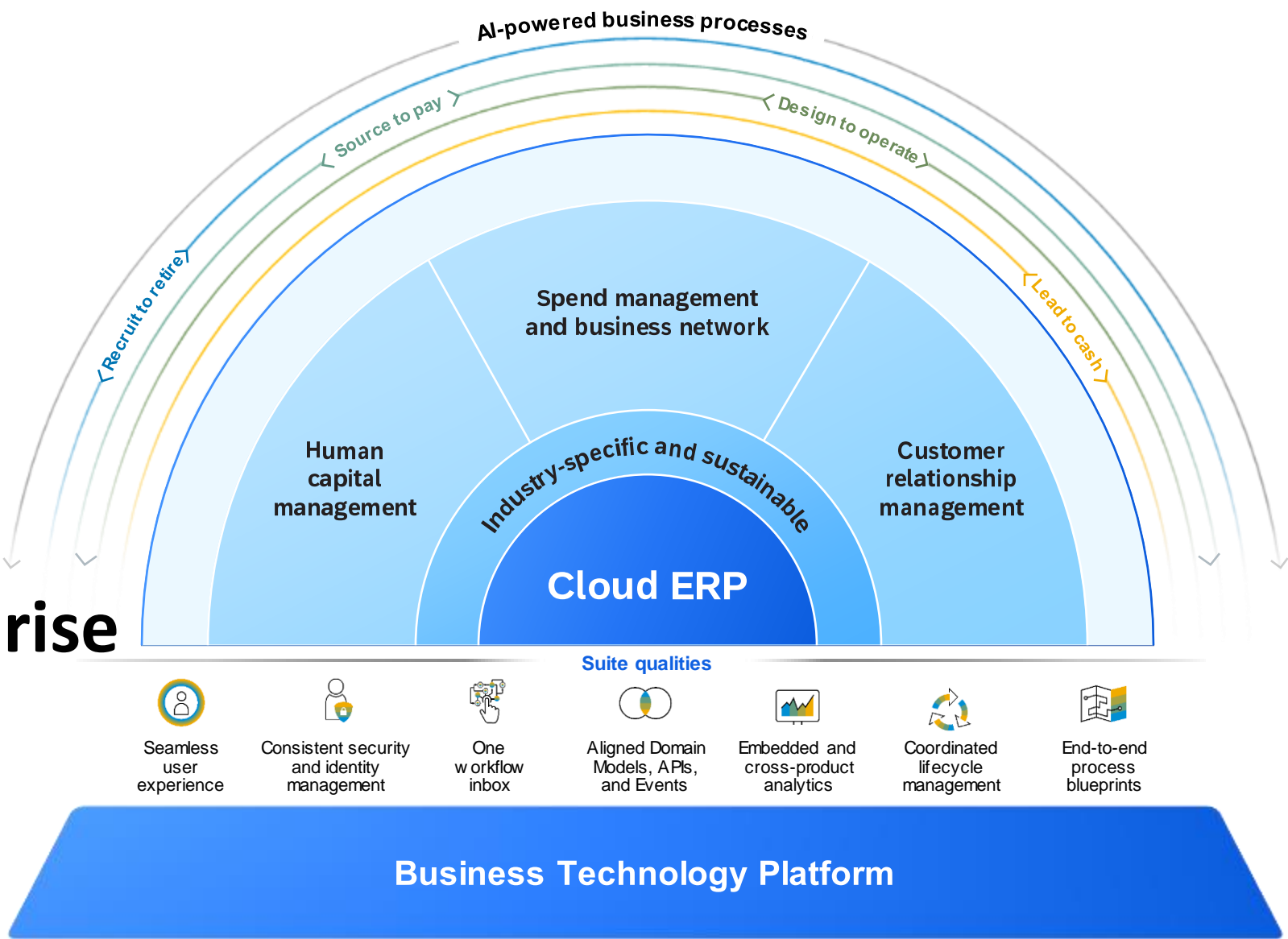
**Integrated landscapes are a prerequisite**

... manage your data in a harmonized way to successfully achieve digital transformation

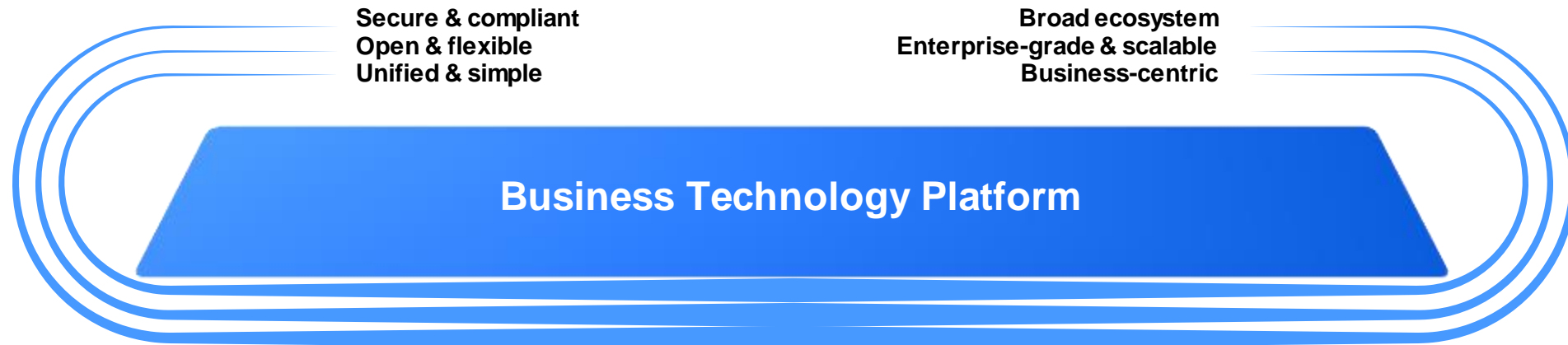
**Data driven organizations perform better**



SAP BTP is the foundation of the Intelligent Sustainable Enterprise



# SAP BTP Cloud Capabilities



App Dev	Automation	Integration	Data and Analytics	AI
→ Visual Low-Code / No-Code experience	→ Workflow Management	→ Process integration	→ Analytics & planning	→ Pre-trained AI models
→ Pro-code tooling	→ Robotic Process Automation	→ API-led integration	→ Data management	→ Responsible AI
→ Digital experience	→ Process monitoring & analytics	→ Event-driven integration	→ Operational database	→ AI model lifecycle management
→ DevOps	→ Automated document processing	→ B2B integration	→ Data warehouse & data lake	→ AI-infused SAP Applications (incl. Generative AI)
		→ Data integration		



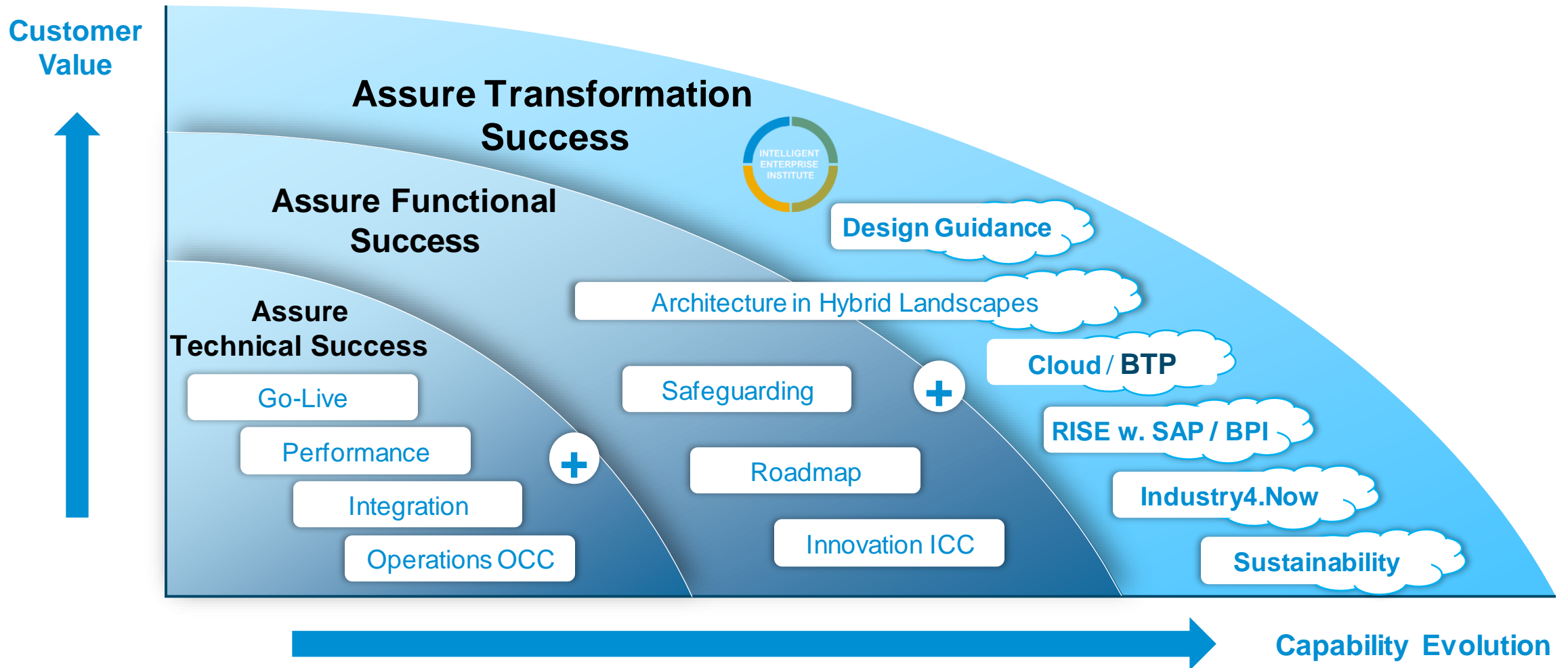
SAP MAXATTENTION

# **Analytics and Data Management Focus Group and Today's Agenda**



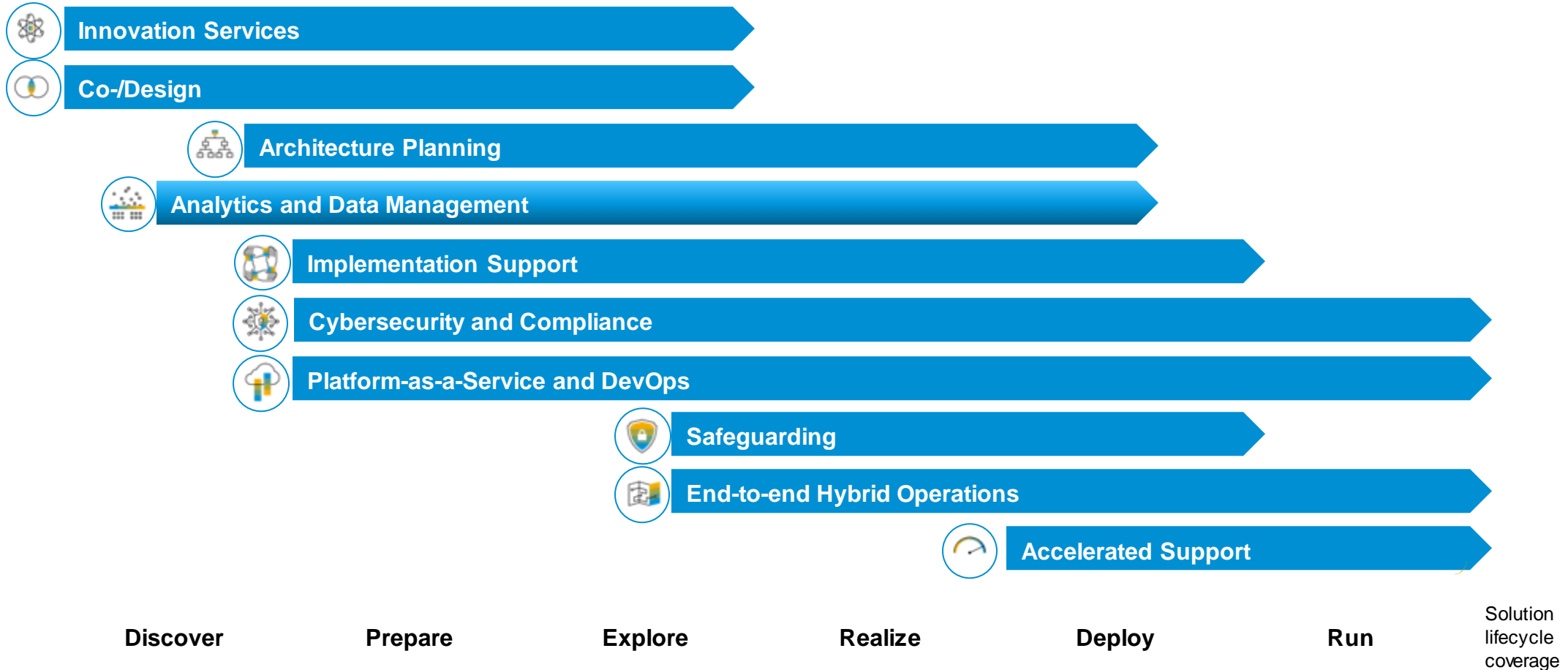
# SAP MaxAttention Evolution

Advanced Capabilities to Engage with Customers & to Grow Together



# SAP Premium Engagements : SAP MaxAttention Portfolio Overview

Successful Transformations Require Comprehensive Services and Scope

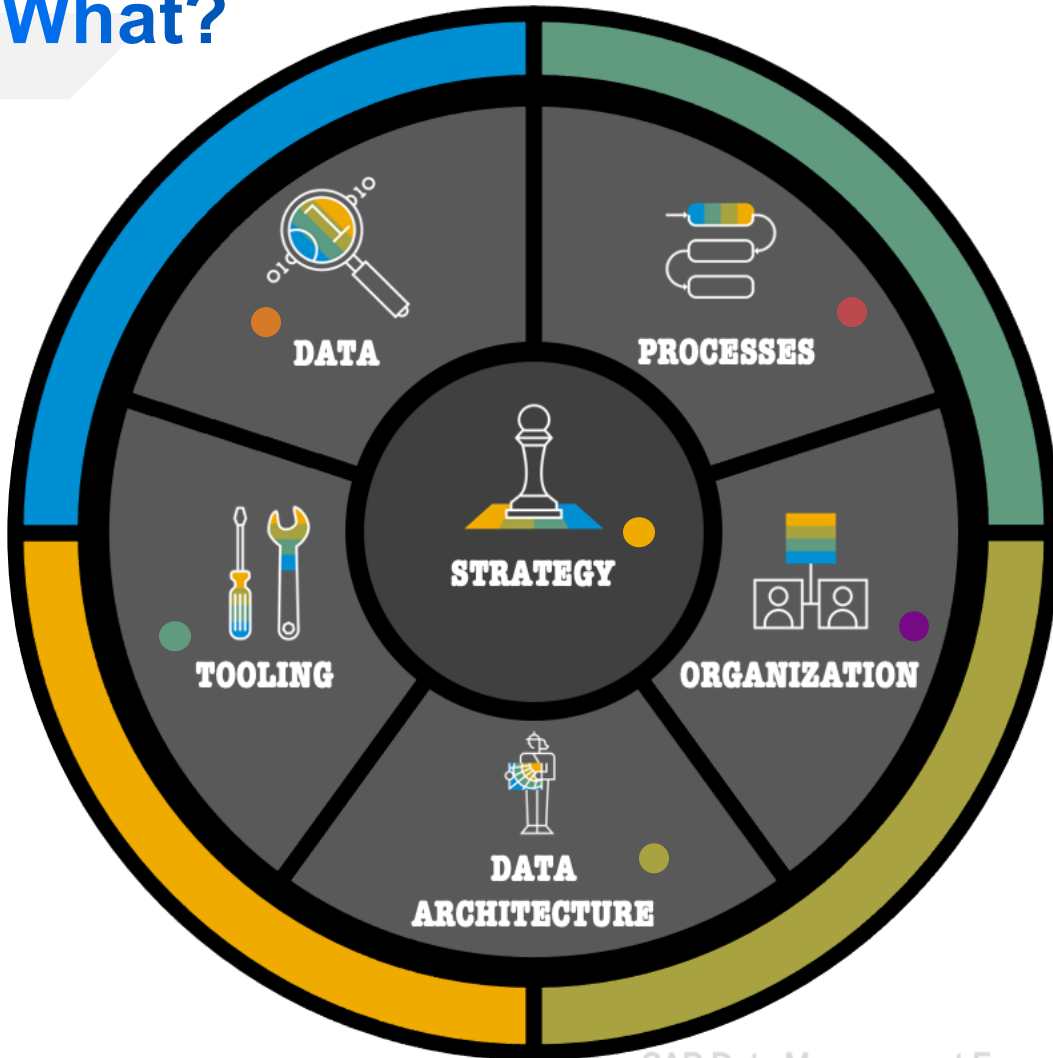




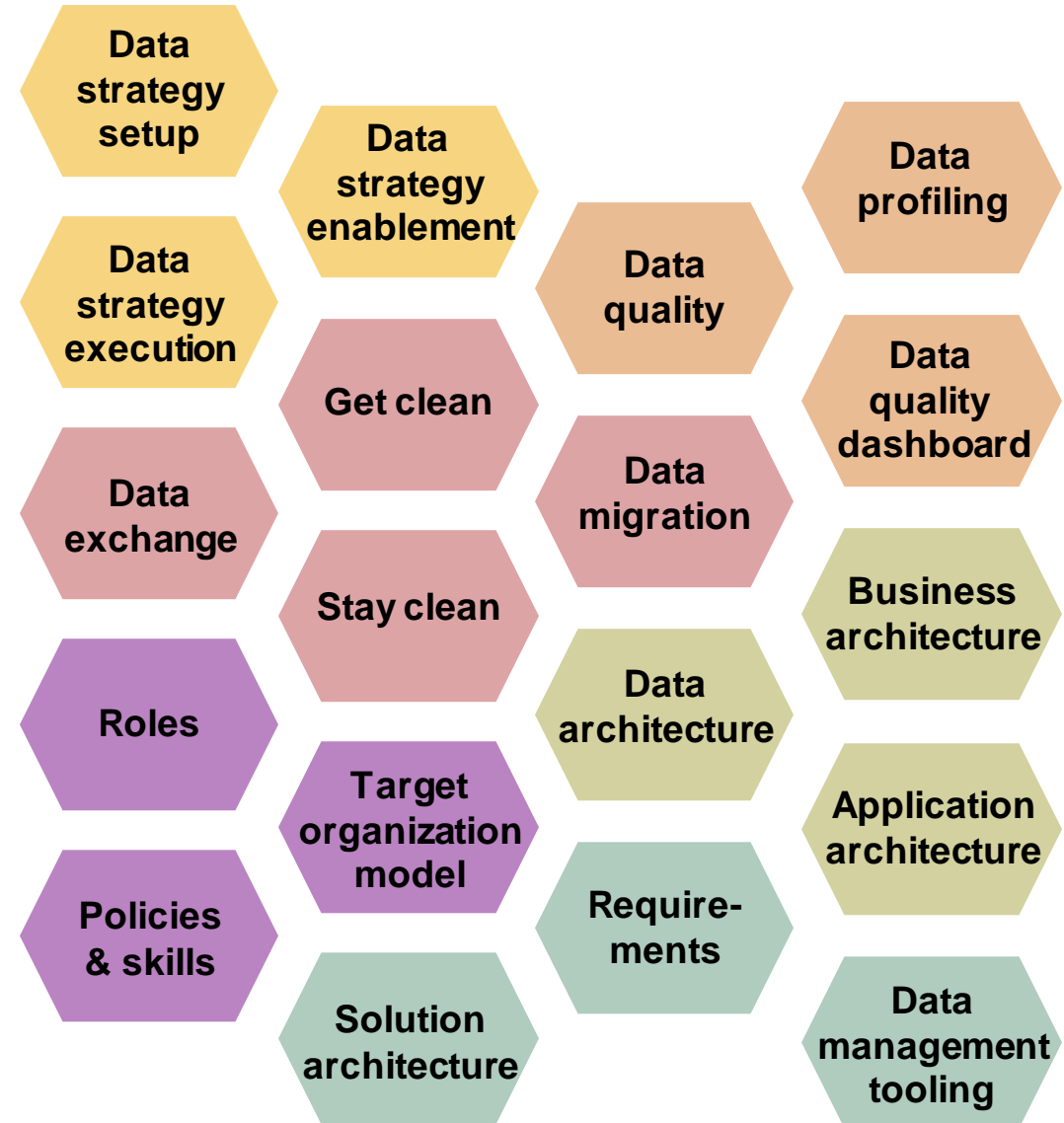
# Analytics and Data Management Focus Group

## SAP Data Management Framework

### What?



SAP Data Management Framework



# SAP MaxAttention Innovation Workshop

Agenda Sep 28, 2023

08:00 a.m. CET	0:30	<b>Welcome &amp; Introduction</b> Manfred Neskudla, Vice President and Head of CoE EMEA, Cloud Customer Success, SAP Christian Baehr, Head of Data Warehousing and Data Management CoE EMEA, Cloud Customer Success, SAP
08:30 a.m. CET	0:45	<b>Building a Solid Data-Driven Foundation</b> Marco van Horck, Head of Data Lab, Intelligent Enterprise Institute, SAP
09:15 a.m. CET	00:15	Break
09:30 a.m. CET	0:45	<b>Cultivating a Data-Driven Culture: Adopting Data Management Best Practice</b> Robert Stam, Data Architect, Data Lab, Intelligent Enterprise Institute, SAP
10:15 a.m. CET	0:45	<b>Unleashing the Power of Business Data with Business Data Fabric</b> Torsten Ammon, Senior Vice President and Head of SAP HANA, Analytics & Data Warehousing, SAP
11:00 a.m. CET	0:15	Break
11:15 a.m. CET	0:45	<b>Advanced Exploration: Utilizing Data Products, Beyond the Scope of Traditional Analytics</b> Habeebuddin Mohamed, Chief Solutions Architect, Data Warehousing and Data Management CoE EMEA, Cloud Customer Success, SAP Steffen Thibaut, Business Process Consultant, Data Warehousing and Data Management CoE EMEA, Cloud Customer Success, SAP
12:00 p.m. CET	0:30	<b>How SAP Premium Engagements can help you in journey of data and analytics</b> Peter Schmidt, Chief Solutions Architect, IT Planning Architects Team, Cloud Customer Success, SAP
12:30 p.m. CET	0:15	<b>Closing Remarks</b> Christian Baehr, Head of Data Warehousing and Data Management CoE EMEA, Cloud Customer Success, SAP



# Get in touch

Contact information:

**Manfred Neskudla**

Vice President

Head Premium Hub - COE EMEA

Customer Success | Cloud Success Services

Success Delivery Center

[Manfred.Neskudla@sap.com](mailto:Manfred.Neskudla@sap.com)

**Christian Bähr**

Head of Premium Hub – COE for Analytics, Data

Warehousing, Analytics and Data Management

Customer Success | Cloud Success Services

Success Delivery Center

[Christian.Baehr@sap.com](mailto:Christian.Baehr@sap.com)







# Building a Solid Data-Driven Foundation

## Intelligent Enterprise Institute Data Lab

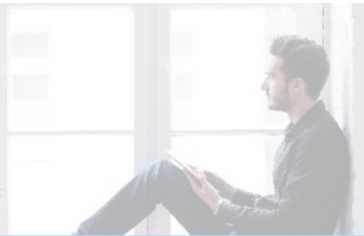
Marco van Horck, SAP  
October 28, 2023

PUBLIC

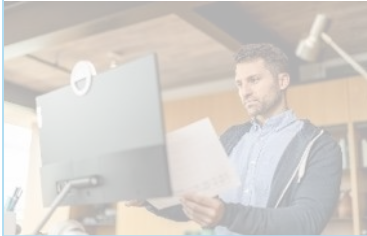


## SAP MAXATTENTION

### Thought leadership



### Content publications



### Events and network



### Masterclasses



### Intelligent processes



### Intelligent use of data



### Win in the experience economy



### Become a sustainable business



## Speaker



**Marco van Horck**  
Intelligent Enterprise Institute  
Global Lead Data Lab  
[Marco.van.horck@sap.com](mailto:Marco.van.horck@sap.com)



# Business resilience



Traditional business model



Data-driven business model



Traditional business model



Data-driven business model





# The data driven organization



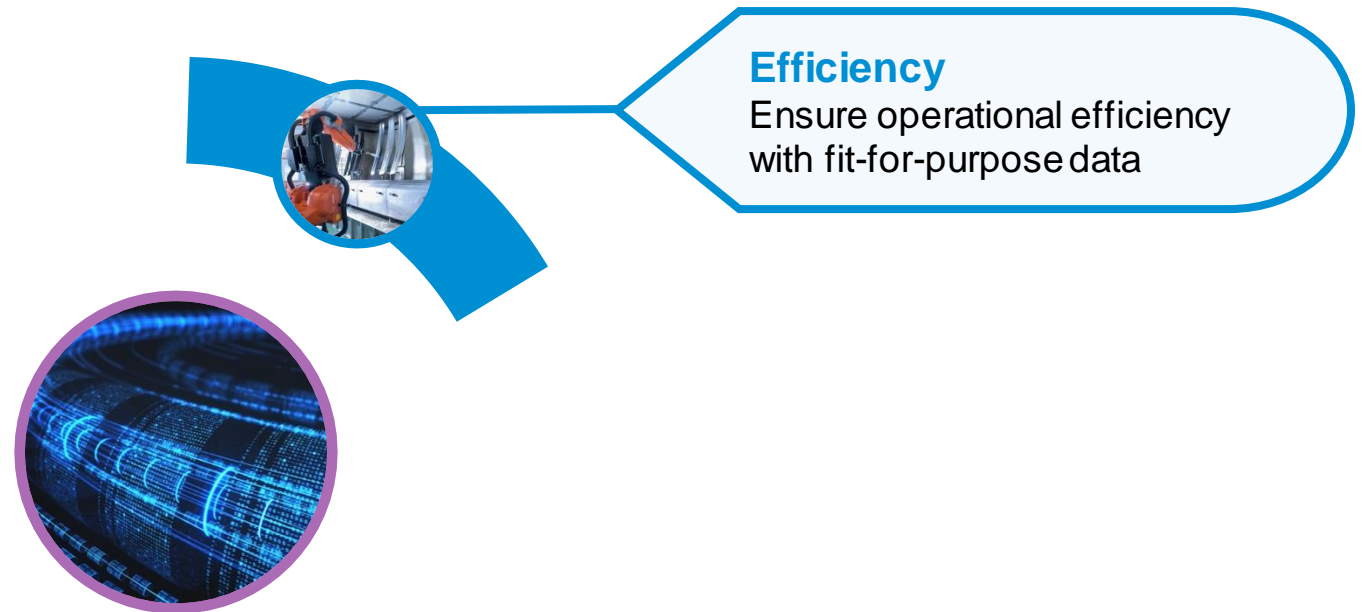
# A simple example...



## A mobile phone journey:

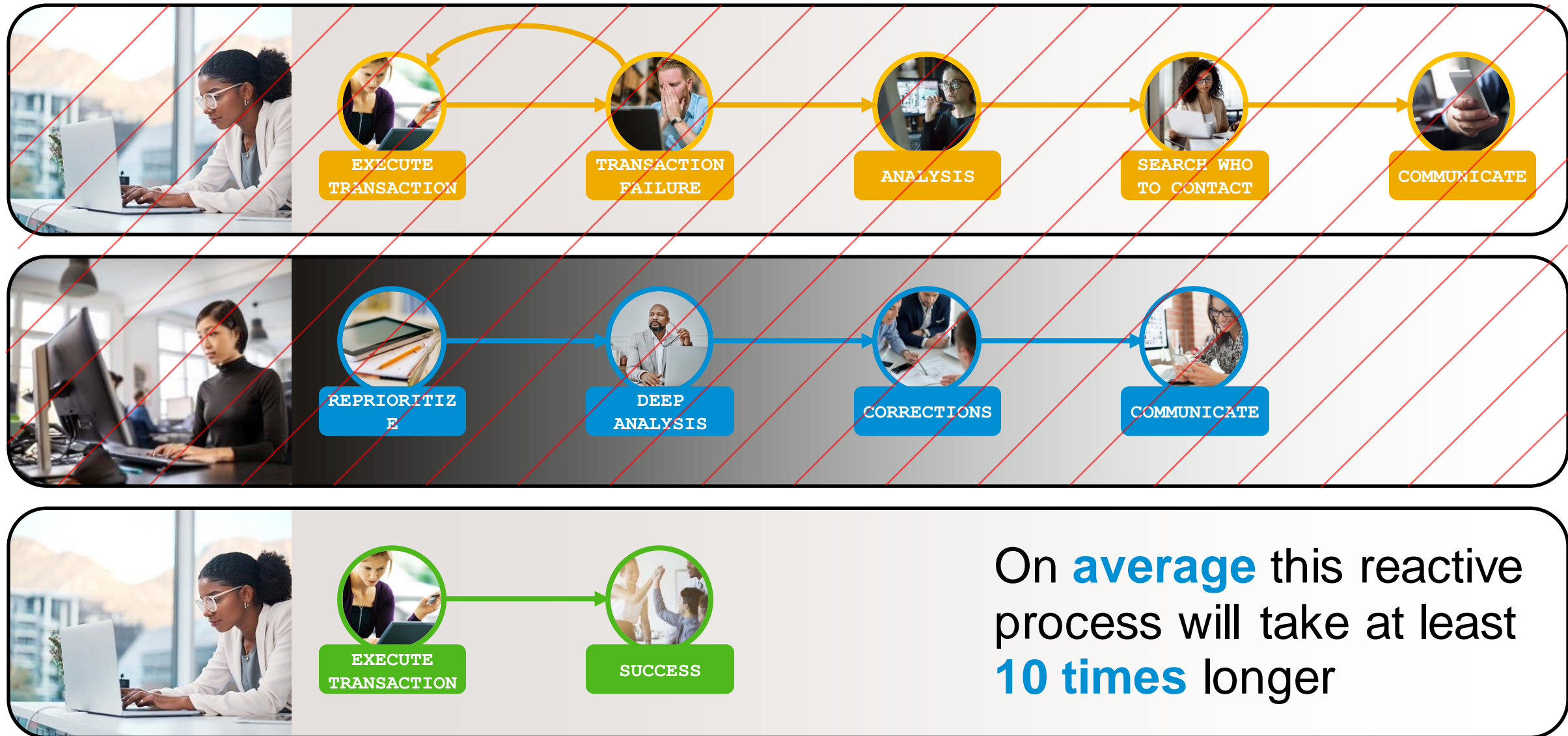


# What makes an organization data-driven?





# Efficiency in business processes





# Efficiency



DATA  
QUALITY

100%

90%

80%



PROCESS  
TIME

100 hrs

90 hrs

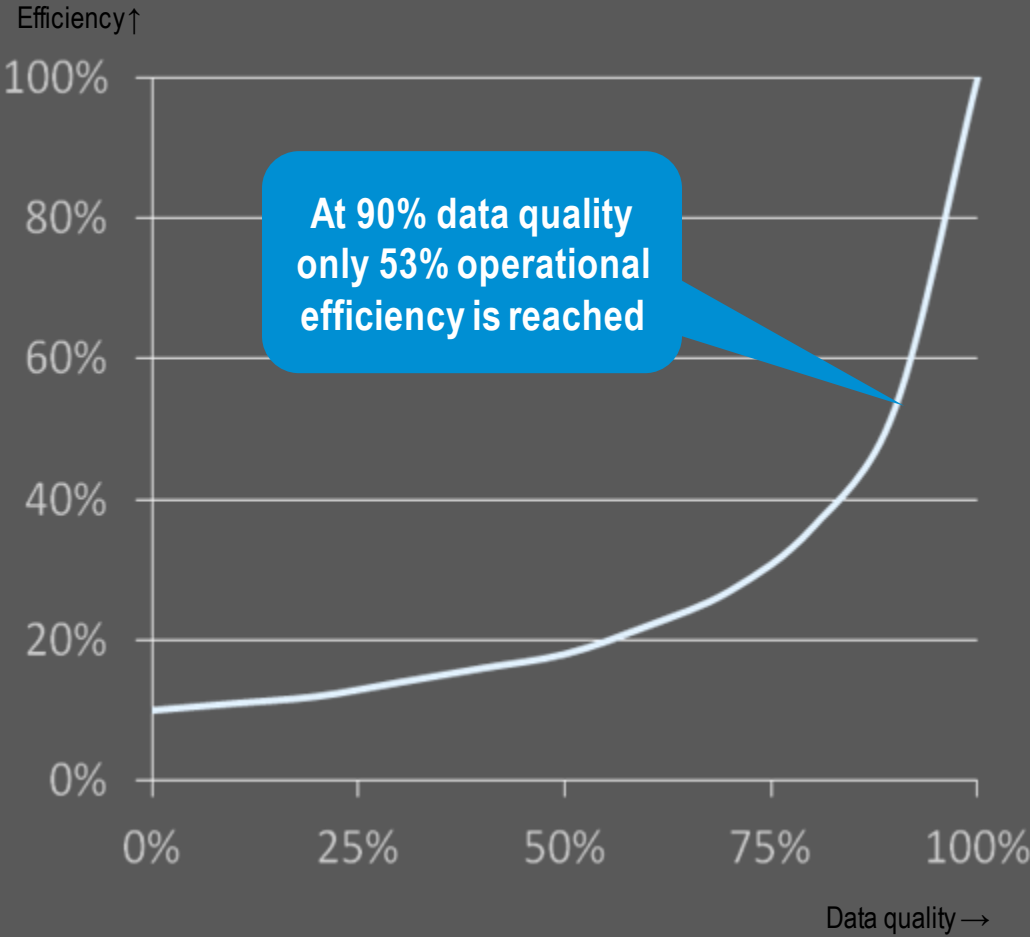
100 hrs (10 x 10 hrs)

190 hrs

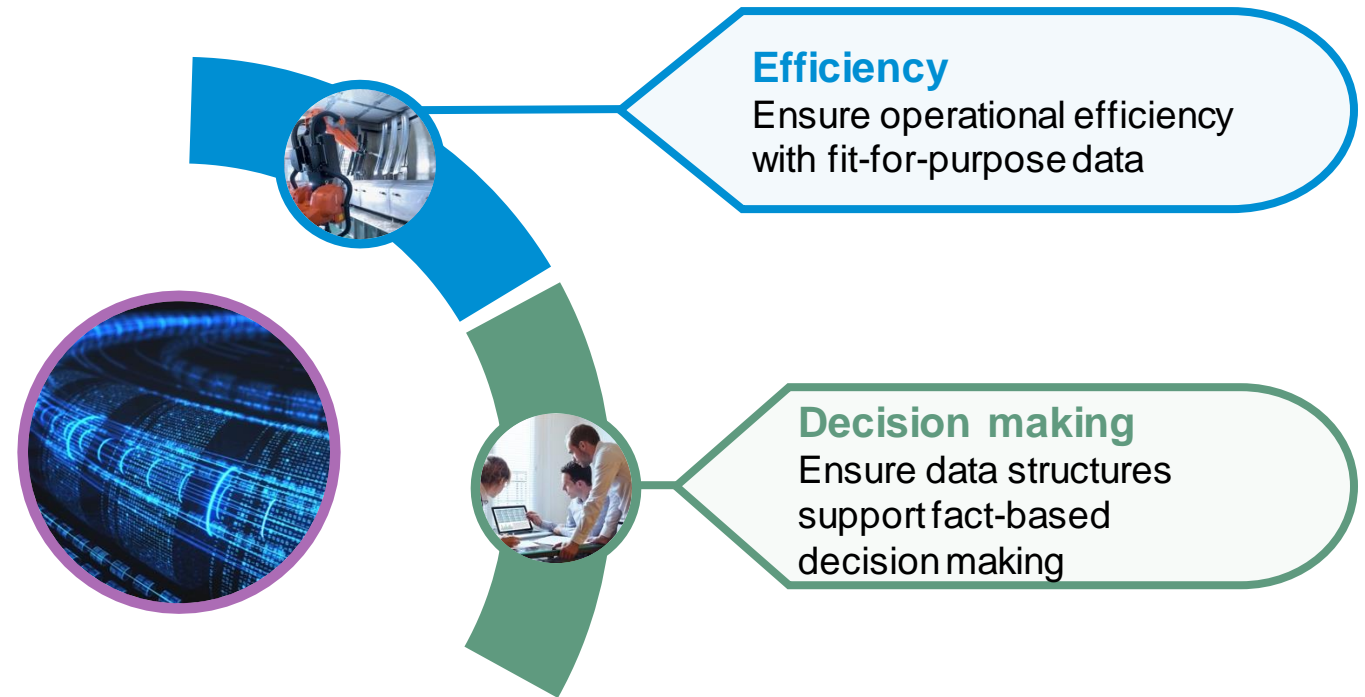
80 hrs

200 hrs (10 x 20 hrs)

280 hrs



# What makes an organization data-driven?



# Candy company example



Which flavor do our customers prefer?

