



LAUNCH OF THE GLOBAL DATA STANDARD FOR REAL ESTATE

NOVEMBER 24TH & 25TH

AGENDA INFORMATION DAY



JOIN US!

www.ibpdi.org
contact@ibpdi.org
<https://github.com/ibpdi>

TODAY: 4:00PM - 5:00PM

WELCOME & INTRODUCTION FROM THE
INITIATORS

TODAY: 5:00PM - 6:00PM

INTRODUCTION TO OUR COMMON DATA
MODEL

WELCOME & INTRODUCTION FROM THE INITIATORS

INTERNATIONAL
BUILDING
PERFORMANCE &
DATA
INITIATIVE



INTRODUCTION FROM THE INITIATORS



Tobias Decker
Chief Product Officer



Andrew Knight
Int. Data Standards
Director
RICS



Christian Tschumper
Customer Success Team
Lead
Microsoft Switzerland



Andy Dietrich
Founder & CEO
Strategiekollegen



VISION JOINT OPEN DATA INITIATIVE

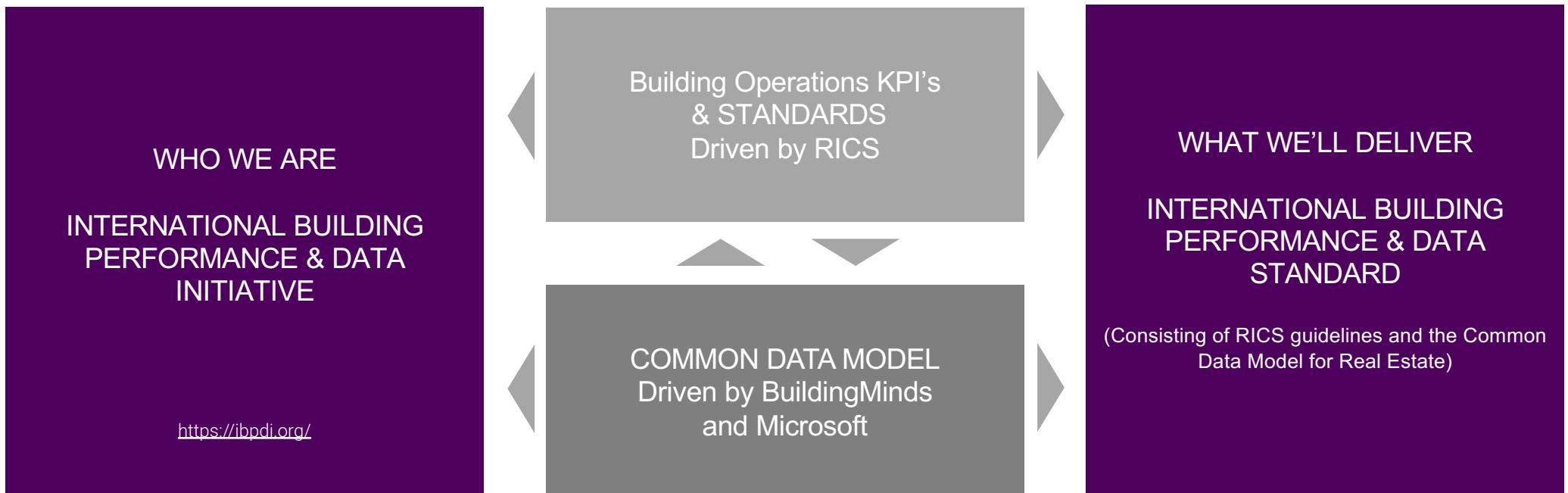


OUR ASPIRATION FOR THE REAL ESTATE INDUSTRY IS TO SPEAK THE SAME DATA LANGUAGE.

OUR GOAL IS TO EFFECTIVELY ENABLE THE BUSINESSES IN THE REAL ESTATE INDUSTRY TO BECOME MORE AGILE, MORE ADAPTIVE AND TRUE MASTERMINDS OF THEIR ASSETS.

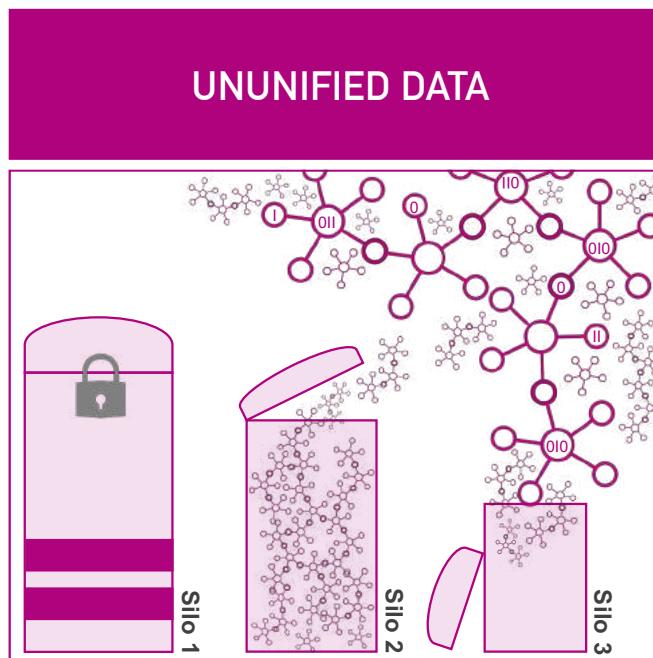
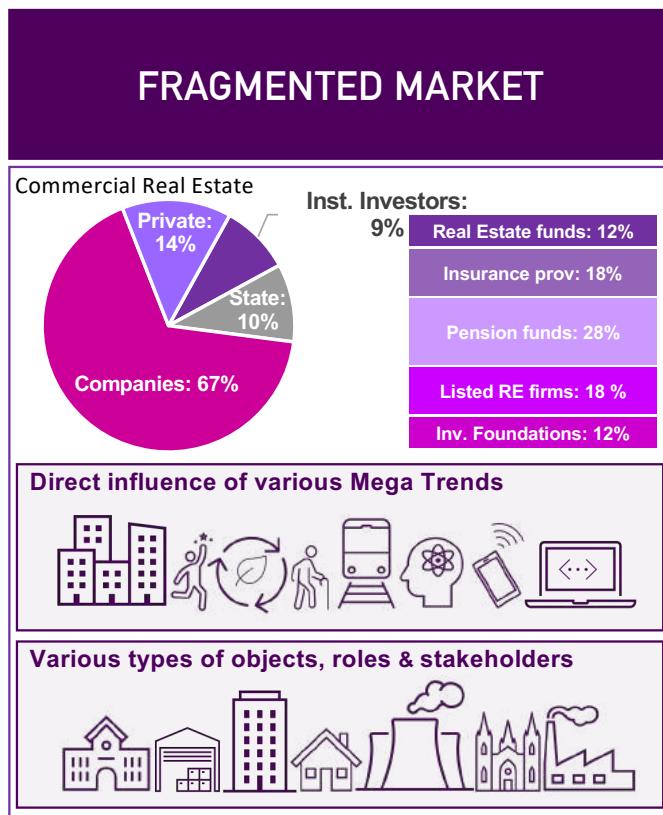
WHO WE ARE

JOINT OPEN DATA INITIATIVE



THE CHALLENGES

HIGHLY COMPLEX VALUE CHAIN WITH NO ALIGNMENT



THE GOAL A UNIFORM BASIS

TRANSPARENCY

COLLABORATION

FULL LIFECYCLE



#IRL

Let's talk the talk AND walk the walk together.



Join the movement!



© 2020 RICS

A purple-tinted background image of a modern glass and steel structure, possibly a conservatory, with the RICS logo and title overlaid.

RICS®

IBPDI

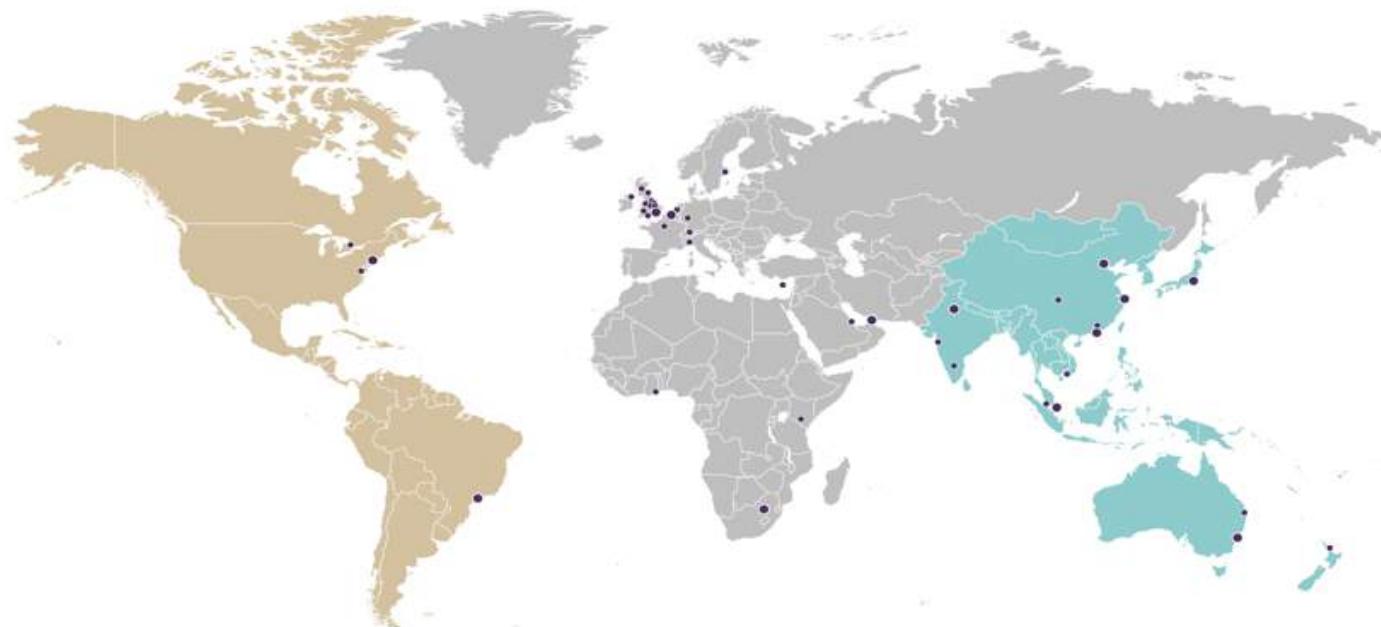
Why do we need Common Data Model?

WHO ARE RICS

1/2

Global office locations

RICS has 40 offices across the Americas, EMEA and Asia Pacific



Figures at October 2018

WHO ARE RICS

2/2

RICS-qualified and trainee professionals



Figures at October 2018

WHY DOES THE REAL ESTATE MARKET NEED A CDM?

1/2

- Most real estate and property data unstructured, siloed and often with questionable provenance and lineage
- Need a CDM to drive convergence and interoperability between platforms and systems
- Need a CDM freely available in the public domain
- Need a foundation to support innovation across the market using AI, Business Process Automation etc.
- Will support multiple use cases across the whole real estate life-cycle
- Using trusted asset/property identification will support links to other data set such as geospatial data and city and regional digital twins



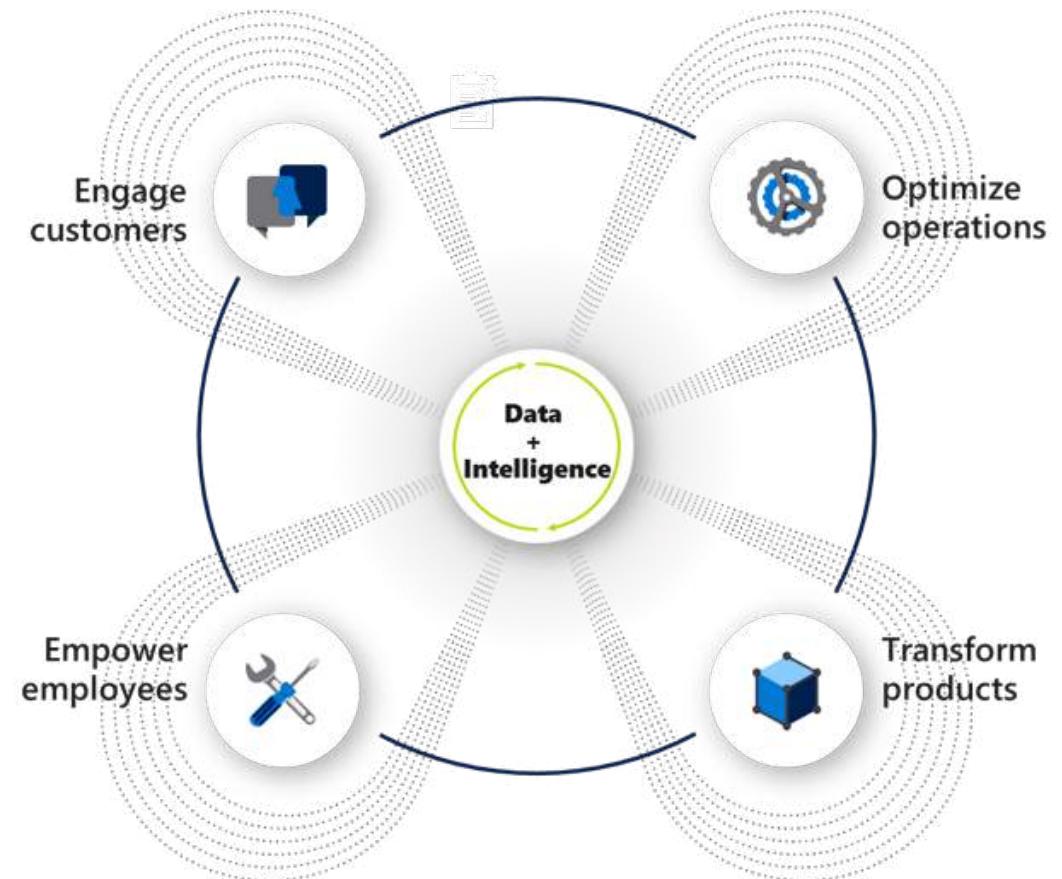
WHY DOES THE REAL ESTATE MARKET NEED A CDM?

2/2

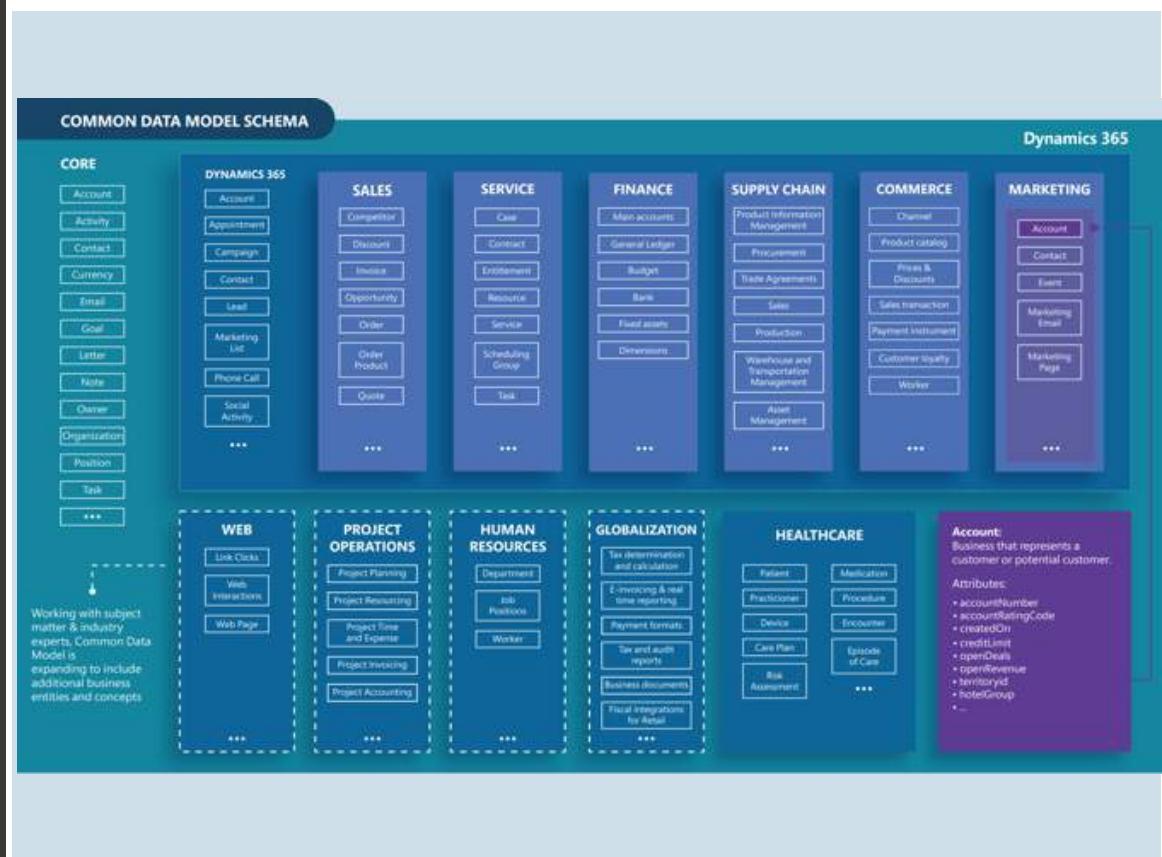
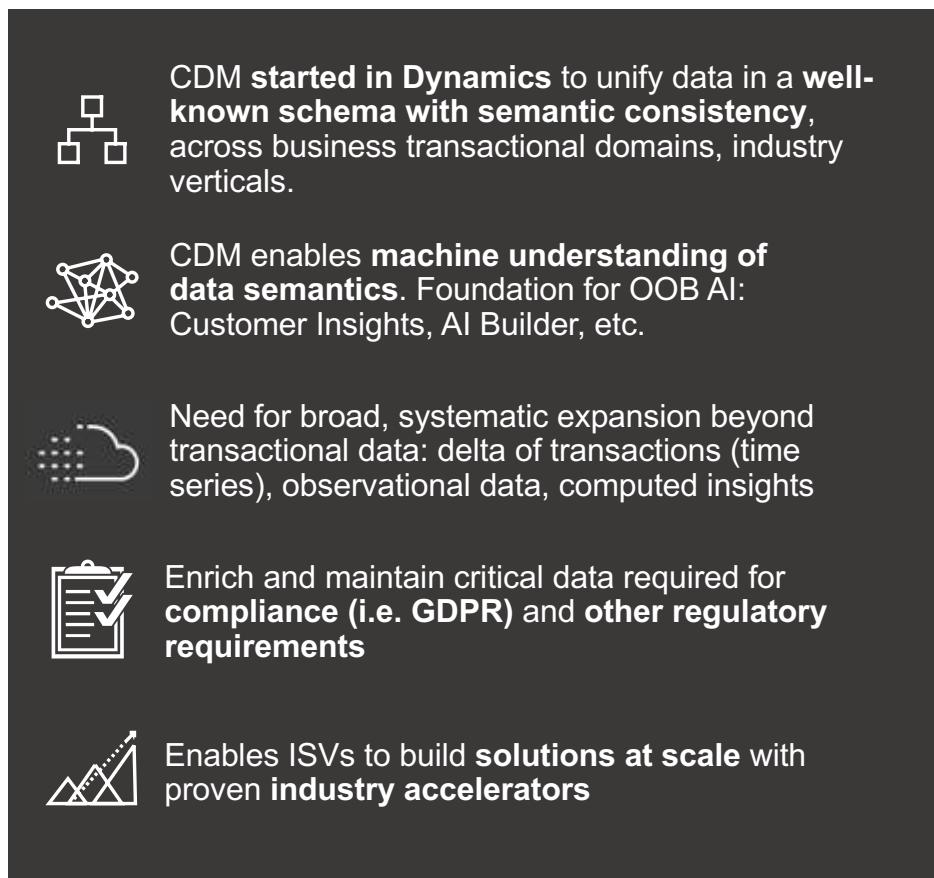
- The critical issue of sustainability needs accurate and consistent data
- A CDM will support and compliment international standards across:
 - Valuation (IVS)
 - Measurement (IPMS)
 - Life-cycle costing (ICMS)
 - Due diligence and brokerage (ILMS)
 - BIM (ifc)
- Will encourage sharing and governance of data to improve real estate performance without compromising privacy concerns



MICROSOFT'S CDM APPROACH ENABLING DIGITAL TRANSFORMATION



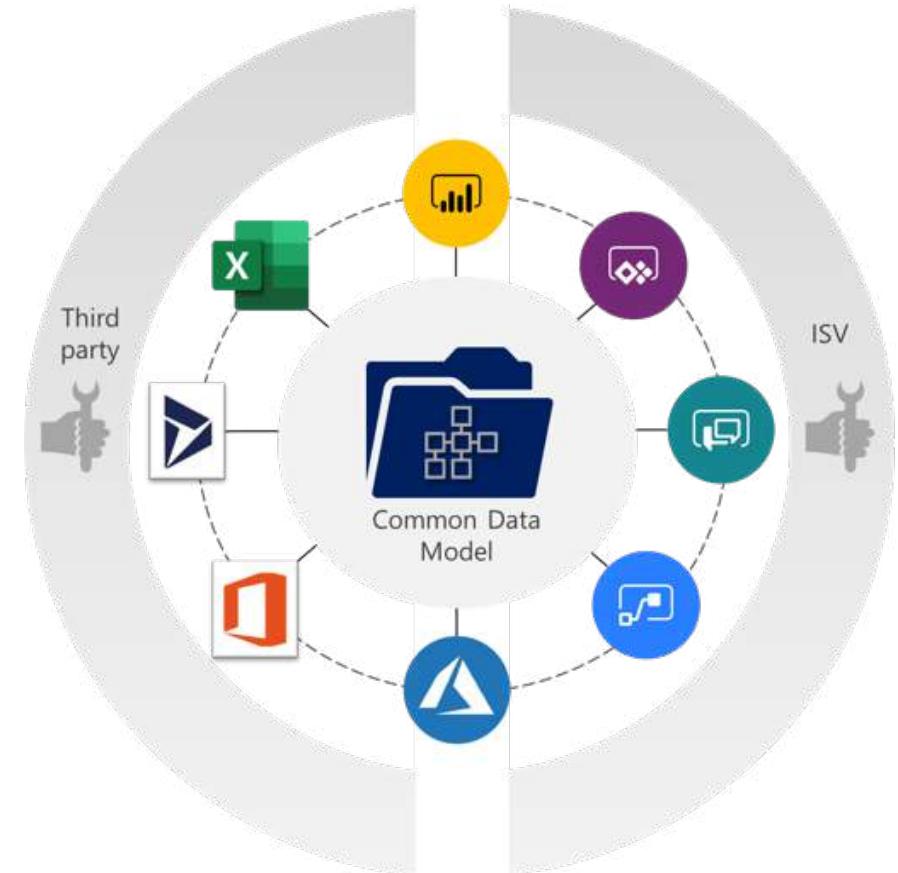
MICROSOFT'S CDM APPROACH STANDARDIZE ON DATA MEANING.



MICROSOFT'S CDM APPROACH ACROSS INDUSTRIES.

Create an **agile** and **powerful** ecosystem where **everyone** benefits from shared data meaning

-  **Automotive**
-  **Education**
-  **Financial Services**
-  **Healthcare**
-  **Manufacturing**
-  **Media**
-  **Nonprofit**
-  **Retail**
Coming Soon



FROM THEORY TO IMPLEMENTATION

PRACTICAL INSIGHTS.

Integrated Full-scale Performance Analytics



STANDARDIZED AND
CUSTOM DASHBOARDS

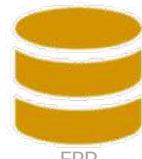


SMART ALGORITHMS / MACHINE
LEARNING / ARTIFICIAL INTELLIGENCE

Common Data Model

Data normalization and augmentation

Data integration



ERP



BMS



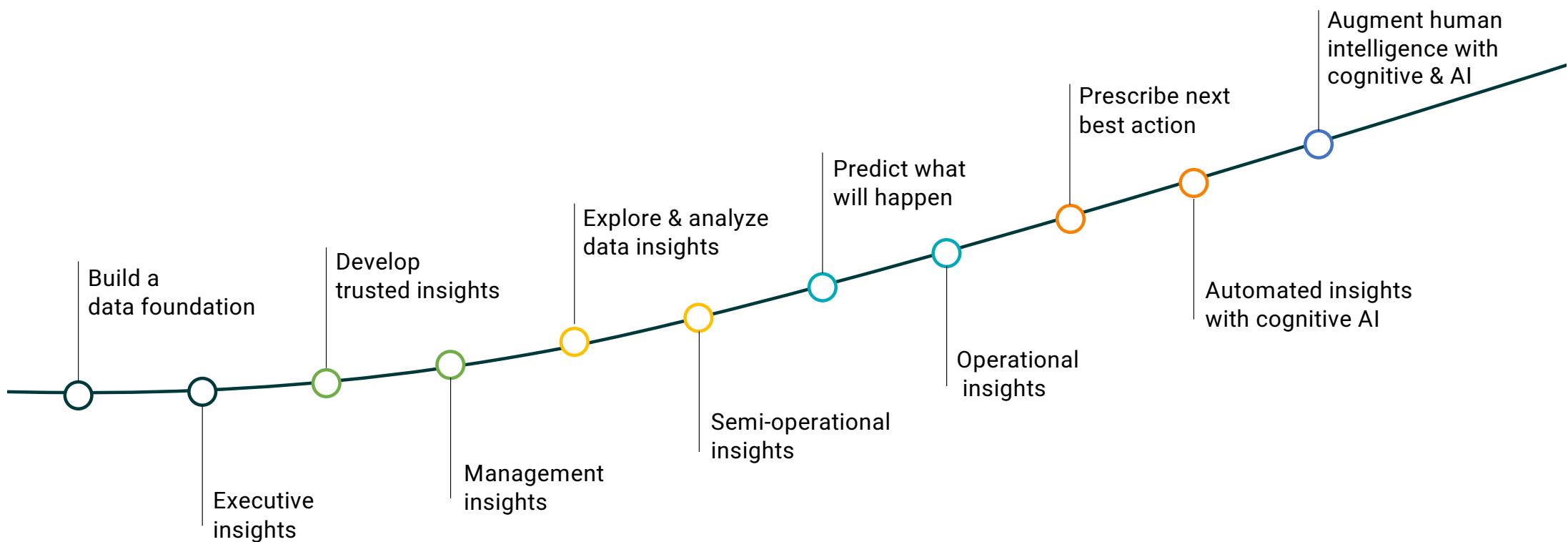
CAFМ



BIM

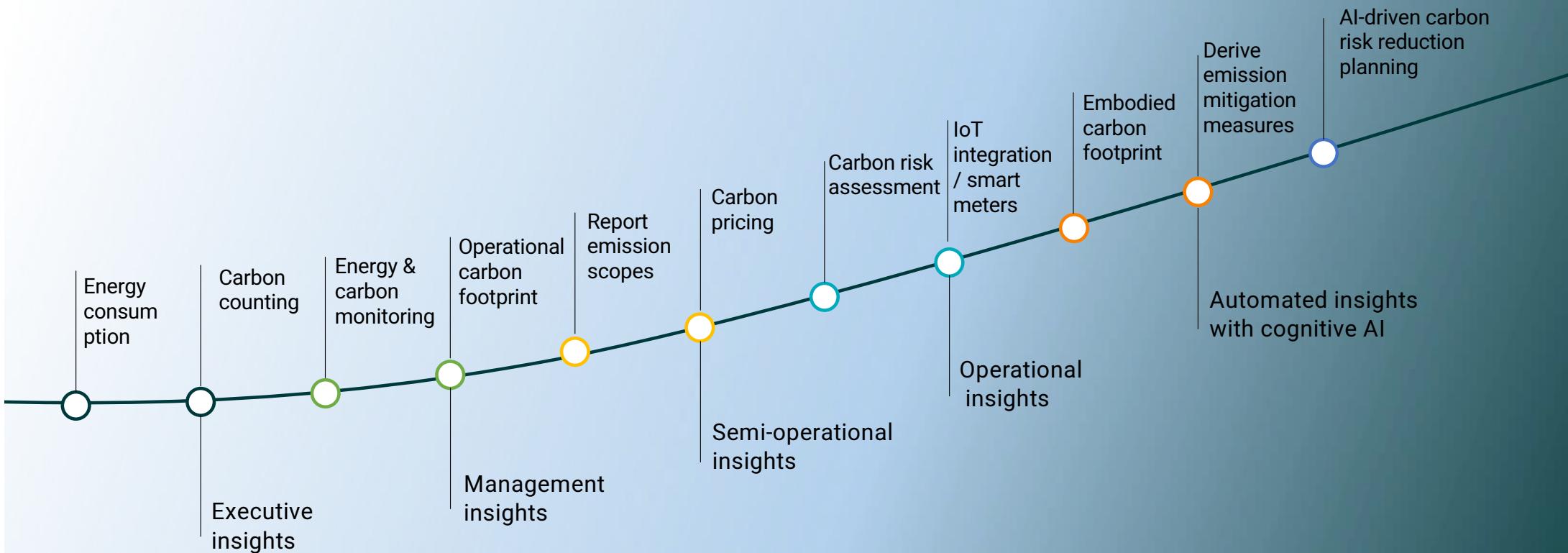


STEP BY STEP FROM A DATA FOUNDATION TO DATA INTELLIGENCE PRACTICAL INSIGHTS.