According to the data the most sold flavor is

**Banana**

Deepdive into the data:

**14**

types of strawberry

Strawberry  
Strawberry licorice  
Strawberry pink  
Strawberry cream  
Strawberry yoghurt  
...

**2**

types of banana

Banana  
Banana yoghurt

Is banana-flavored really the most sold?

## Data manipulation

If you **torture** the data long enough, it will **confess** to anything.

Ronald Coase, Nobel prize winner Economics





# A true data-driven organization



**Makes fact- based  
decisions**

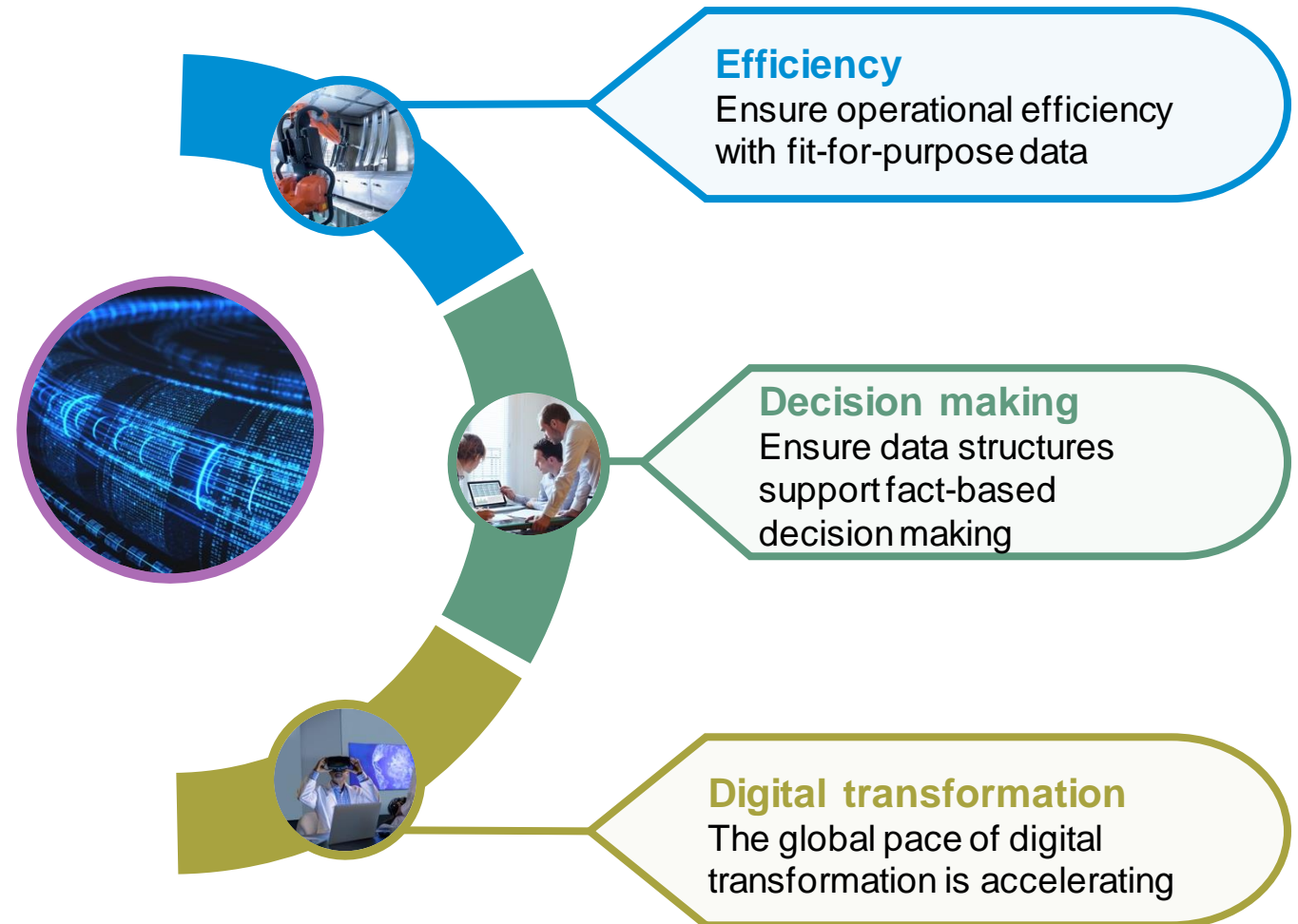


**Minimizes data  
manipulation**



**Works with the right  
structure of data sets**

# What makes an organization data-driven?



# Digital transformation around the world

WORLD  
POPULATION



INTERNET  
USERS



SOCIAL MEDIA  
USERS



MOBILE PHONE  
USERS



MOBILE SOCIAL  
MEDIA USERS



2018

**7.593**  
BILLION

URBANISATION:

**55%**

**4.021**  
BILLION

PENETRATION:

**53%**

**3.196**  
BILLION

PENETRATION :

**42%**

**5.135**  
BILLION

PENETRATION:

**68%**

**2.958**  
BILLION

PENETRATION:

**39%**

2021

**7.911**  
BILLION

URBANISATION:

**56%**

**4.880**  
BILLION

PENETRATION :

**62%**

**4.550**  
BILLION

PENETRATION:

**58%**

**7.101**  
BILLION

PENETRATION:

**90%**

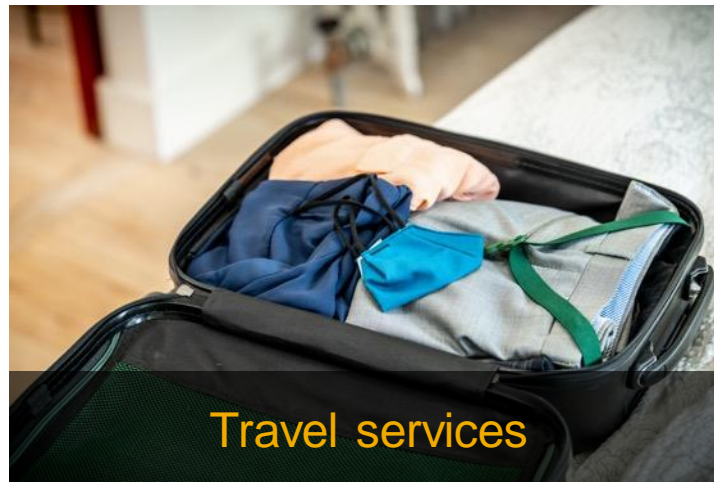
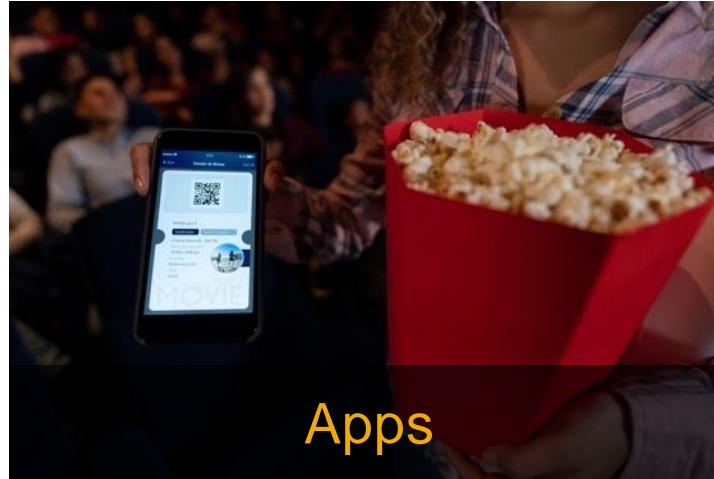
**4.480**  
BILLION

PENETRATION:

**57%**



# Rise in digital product & services





# What makes an organization data-driven?



# Compliance



The number of compliance regulations keeps growing. Non-compliance can lead to high fines, claims and reputational damage.



# What makes an organization data-driven?





# Sustainability



# Sustainability



Are you making the best choices in material usage?

Are people working in the supply chain paid fairly?

What is your CO2 output and where could you potentially reduce?

# Sustainability



To answer these type of questions the following is needed:

Good quality  
**DATA**

# What makes an organization data-driven?

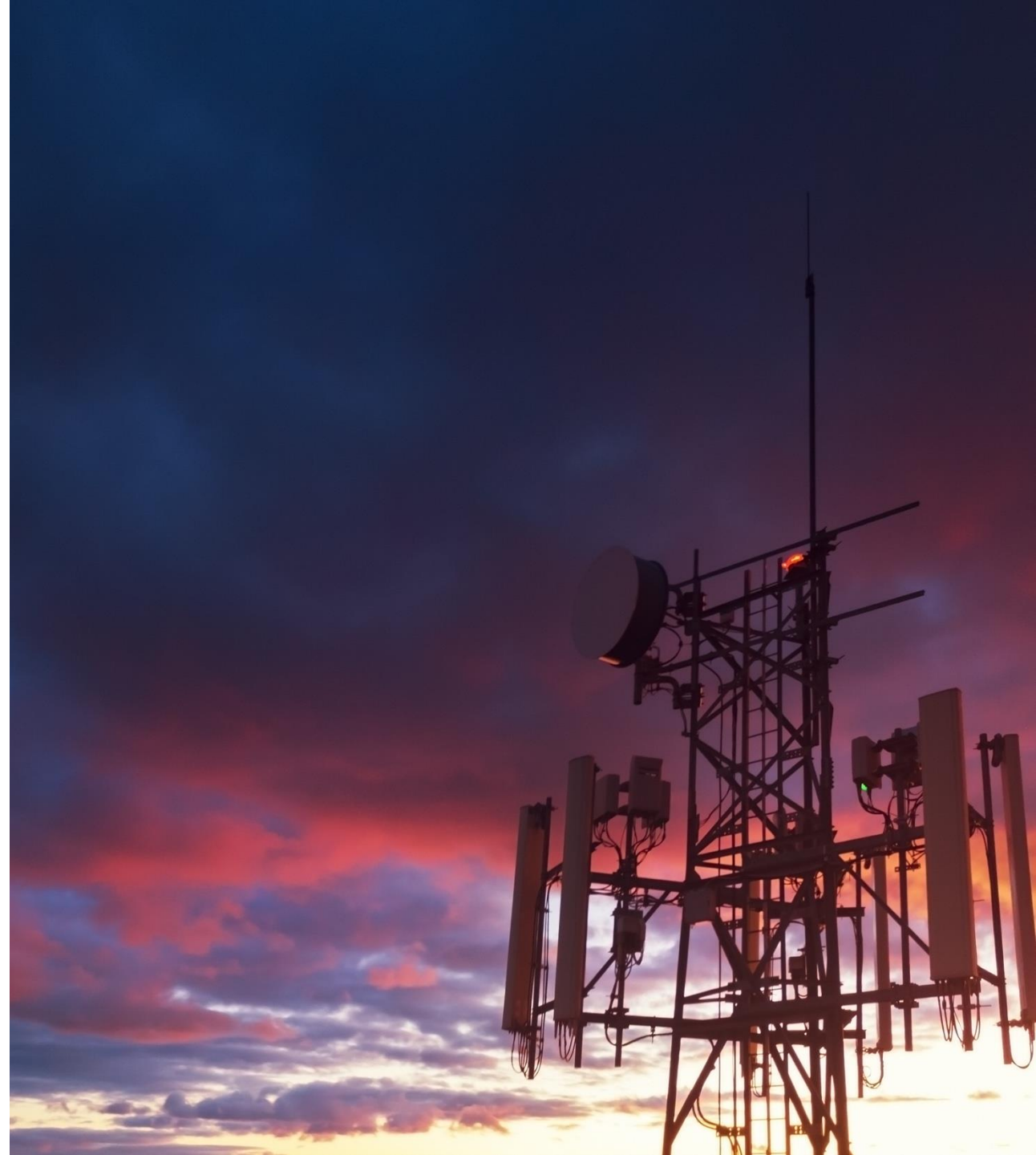




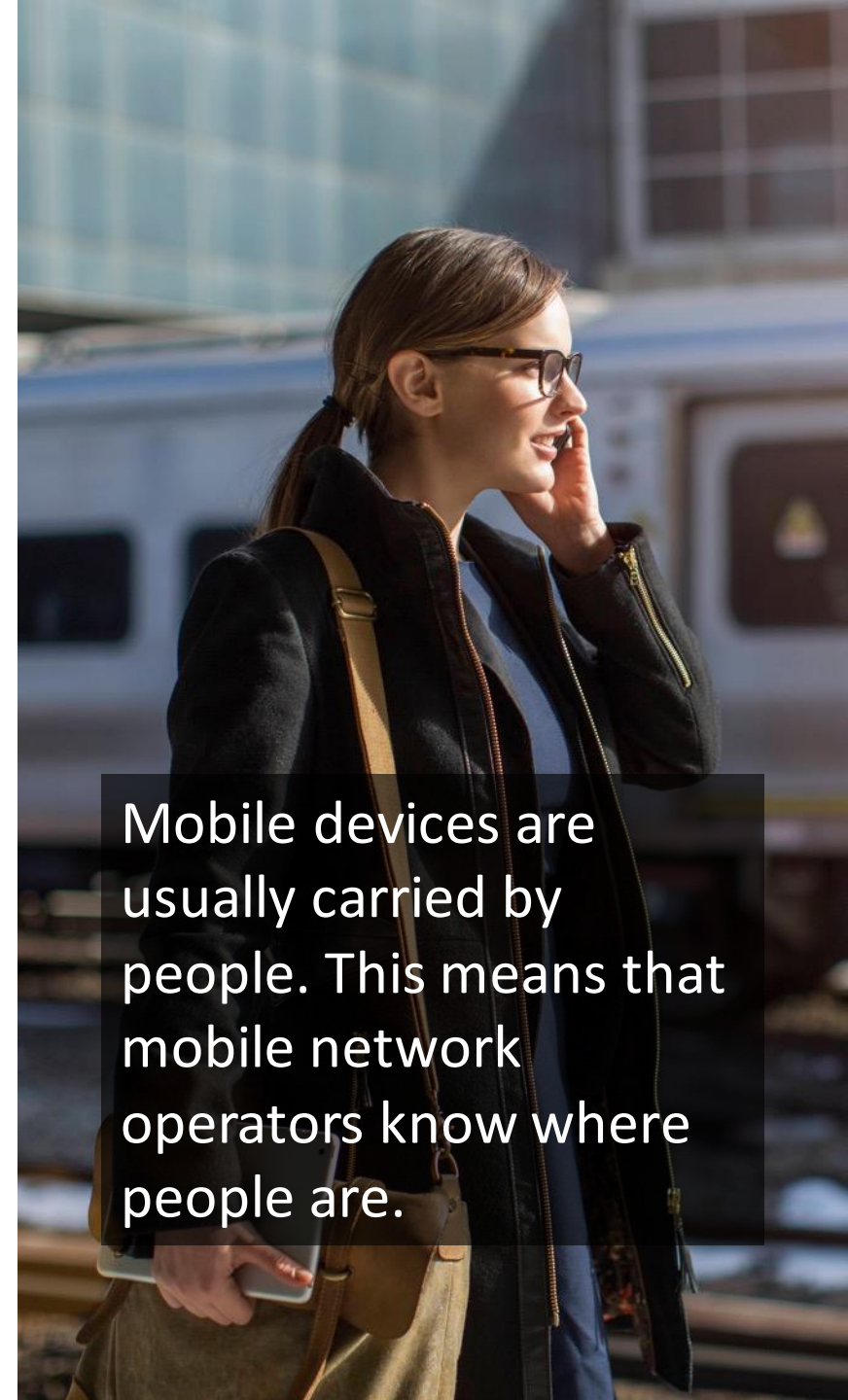
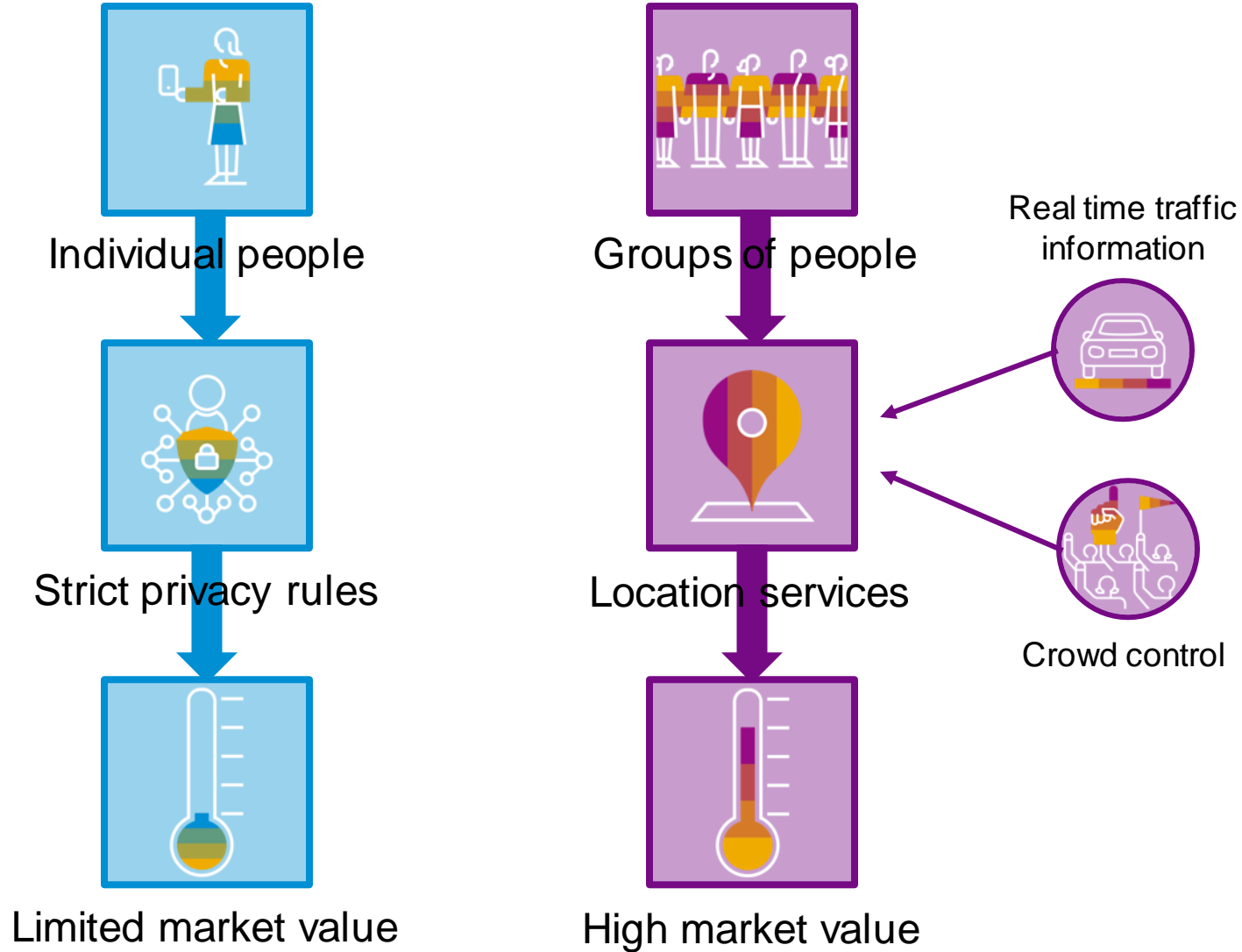
# A mobile device network

A mobile device needs to be able to connect to the nearest cell tower. This ensures the best connection and ensures the lowest energy consumption.

Therefore mobile network operators need to know where mobile devices are.

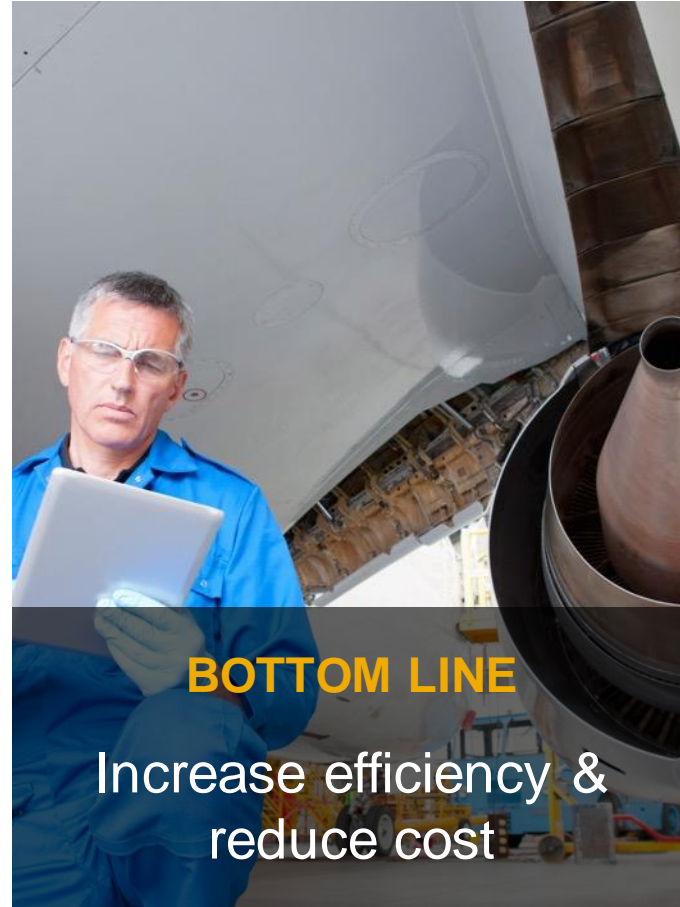
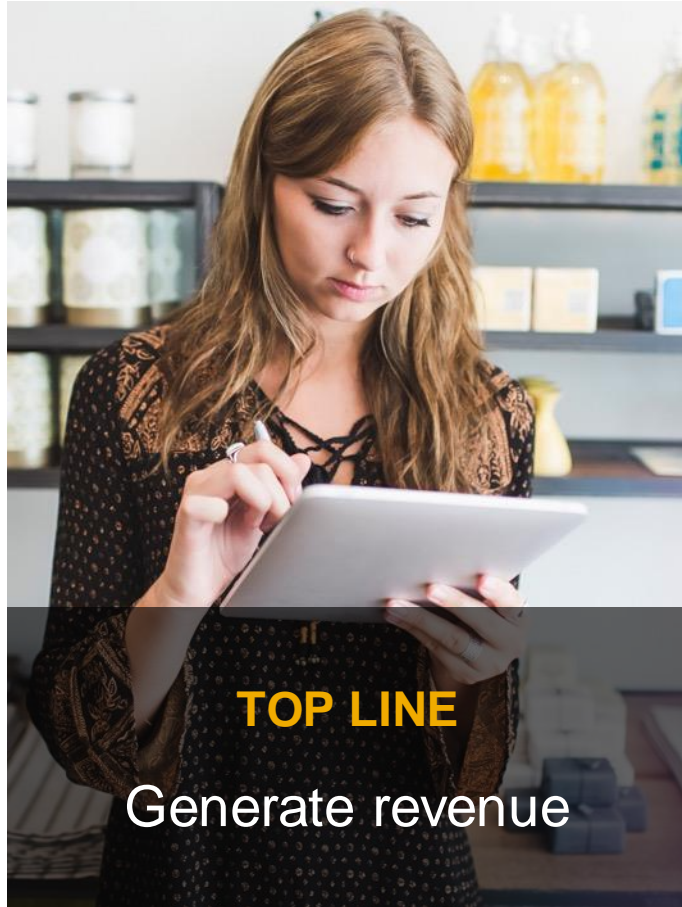


# Data monetization



Mobile devices are usually carried by people. This means that mobile network operators know where people are.

# Forms of data monetization



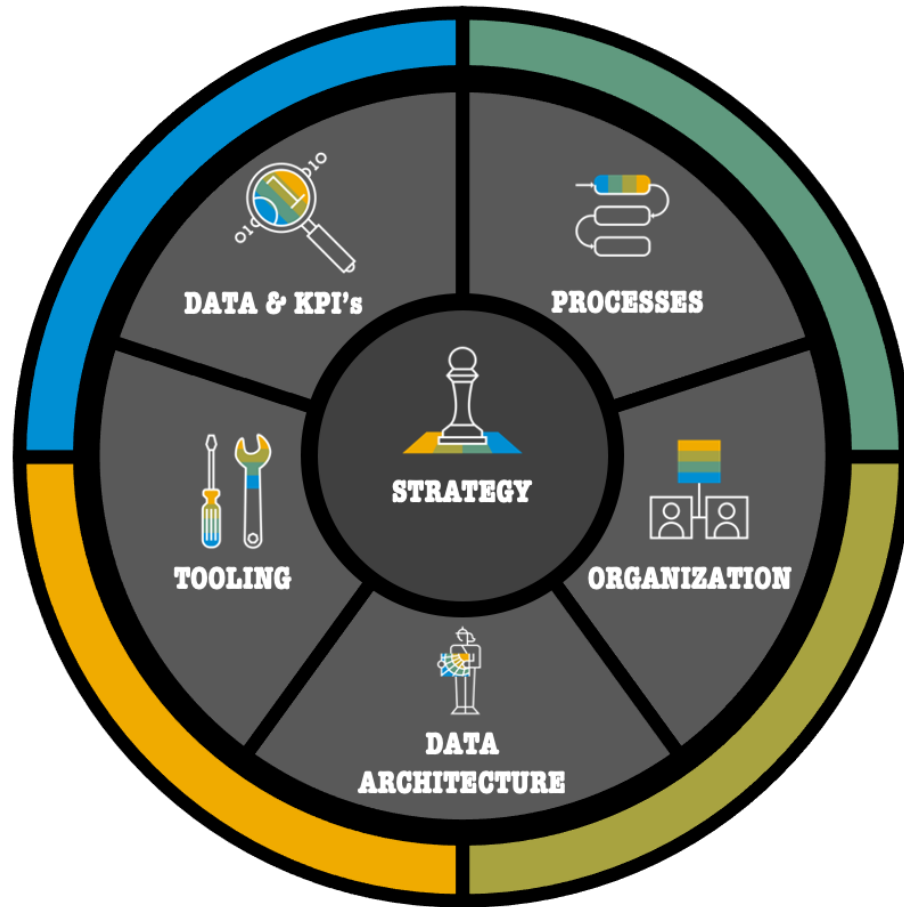


# Data management framework





# Data management framework



Stay tuned for the next session to learn more about our framework







# Get in touch

Contact information:

**Marco van Horck**

Intelligent Enterprise Institute  
Global lead Data Lab

Amerikastraat 10, 5232BE 's-Hertogenbosch, Netherlands

+31 (0)6 21 11 22 65

[marco.van.horck@sap.com](mailto:marco.van.horck@sap.com)





# Cultivating a Data-Driven Culture: Adopting Data Management Best Practice

Robert Stam, SAP  
October 28, 2023

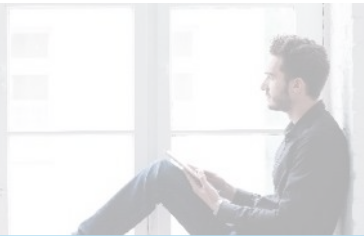
PUBLIC



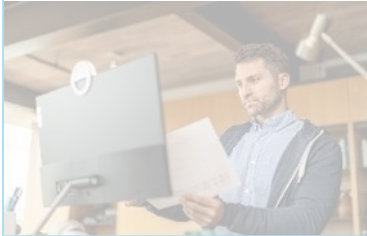


## SAP MAXATTENTION

### Thought leadership



### Content publications



### Events and network



### Masterclasses



### Intelligent processes



### Intelligent use of data



### Win in the experience economy



### Become a sustainable business



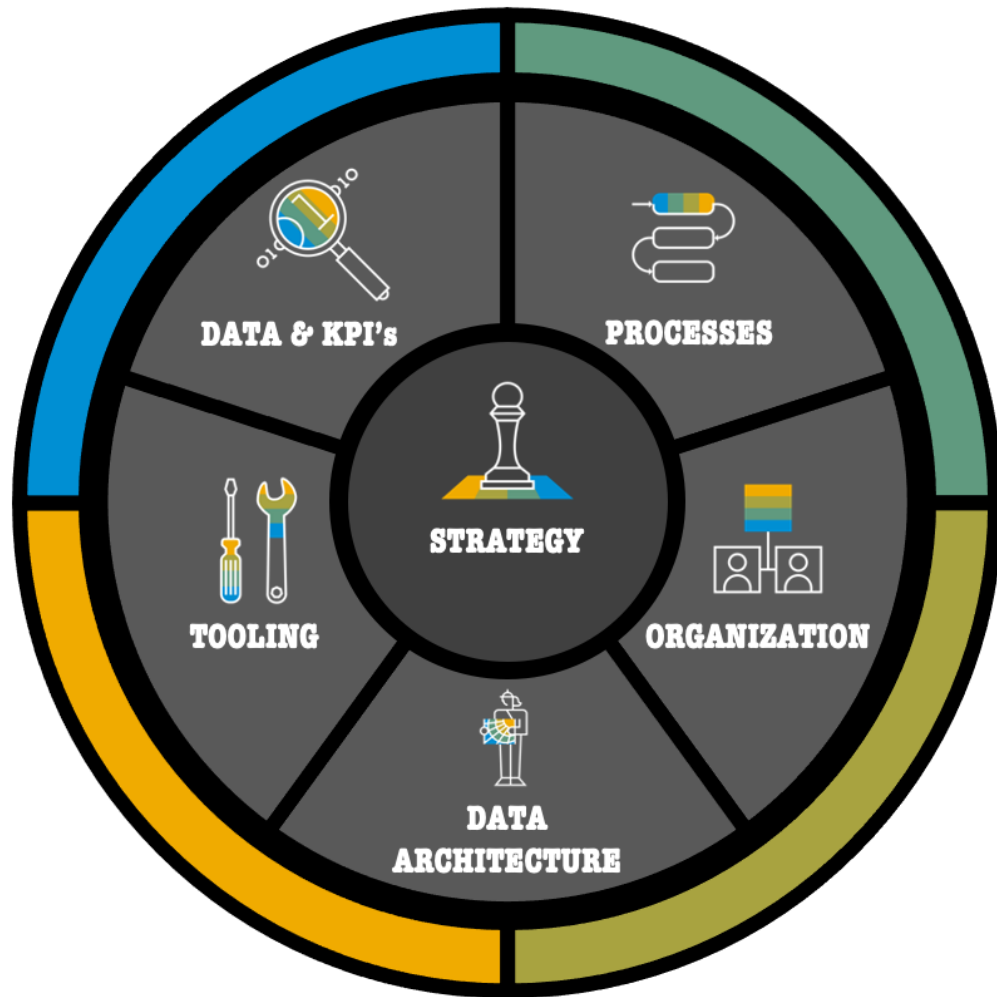
## Speaker



### Robert Stam

Intelligent Enterprise Institute  
Principal consultant Data Lab  
[Robert.Stam@sap.com](mailto:Robert.Stam@sap.com)

# Data management best practise framework

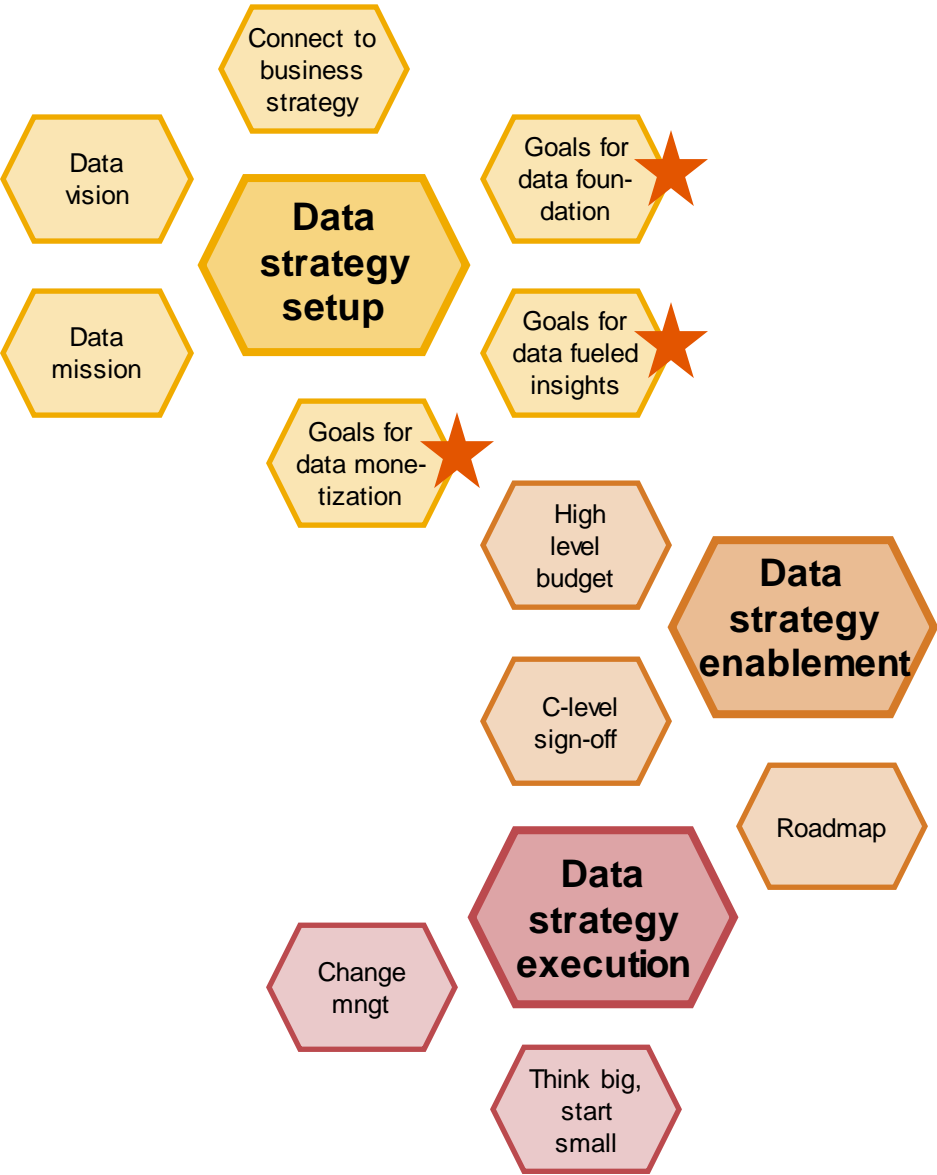
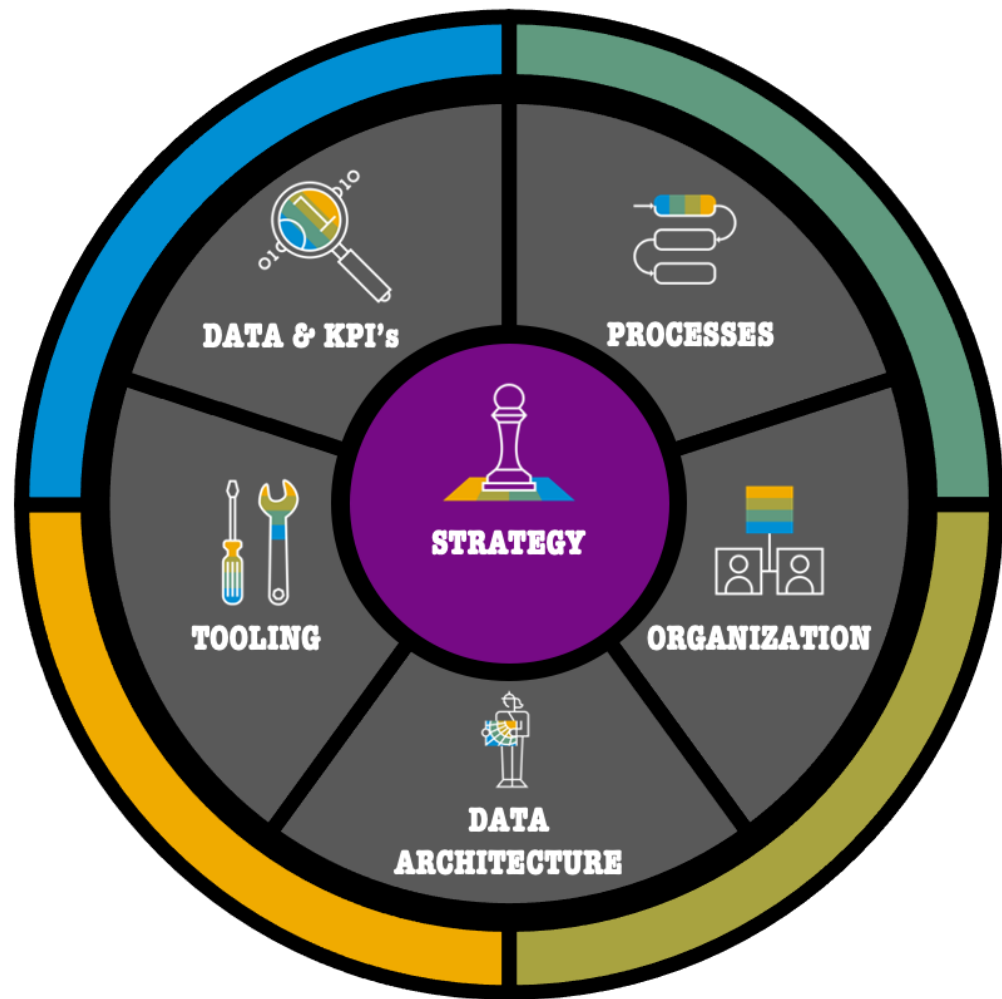




# Data strategy

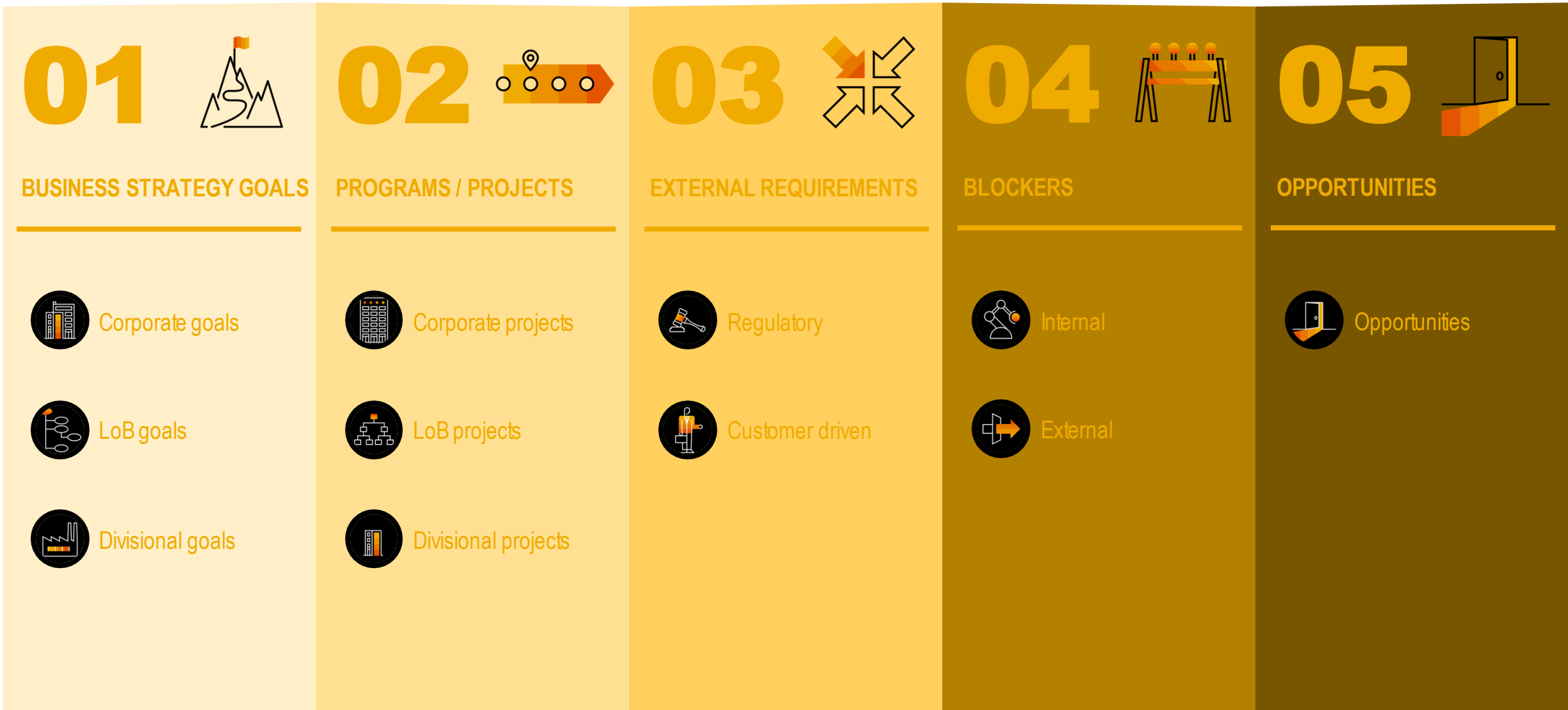


# Data strategy



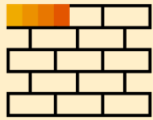


# Gather input for strategic goals



# Brainstorm on strategic goals

## 01



### DATA FOUNDATION

---



Target Organization Model



Data quality



Data Lifecycle Processes



Data architecture

## 02



### DATA FUELED INSIGHTS

---



Descriptive



Diagnostic



Anticipative



Prescriptive

## 03



### DATA MONETIZATION

---



Internal

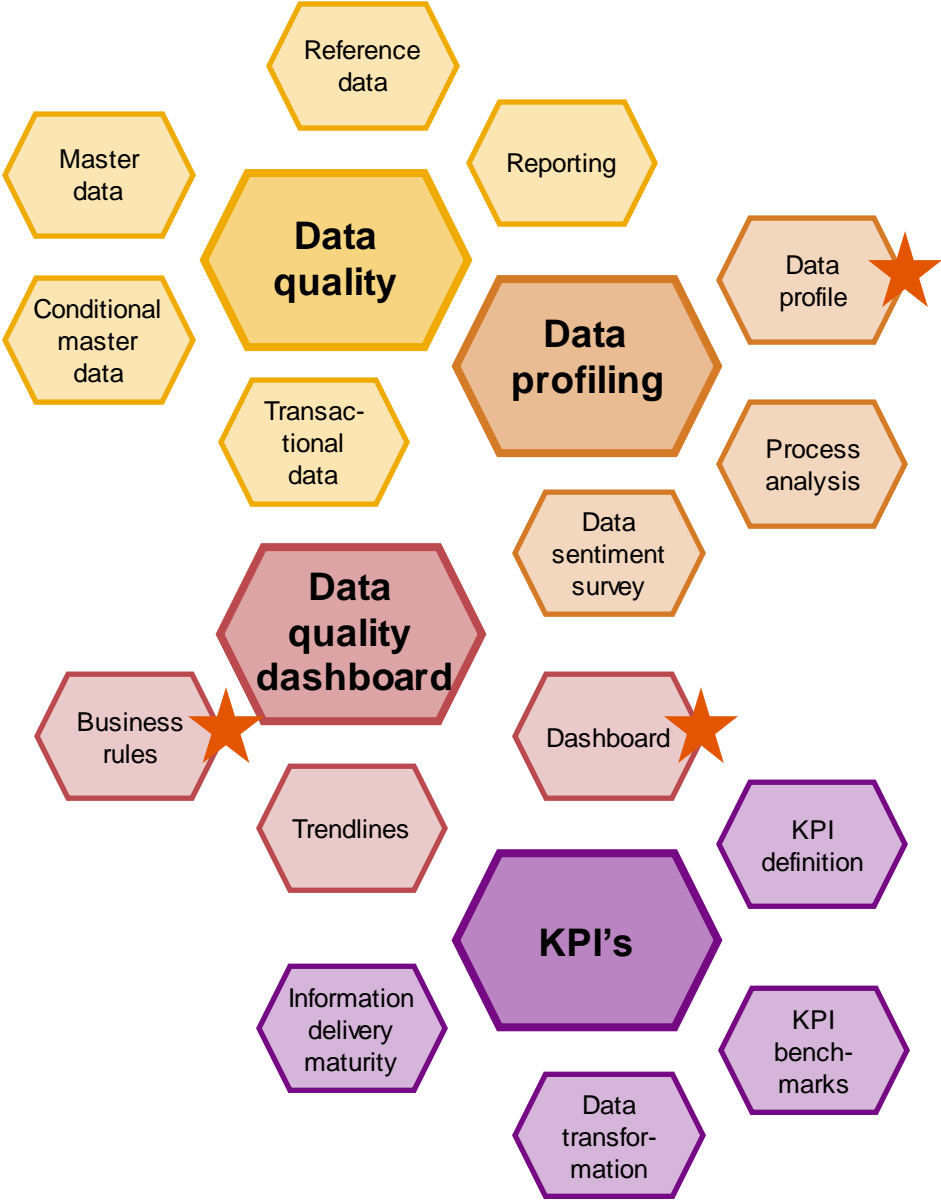
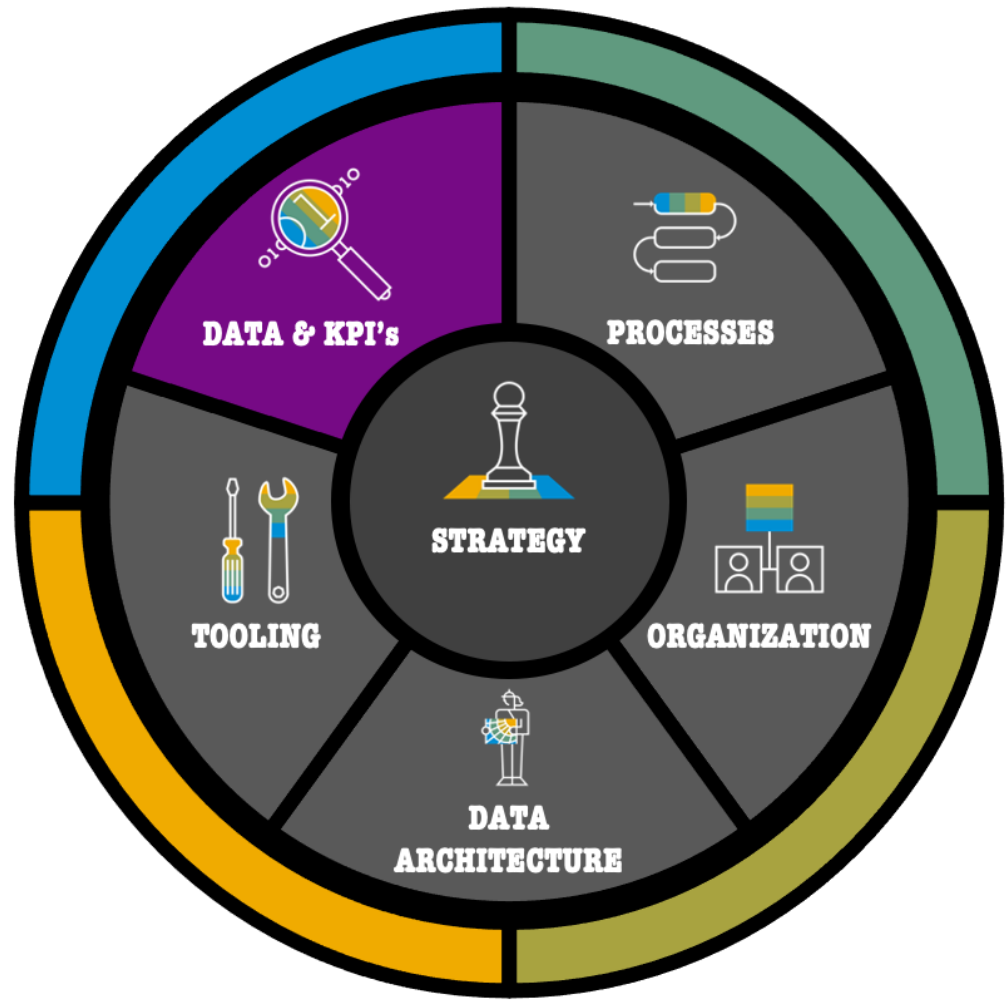


External

# Data & KPI's



# Data & KPI's





## Data profiling

The screenshot displays the SAP Information Steward interface, specifically the 'Workspace Home' section. The main table shows a data profile for the 'Production.Product' table. The table columns include 'Advisor', 'Content Type', 'Min', 'Max', 'Average', 'Median', 'String Length', 'Completeness', and 'Distribution'. The rows list various data fields such as 'Class', 'Color', 'DaysToManufacture', 'DiscontinuedDate', 'FinishedGoodsFlag', 'ListPrice', 'MakeFlag', 'ModifiedDate', 'Name', 'ProductID', 'ProductLine', 'ProductModelID', 'ProductNumber', 'ProductSubcategoryID', 'ReorderPoint', 'SafetyStockLevel', 'SellEndDate', 'SellStartDate', 'Size', 'SizeUnitMeasureCode', and 'StandardCost'. The 'Value' column provides detailed information about the data, including minimum and maximum values, average, and median. The 'String Length' column shows the distribution of string lengths. The 'Completeness' column indicates the percentage of non-null values. The 'Distribution' column shows the frequency of values.

Callouts highlight specific features:

- Value information (ie min. weight is 10kg, max. weight is 300kg)**: Points to the 'Value' column for the 'ProductNumber' field.
- Information about the field length**: Points to the 'String Length' column for the 'ProductNumber' field.
- Number of blanks, null values, zero values, average value**: Points to the 'Completeness' column for the 'ProductNumber' field.
- Value sets, patterns, key words**: Points to the 'Distribution' column for the 'ProductNumber' field.

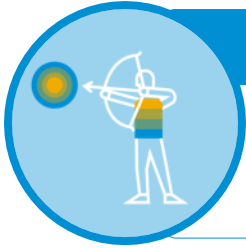
A data profile doesn't tell you if data is **correct** or **not**. It only tells you what the data **looks like**.

The main component  
of **verifying** data  
quality is **business  
rules**





# Business rules



## ACCURACY

**Example:** Weight of product cable must be between 0,2kg and 0,6kg per meter



## COMPLETENESS

**Example:** Customer fixed phone number or mobile phone number is missing



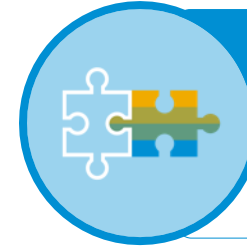
## CONFORMITY

**Example:** Mobile phone numbers need to follow the pattern +39.3xx.xxx.xxxx



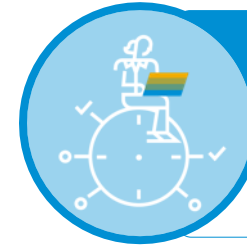
## CONSISTENCY

**Example:** Customer XYZ must have same address in system A and in system B



## INTEGRITY

**Example:** If clothing size of employee is S and he is male, the weight of the employee should be between 40kg and 70kg



## TIMELINESS

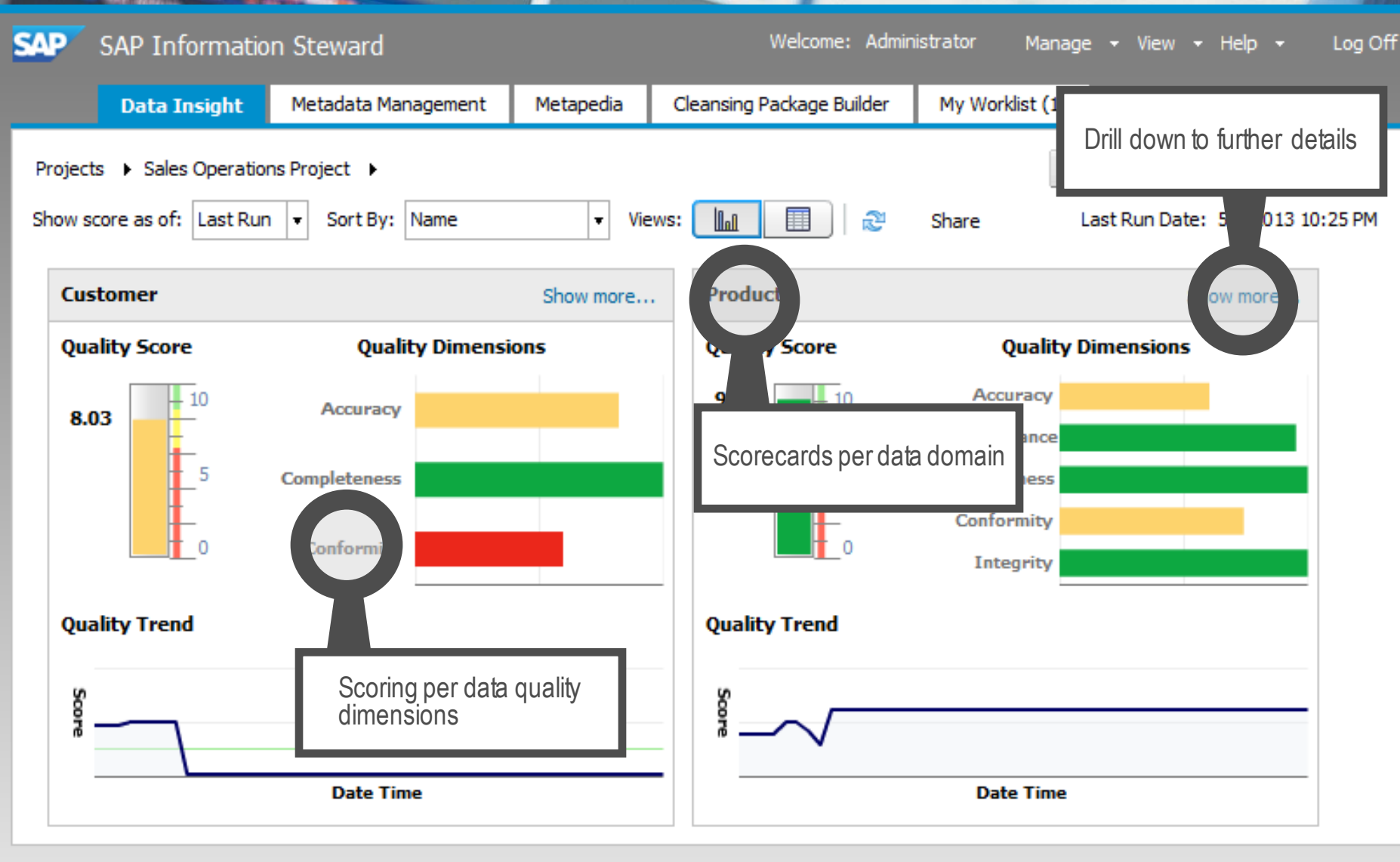
**Example:** Customer record should be available in system X 2 minutes after it has been created in system Y



## UNIQUENESS

**Example:** The VAT number of a customer may not be the same as the VAT number of another customer

# Data quality dashboard



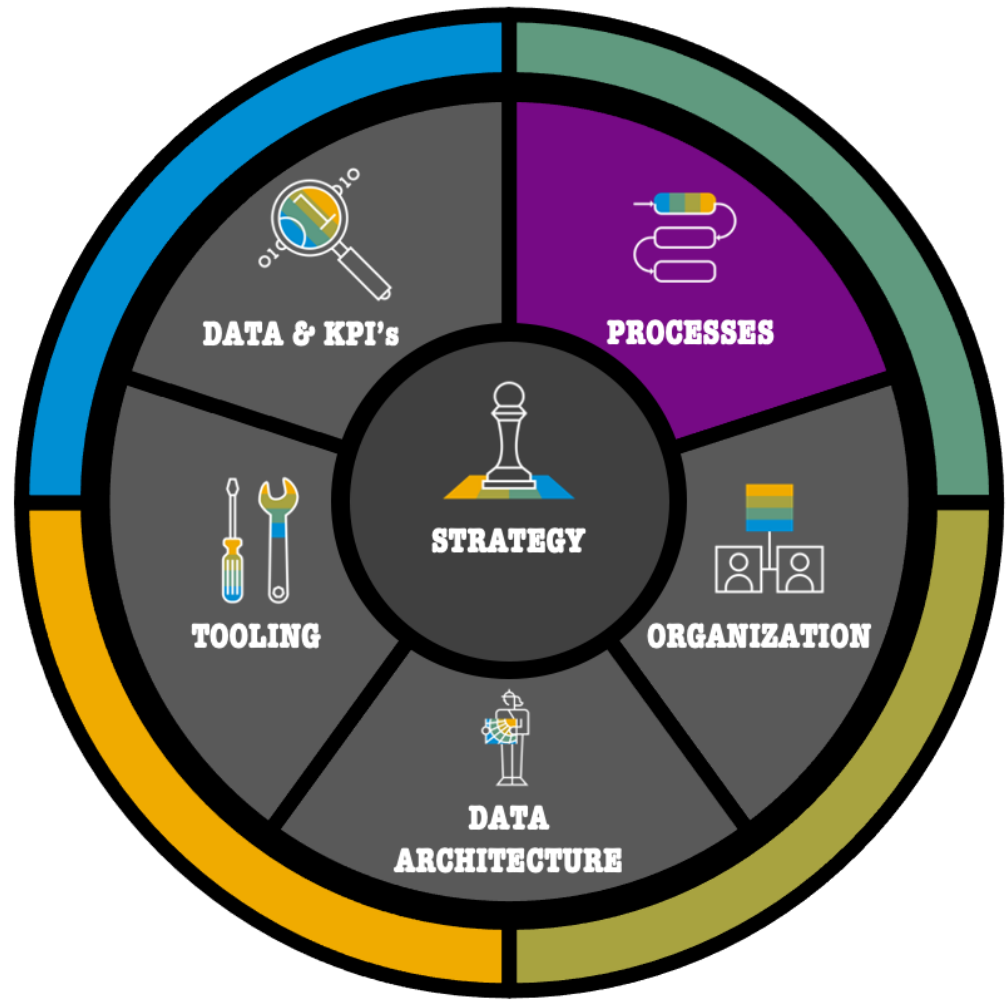
A data quality dashboard validates the actual data against the business rules and reports any violations