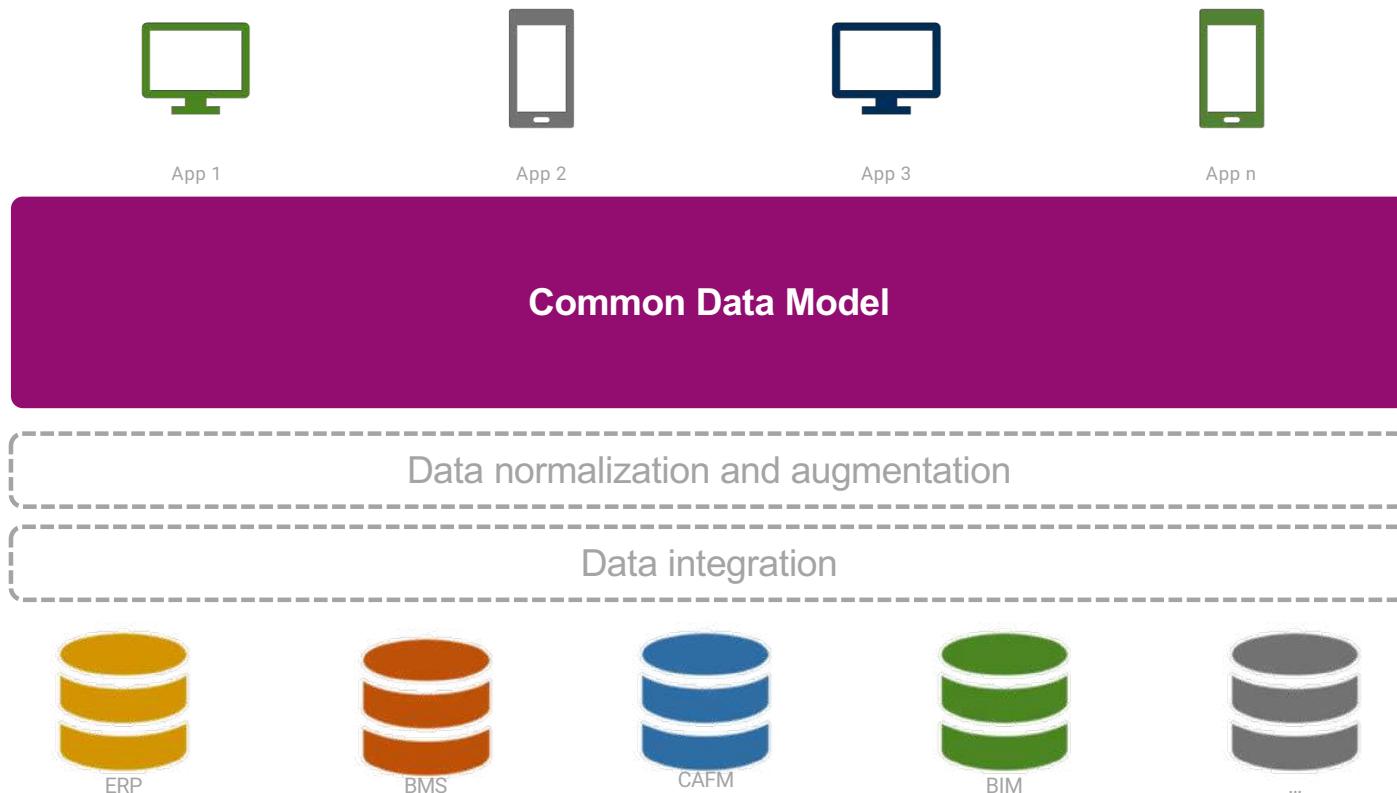


Source: EY, MIT

STEP BY STEP FROM A DATA FOUNDATION TO DATA INTELLIGENCE APPLIED TO USE CASE: SUSTAINABILITY.



AGILE APP DEVELOPMENT AND INTEGRATION BASED ON STANDARD APIs OPERATING SYSTEM FOR THE REAL ESTATE INDUSTRY.



ASSOCIATION STRUCTURE & WORKING MODE



Executive Board



- President: Rebekka Ruppel
- Vice-president & Secretary: Laura Bäumchen
- Treasurer: Utkarsh Chaturvedi
- Data Model Officer: Tobias Decker
- Data Model Officer: Andrew Knight
- PR & Communication Officer: Prof. Dr. Michael Trübestein MRICS

Working Groups



- Bi-weekly sprint review meetings per cluster
- Active working groups: Digital Building Twin and Energy & Resources
- Working groups starting in December: Portfolio- / Asset Management and Financials

JOIN US



**JOIN US IN CREATING THE COMMON
DATA MODEL FOR REAL ESTATE**

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CLUSTERS WORKSHOP: DIGITAL BUILDING TWIN AND ENERGY & RESOURCES

INTRODUCTION TO THE COMMON DATA MODEL

INTERNATIONAL
BUILDING
PERFORMANCE &
DATA
INITIATIVE



Alec Saunders
Principle PM - Business
Applications
Microsoft



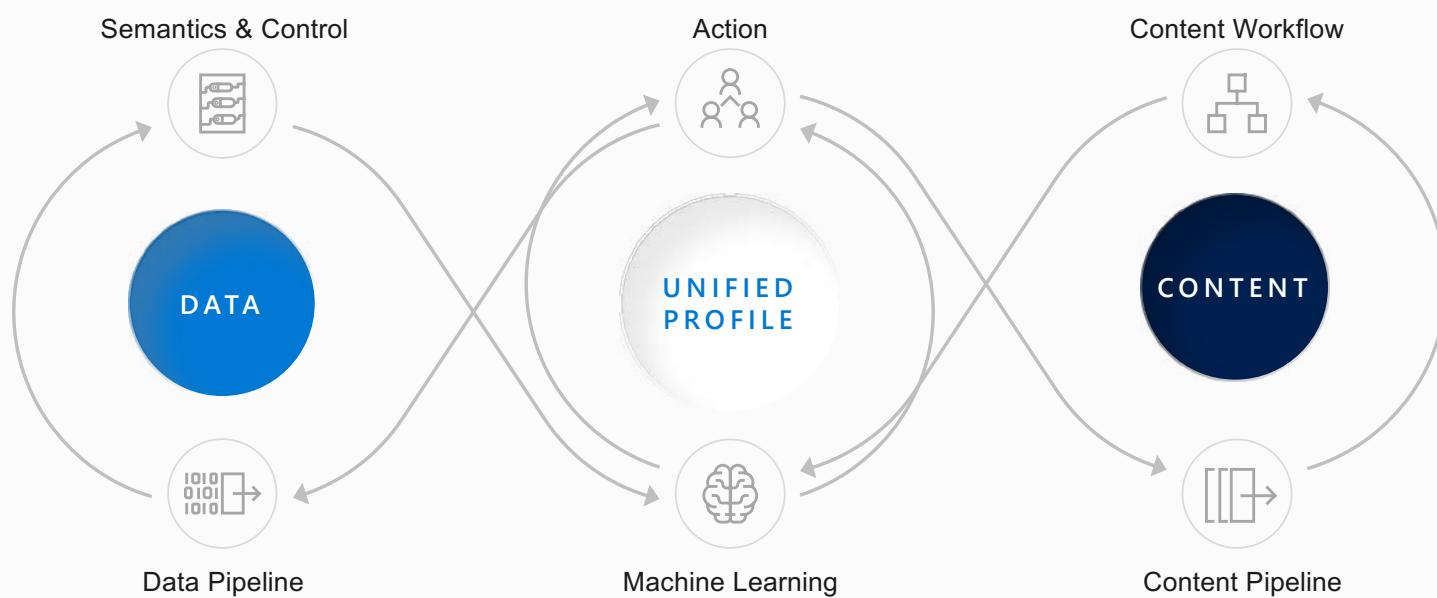
Rebekka Ruppel
CEO
pom+Deutschland



Utkarsh Chaturvedi
Product Manager
BuildingMinds



DIGITAL TRANSFORMATION REQUIRES A BROAD SPECTRUM OF CAPABILITIES.



Align and manage data sources to create a unified customer profile



Deliver and optimize personalized experiences across all channels



Employ artificial intelligence to enrich data and automate processes

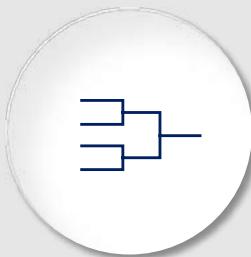


Simplify workflows across teams and streamline customer experiences



Build secure, scalable and compliant business operations

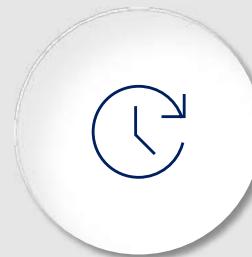
THE CHALLENGE UNLOCKING DATA.



It's in different schemas,
different metadata, different
relationships



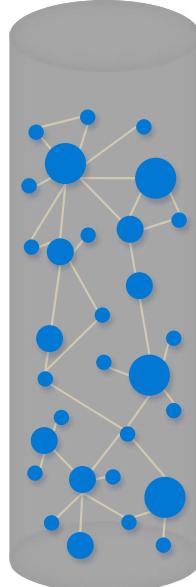
Analysis requires a huge
standardization effort



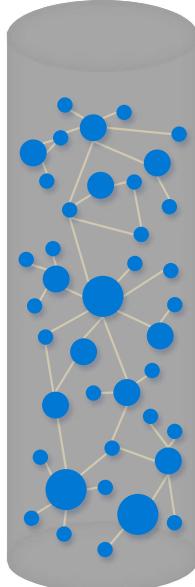
Applying large-scale & timely
ML & AI is time consuming
and expensive

DATA STORAGE WITHIN INTERNAL AND EXTERNAL SILOS.

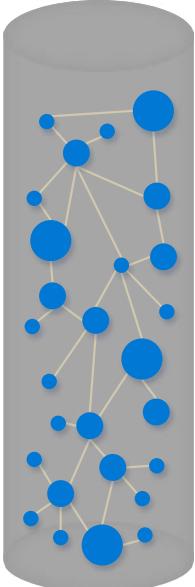
Mobile/Web



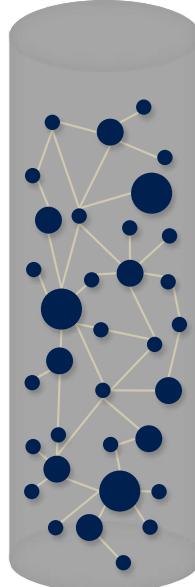
Transactions



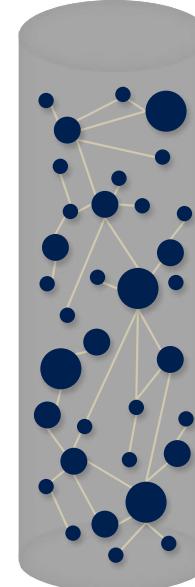
IoT



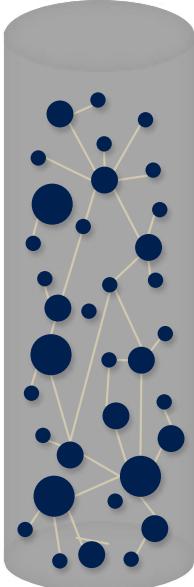
Social



Advertising



Marketplace



A UNIFORM WAY TO DESCRIBE AND UNDERSTAND MEANING OF DATA.