# Processes

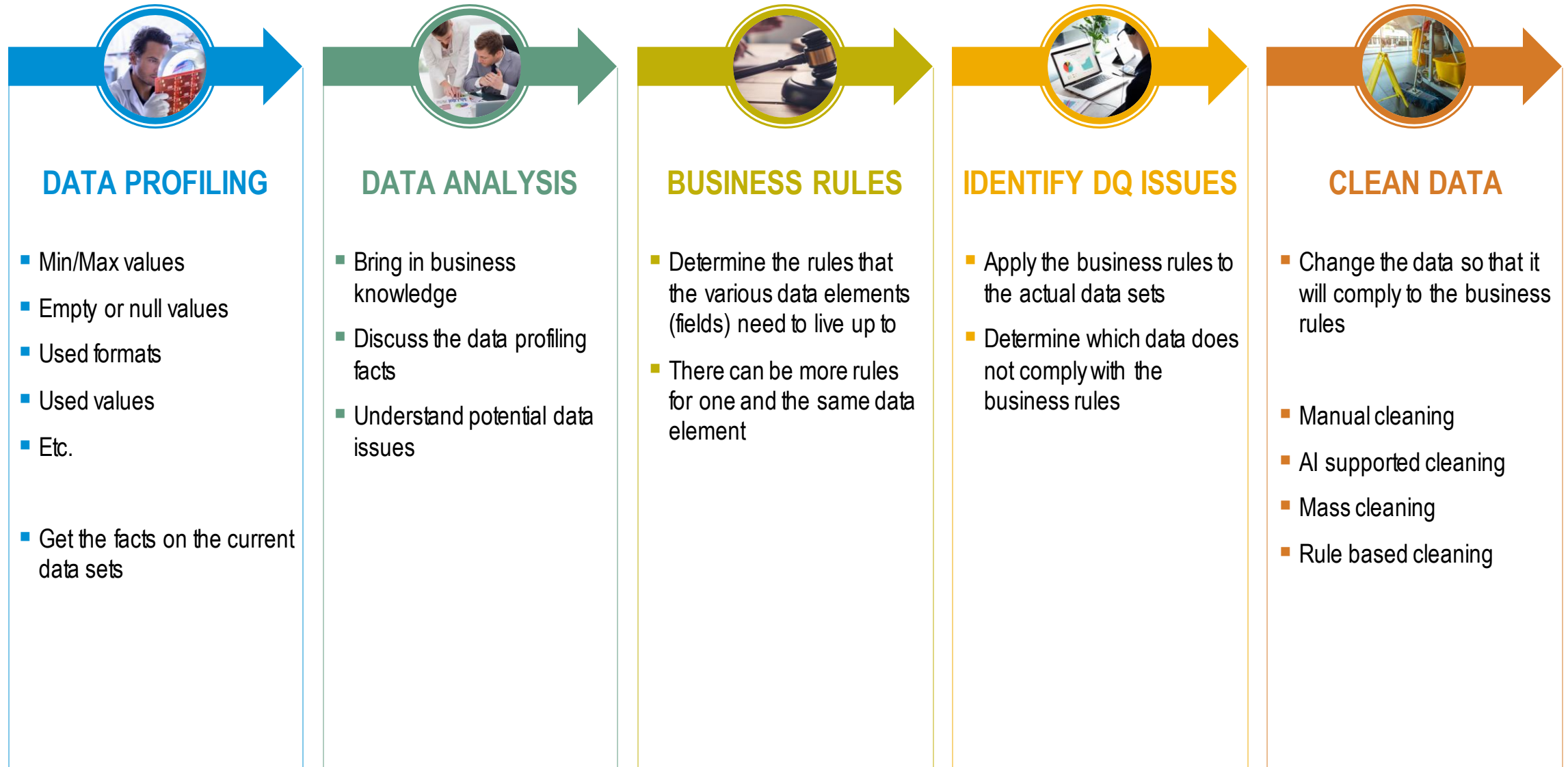




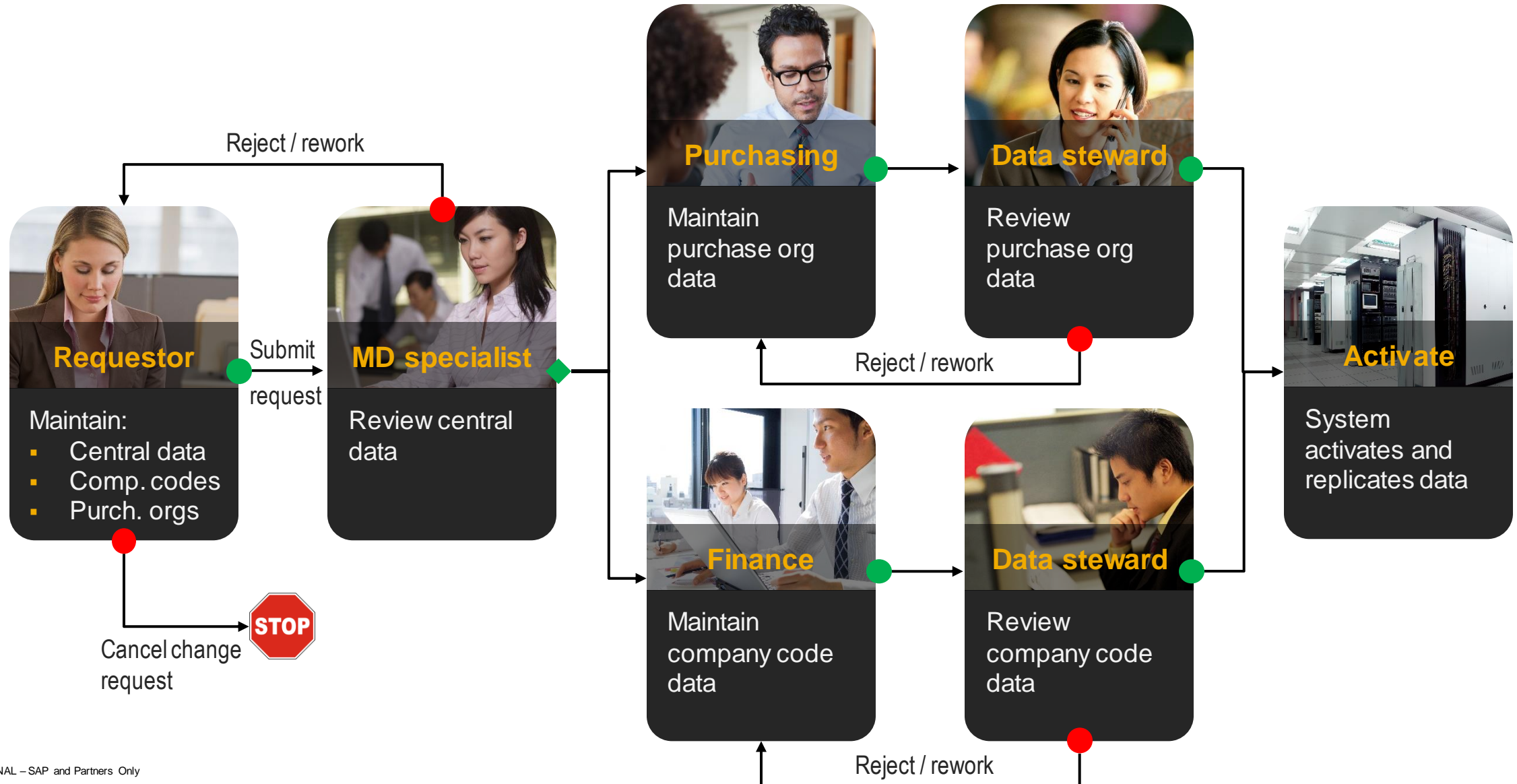
# Processes



# Get clean process



# Create data: Supplier example

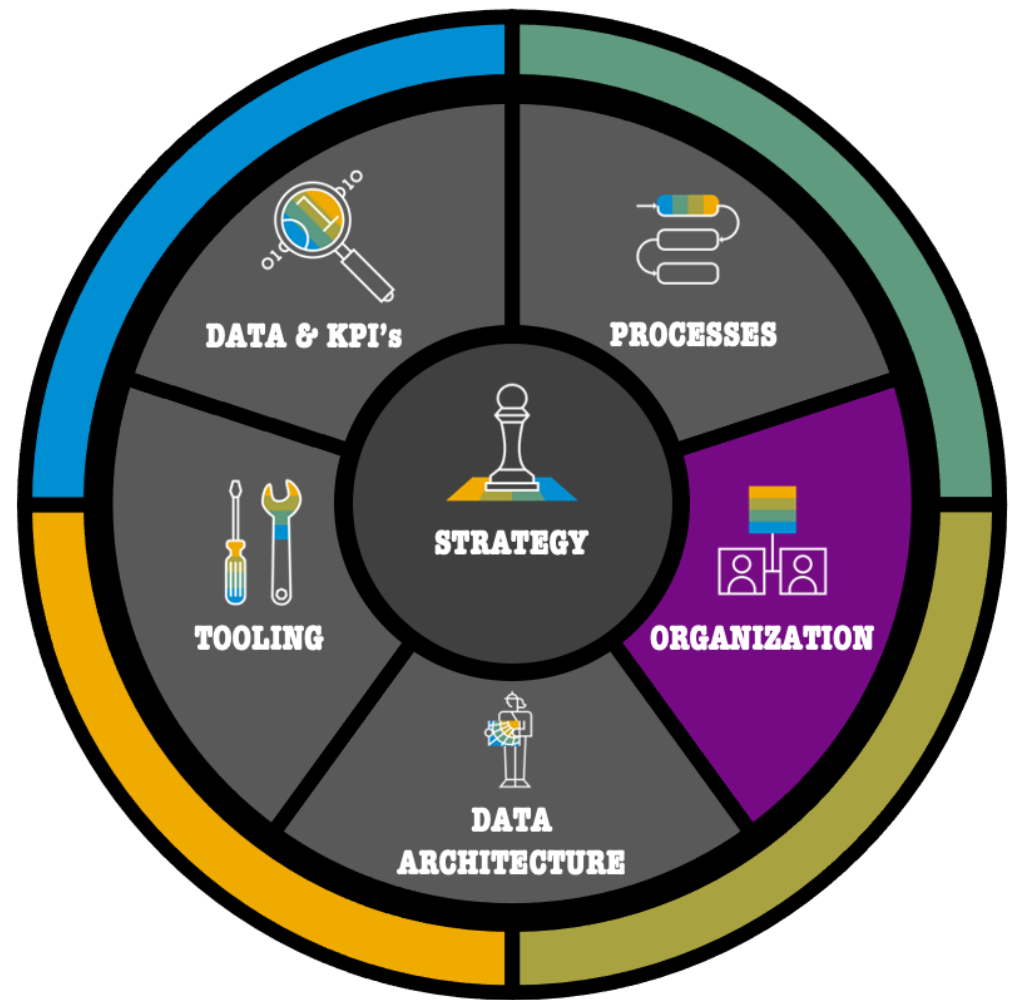




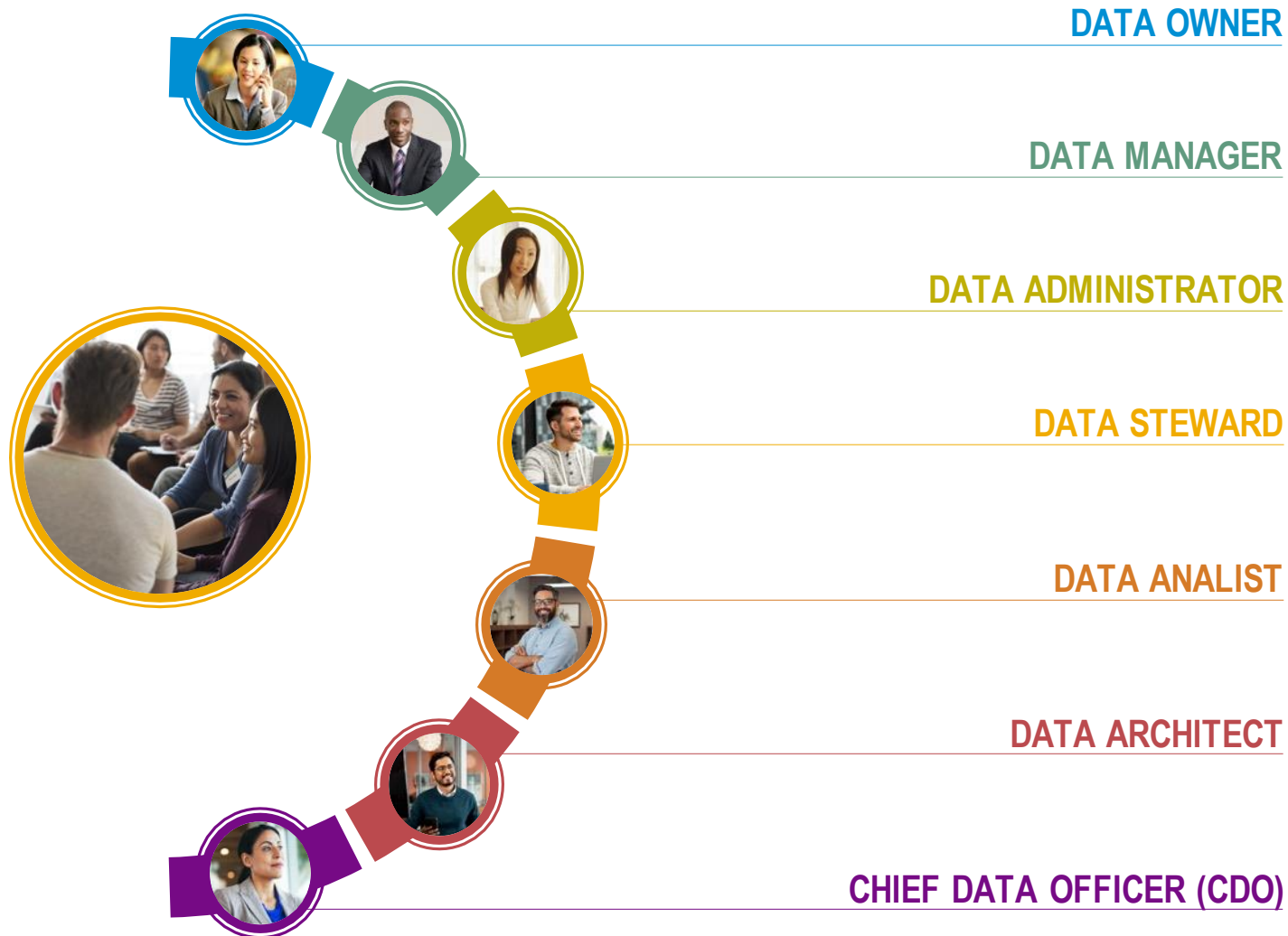
# Organization



# Organization

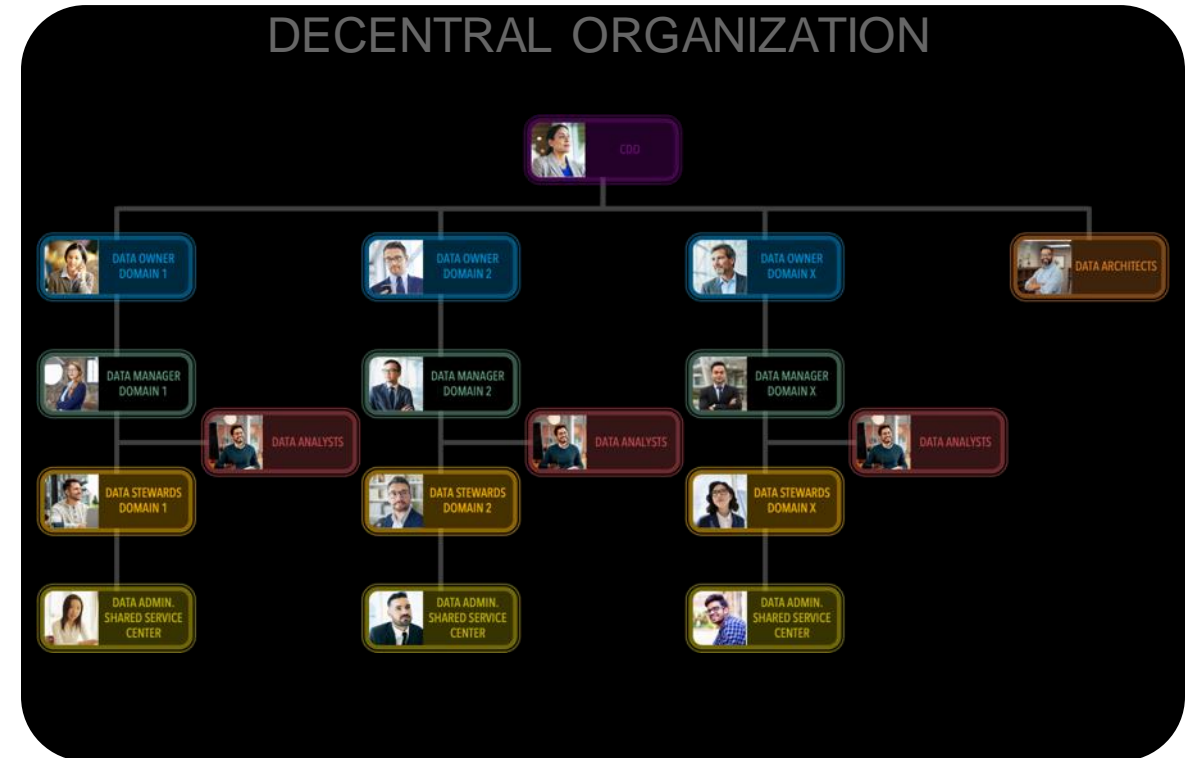
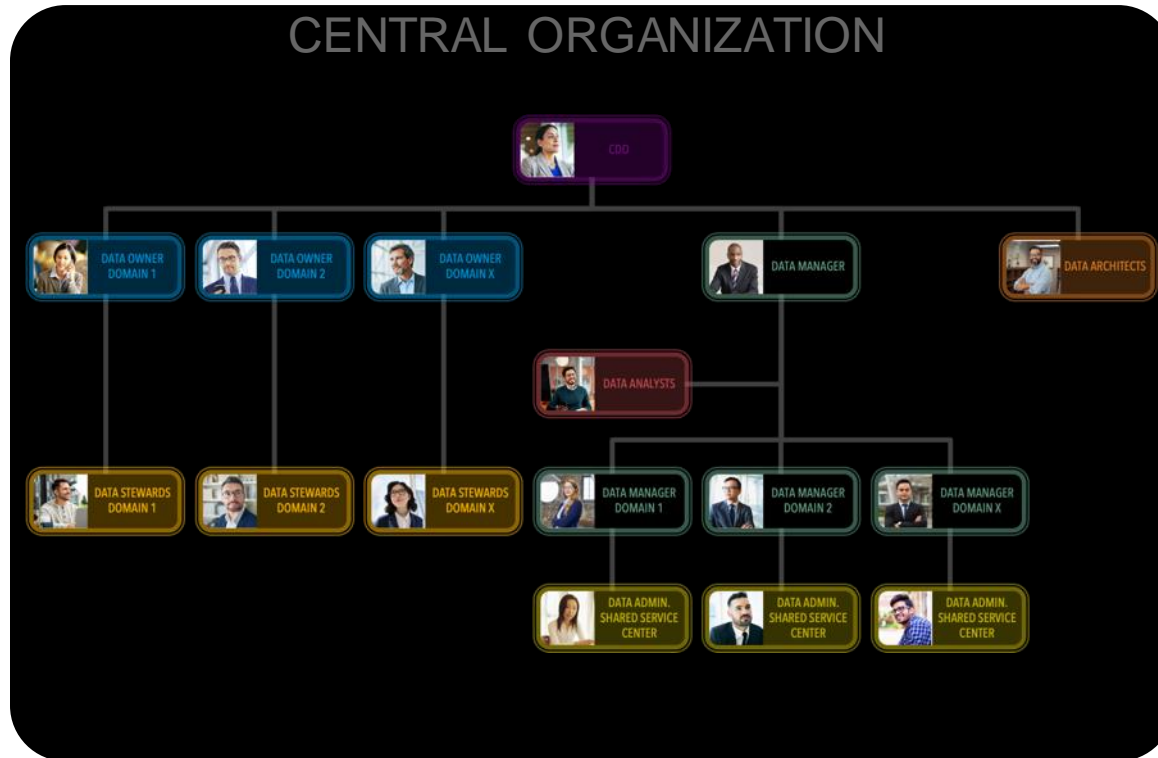


# Roles in Data Management





# Target Organization model

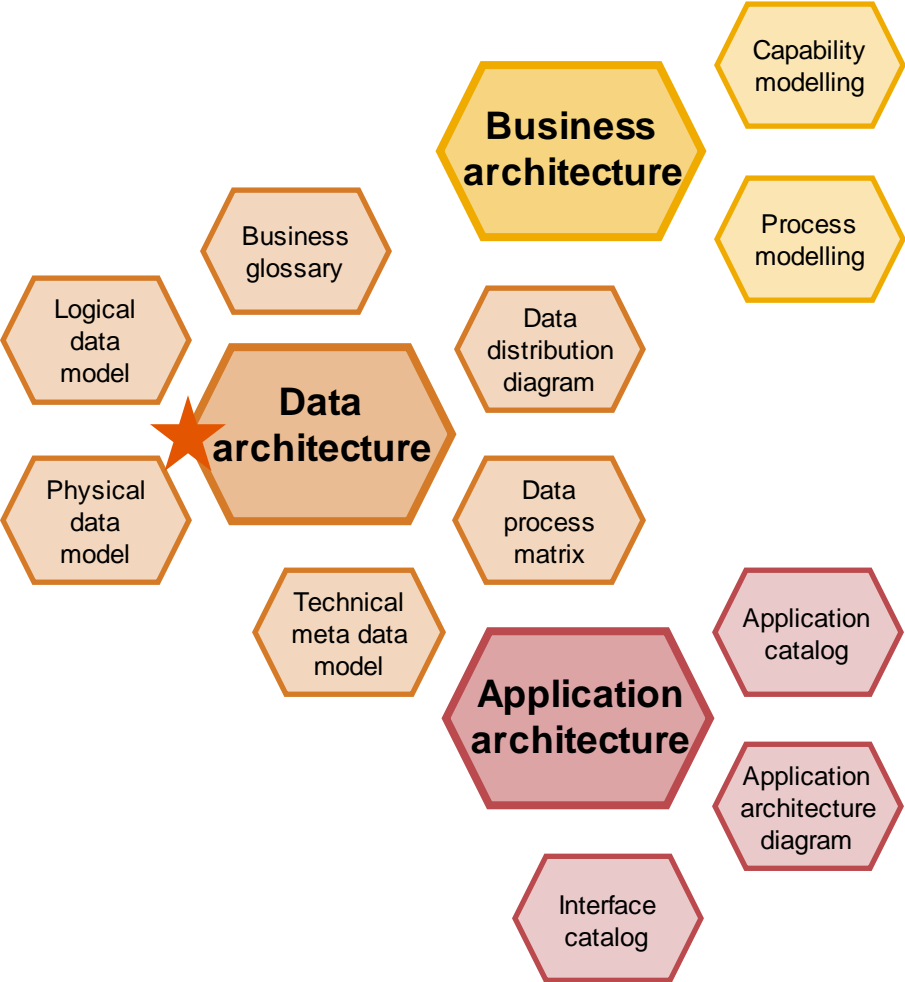
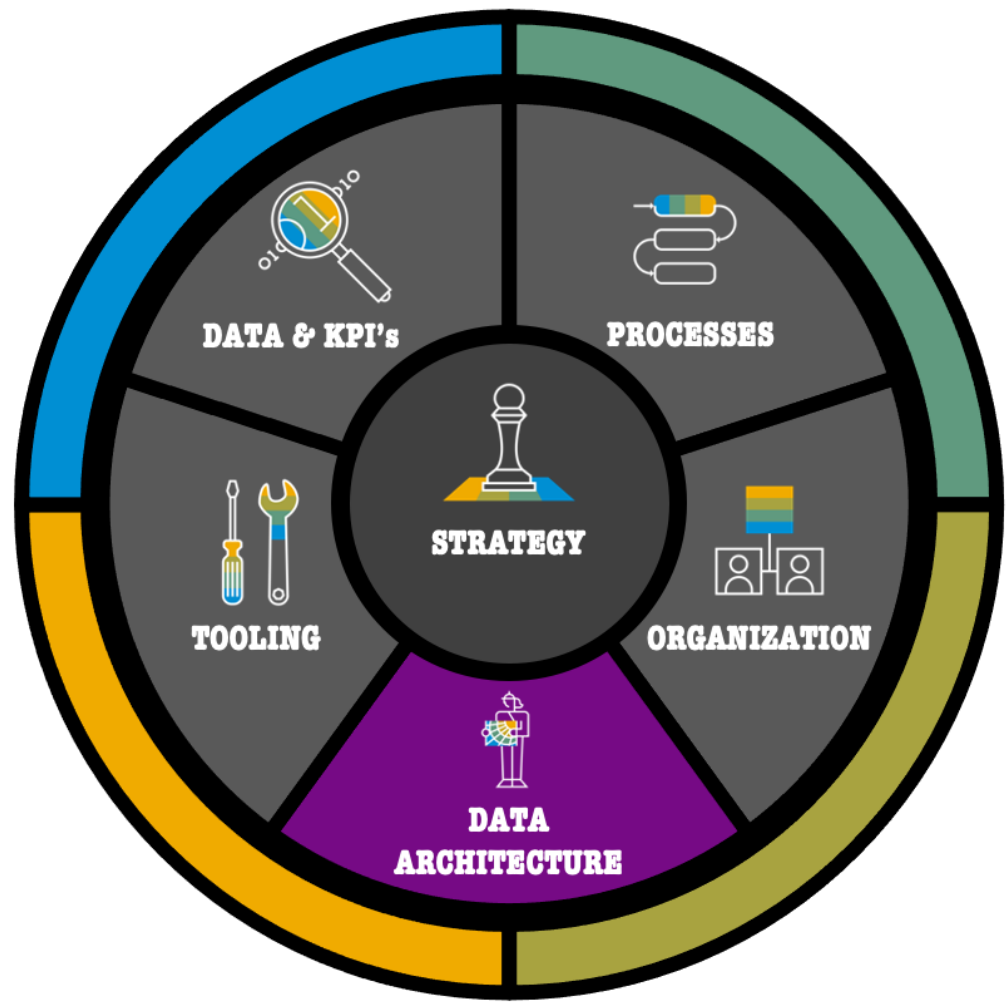


Often a mix of the deployment models gives the best results. For certain data domains a central approach makes the most sense. For other domains a more decentral approach is more logical. Important is that the right mix is found and noted down in the Target Organization Model

# Data architecture



# Data architecture





# Data architecture artifacts



## BUSINESS GLOSSARY

- The business glossary describes all (relevant) business terms that are used within the organization



## LOGICAL DATA MODEL

- The logical model is a graphical representation of how the business terms are connected to each other
- As an example: a purchase order is connected to materials and to suppliers



## PHYSICAL DATA MODEL

- The physical model is a graphical representation of how data is actually stored in the various systems
- References to the logical model complete the insight on where business relevant data is stored



## TECHNICAL META DATA

- Technical meta data provides information about data
- It contains elements such as:
  - Data types
  - Source
  - Creation data
  - Etc.



## DATA DISTRIBUTION DIAGRAM

- Data does not stick to boundaries. The data distribution diagram shows how data flows across the IT landscape



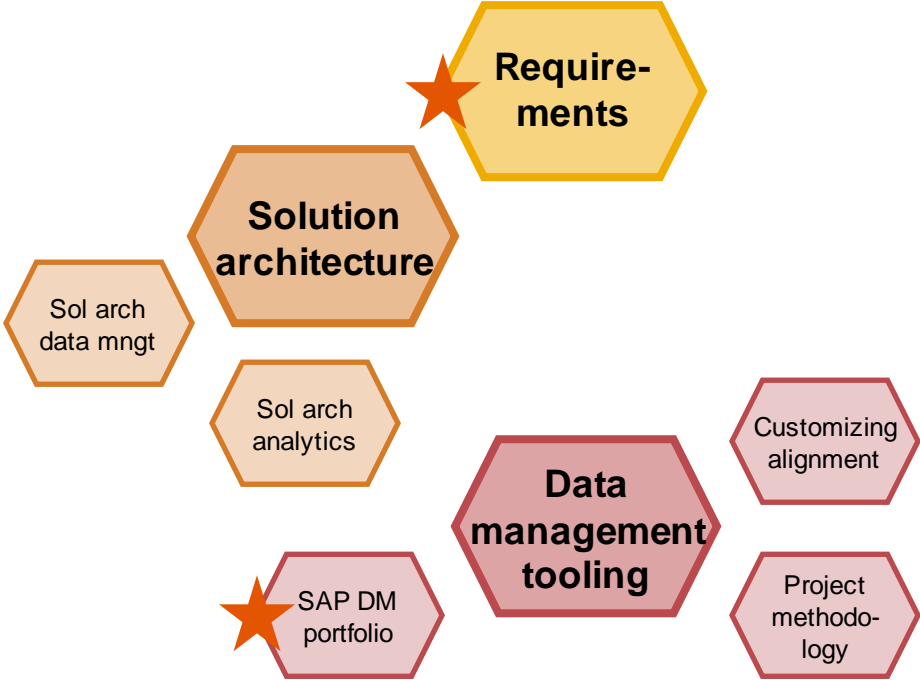
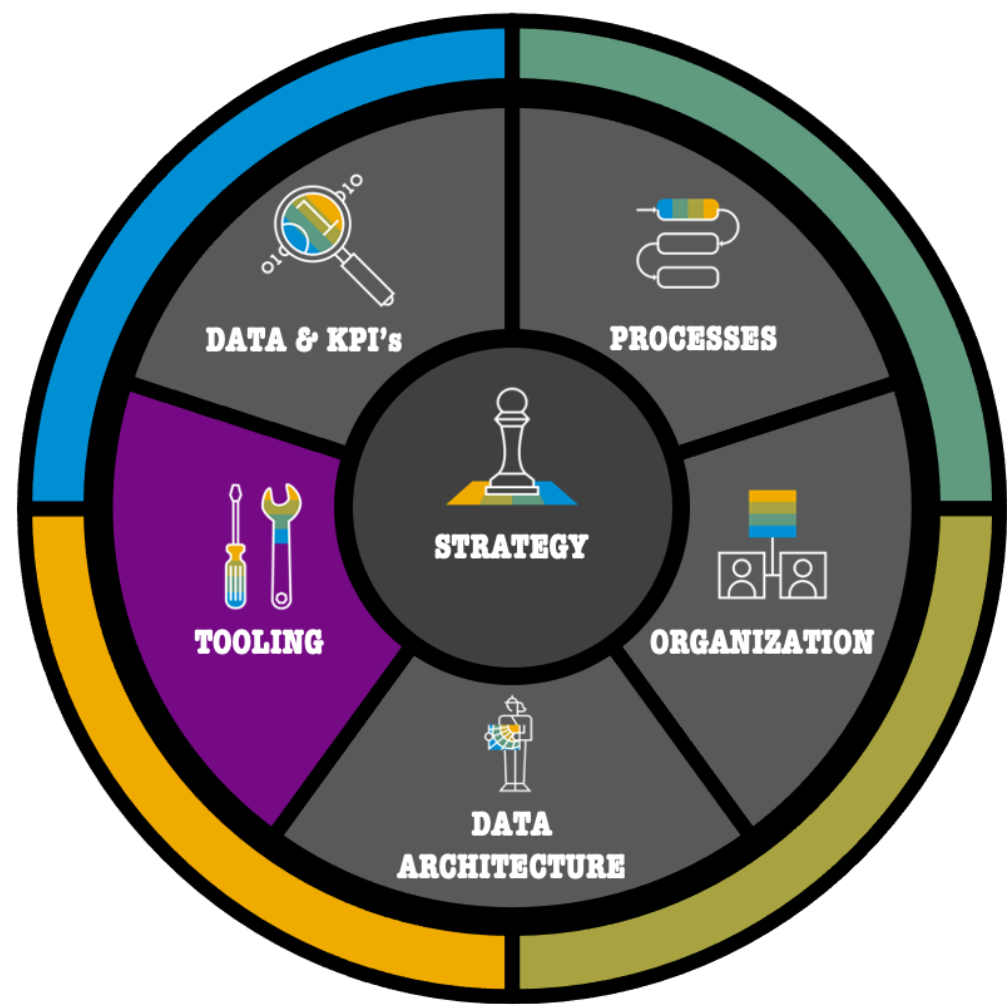
## DATA PROCESS MATRIX

- The data process matrix shows which data is created, enhanced, consumed and deleted in which processes

# Data management tooling



# Data management tooling





# Requirement gathering



## Warehouse management tooling implementation:

- Experienced stakeholders
- Clear ownership
- Clear requirements



## Sourcing tooling implementation:

- Experienced stakeholders
- Clear ownership
- Clear requirements



## Master data tooling implementation:

- Who are the stakeholders?
- Where is the ownership?
- How do we get the requirements?

# Main IT features for get clean



**EXTRACT  
DATA**



**PROFILE  
DATA**



**DATA QUALITY  
RULES**



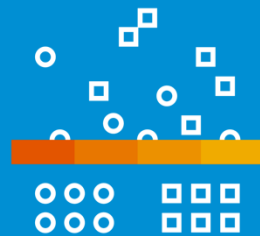
**DATA QUALITY  
DASHBOARD**



**DATA  
REMEDiation**



**DATA  
TRANSFORM.**



**DATA  
STANDARDIZ.**



**RECORD  
MATCHING**

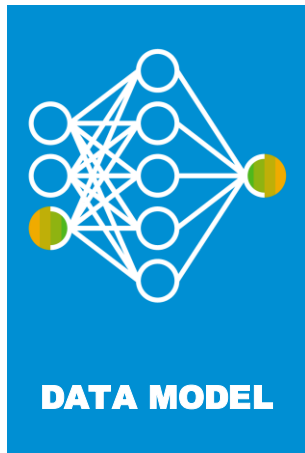
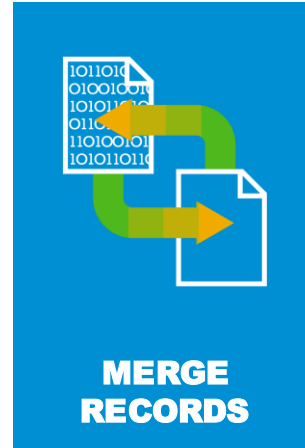


**RECORD  
MERGING**



**DATA  
LOADING**

# Main IT features of stay clean



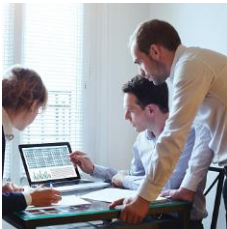


# SAP product portfolio

## GET CLEAN



On prem:



Information  
Steward



Data  
Intelligence



DataSphere

Roadmap

Cloud:

## STAY CLEAN



On prem:



Master Data  
Governance  
(MDG)



MDG Cloud  
Edition

Cloud:

# SAP analytics tooling

Stay tuned for the next sessions to learn more about our Business Data Fabric







# Get in touch

Contact information:

**Robert Stam**

Intelligent Enterprise Institute  
Principal consultant Data Lab

Amerikastraat 10, 5232BE 's-Hertogenbosch, Netherlands

+31 (0)6 10 70 63 55

[Robert.Stam@sap.com](mailto:Robert.Stam@sap.com)



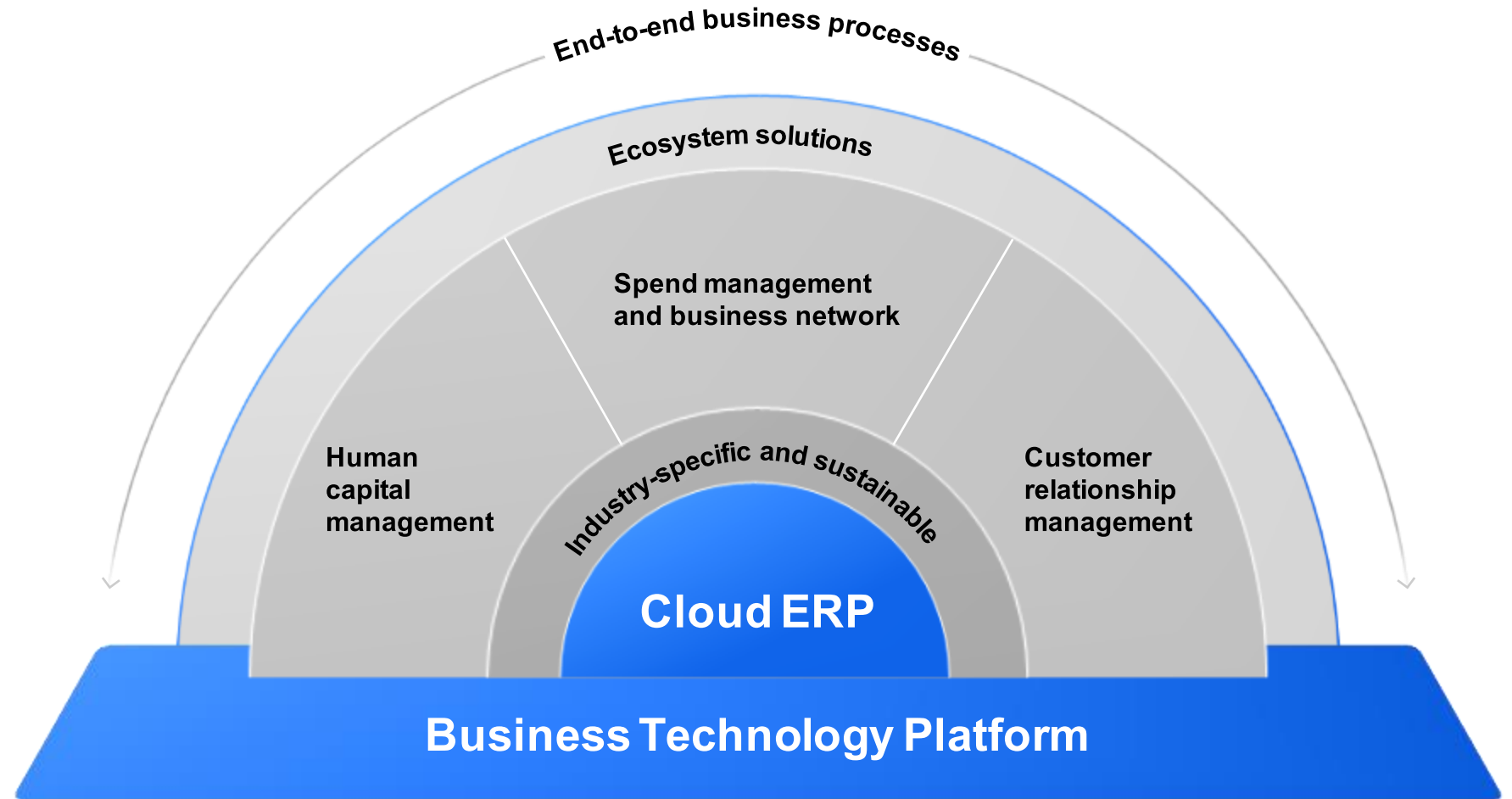
# Strategy SAP Datasphere

Torsten Ammon  
SVP of SAP Datasphere & Data Warehousing  
September 28, 2023

Public

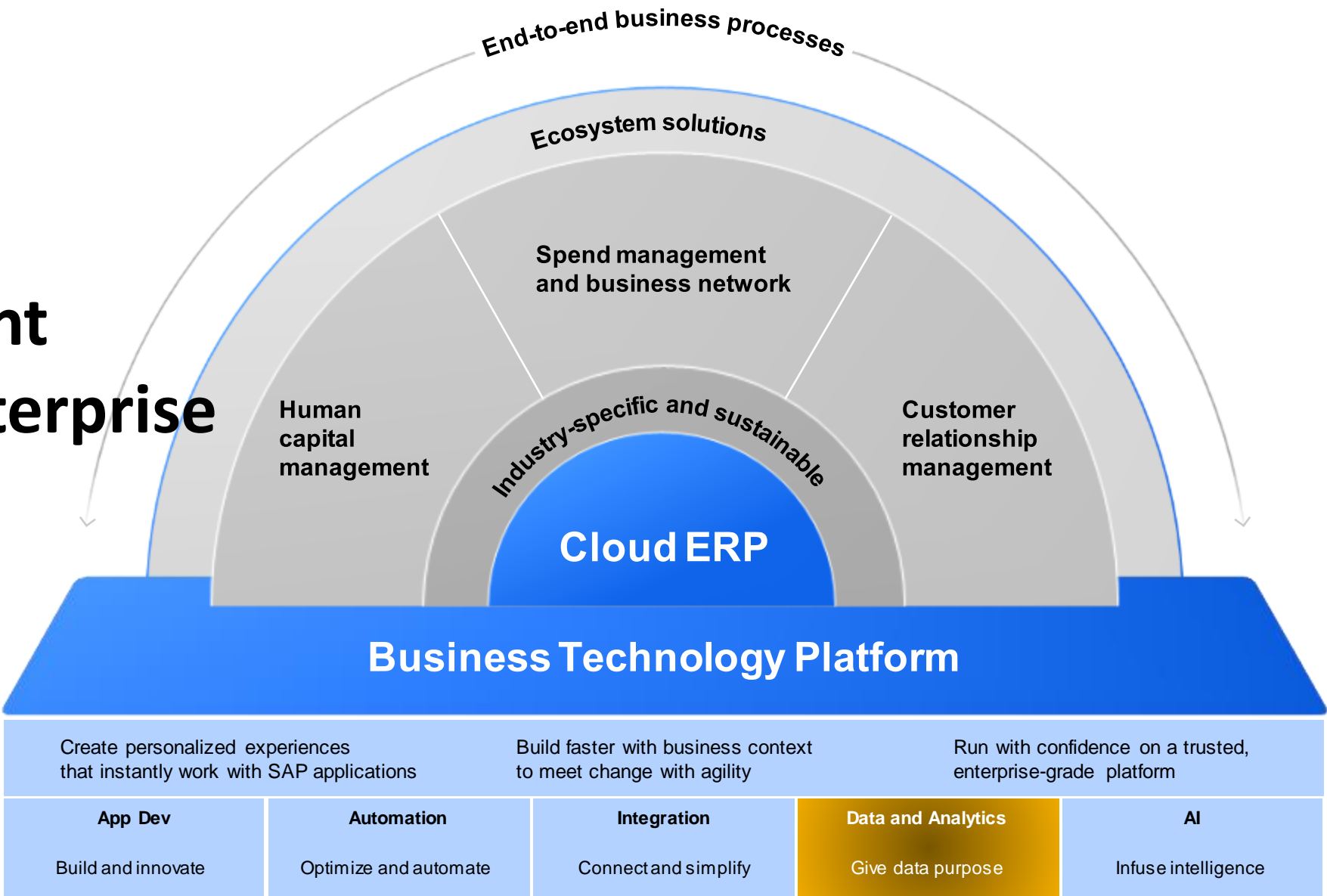


**Enable every  
enterprise  
to become an  
intelligent,  
sustainable  
enterprise**





SAP BTP is the foundation of the Intelligent Sustainable Enterprise



# SAP Business Technology Platform

## Capabilities

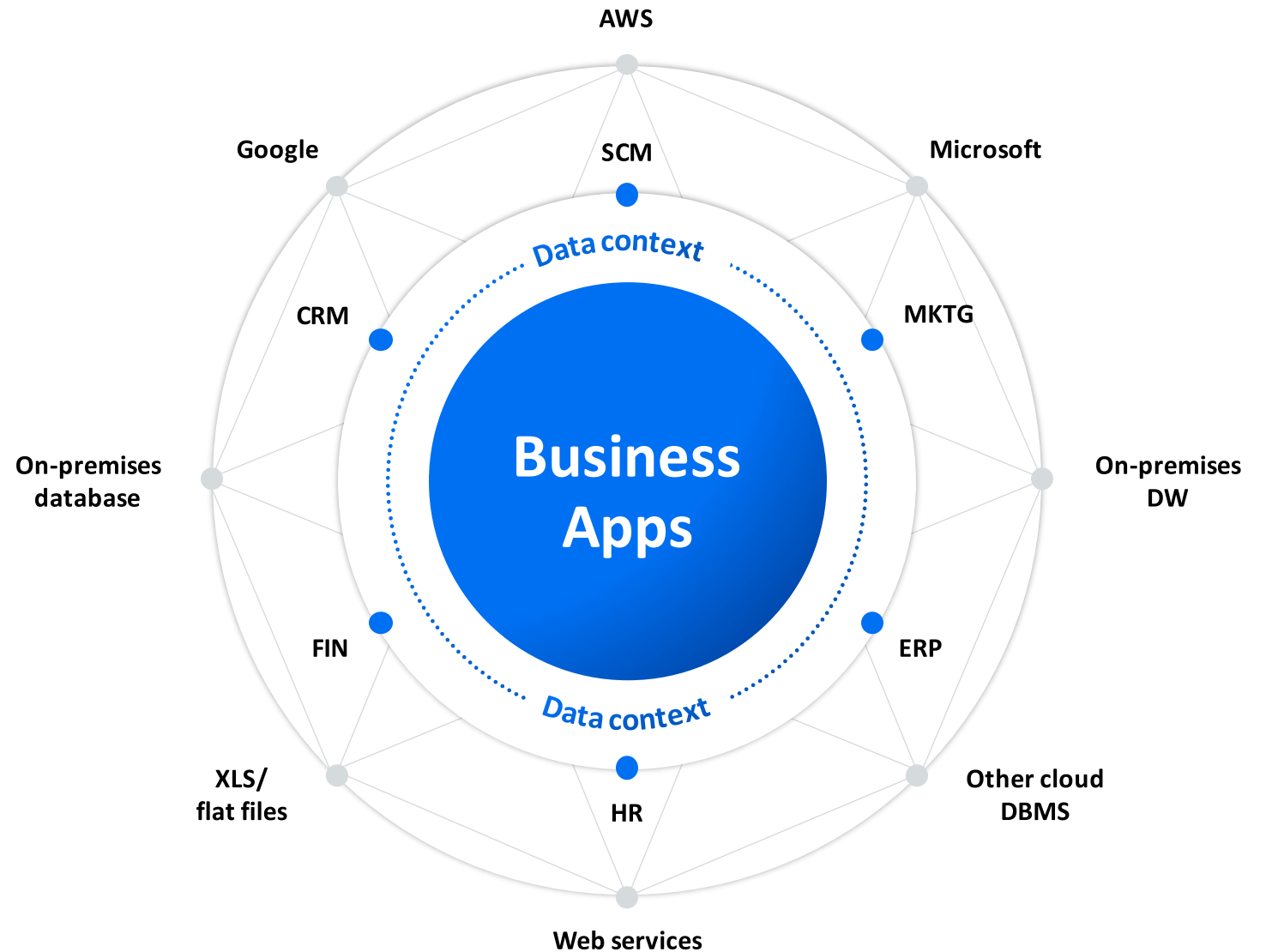


# (Multi-) cloud brings new opportunities and challenges

New data sets spawn new projects

On-premises sources remain

Complexity has increased, shifting governance and integration work back to customers

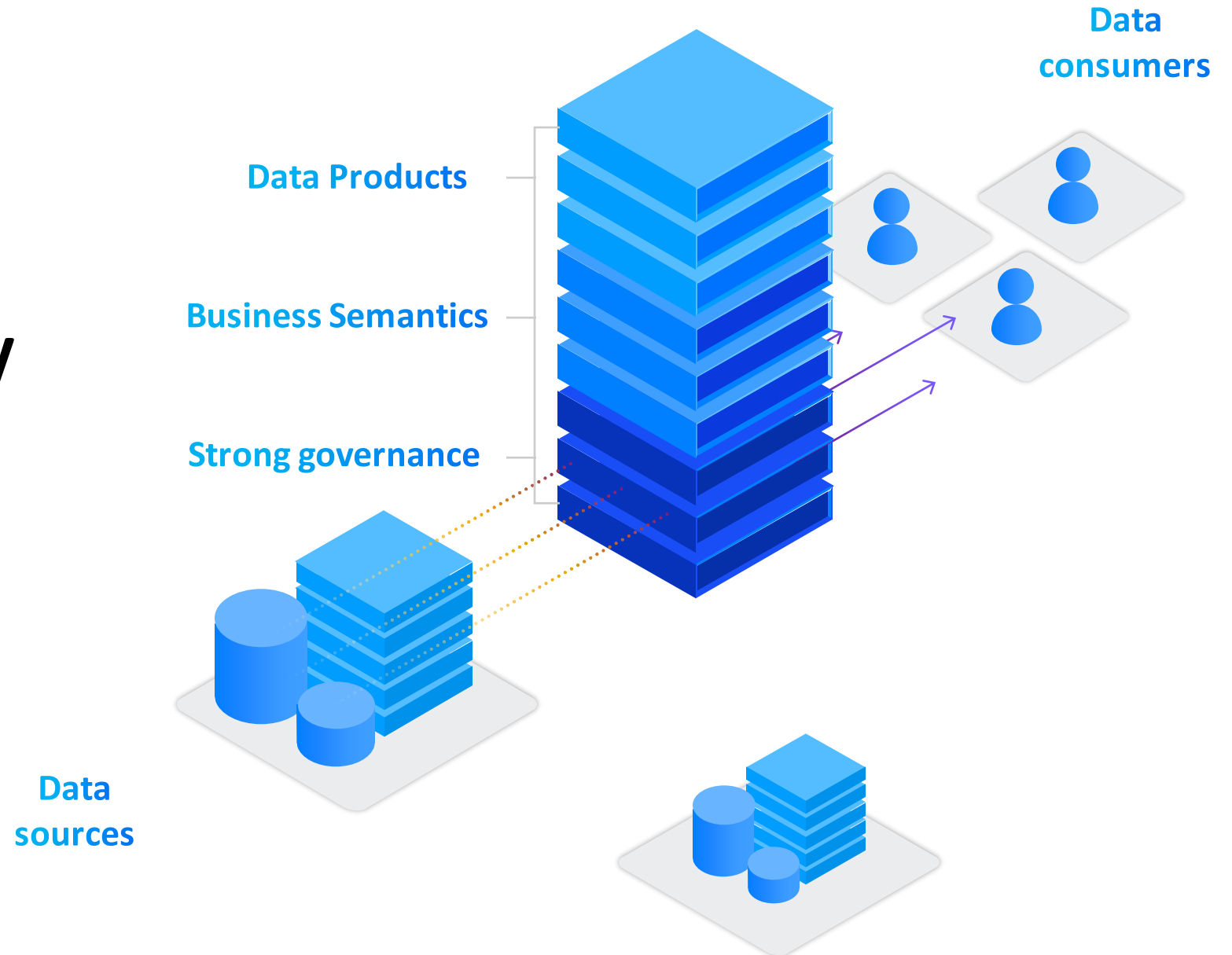




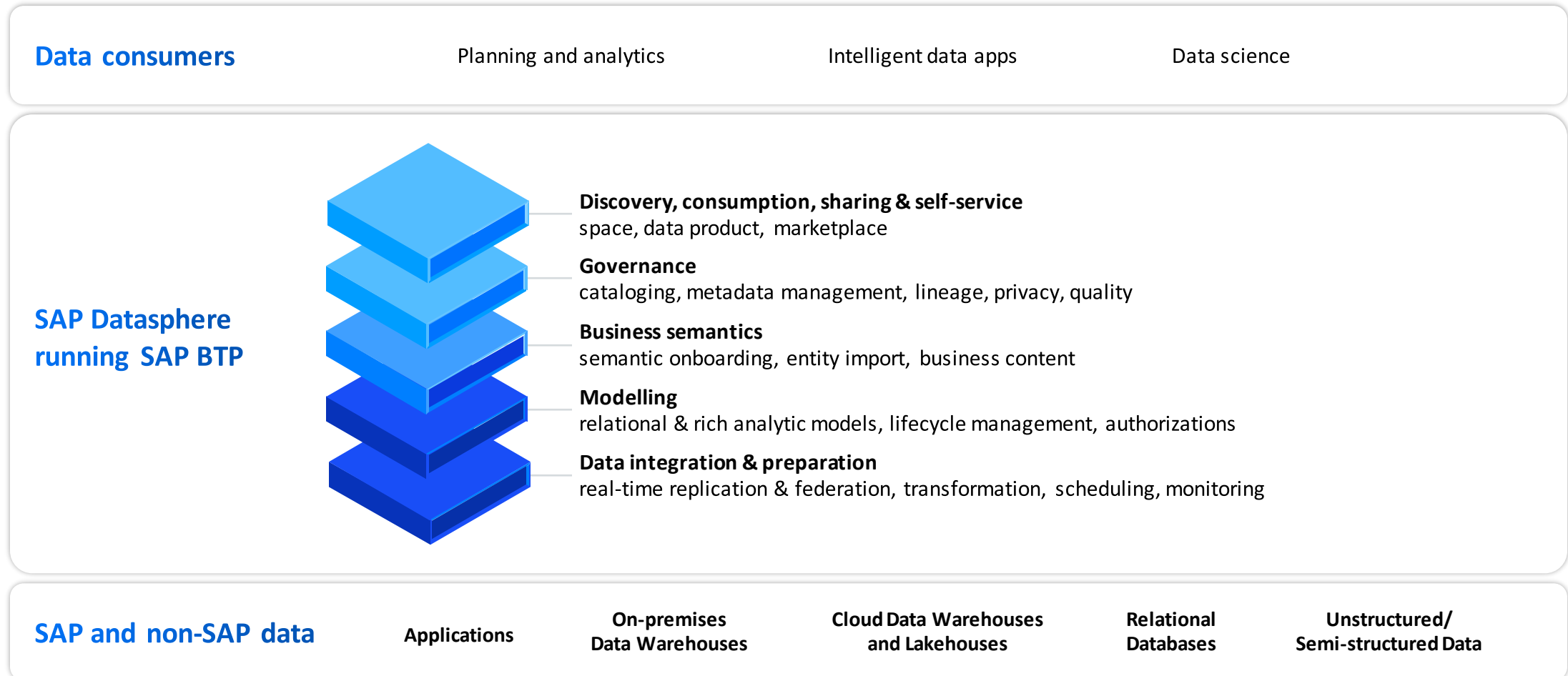
# Universal yet opposing data needs for business and technology stakeholders



# A business data fabric radically simplifies your data landscape



# SAP Datasphere is the foundation for a business data fabric architecture





# Together with our open data partners

**SAP Datasphere  
embracing openness**



Databricks delivers a Data Lakehouse platform, based on Apache Spark, and Delta Lake that brings reliability to data lakes for machine learning and other data science use cases.



Confluent delivers the leading cloud-native service for connecting and processing real-time data with a fully-managed Apache Kafka environment.



Collibra delivers the best-of-breed data intelligence cloud platform that tightly integrates data catalog, governance, lineage, quality, and privacy capabilities.



DataRobot empowers organizations to leverage augmented intelligence with automated machine learning.



Extend SAP data models to Google Big Query or bring Google Big Query insights directly into SAP processes with the ability to gain new analytics and AI insights from unified data.

# Deep Dives

## Analytics & Planning

Powerful end-to-end analytics & planning integration with SAP Analytics Cloud & Microsoft Office

### Discovery, consumption, sharing & self-service

space, data product,  
marketplace

### Governance

cataloging, metadata  
management, lineage,  
privacy, quality

### Business semantics

semantic onboarding, entity  
import, business content

### Modeling

relational & rich analytic  
models, lifecycle  
management,  
authorizations

### Data integration & preparation

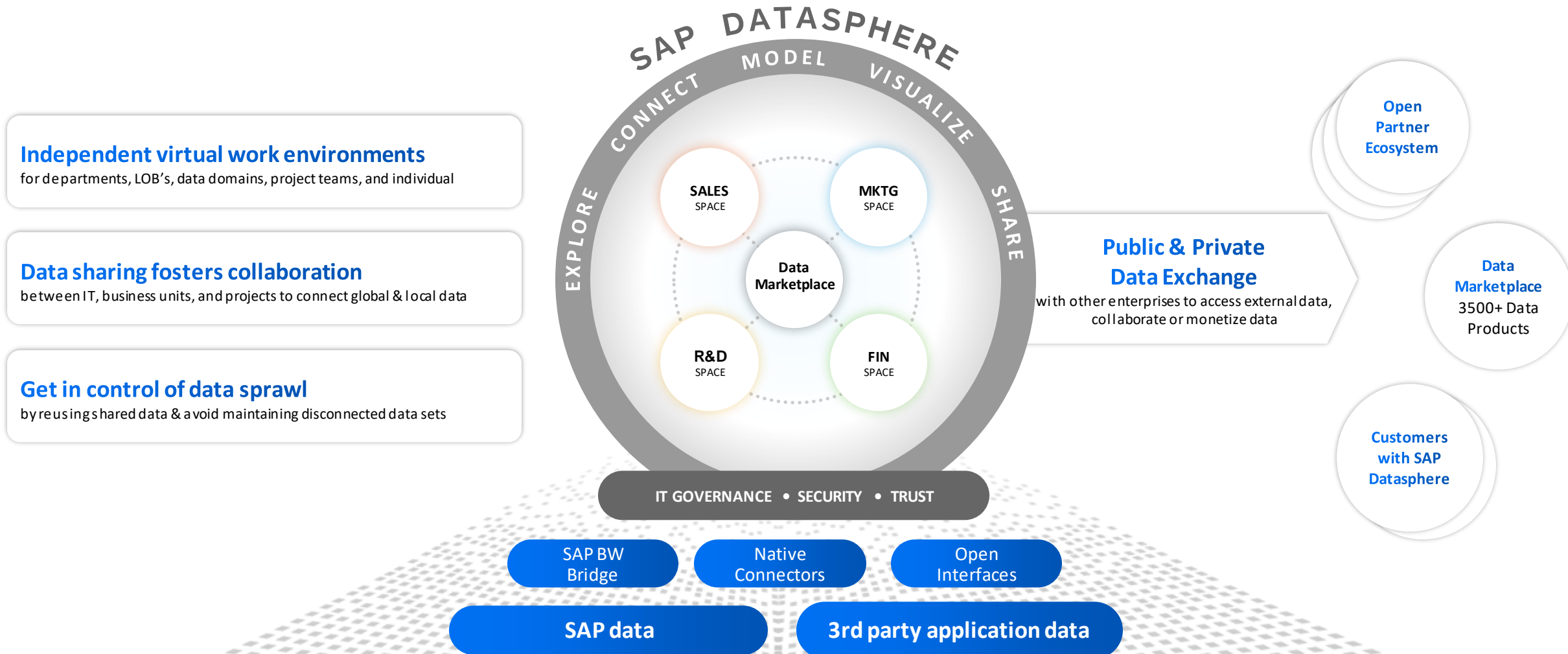
real-time replication &  
federation, transformation,  
scheduling, monitoring

## SAP BW Move & Hybrid

Leverage investment and extend on-prem scenarios with SAP BW Bridge and hybrid landscapes

# Access to External & Internal Data in Clicks

## for better, faster & more scalable data collaboration



# Unlock metadata integration and crawling with SAP sources leveraging the **SAP Datasphere Catalog**



## Discover

**Discover data** (*crawl, profile, organize, link, and enrich*) and make data **accessible** (*browse, search*)



## Organize

**Classify, organize, and understand data** (*location, attributes, quality, lineage, sensitivity*)



## Curate

Enforce **centralized authorization** and **security** for data orchestration, and control **data quality standards**

## Collibra Partnership

Bi-Directional Metadata Exchange

Non-SAP Data Metadata Extraction

## Upcoming Innovations

**Harmonized SAP data product discovery & onboarding**

**Metadata extraction**

SAP BW/4HANA; SAP S/4HANA; SAP ECC; SAP HANA

**Enhanced modeling integration**

**Column-level lineage**

**Workflow & notification**



# Unified entry point for semantically rich model generation & import into **SAP Datasphere**

## Semantic Onboarding

Bringing together all features & processes that allow SAP customers to make semantics available at ease & scale



### Import Entities

Harmonize existing metadata import options from SAP S/4HANA Cloud, SAP S/4HANA, SAP BW, SAP BW/4HANA



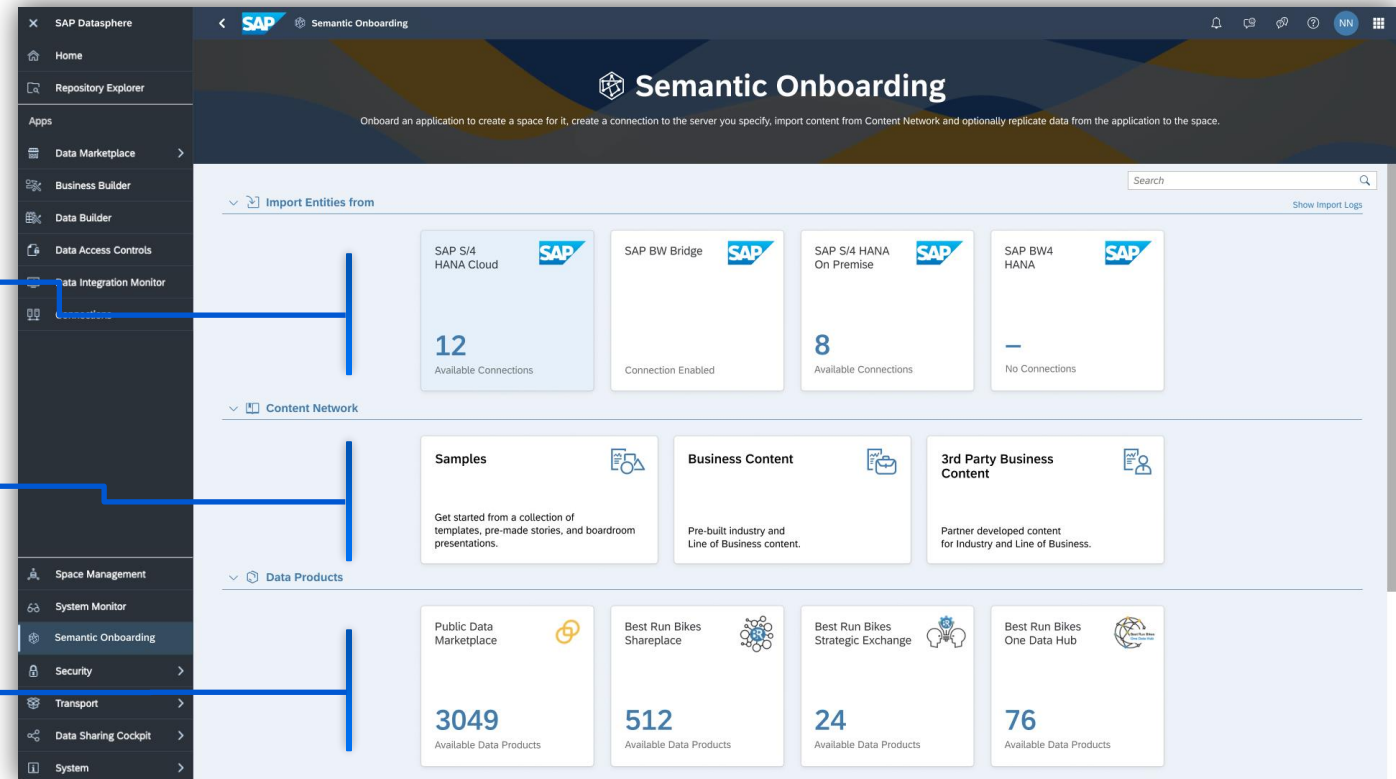
### Content Network

Harmonize existing metadata import options from SAP S/4HANA Cloud, SAP S/4HANA, SAP BW, SAP BW/4HANA



### Data Products

Access customer and partner managed data products to democratize SAP data within SAP Datasphere & beyond via API



# Modeling for Everybody

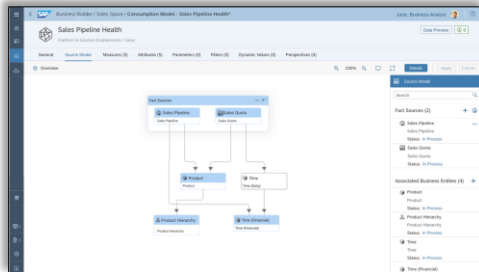
## Business Analyst

No Code / Low Code

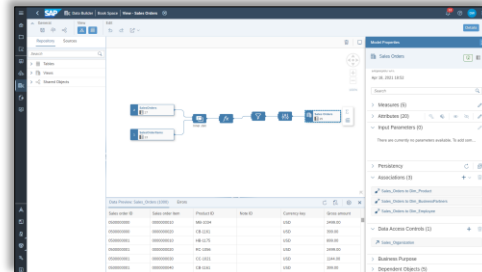
## Developer / Power User

Pro Code

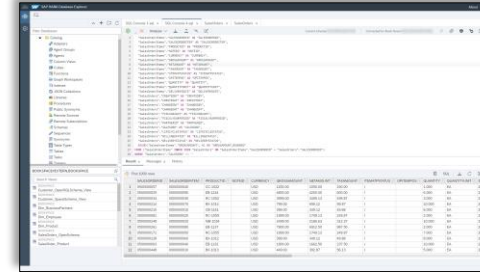
### Business Modeling



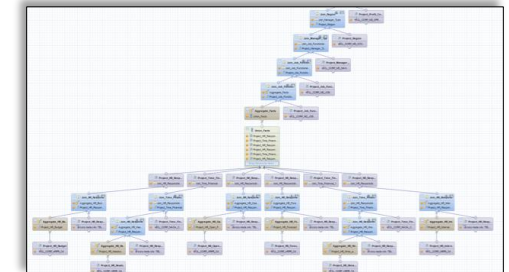
### Graphical & Scripted



### Open SQL Schema



### SAP HANA Deployment Infrastructure



## Upcoming Innovations

### Analytical Model

Stacking Authorizations Multi-Fact SAP BW qualities

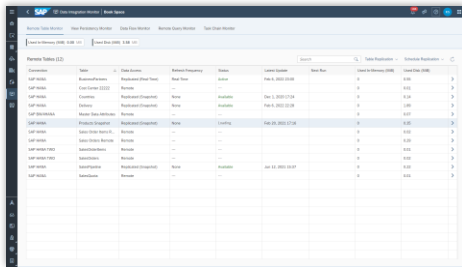
### Folder Support

### Compatibility Contracts

### External Hierarchies

# Open for Virtual Access and Persistence

## Virtual Access

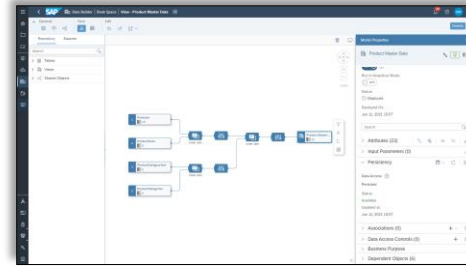


### Remote table federation

- Leave data in the source system and access remotely in real-time when needed
- No upfront data movement
- Federation is supported across various sources and hyperscalers



## Persistence



### Remote table replication

- Real-time replication or snapshots using single entities

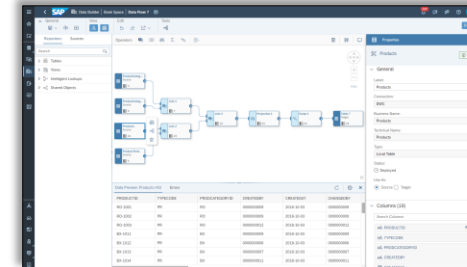
### Replication flow

- Replication with multiple entities and flexible targets

### View Persistence

- Materialize view output results in a stable persistence

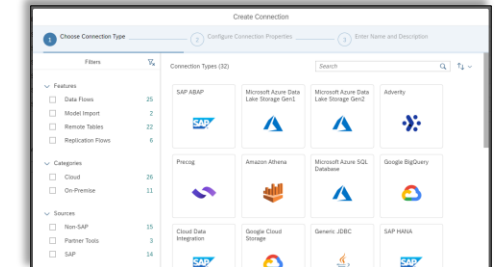
## Data Flow



### Batch loads & transformations

- Combine structured and semi structured data while defining ETL processes
- Advanced transformation capabilities leveraging Python 3
- Schedule in task chains

## External Tools



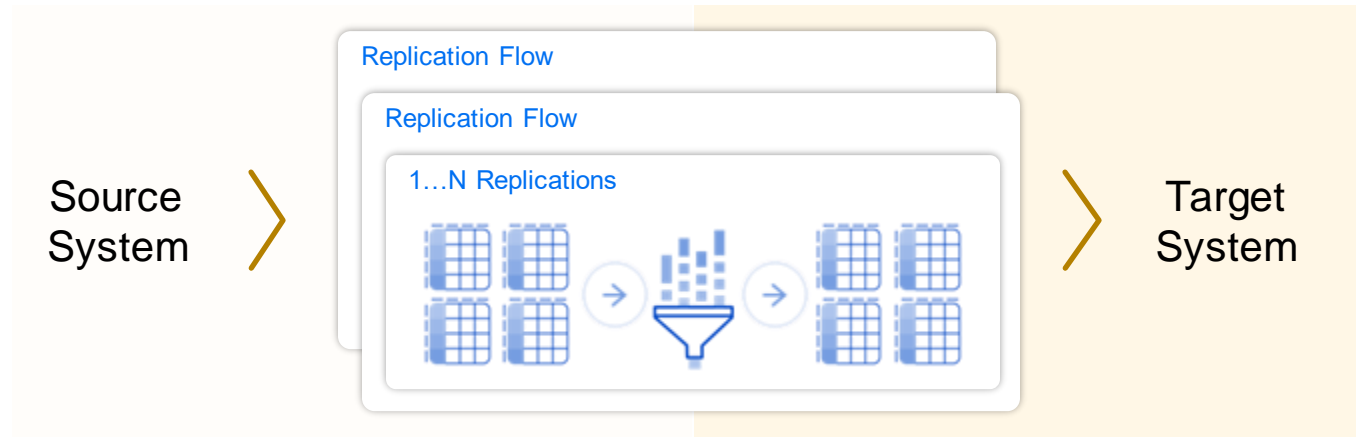
### Integrate with all data sources

Allow external data movement tools like SAP Data Services, SAP Data Intelligence, SAP OpenConnectors, SnapLogic, Precog, Adverity, etc. to bring data into the system using SQL interfaces and the open SQL schema

# Enable mass data replication & transformation

## Replication Flow

Available today



### Upcoming Innovations

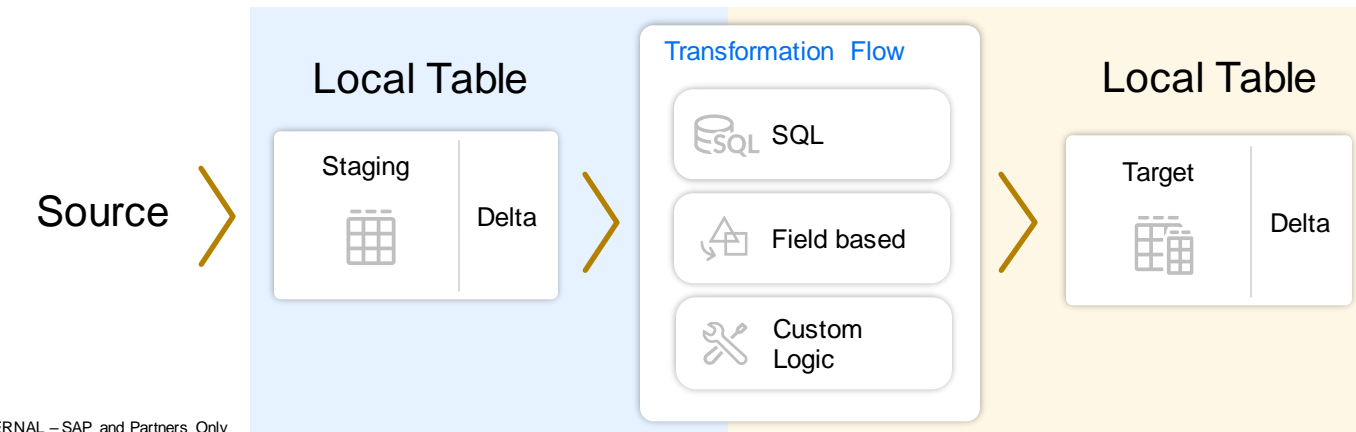
**Outbound connectivity to non-SAP systems**  
(e.g. data lakes, Kafka)

**Endorsed partner connectivity for Replication Flows**  
(Google, Confluent, Databricks)

**Functional enhancements**  
(scheduling, schema evolution etc.)

## Transformation Flow

Q4 2023



### Upcoming Innovations

**Delta staging** in SAP Datasphere to enable SQL transformations, delta writing for multilevel staging, and storage of holistic truth after transformation

**Schedulable** via task chains and integrated in data integration monitor



# We recommend moving your SAP BW landscape in **three steps**

## SAP BW/4HANA

Safeguard investments by retaining mature and complex on-premises systems or move to the private cloud – in support of the “RISE with SAP” strategy.