Mobile/Web



Transactions



IoT



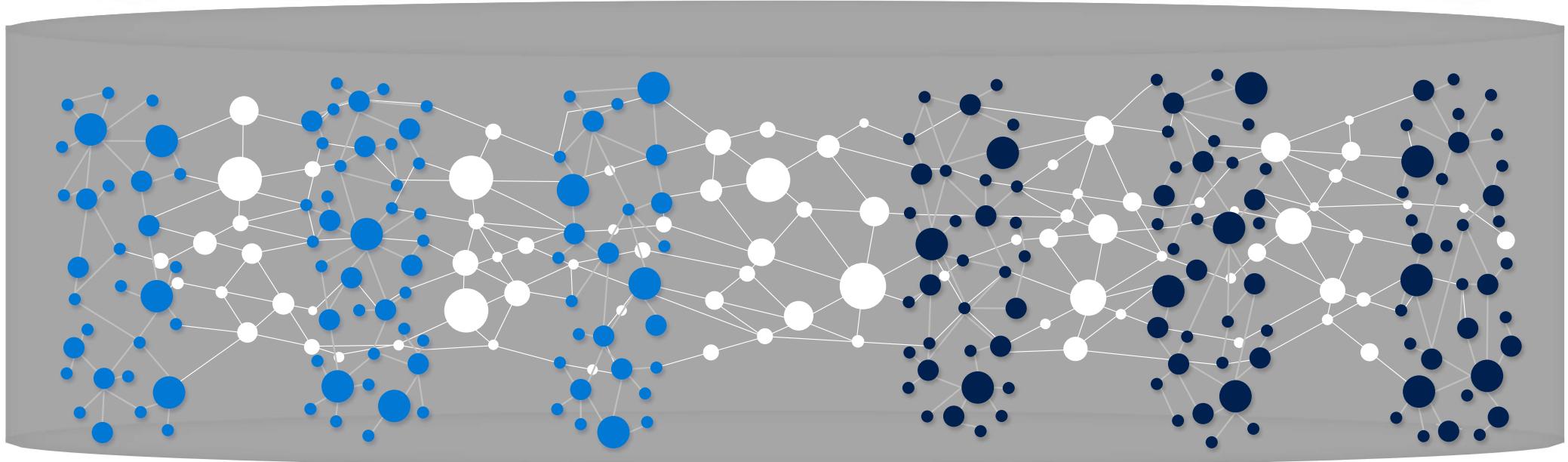
Social



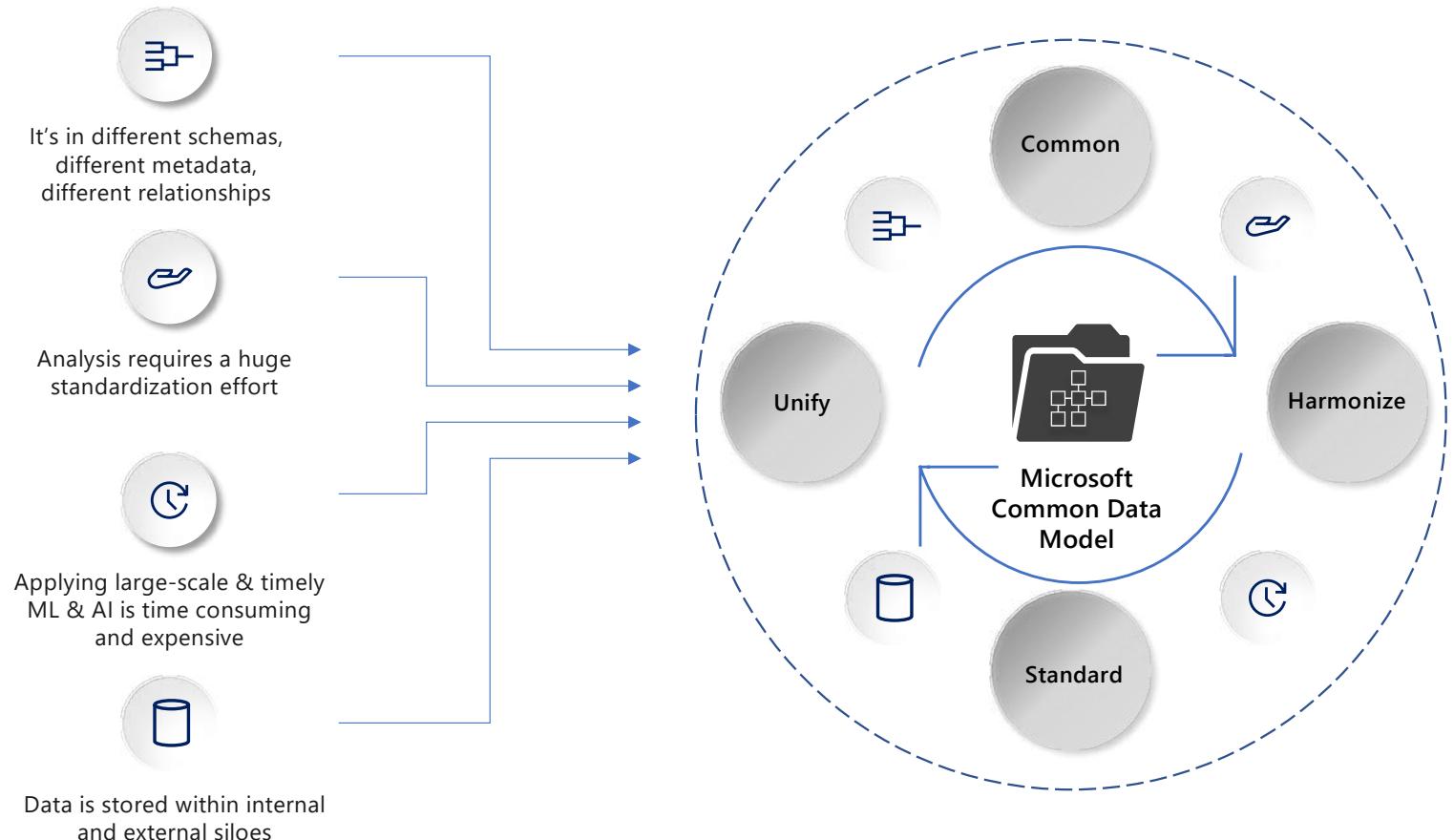
Advertising



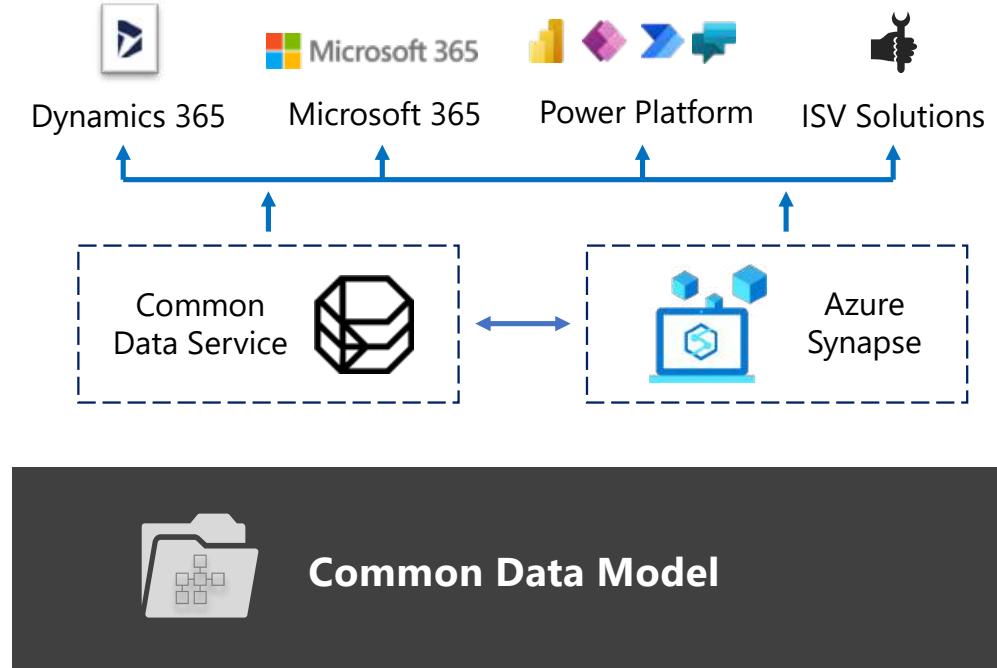
Marketplace



Common Data Model can address these challenges



Common Data Model



How to use Common Data Model for your solution



Use Common Data Service to create new perspectives using semantically described data



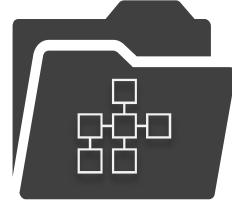
Use Azure Synapse to build powerful analytical solutions and create new meaningful insights



Use the CDM SDK and definitions to create semantically aware solutions and platforms



Microsoft Common Data Model (CDM)



A **common machine-understandable way** to
describe data with **semantic consistency** across
business, transactional, analytical and industry domains
that
drives interoperability across apps and services from the
Microsoft ecosystem, and customers to **create insights**

Microsoft Common Data Model



CDM unifies data in a **well-known schema with semantic consistency**, across business transactional domains, industry verticals.



CDM enables **machine understanding of data semantics**. Foundation for OOB AI: Customer Insights, AI Builder, etc.



Need for broad, systematic expansion beyond transactional data: delta of transactions (time series), observational data, computed insights



Enrich and maintain critical data required for **compliance (i.e. GDPR)** and **other regulatory requirements**



Enables ISVs to build **solutions at scale** with proven **industry data models** and **industry accelerators**

INTEGRATE & DISAMBIGUATE DATA WITH THE COMMON DATA MODEL

An open-sourced definition of major and enterprise business entities with semantic metadata that simplify the challenges of application development and data integration.

The common data model unifies data in a well-known schema with semantic consistency.

App developers and backend integrations can develop independently.

There's a growing collection of solutions that store data in Common Data Model format:

Power BI, Dynamics 365, PowerApps, Azure

COMMON DATA MODEL SCHEMA

DYNAMICS 365

CORE

- Account
- Activity
- Contact
- Case
- Lead
- List
- Note
- Opportunity
- Organization
- Product
- Task
- ***

DYNAMICS 365

- Account
- Appointment
- Campaign
- Case
- Marketing List
- Phone Call
- Sales Activity
- ***

SALES

- Customer
- Lead
- Opportunity
- Order
- Quotation
- Sales Order
- ShipVia
- Tab
- ***

SERVICE

- Case
- Contract
- Entitlement
- Invoice
- Service
- Service Item
- Tab
- ***

FINANCE

- Bank Account
- Budget
- Bank
- Facilities
- Glossary
- Tab
- ***

SUPPLY CHAIN

- Customer Relationship Management
- Inventory
- Production
- Procurement
- Supplier
- Tab
- ***

COMMERCE

- Channel
- Price & Discount
- Order
- Order Line
- Order Status
- Customer Profile
- Tab
- ***

MARKETING

- Account
- Contact
- Lead
- Marketing List
- Tab
- ***

WEB

- Web Click
- Web Form
- Webpage
- ***

PROJECT OPERATIONS

- Project Planning
- Project Resource
- Project Scheduling
- Project Accounting
- ***

HUMAN RESOURCES

- Department
- Job Title
- Worker
- ***

GLOBALIZATION

- Localization
- Language
- Region
- Tab
- ***

HEALTHCARE

- Facility
- Provider
- Device
- Location
- Risk Assessment
- Tab
- ***

ACCELERATOR

Definition that represents a customer or potential customer.

- Attributes
- A primary identifier
- A composite key
- Address On
- Address Off
- Open Skills
- Open Education
- Open Interest
- Hotel Group

https://aka.ms/CDMposter

COMMON DATA MODEL SCHEMA

Dynamics 365

CORE

Account
Activity
Contact
Currency
Email
Goal
Letter
Note
Owner
Organization
Position
Task
...

DYNAMICS 365

Account
Appointment
Campaign
Contact
Lead
Marketing List
Phone Call
Social Activity

SALES

Competitor
Discount
Invoice
Opportunity
Order
Order Product
Quote

SERVICE

Case
Contract
Entitlement
Resource
Service
Scheduling Group
Task

FINANCE

Main accounts
General Ledger
Budget
Bank
Fixed assets
Dimensions

SUPPLY CHAIN

Product Information Management
Procurement
Trade Agreements
Sales
Production
Warehouse and Transportation Management
Asset Management

COMMERCE

Channel
Product catalog
Prices & Discounts
Sales transaction
Payment instrument
Customer loyalty
Worker

MARKETING

Account
Contact
Event
Marketing Email
Marketing Page

Working with subject matter & industry experts, Common Data Model is expanding to include additional business entities and concepts

WEB

Link Clicks
Web Interactions
Web Page

PROJECT OPERATIONS

Project Planning
Project Resourcing
Project Time and Expense
Project Invoicing
Project Accounting

HUMAN RESOURCES

Department
Job Positions
Worker

GLOBALIZATION

Tax determination and calculation
E-invoicing & real time reporting
Payment formats
Tax and audit reports
Business documents
Fiscal integrations for Retail

HEALTHCARE

Patient
Practitioner
Device
Care Plan
Risk Assessment
Medication
Procedure
Encounter
Episode of Care

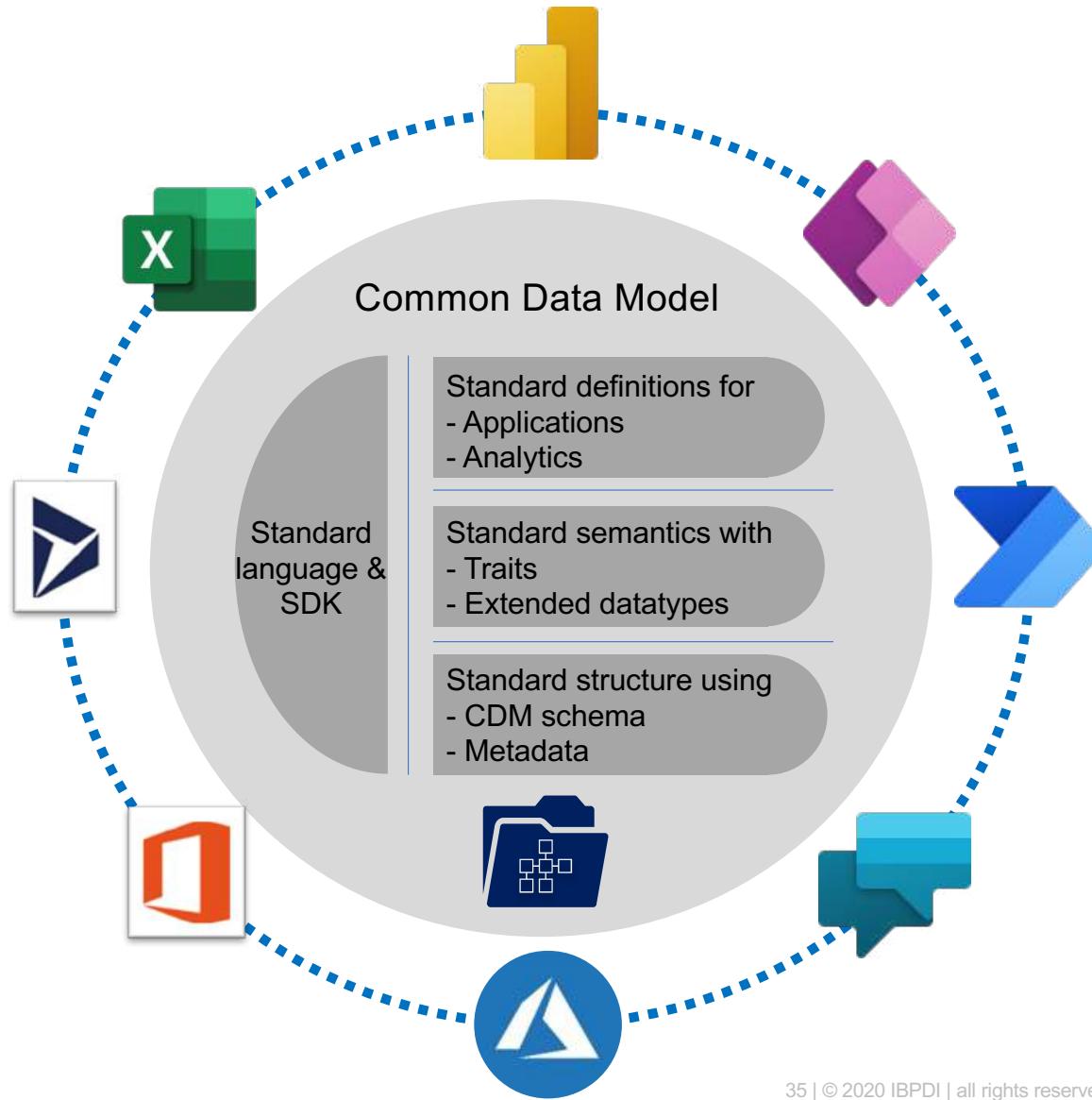
Account:

Business that represents a customer or potential customer.

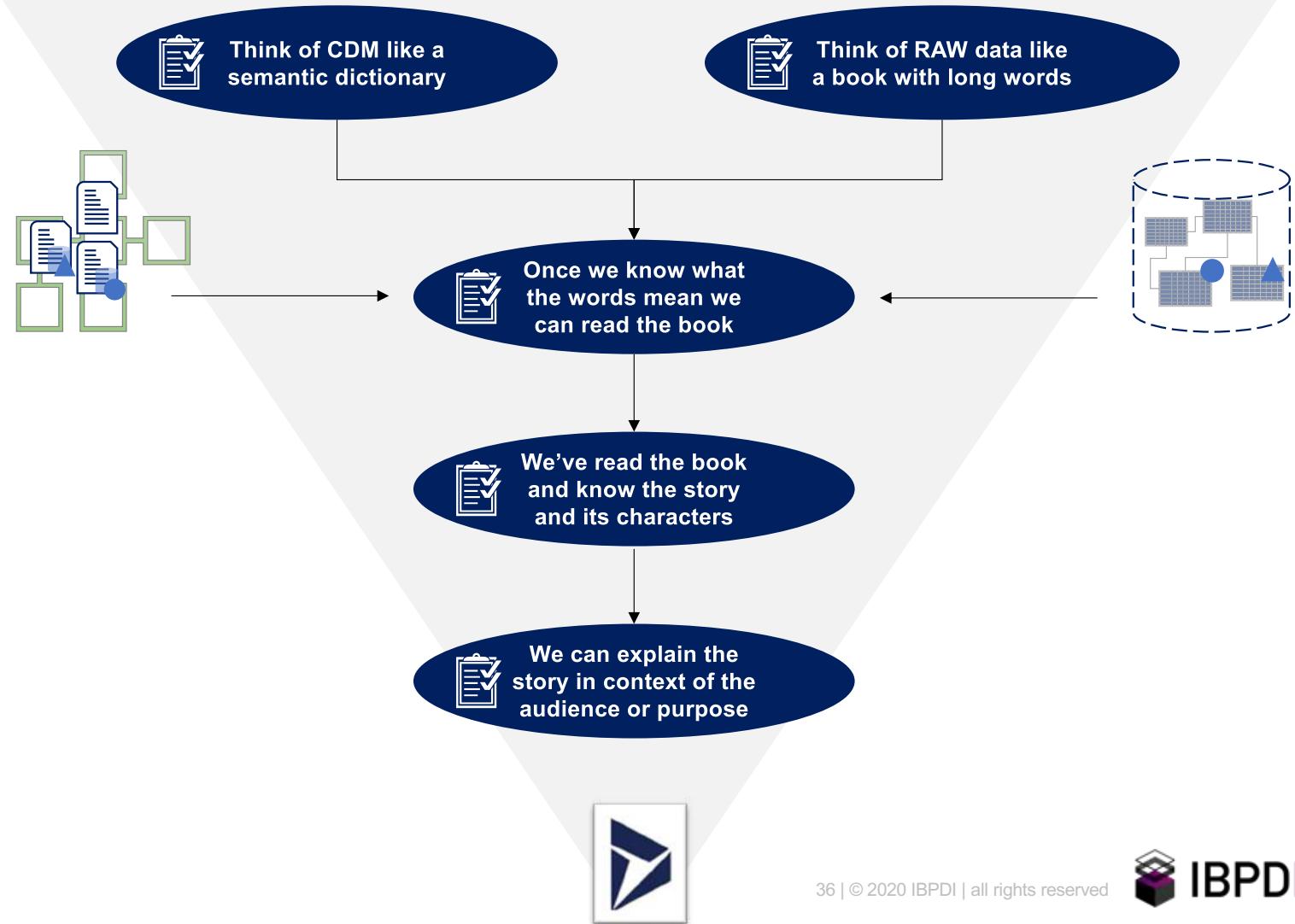
Attributes:

- accountNumber
- accountRatingCode
- createdOn
- creditLimit
- openDeals
- openRevenue
- territoryId
- hotelGroup
- ...

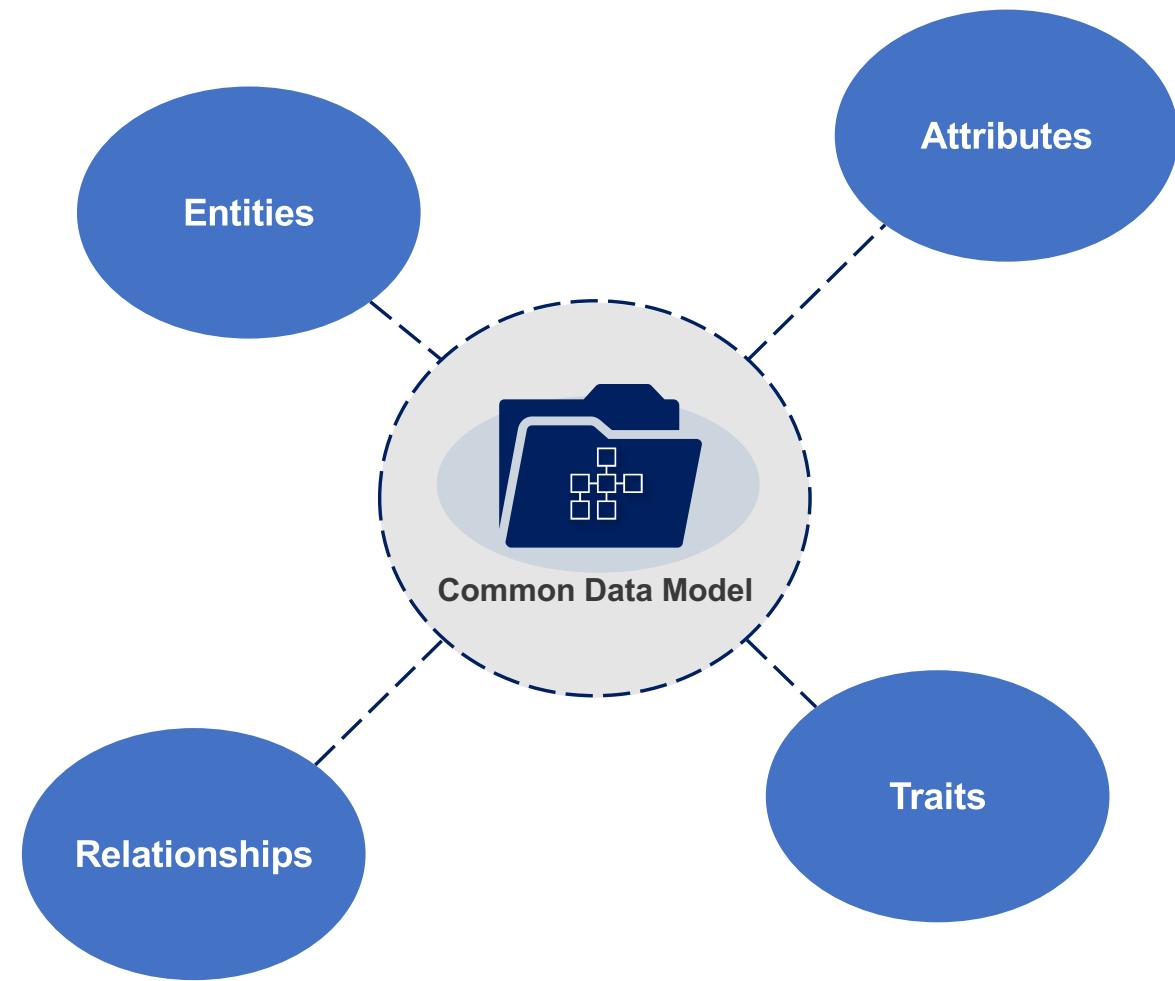
Create an
agile and
powerful
ecosystem
where
everyone
benefits from
shared data
meaning



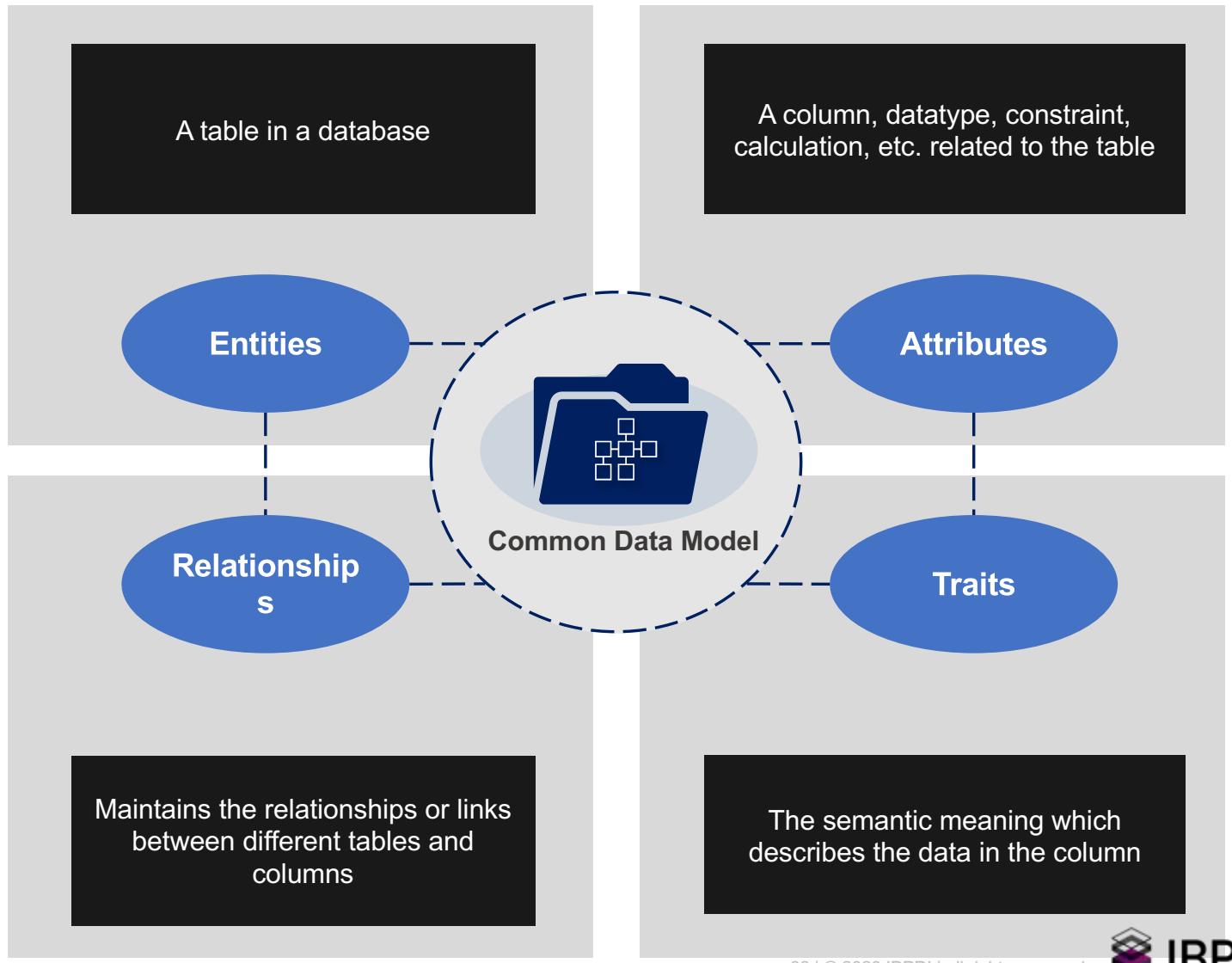
Think of CDM
as a semantic
dictionary that
explains the
data



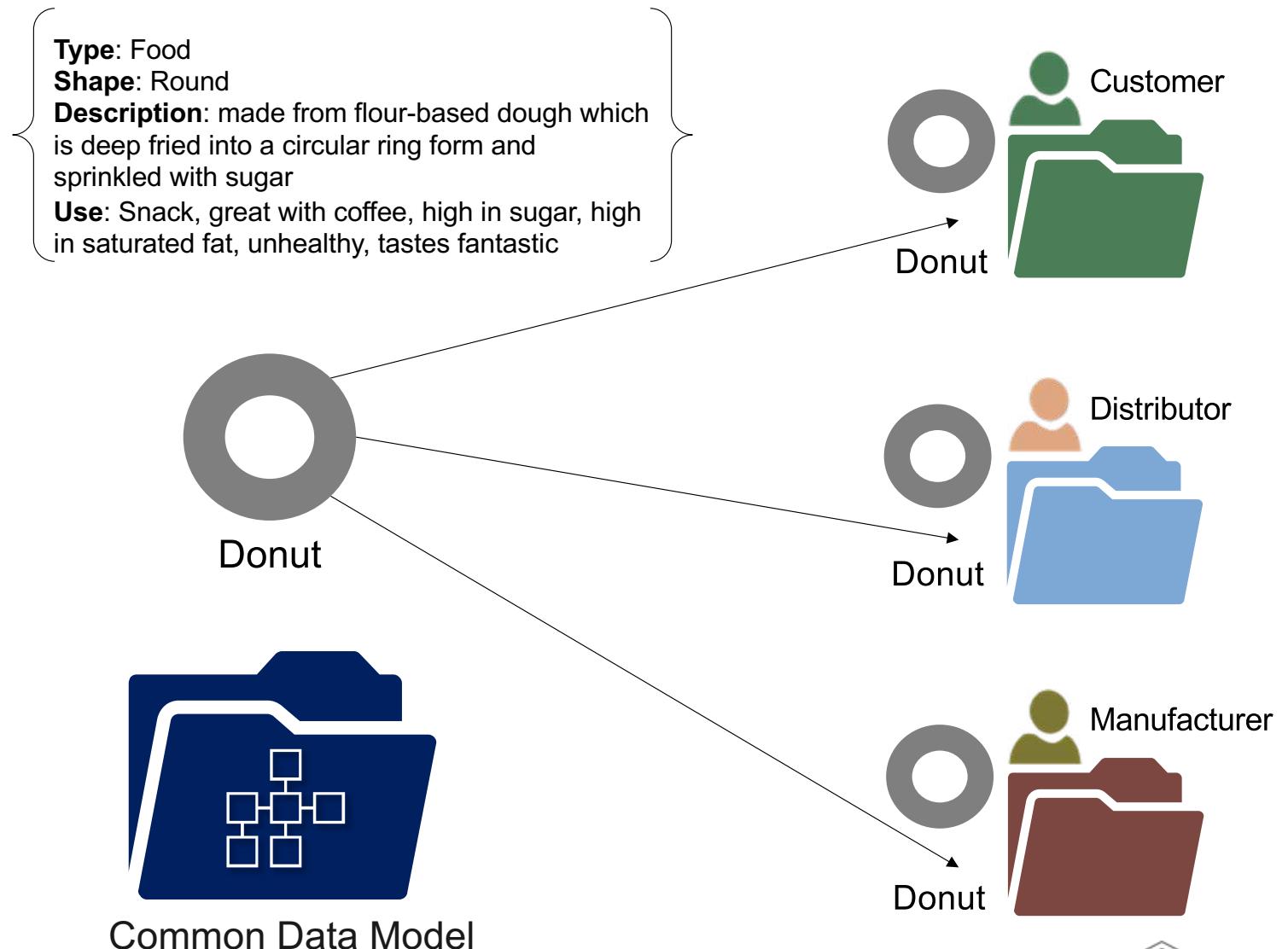
Main elements of Common Data Model definitions



Relational understanding



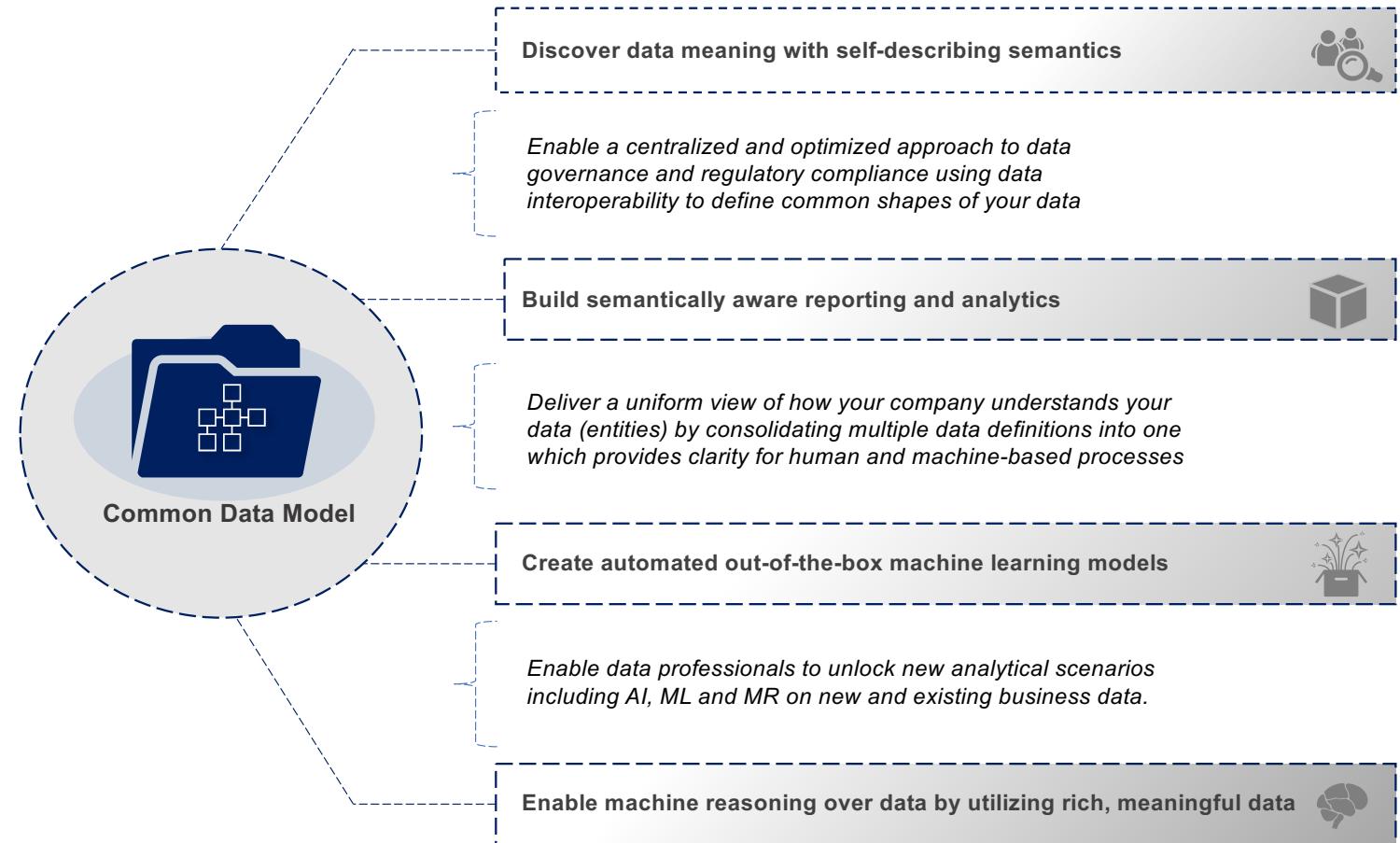
Semantic
standards
enable
everybody to
collaborate
over data