## SAP Datasphere

Innovate with SAP’s strategic target solution for all data warehousing use cases, in line with our data-to-value portfolio strategy.



*Flexibility to gradually move at your own pace with long-term support for SAP BW/4HANA commitment until 2040.*

**1**

### Innovate with new use cases within SAP Datasphere

unique innovation with SAP Datasphere as the foundation for a Business Data Fabric architecture – driving agility, business empowerment, data warehousing, and accelerated time-to-value

**2**

### Gradually Move in Alignment with your SAP S/4HANA transformation

Leverage hybrid functionality to modernize the planning and analytics stack on top of SAP BW (IBP, Add-Ons, Applications...)

**3**

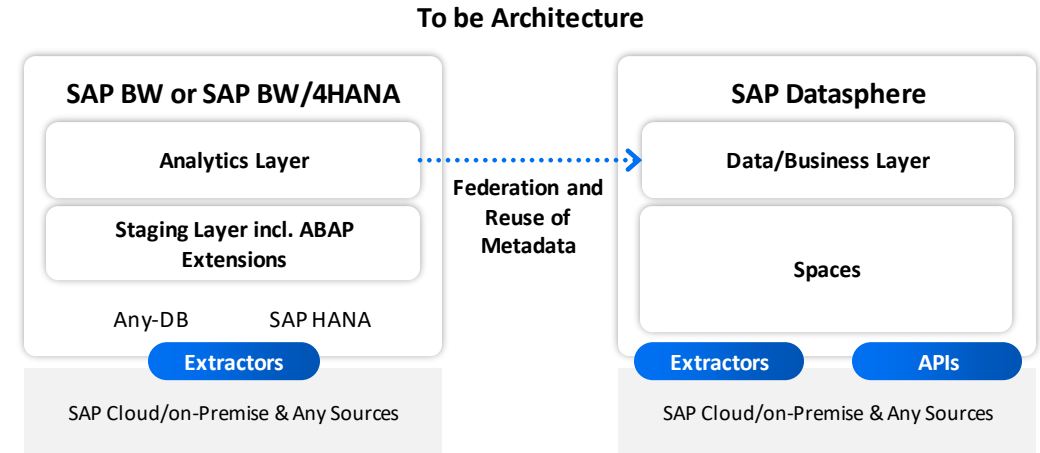
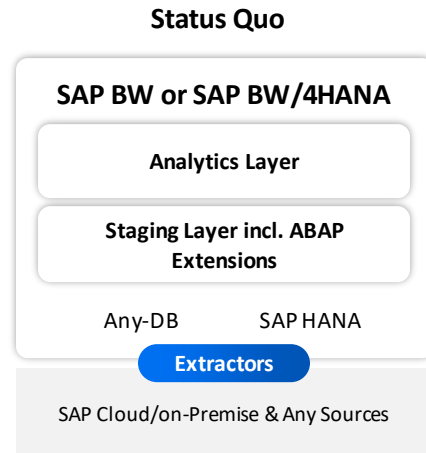
### Replace SAP BW

with an modernized Analytics stack on top of SAP Datasphere

# Transition to SAP Datasphere with full flexibility at your own pace

## Hybrid.

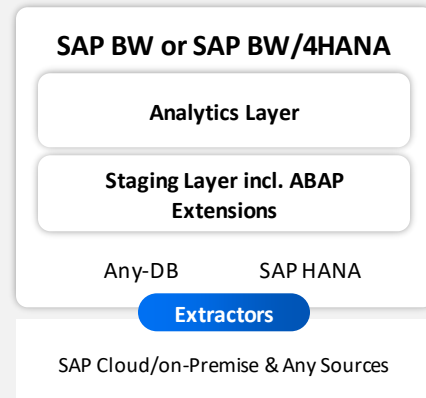
Combining SAP BW or SAP BW/4HANA with SAP Datasphere



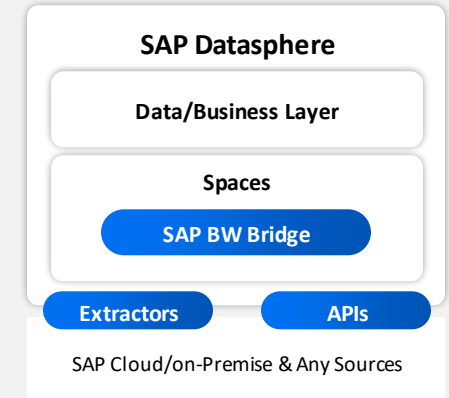
Switch/move from Hybrid to SAP Datasphere with SAP BW bridge

## SAP BW bridge.

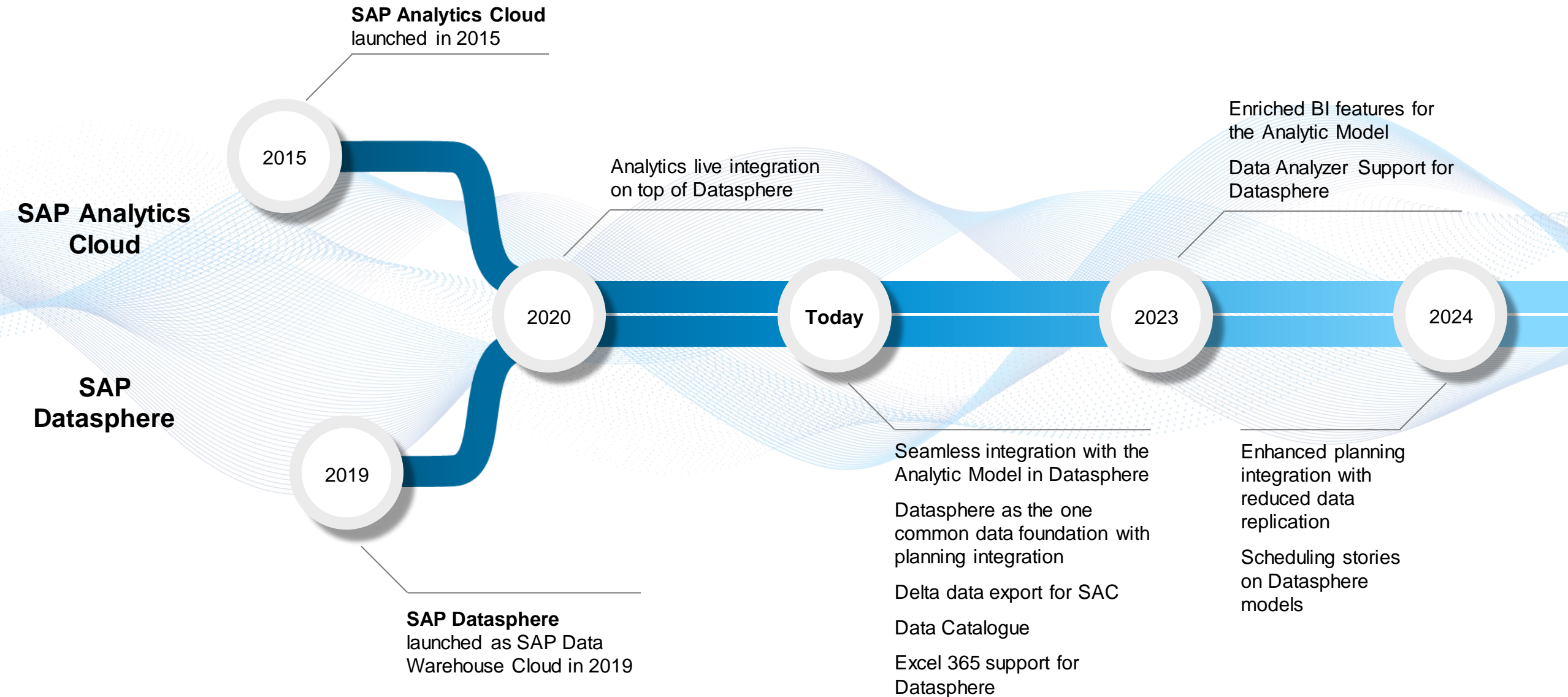
Replace parts of SAP BW or SAP BW/4HANA with SAP Datasphere



**Move**  
Tool-supported conversion including data



# SAP Analytics Cloud and SAP Datasphere integration journey.

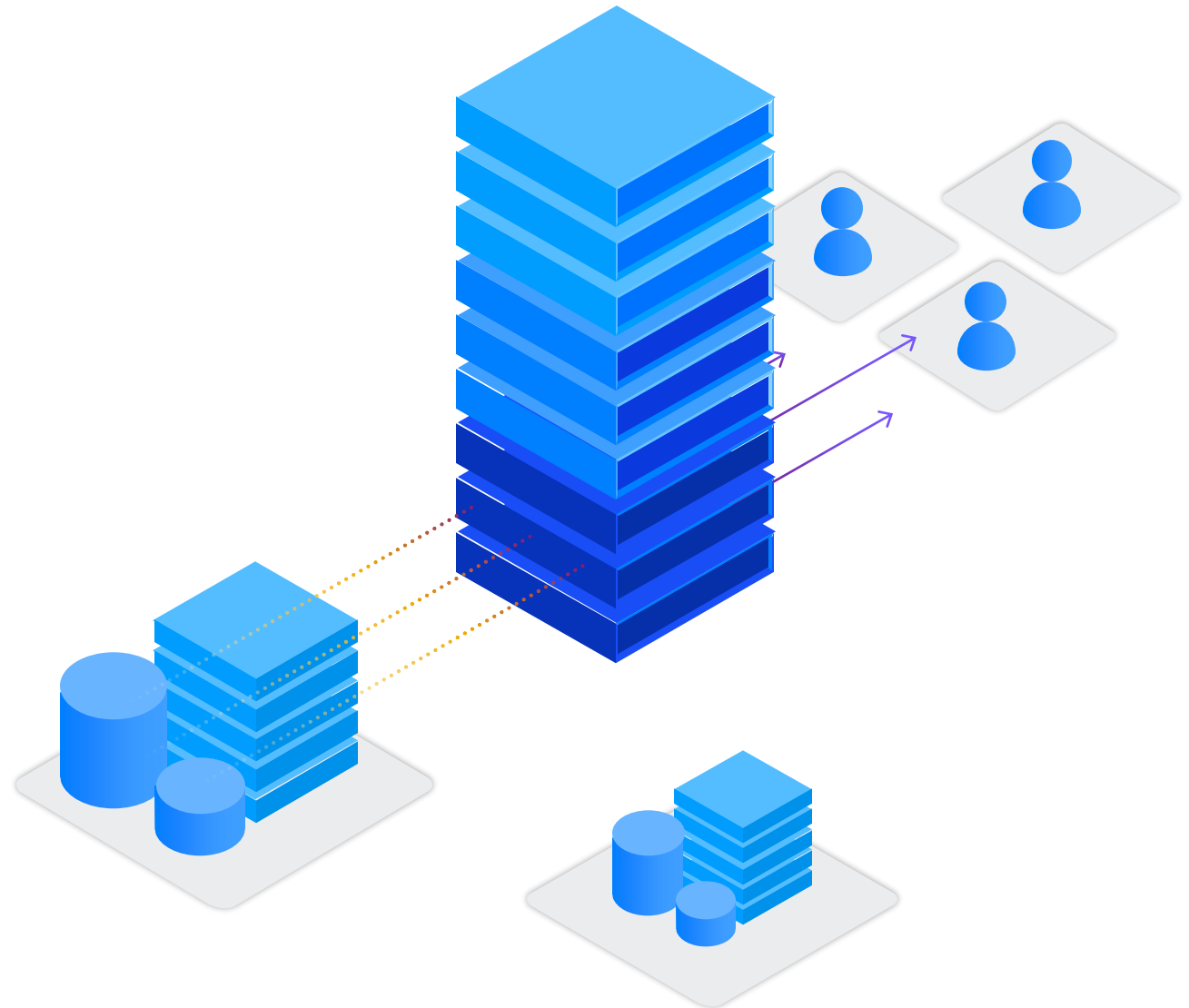


# What's next?

 **Tight Integration into  
SAP Applications**

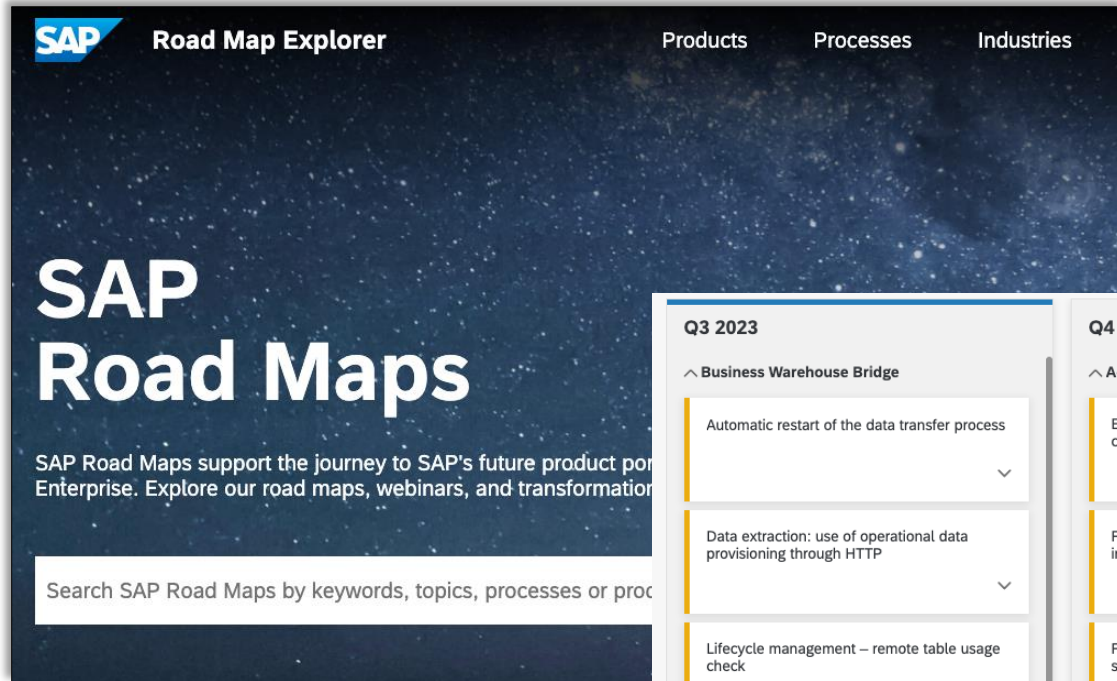
 **Lakehouse Architecture**

 **Foundation for  
GenAI Enablement**






# SAP Datasphere. SAP Road Map Explorer



Check the latest information on the  
[SAP ROAD MAP EXPLORER](#)

Q3 2023	Q4 2023	Q1 2024	Q2 2024
<div>Business Warehouse Bridge</div> <div>Automatic restart of the data transfer process</div> <div>Data extraction: use of operational data provisioning through HTTP</div> <div>Lifecycle management – remote table usage check</div> <div>Data Cataloging</div> <div>Extending extraction of column and attribute details</div> <div>Linking of terms and KPIs to asset attributes</div> <div>Pairings with multiple tenants</div>	<div>Administration and Service Management</div> <div>Elasticity and workload – support configuration of elastic read nodes</div> <div>Flexible tenant configuration – self-service to increase the size of a tenant's BW bridge</div> <div>Flexible tenant configuration: self-service for scale-down</div> <div>Unified home: focus on priority action items and react to need-to-know information quickly</div> <div>Business Modeling</div> <div>Ability to generate a time dimension in business-builder modeling</div> <div>Business Warehouse Bridge</div>	<div>Business Warehouse Bridge</div> <div>Enablement of overwriting capabilities for established metadata and synchronization with SAP BW/4HANA systems</div> <div>Handling and reuse of hierarchies in SAP BW bridge</div> <div>Model conversion updates for business warehouse solutions</div> <div>SAP BW bridge for SAP Datasphere: delta extraction to SAP Datasphere</div> <div>Data Cataloging</div> <div>Metadata extraction for SAP Business Warehouse</div> <div>Unified discovery of data products and metadata in catalog</div>	<div>Data Cataloging</div> <div>Metadata extraction for SAP HANA</div> <div>Metadata extraction for SAP S/4HANA</div> <div>Data Center Availability</div> <div>SAP BW bridge: data center availability in the Google Cloud Platform U.S., APJ, and Europe regions</div> <div>Data Integration</div> <div>Support for using noncumulative (NCUM) measures in inventory reporting</div> <div>Data Marketplace</div> <div>Private data marketplace – sharing data products through the Catena X EDC connector</div>

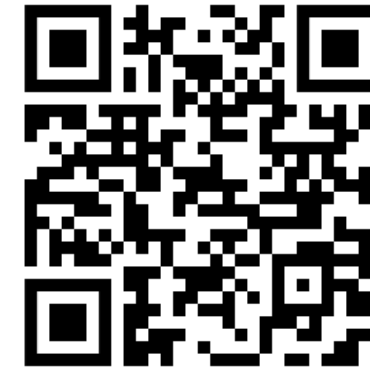
# Get started with SAP Datasphere



**openSAP**  
open.sap.com

THE BEST RUN **SAP**

4 Weeks Course | Start: Sep 5 2023 | Announcement: April 18<sup>th</sup> 2023



open**SAP**



SAP Discovery  
Center

# Thank you.

Contact information:

Torsten Ammon  
torsten.ammon@sap.com







# **SAP® MaxAttention™ Innovation Workshop**

## **Utilizing Data Products, Beyond the Scope of Traditional Analytics**

Habeebuddin Mohammed, Steffen Thibaut, SAP  
September 28, 2023

PUBLIC



# SAP MAXATTENTION

## Speakers



**Habeebuddin Mohammed**

Business Process, Data and Analytics Chief Architect  
COE for Data Warehousing, Analytics and Data  
Management | Success Delivery Center  
[Habeebuddin.Mohammed@sap.com](mailto:Habeebuddin.Mohammed@sap.com)



**Steffen Thibaut**

Business Process Associate Consultant  
COE for Data Warehousing, Analytics and Data  
Management | Success Delivery Center  
[Steffen.Thibaut@sap.com](mailto:Steffen.Thibaut@sap.com)

# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data Mesh

Why Data Mesh?

What is Data Mesh?

Principles of Data Mesh

How BTP can help in implementation of data mesh

## Data as a Product

Concept of data products

How can this be achieved in SAP Datasphere – Data Marketplace

Data Marketplace Roadmap

## Use Case Demo

End to End demo of Data as a Product

## Key Takeaways

## Q&A



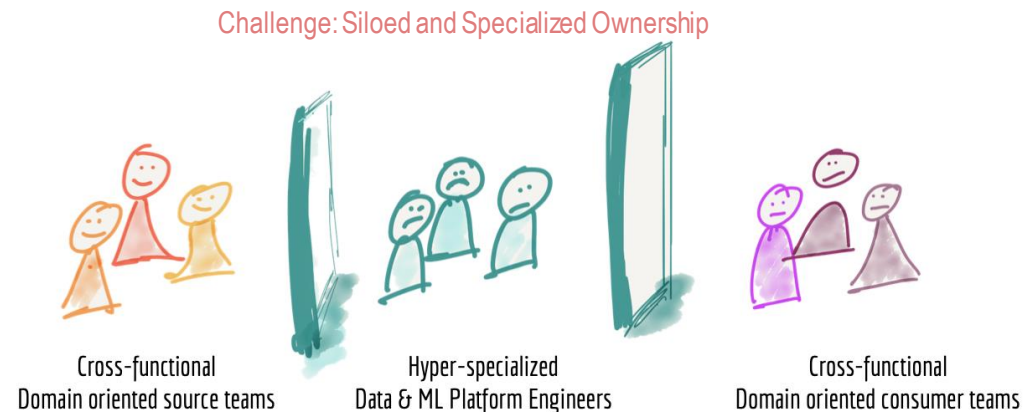
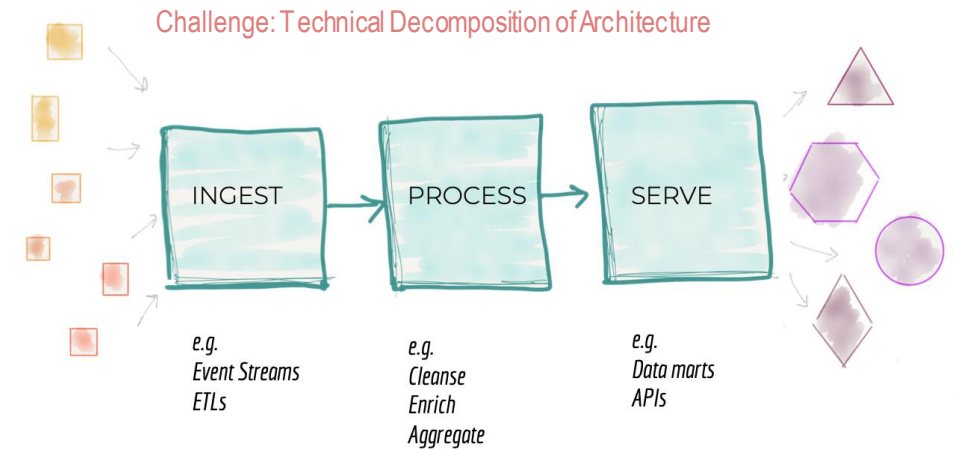
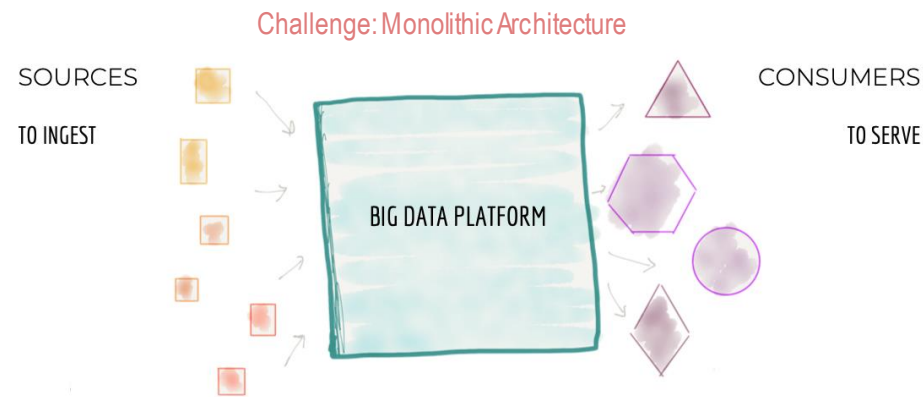
# Kick-off Question: Data Mesh





# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Why Data Mesh – Typical Challenges of Enterprise Data Platform Architecture





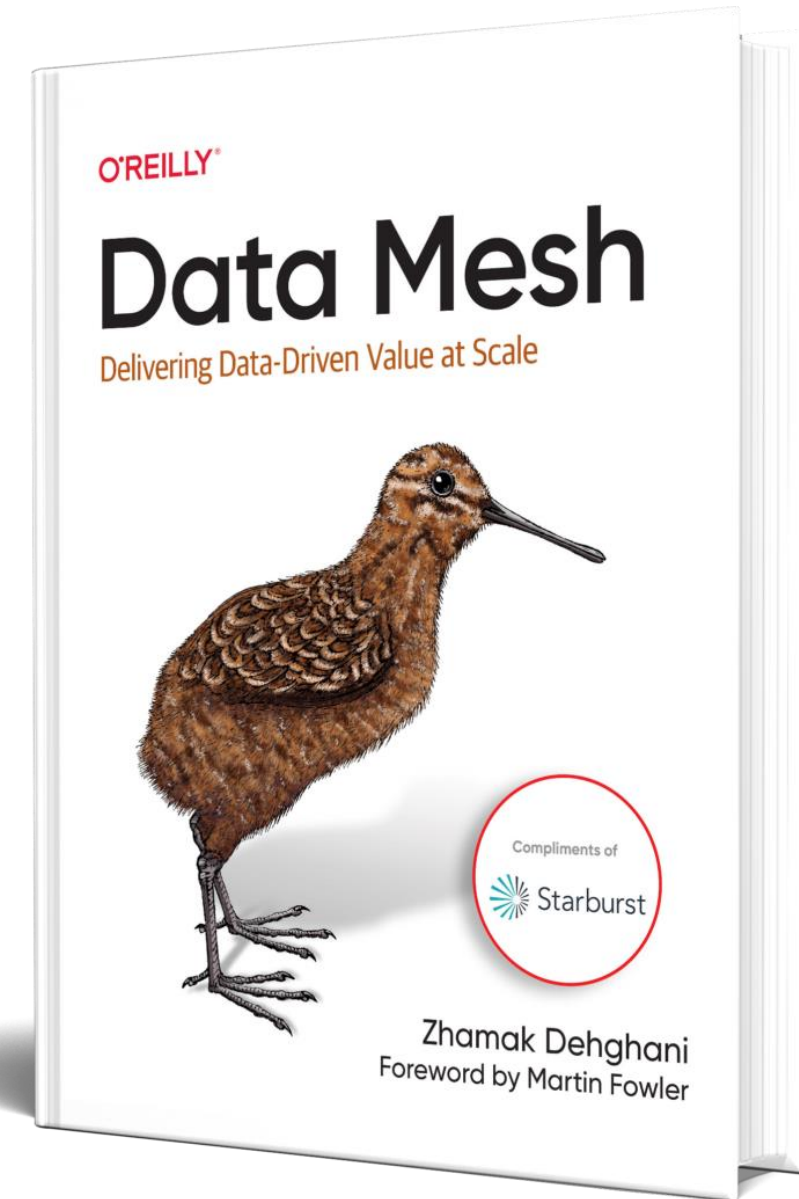
# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data Mesh Approach

Data Mesh is a **sociotechnical** approach to share, access, and manage **analytical data** in complex and large-scale environments — within or across organizations.

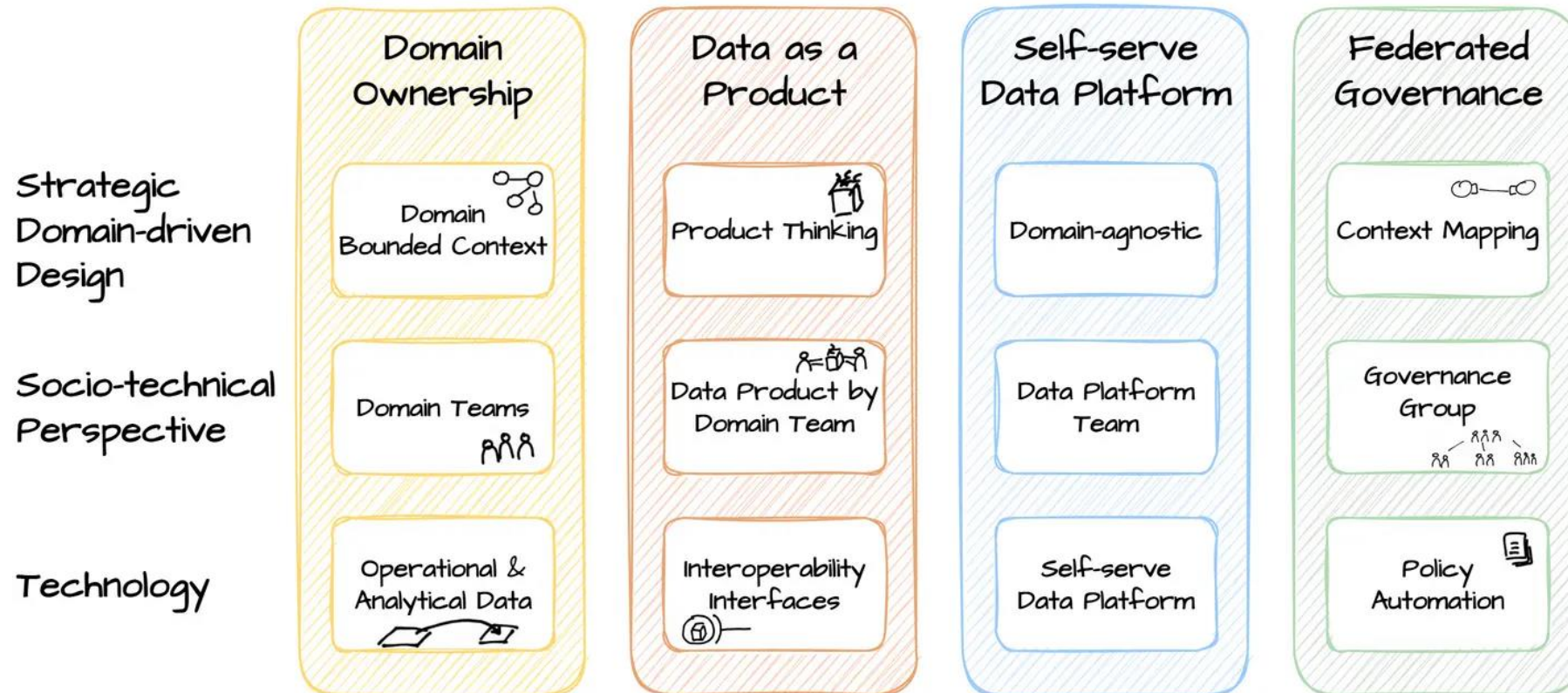
A Data Mesh is intended to; “**address[es] the common failure modes of the traditional centralized data lake or data platform architecture**”, hinging on modern distributed architecture and “self-serve data infrastructure”.

Zhamak Deghani



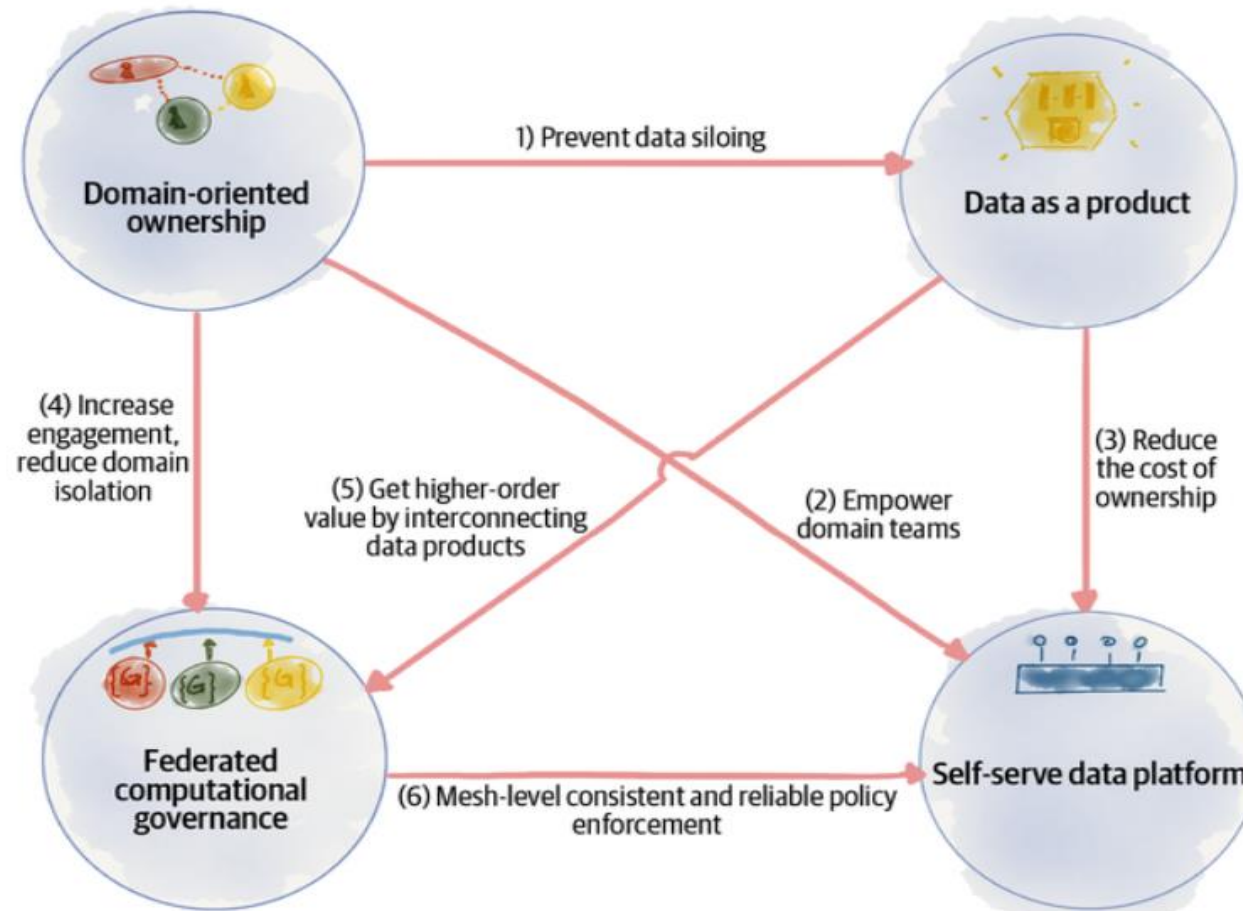
# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Principles of Data Mesh – Four Pillars



# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Principles of Data Mesh – Dependencies



*\* Direction of the arrow shows the dependency from one principle to another; implementing the from principle creates the challenge that the to principle addresses.*

# Data Fabric & Data Mesh: What's the difference?



**Data Fabric:** ...a technological platform that automates all **data management functions** — including ingestion, transformation, orchestration, governance, security, preparation, and quality curation — **enabling insights and analytics. (Forrester)**

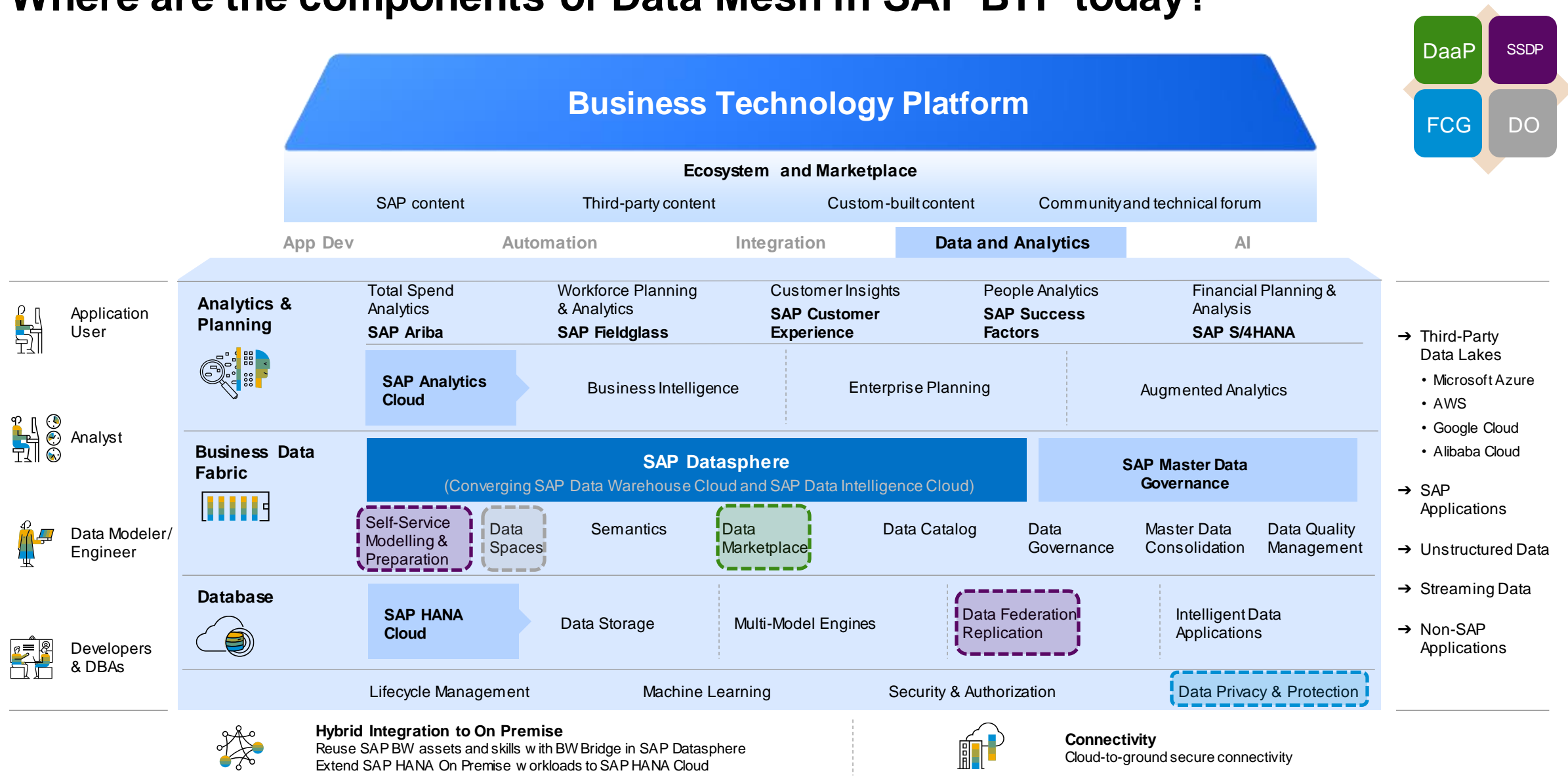


**Data Mesh:** ...is considering a domain view, giving the domains the freedom to take **ownership of their own data**. A business domain knows their data best. Hence it is logical in a **data democratization organization** to let them be accountable and responsible for it. Data Mesh depends on the technical capabilities of Data Fabric for implementation.