Create rich metadata



Unlocking analytics at scale



Boost productivity with increased data integration capability

Share and exchange well-described data
with customers and partners

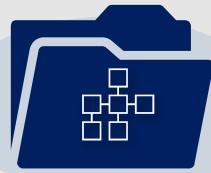


Increase productivity and reduce costs
with machine-readable data definitions



10 1 1 0 1 0 1 0 1

Align common and shared definitions
for heterogenous, unified data

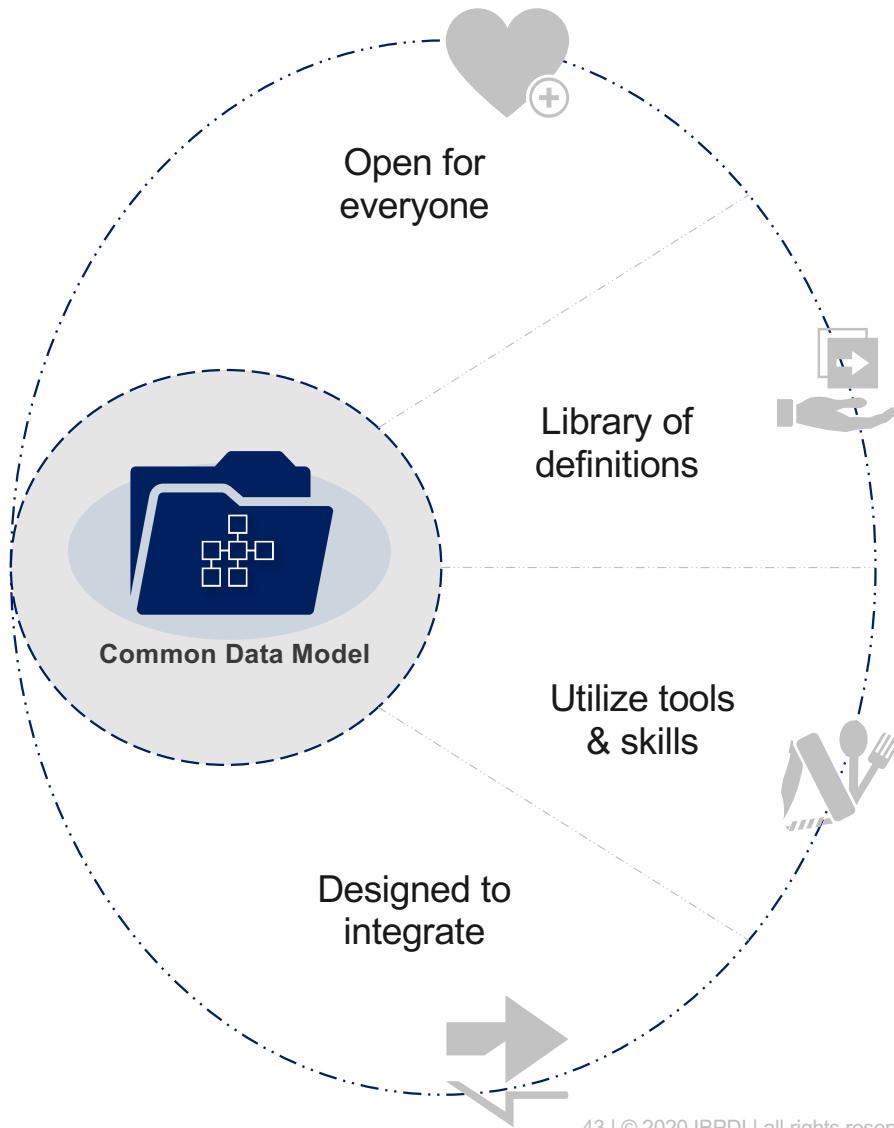


Common Data Model

Leverage out-of-the-box industry accelerators
to deliver industry-focused apps and solutions



Utilize a wealth of **open-source** assets

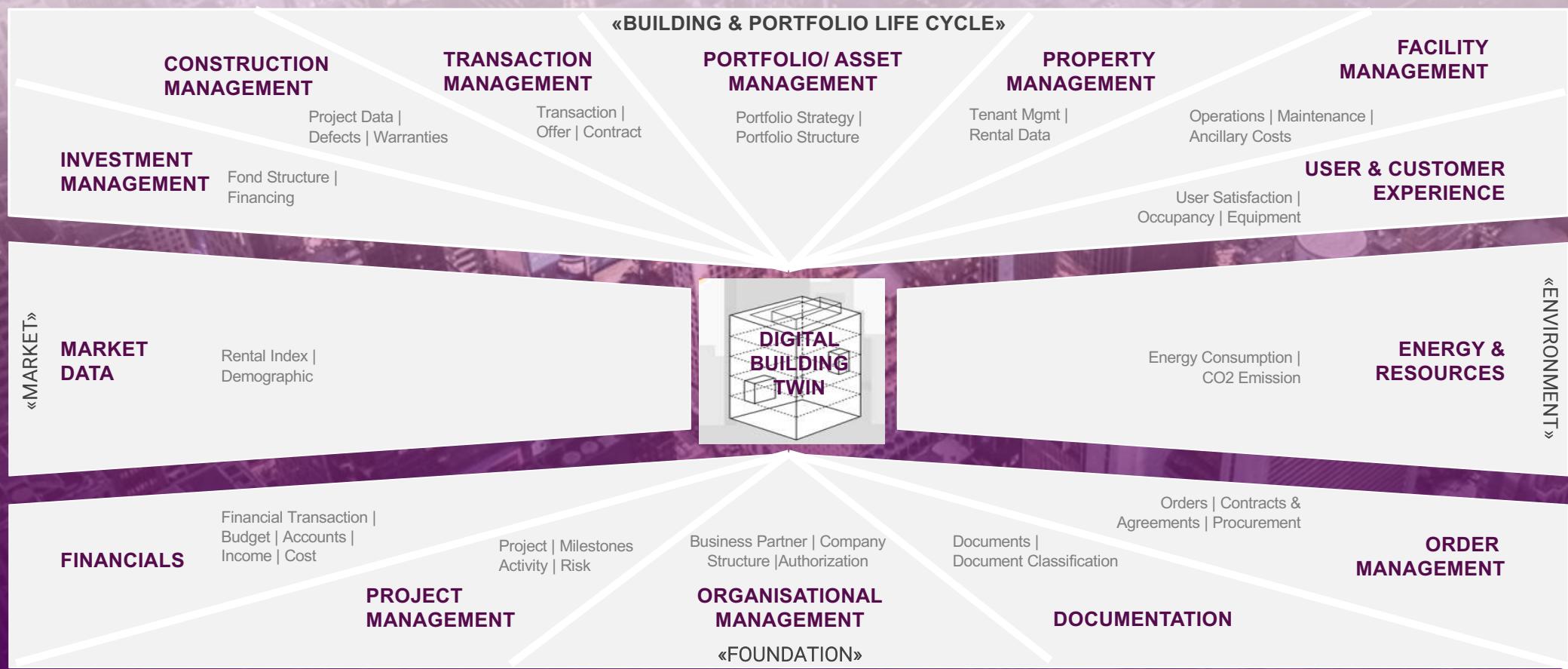


BUILDING THE FUTURE STANDARD

INTERNATIONAL BUILDING PERFORMANCE & DATA INITIATIVE

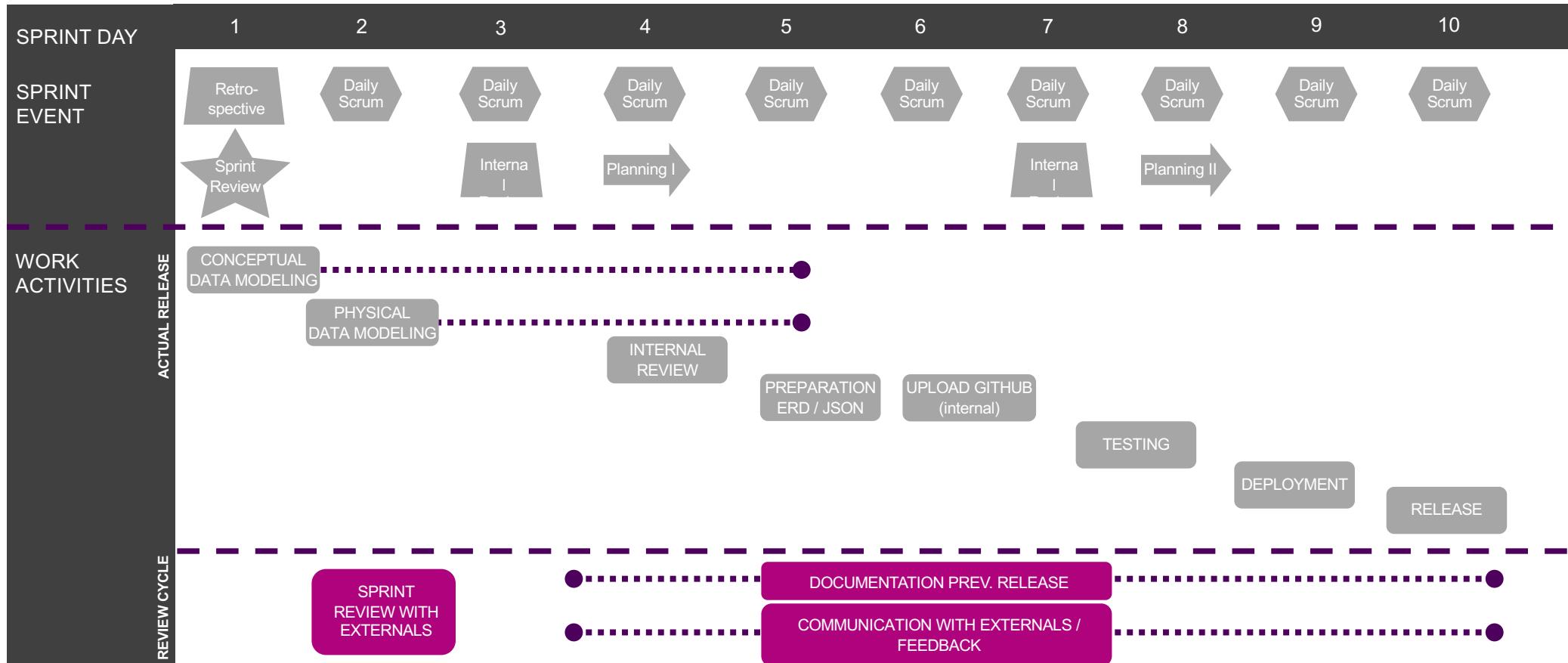


THE COMMON DATA MODEL FOR REAL ESTATE.



CDM AGILE DEVELOPMENT PROCESS

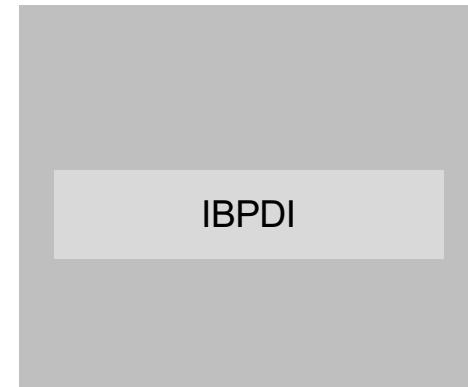
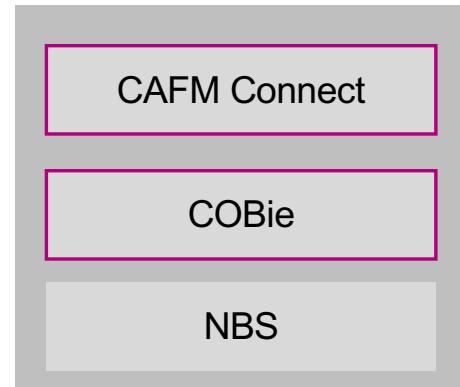
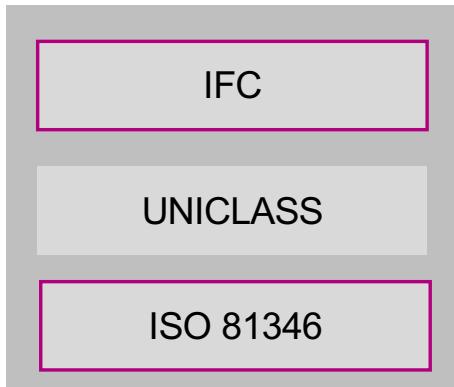
AGILE WORKING MODE, DIRECT FEEDBACK.



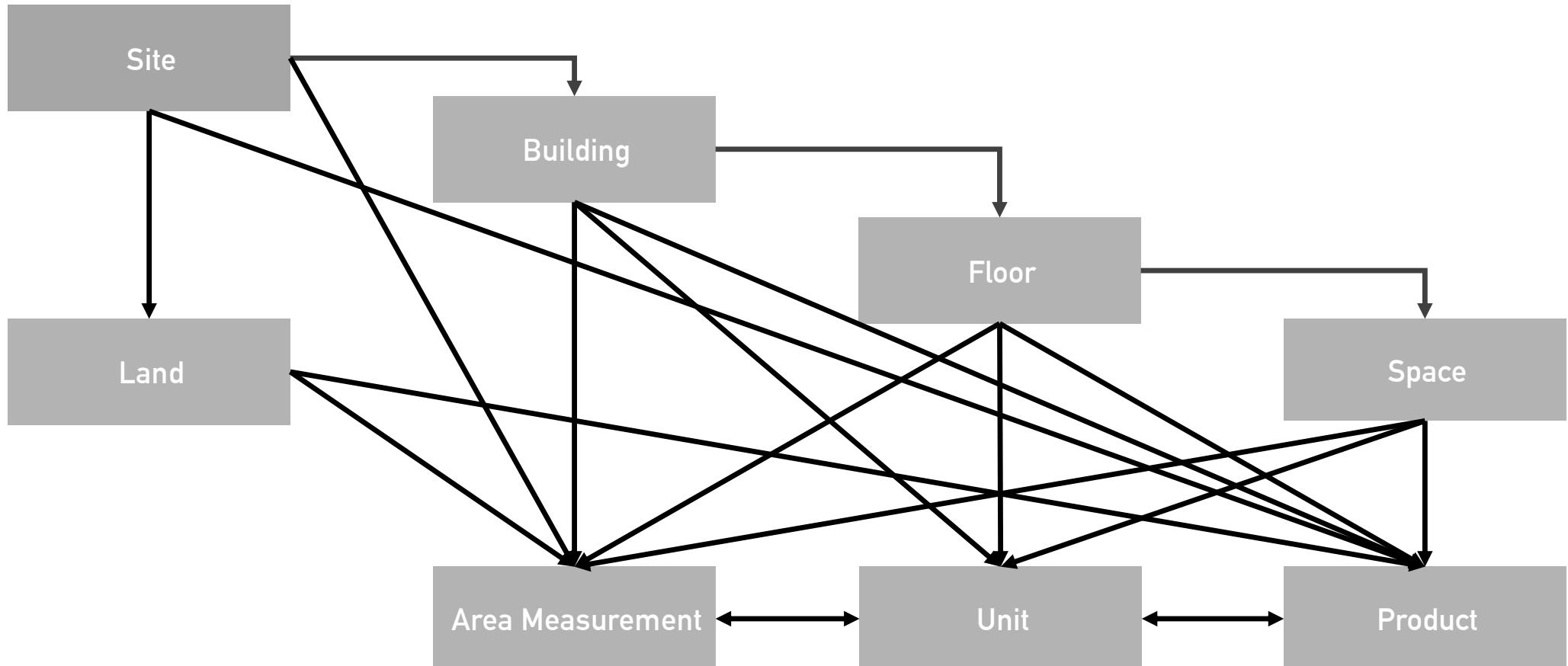
DIGITAL BUILDING TWIN CLUSTER RESULTS.



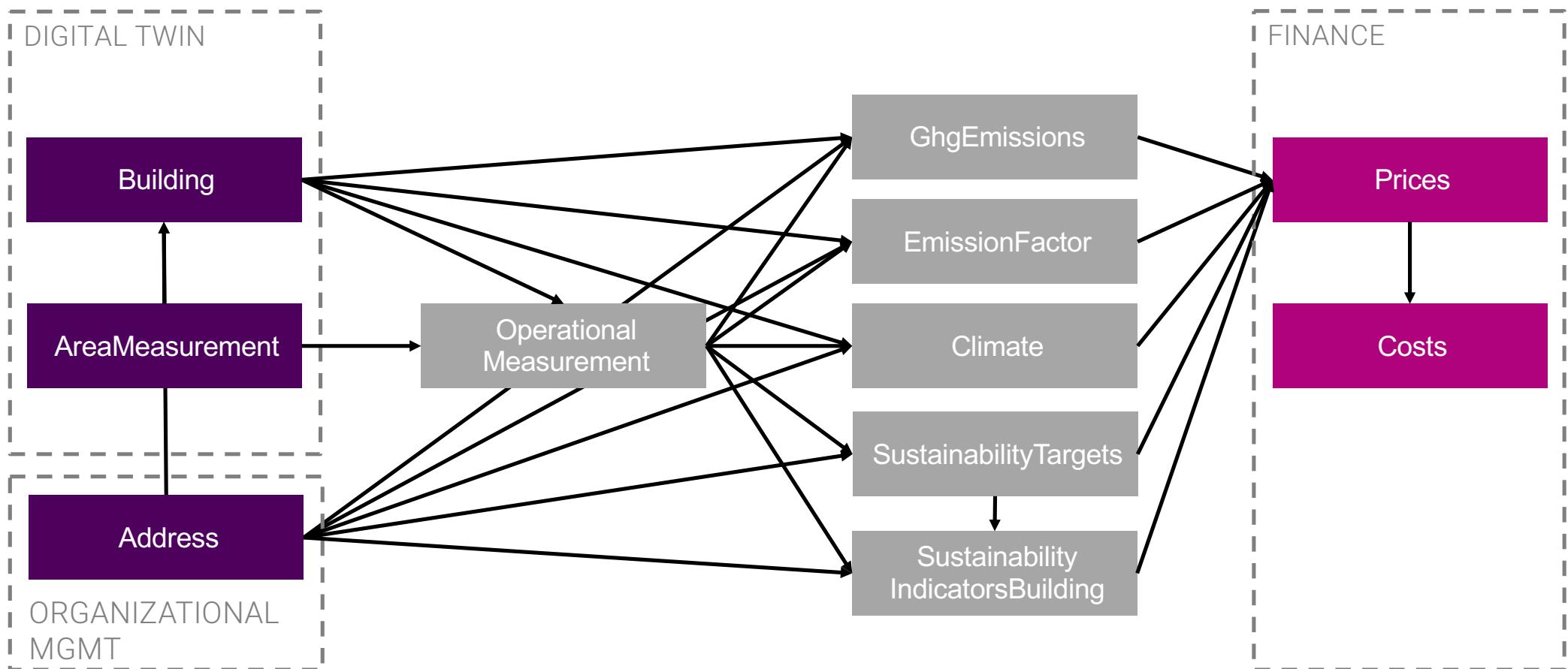
RELEVANT STANDARDS



DIGITAL BUILDING TWIN CLUSTER RESULTS.



ENERGY & RESOURCES STRUCTURE.





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NOVEMBER 24TH & 25TH

AGENDA OUTLOOK



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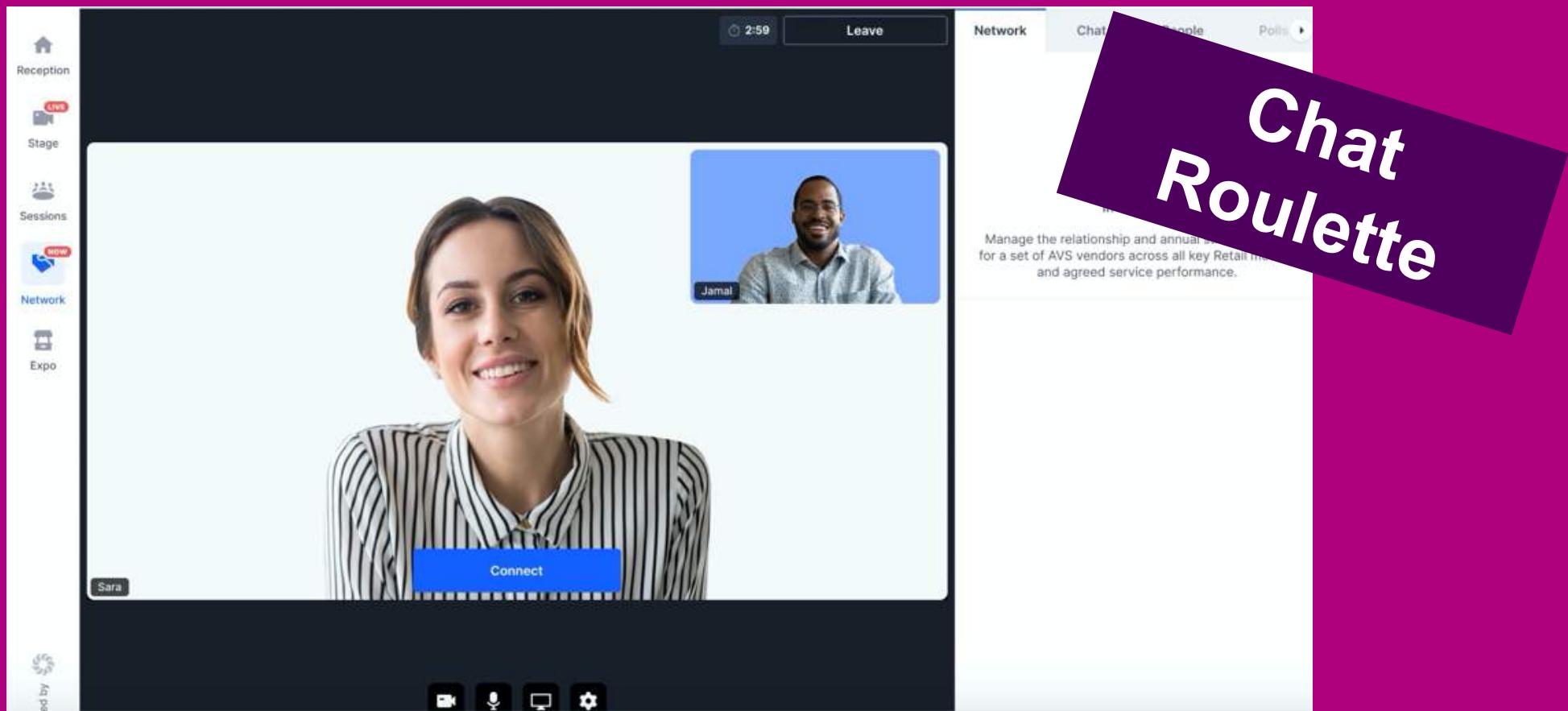
TOMORROW: 4:00PM - 5:00PM

GET TO KNOW THE IBPDI MEMBERS

TOMORROW: 5:00PM - 6:00PM

CLUSTERS WORKSHOP: DIGITAL BUILDING
TWIN AND ENERGY & RESOURCES
MODEL

GET TO KNOW THE IBPDI MEMBERS



GET TO KNOW THE IBPDI MEMBERS

INTERNATIONAL BUILDING PERFORMANCE & DATA INITIATIVE



Laura Fischer
CFO, COO, Head PM

Allianz Suisse Immobilien



Marc Heinz
CEO

vrame Consult



Verena Gibson
Project Consultant

vrame Consult

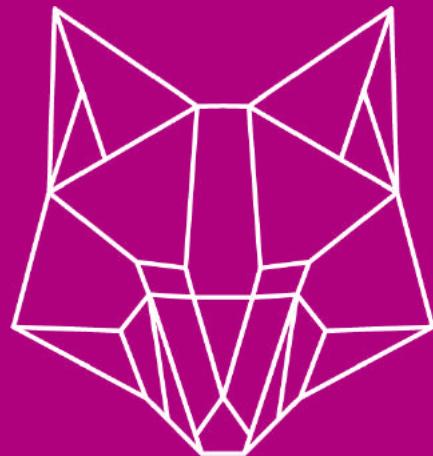


Rebekka Ruppel
CEO

pom+Deutschland



VRAME CONSULT AS CONTRIBUTOR AT IBPDI



turning
data into
information



VRAME CONSULT INSIGHTS.

vrame Consult GmbH

founded in 2015

grown to an 18-strong interdisciplinary team

Strategic and project-specific BIM consulting and
BIM implementation on the builder client side with a
focus on life-cycle information management

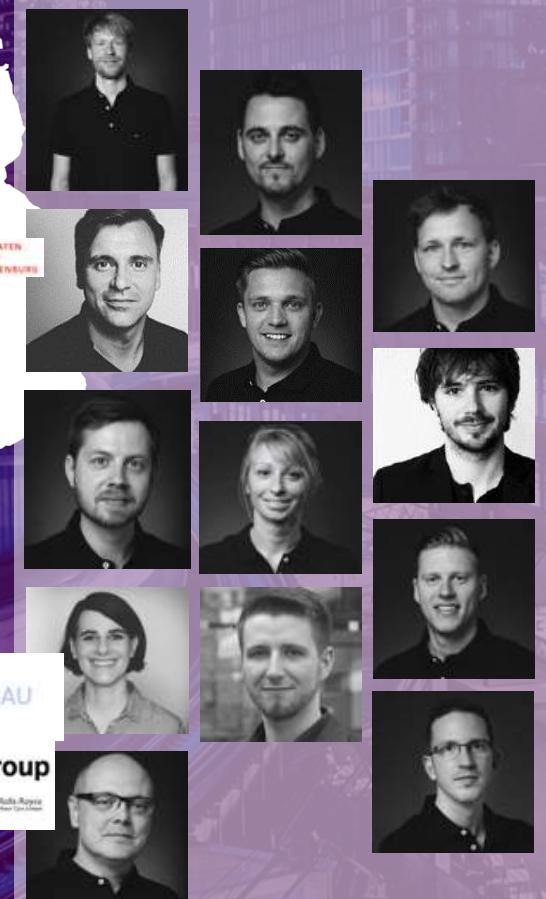
Clients:

- builders,
- project developers,
- investors,
- operators

Industries:

- building construction,
- construction,
- infrastructure,
- chem.
- institutions

Locations:
Berlin, Oldenburg, Dresden, Erfurt, Rosenheim



VRAME CONSULT INSIGHTS.

vrame Consult GmbH

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grown to an 18-strong interdisciplinary team

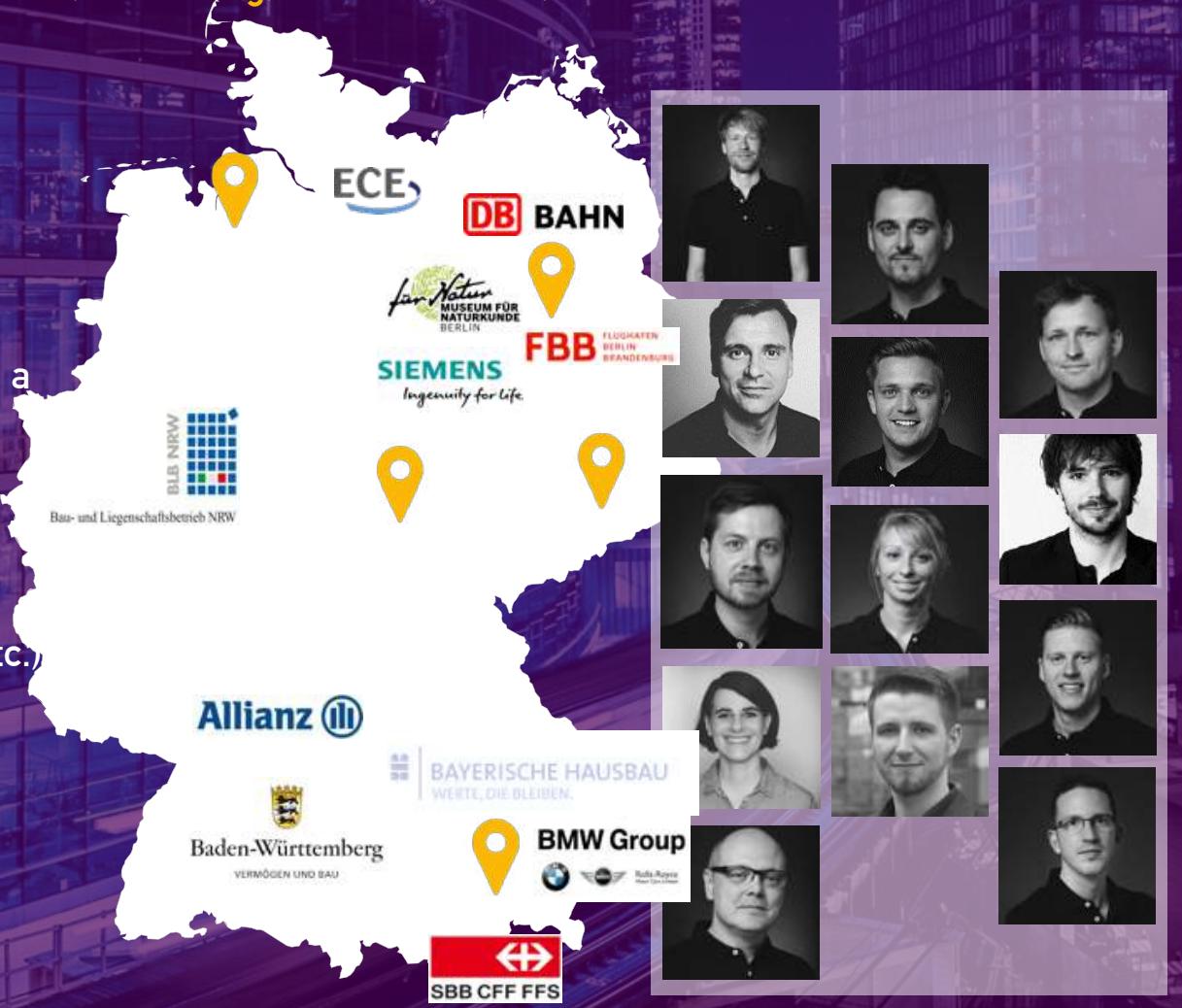
Strategic and project-specific BIM consulting and
BIM implementation on the builder client side with a
focus on life-cycle information management

Fokus:

- Development of BIM strategic
- Project BIM Setup (AIA (EIR), modeling rules, etc.)
- Advice on item designation, CDE
- BIM implementation
- BIM management

Locations:

Berlin, Oldenburg, Dresden, Erfurt, Rosenheim

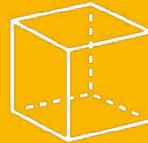


VRAME CONSULT

WHAT ARE THE CHALLENGES OF BIM IMPLEMENTATION AND DIGITALIZATION IN THE REAL ESTATE INDUSTRY?