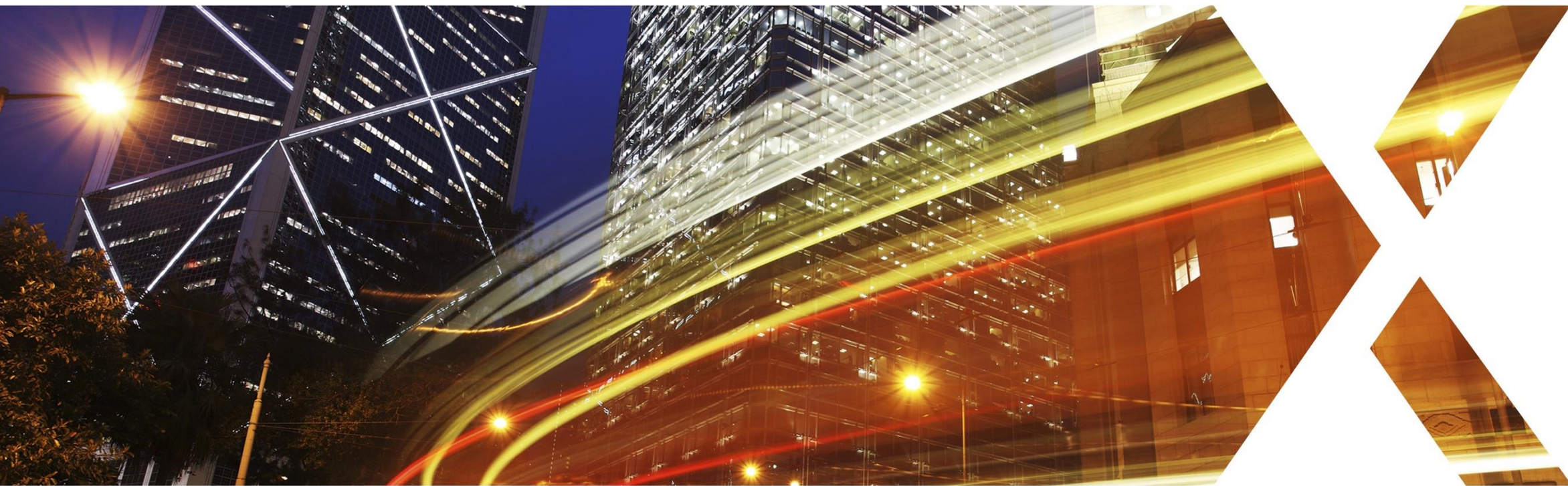
Data mesh inverts this model with **domain-driven design and product thinking**. Responsibilities are distributed to the people who are closest to the data. These product owners are responsible for delivering data as a product and, as such, they are accountable for objective measures.



# Where are the components of Data Mesh in SAP BTP today?



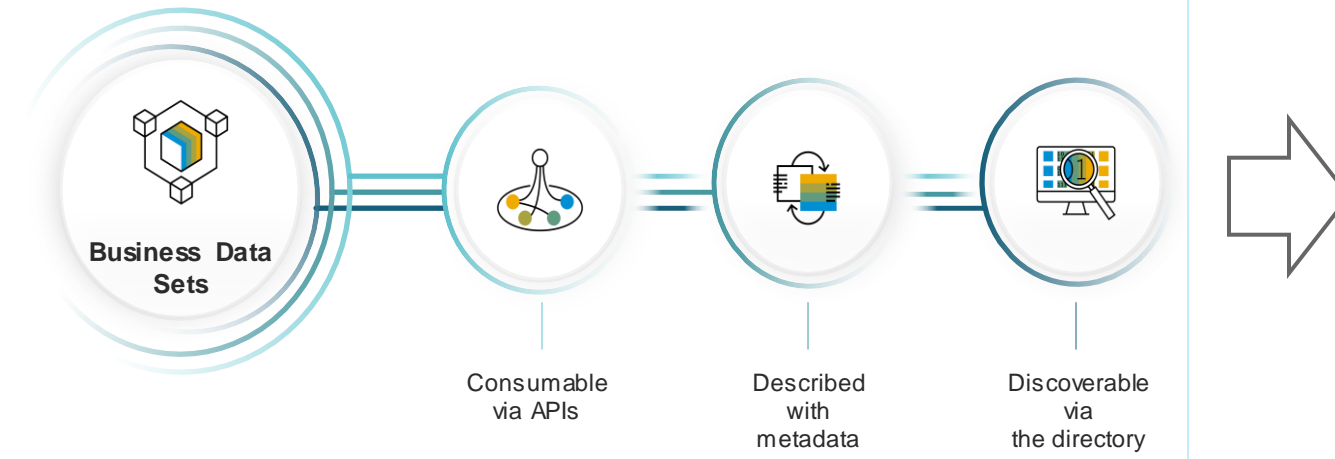
# Data as a Product



# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – Concept

A Data Product must be:



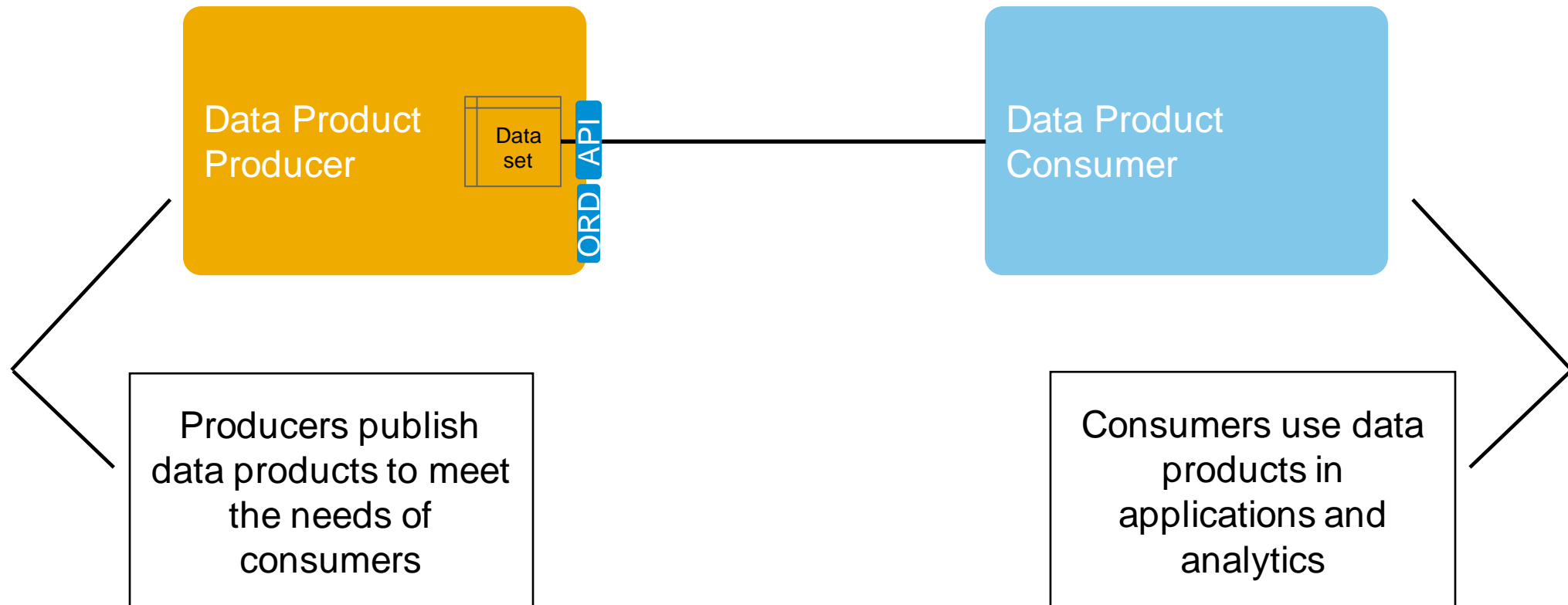
A Data Product has two essential aspects:

1. **It exposes a data set via an “API”**  
supported APIs: REST, Odata, SQL, SQL Interface Views
2. **It exposes metadata describing the Data Product via an ORD\* document**  
description of the data set and intended use(s), output ports – where to access the data, description of structure and semantics

## Enable Data Sharing Across Application Boundaries

# Utilizing Data Products, Beyond the Scope of Traditional Analytics

Data as a Product – Producers and Consumers

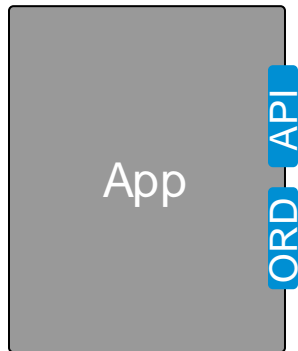




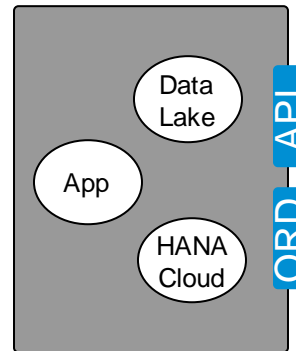
# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – Producers and Consumers

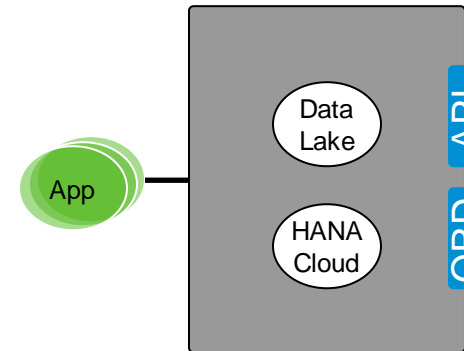
- 1 Application exposes a Data Product directly



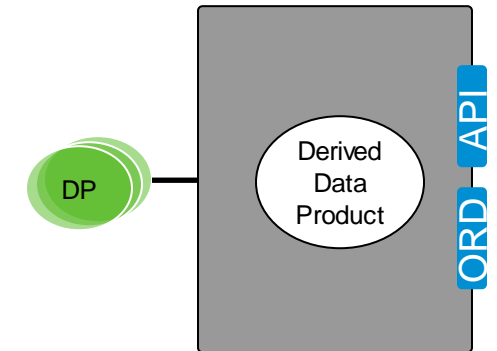
- 2 Application exposes a Data Product via the LoB data platform



- 3 Stand-alone Data Product



- 4 Datasphere-based Data Product



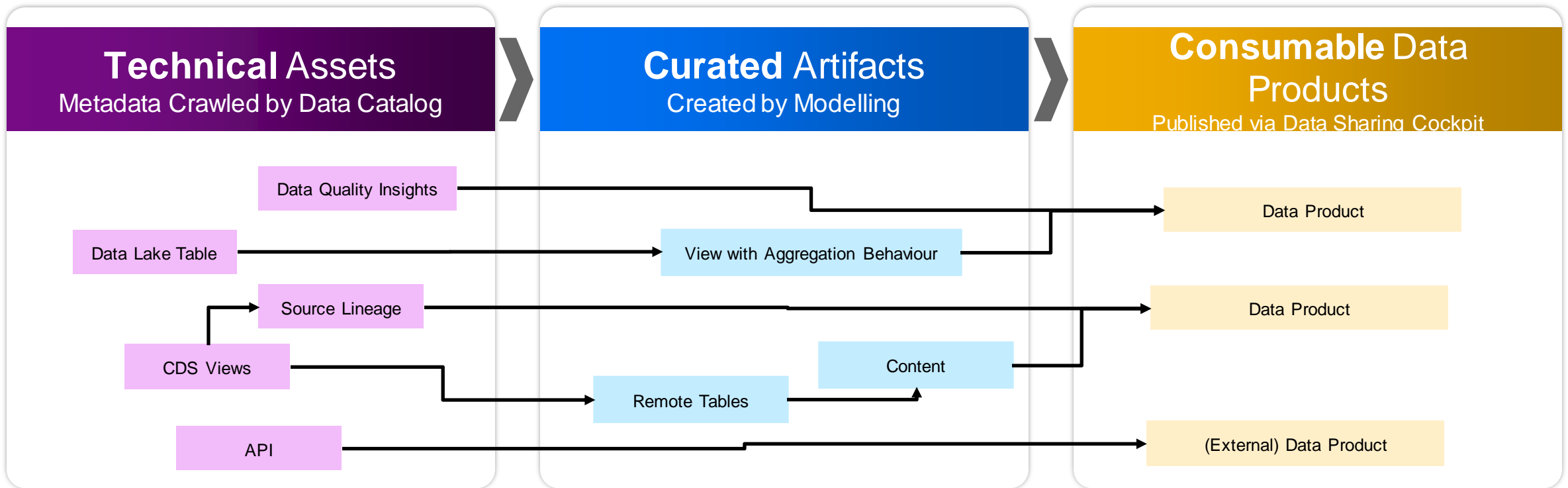
# Utilizing Data Products, Beyond the Scope of Traditional Analytics

Data as a Product – Convergence of data catalog & data marketplace

## Aspiration: Converged User Experience

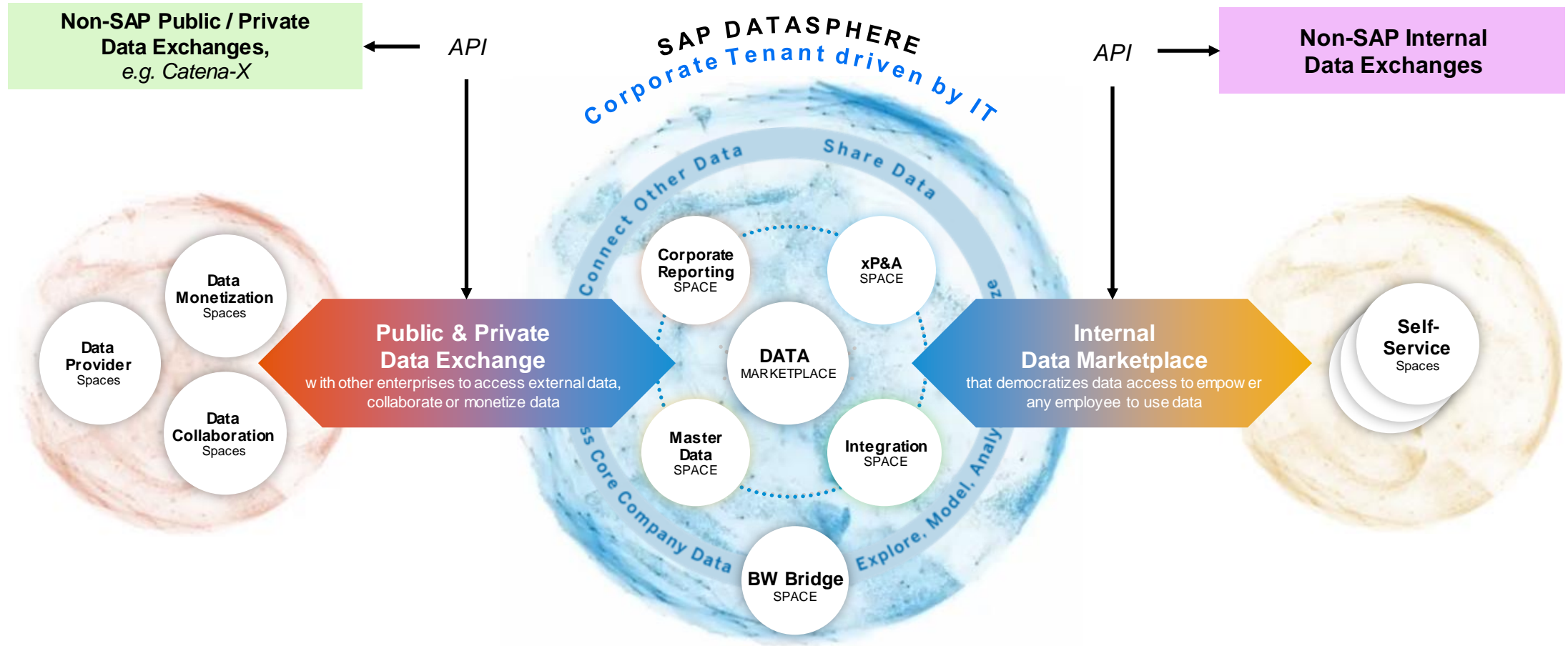
One Search. One Process. One Profile. One Lineage.

One Onboarding for E2E SAP & Ecosystem Managed Content (Catalog Entities, Datasphere Artifacts & Data Products)



# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – Data Marketplace



# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – Internal Data Marketplace

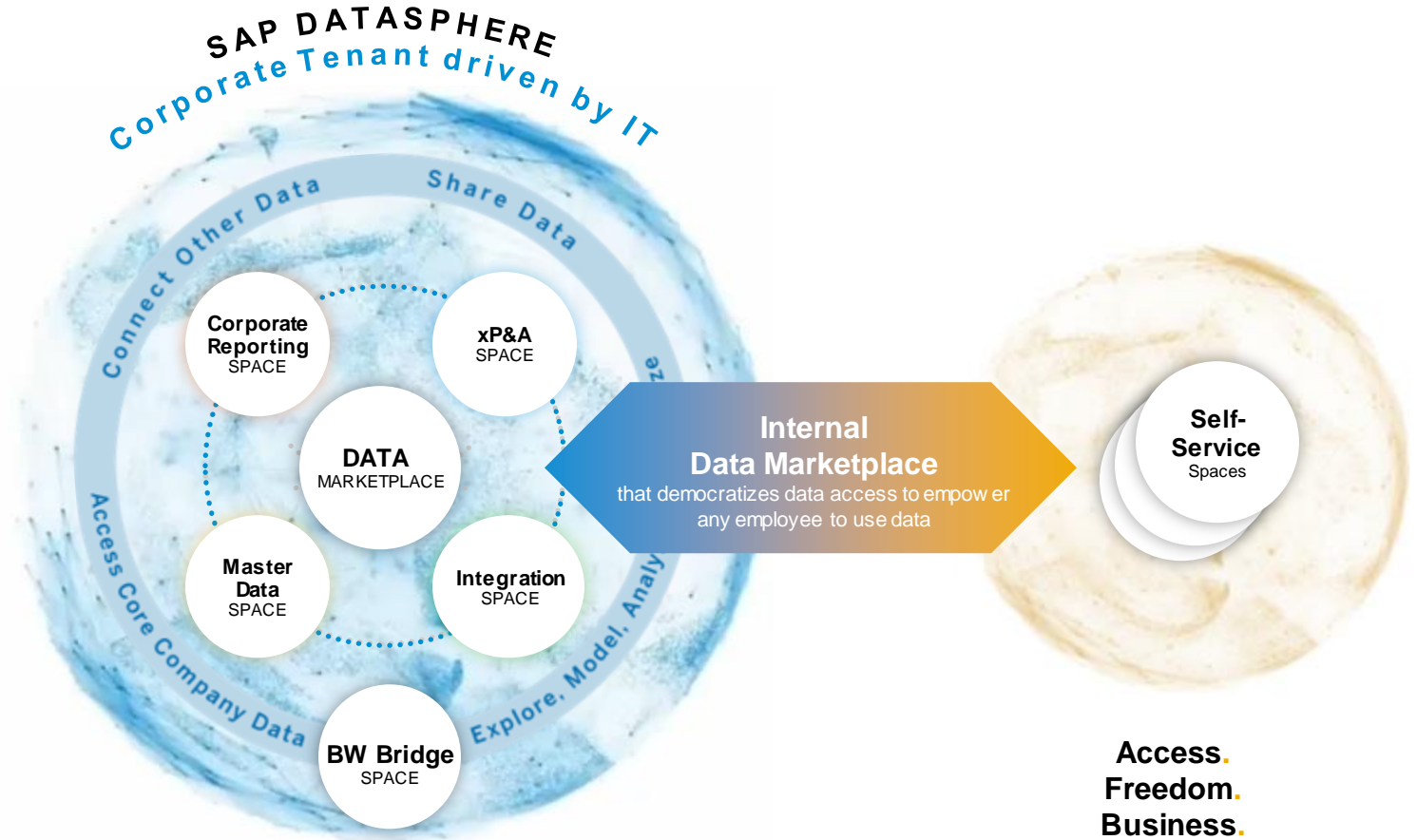
An **Internal Data Marketplace use case** can be realized in SAP Datasphere which allows to empower the own organization to share and consume data products.

It works with the **standard UIs & APIs** to list and consume data products. This allows to see public and internal data products together.

In contrast to the public data marketplace, in the internal use case only a **selected audience** shall see the data products

Internal audiences can be defined by setting up **internal contexts** & inviting dedicated users or the entire user base of one or several tenants.

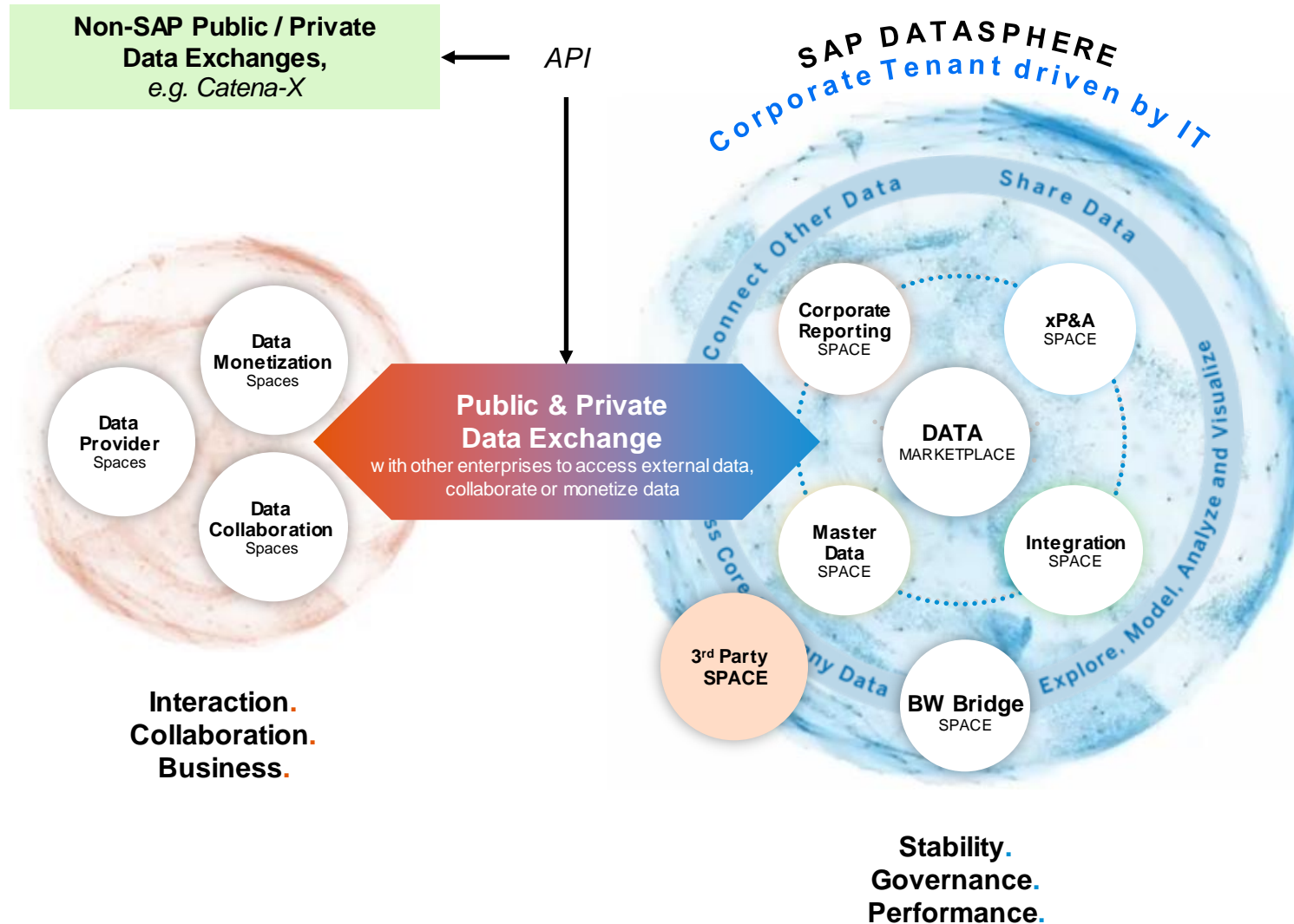
The data products can then be connected to the **space of choice or accessed via API** for usage with 3<sup>rd</sup> Party analytics, AI/ML, etc.





# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – External Data Marketplace



A **Private Data Exchange** context can be used to collaborate on data products also with organizations from the ecosystem

This can be realized by providing **access to a space on the own tenant or across tenants** as the context is valid in the entire landscape

The Private Exchange can be realized as a Data Shop where only **one party publishes** or as a **democratic setup** with same rights for all participants

# Feedback Question: Data as a Product



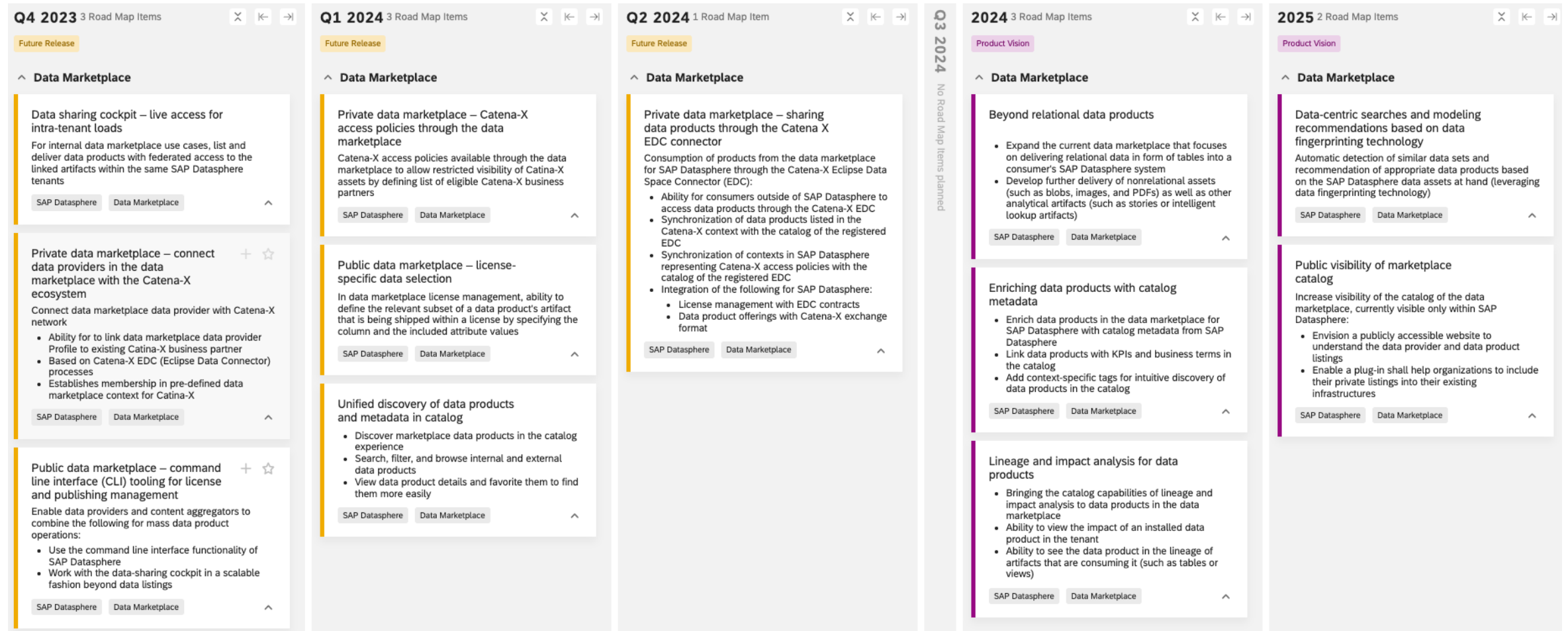


# Datasphere Demo: Data as a Product



# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Data as a Product – Data Marketplace Roadmap\*





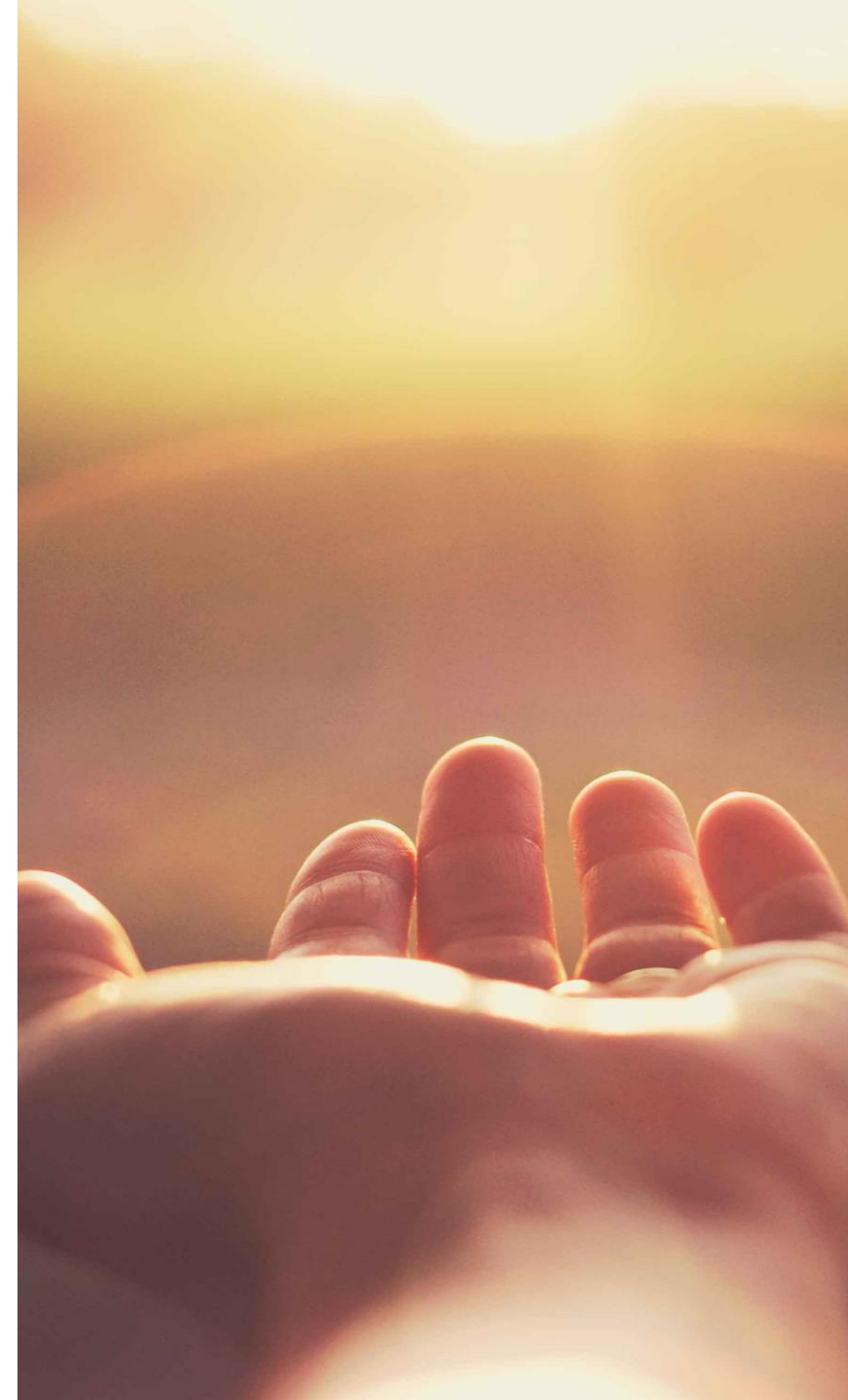
# Utilizing Data Products, Beyond the Scope of Traditional Analytics