How can we turn data into information?



What's about

Building
Information
Modeling (BIM)

What's about

BIM-/ Information-
Management

What's about

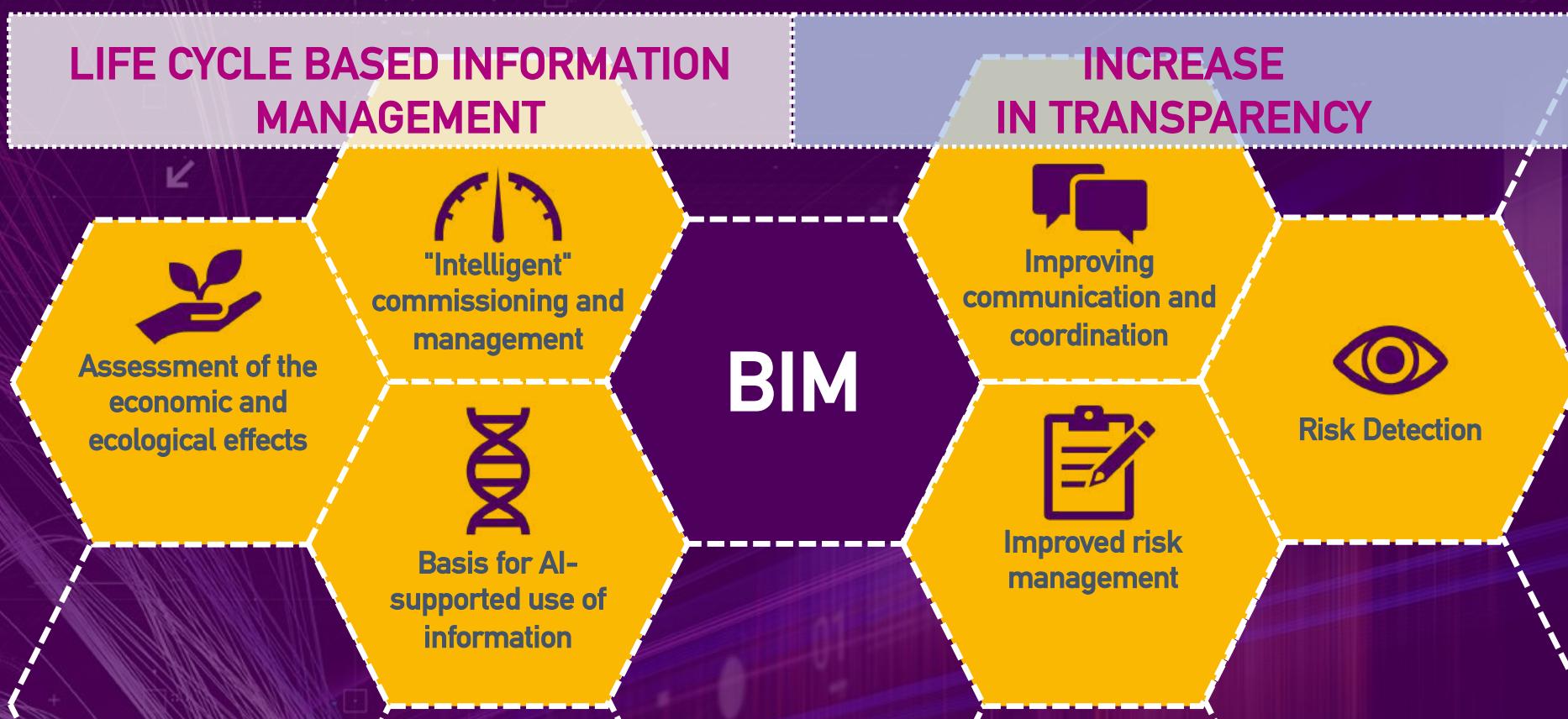
Stakeholder-
Management

What's about

Using information in
Cross-Platforms

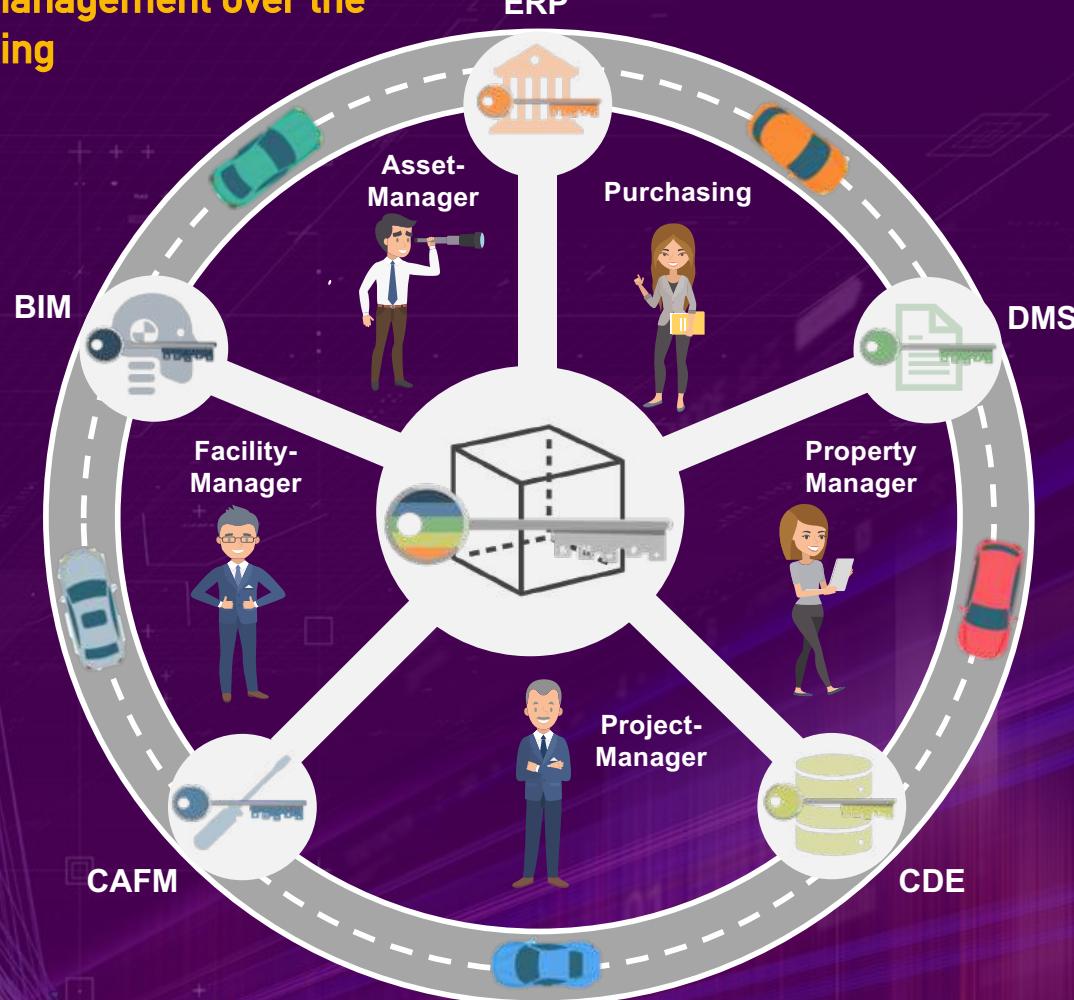
BIM and Digitalisation in the real estate industry

Potential benefits for building owners through BIM



Life cycle information management

Structured information management over the entire life cycle of a building



A unique key (information scheme) must be used to make the information usable regardless of the source and target system. A common language area ("master key") is required for this.

Overview - Information management in a CDE

Overview of the application of the information scheme



COMMON INFORMATION STRUCTURE



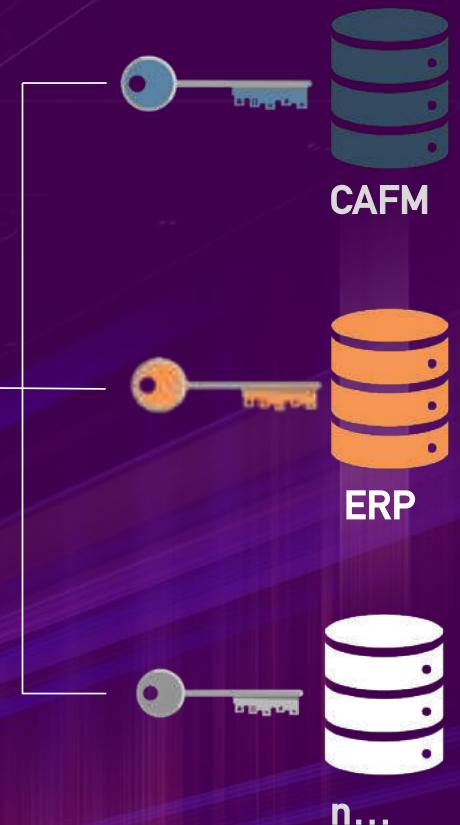
Project information

- Project oriented
- Cooperation in the project team
- Implementation of standard processes
- Sorting and structuring the files



Operator information

- Data provision
- Common Data Model



Implementation of maintenance-relevant information

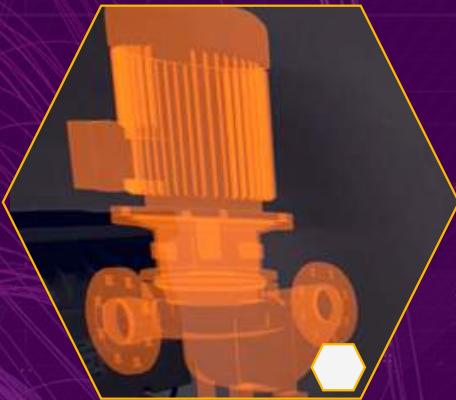
Definition of the information scheme and its application for those involved in planning



Aims for a life cycle information management

For Obtain and using clearly identifiable information
you need an unique master key of your information

By using a unique master key for your
information, you can...



- 1 ... Clearly identify objects according to location, system and function
- 2 ... make objects unique and countable
- 3 ... put the objects in relation
- 4 ... link objects to documents
- 5 ... use the information in a common data model, for FM tenders, for
your maintenance, and so on...

Let's build the future standard for the real estate industry together.

Thank you
for your attention!

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turning
data into
information

ALLIANZ SUISSE IMMOBILIEN

GET TO KNOW US.

A quick intro

ALLIANZ REAL ESTATE SWITZERLAND AT A GLANCE

- > Real Estate Portfolio and Asset Manager for Allianz Suisse
- > amongst the largest **10 real estate investors** in Switzerland
- > Geographically **diversified Swiss portfolio** of around **300 assets** with a total value of **CHF 5.5 billion**
- > **60 real estate experts** covering all major parts of the value chain
- > **Head office at Allianz Tower** in Wallisellen with subsidiaries in Bern, Lausanne and Geneva



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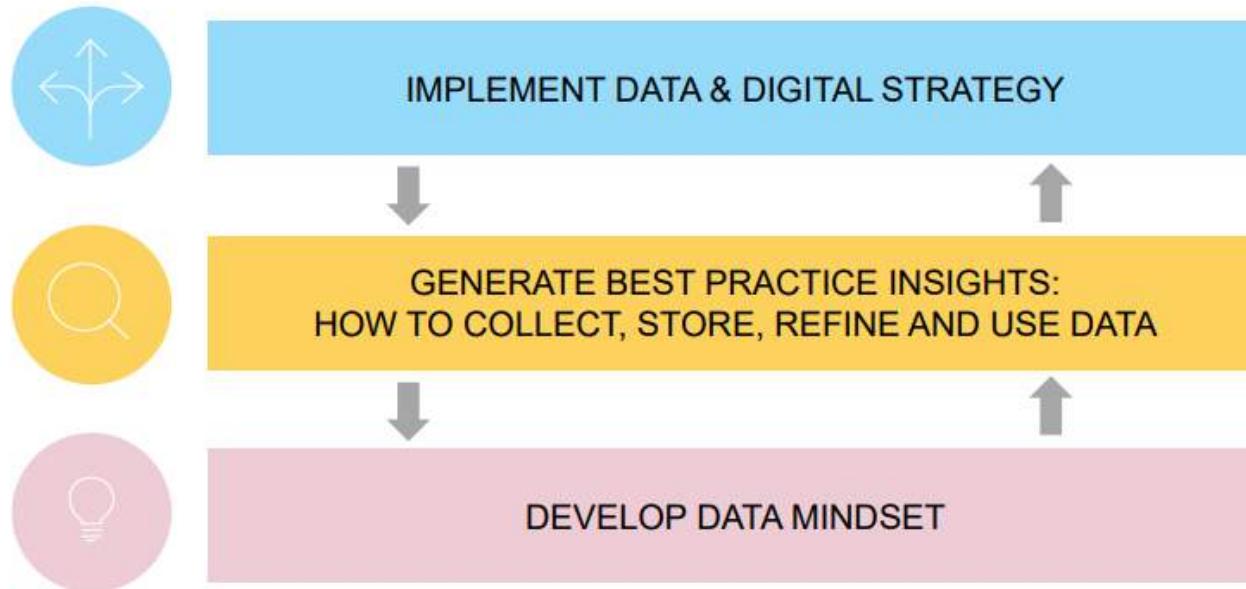
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GET TO KNOW US.

Joining IBPDI as a contributor



IBPDI AS A GREAT OPPORTUNITY TO REACH THE NEXT LEVEL WITH OUR DATA



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Rebekka Ruppel
CEO

pom+Deutschland



Utkarsh Chaturvedi
Product Manager

BuildingMinds



Dr. Jens Hirsch
Domain Expert
Sustainability
BuildingMinds

pom+

BUILDING
MINDS A stylized orange graphic of several vertical bars of increasing height, resembling a bar chart or a building's profile.



INTERNATIONAL BUILDING PERFORMANCE & DATA INITIATIVE



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