## Key Takeaways

***SAP BTP & Datasphere provides a business data fabric layer to implement concepts of Data Mesh.***

***Create quick, inexpensive wins over a small but broad portfolio of pilot data products***

***Prefer a small number of employees that dedicate the majority of their time to the development, provision, and maintenance of data products over a large amount that spends less time***





# Get in touch

## Contact information:

### **Habeebuddin Mohammed**

Business Process, Data and Analytics Chief Architect  
COE for Data Warehousing, Analytics and Data Management

Dietmar-Hopp-Allee 16, 69190, Walldorf, Germany  
+40 (0)622 77 66 860

[Habeebuddin.Mohammed@sap.com](mailto:Habeebuddin.Mohammed@sap.com)



### **Steffen Thibaut**

Business Process Associate Consultant  
COE for Data Warehousing, Analytics and Data Management

Dietmar-Hopp-Allee 16, 69190, Walldorf, Germany

[Steffen.Thibaut@sap.com](mailto:Steffen.Thibaut@sap.com)







# **SAP® MaxAttention™ Innovation Workshop – How SAP Premium Engagements can help You in Journey of Data and Analytics Virtual, September 28, 2023**

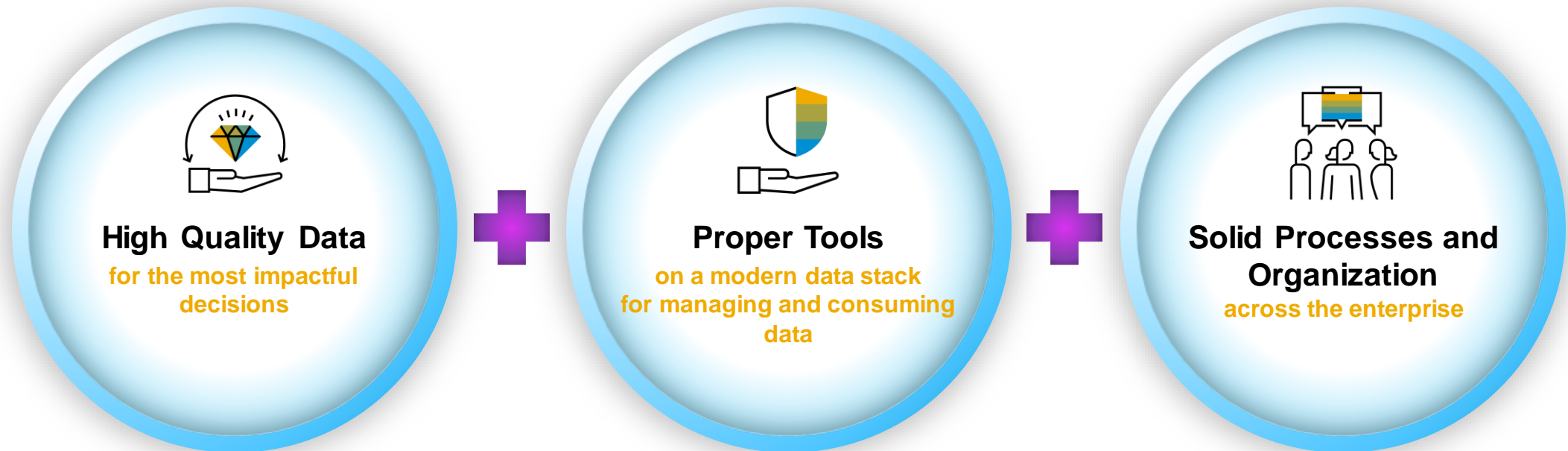
Peter Schmidt, SAP SE

PUBLIC



# SAP® MaxAttention™ Innovation Workshop

Key Takeaways for getting a data driven organization

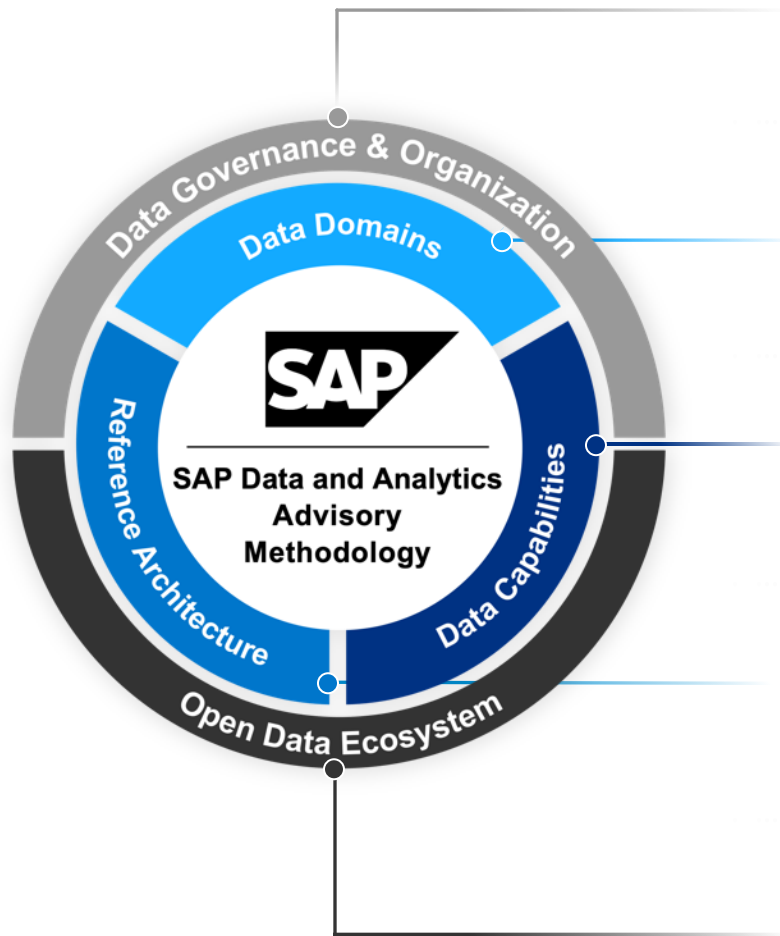


# Data & Analytics Advisory Methodology

## SAP blogs:

[Release of SAP Data and Analytics Advisory Methodology](#)

[General approach of SAP Data and Analytics Advisory Methodology](#)



## Data Governance & Organization

- Consider organizational impact to acquire or develop new skills or competencies required by new solutions.
- Apply best practice data governance processes to ensure consistent data management.

## Data Domain Reference Model

- Establish a common understanding of SAP data across the enterprise.
- Re-use domain structure of SAP Reference Business Architecture to organize SAP data.

## Data & Analytics Capability Model

- Harmonized and solution agnostic data & analytics capability terms and definitions.
- Simplify definition of solution architecture building blocks.

## Reference Architectures

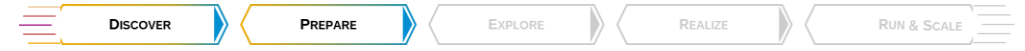
- Faster design of target solution architecture by identifying reference architectures through use case patterns.
- SAP BTP reference architectures can be rapidly adopted, tested and validated.

## Open Data Ecosystem

- Open for third-party technologies/solutions.
- Partner solutions are considered in SAP BTP reference architectures.

# SAP® MaxAttention™ Innovation Workshop

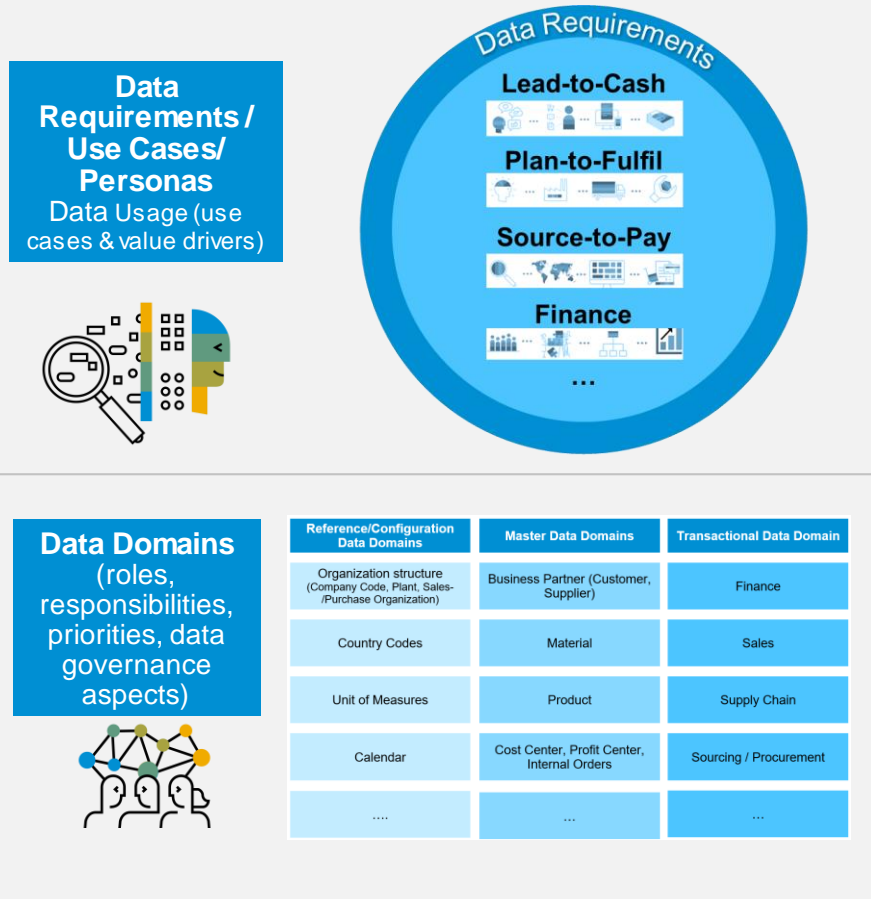
## Approach and Methodology



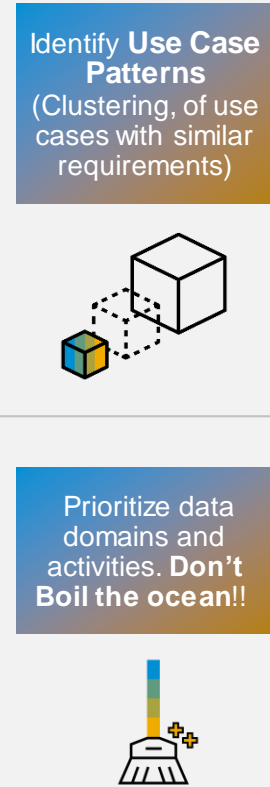
Data Strategy,  
Mission Statement



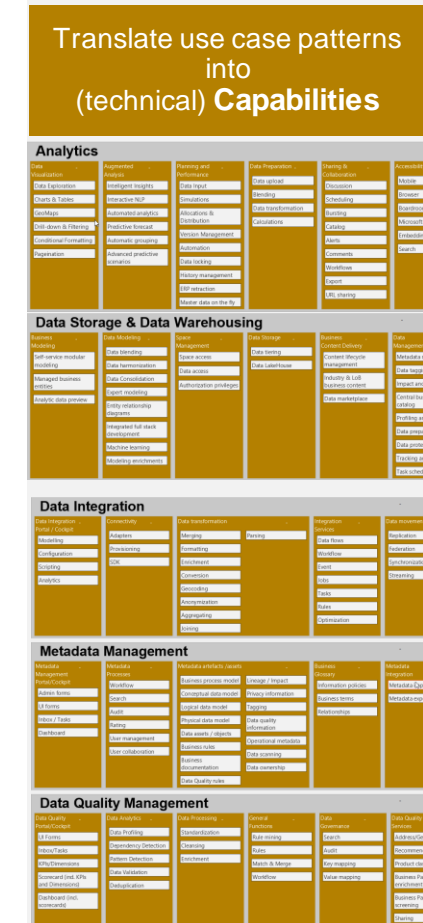
### Collect



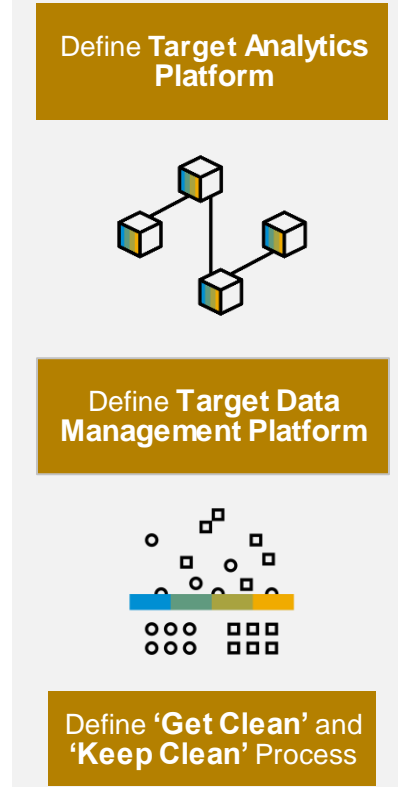
### Organize



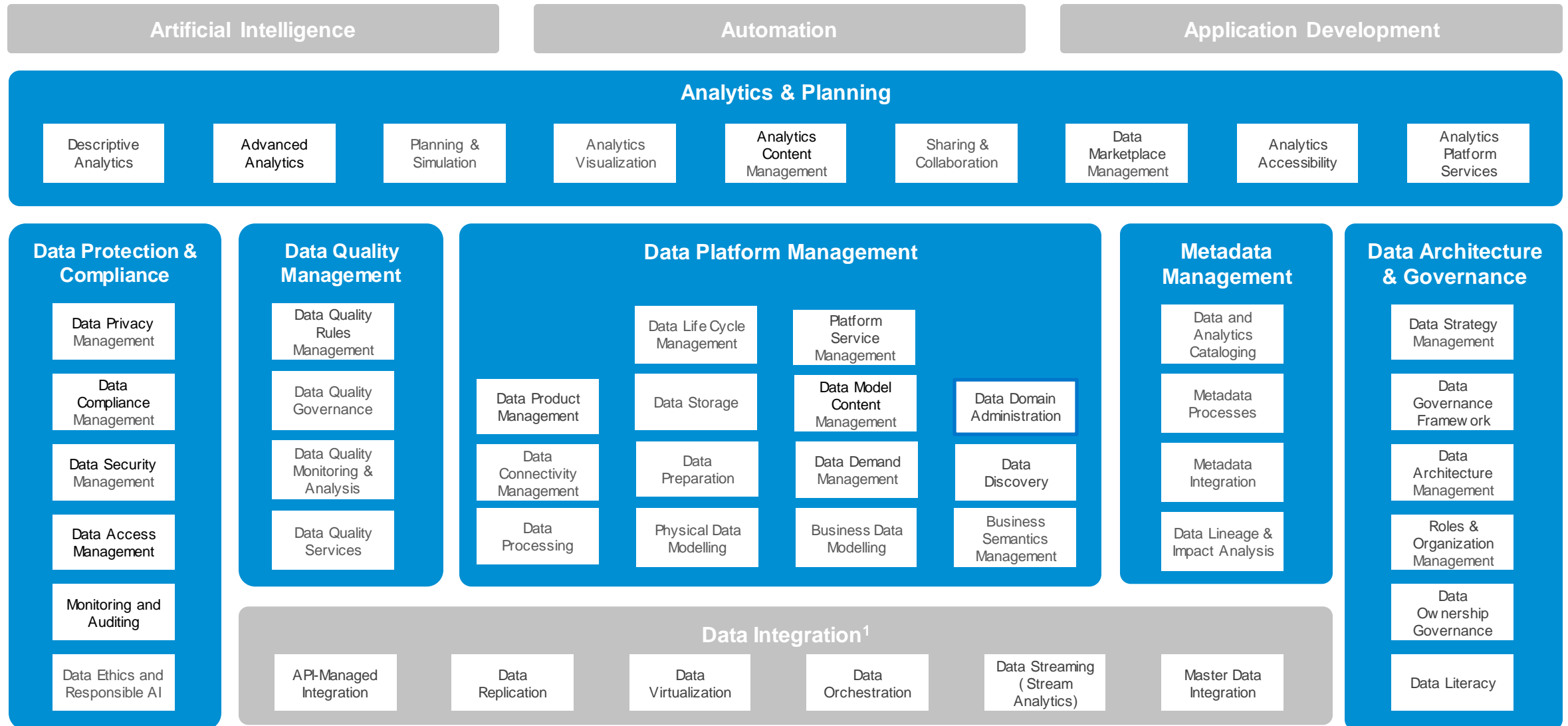
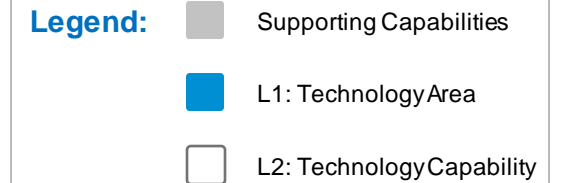
### Structure



### Define



# Reference Data and Analytics capability model

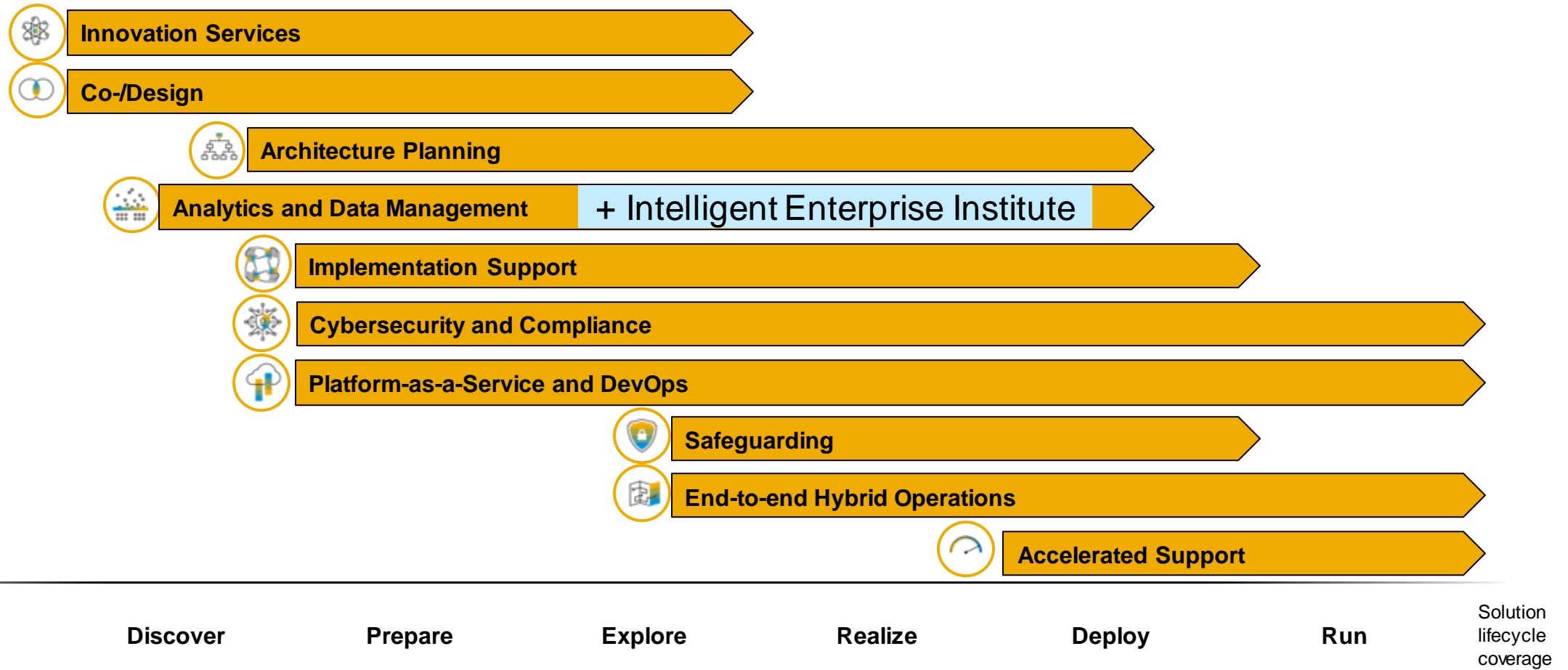


1. Selected integration capabilities from Integration Solution Advisory Methodology (ISA-M)



# SAP® MaxAttention™ Innovation Workshop

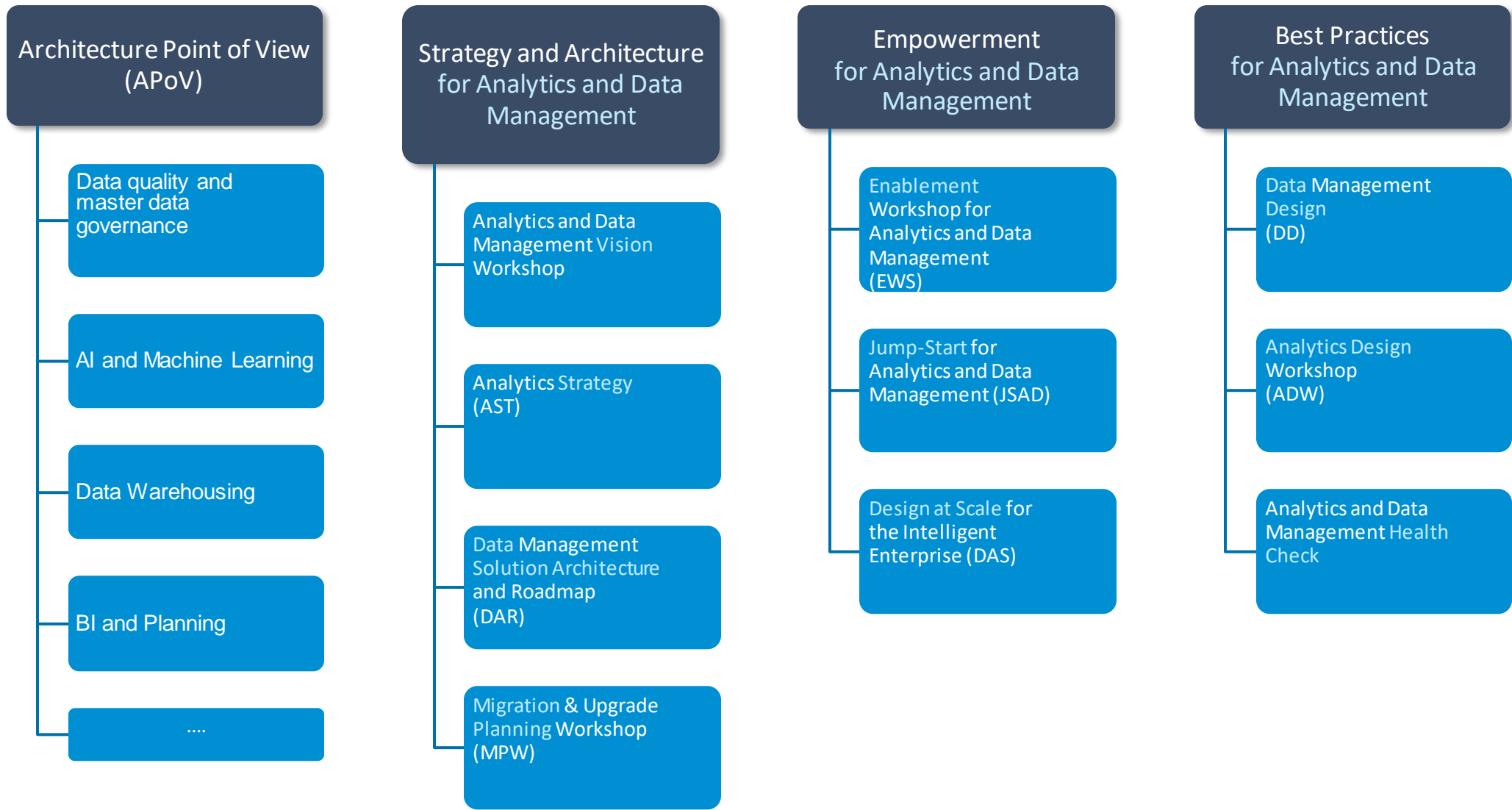
SAP Premium Engagements : SAP MaxAttention Portfolio Overview



# SAP® MaxAttention™ Innovation Workshop

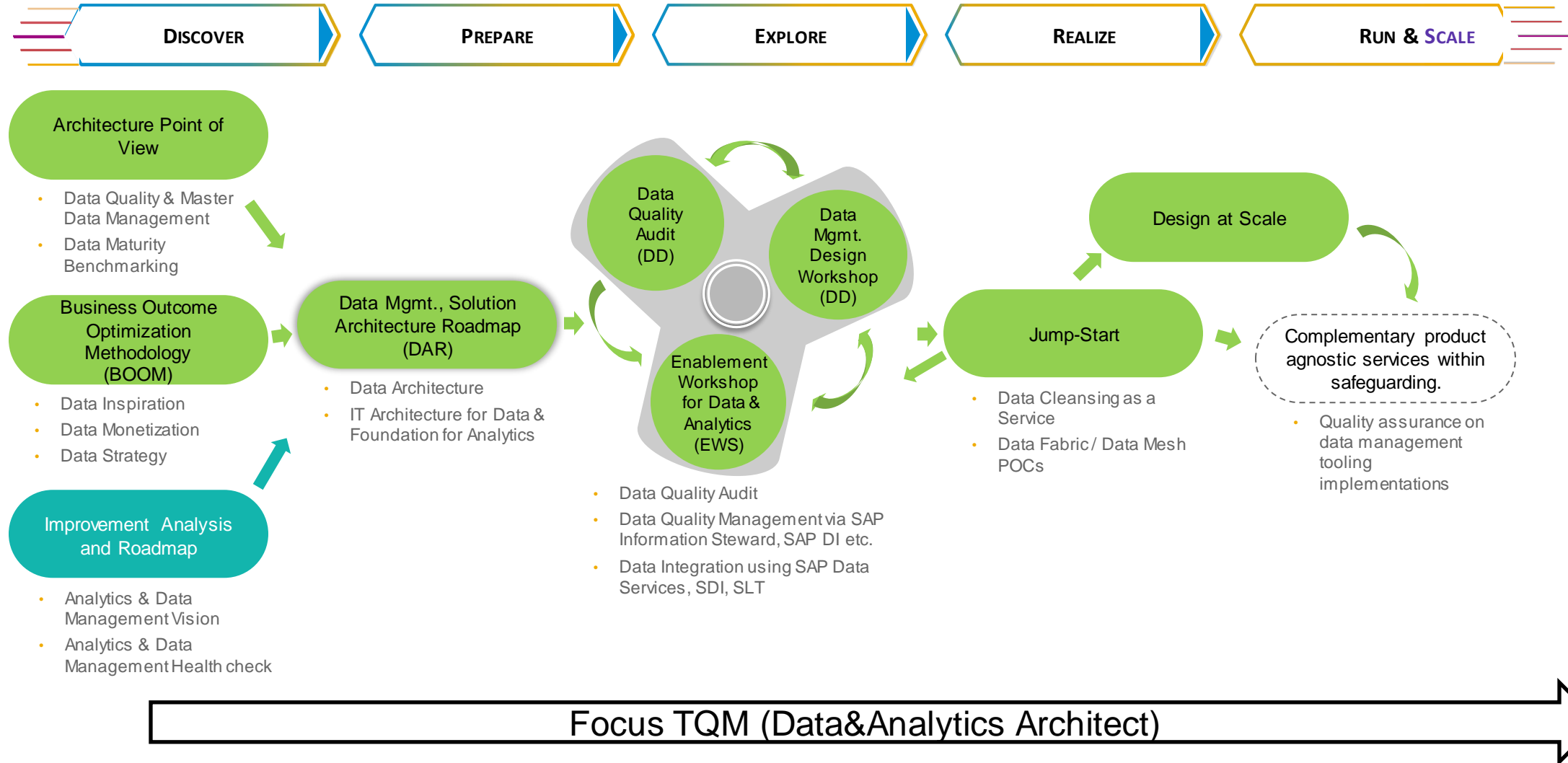
## Analytics & Data Management - Portfolio

Service
Service Component



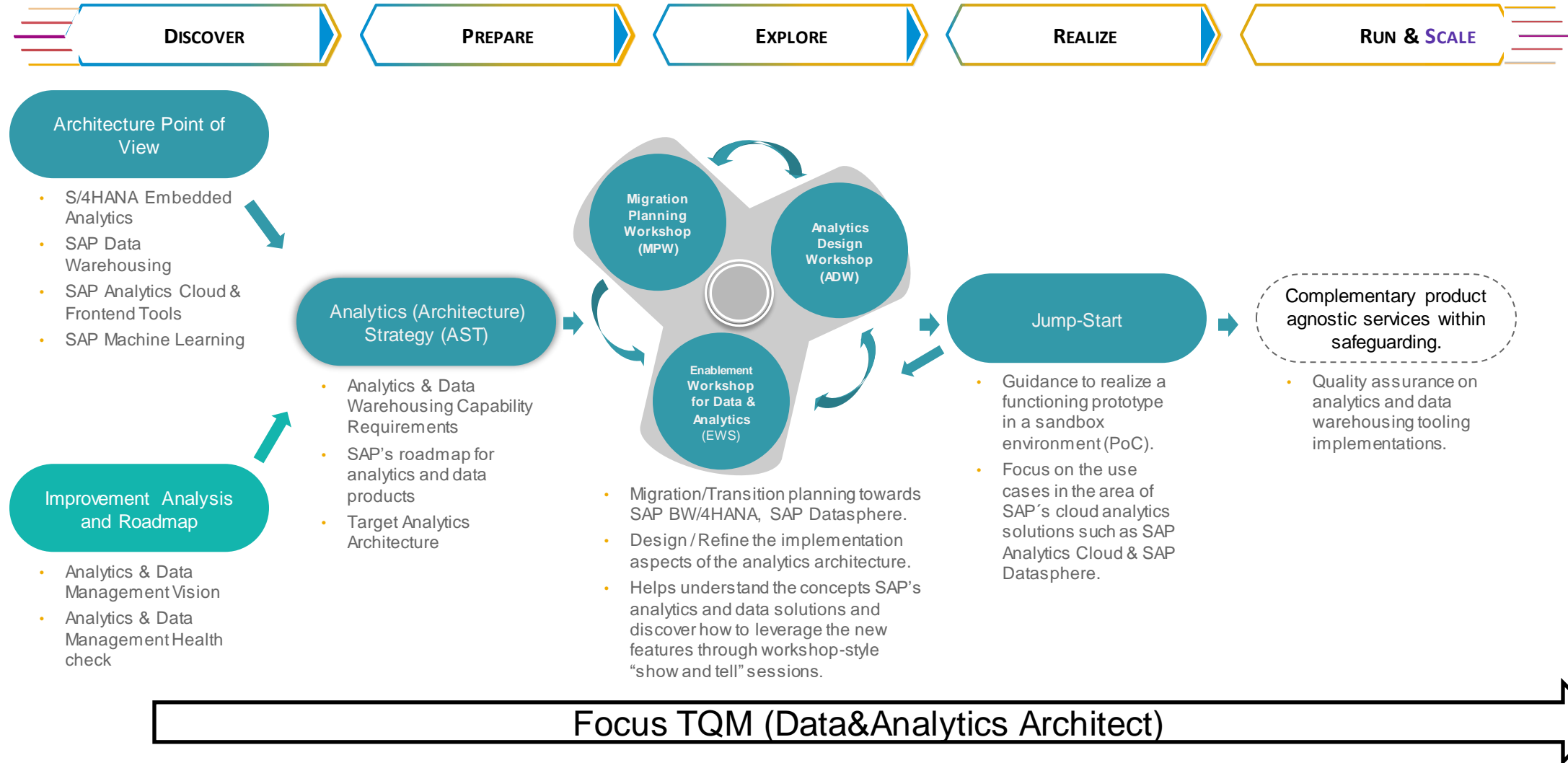
# SAP® MaxAttention™ Innovation Workshop

## Customer Journeys : Data Centric Scenario



# SAP® MaxAttention™ Innovation Workshop

## Customer Journeys : Analytics/BI Centric Scenario





# Thank You

# Q & A