Turn
Data chaos

into

Data value

with

SAP Data Warehouse Cloud

Florian Hamon

Senior Director, Data and Analytics

Center of Excellence

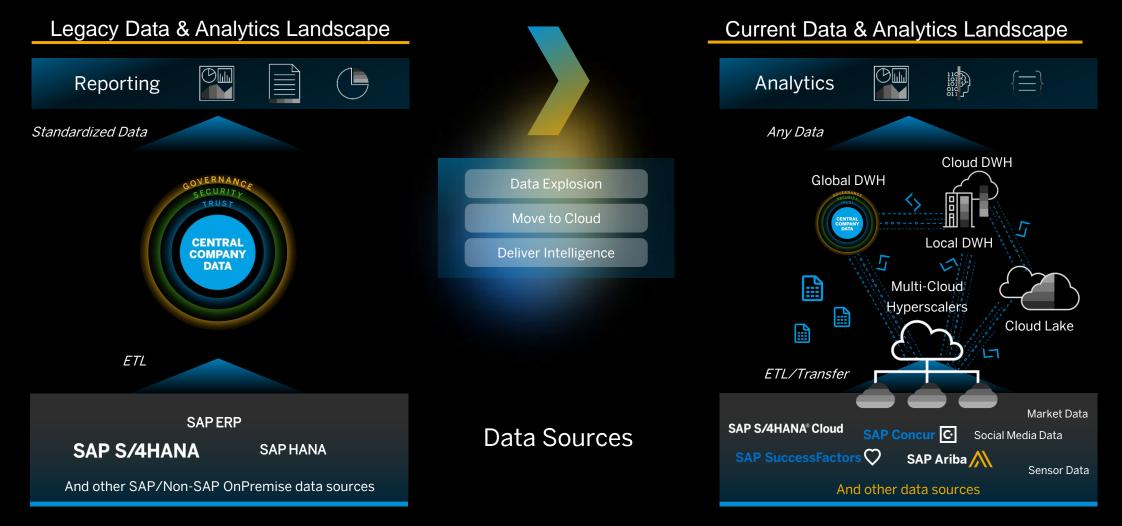Business Technology Platform
EMEA North

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Trends and Challenges in Data Management Today

Manage fragmentation, evolving stakeholders and transition to the cloud

Legacy Data & Analytics Landscape

Reporting

Standardized Data

GOVERNANCE
SECURITY
TRUST

CENTRAL COMPANY DATA

ETL

SAP ERP

SAP S/4HANA   SAP HANA

And other SAP/Non-SAP OnPremise data sources

Data Explosion

Move to Cloud

Deliver Intelligence

Data Sources

Current Data & Analytics Landscape

Analytics

Any Data

Cloud DWH

Global DWH

GOVERNANCE
SECURITY

CENTRAL COMPANY DATA

Local DWH

Multi-Cloud Hyperscalers

Cloud Lake

ETL/Transfer

SAP S/4HANA® Cloud   SAP Concur   Market Data

SAP SuccessFactors   SAP Ariba   Social Media Data

Sensor Data

And other data sources

1: Gartner Research, G00347472, The Future of the DBMS Market is Cloud, June 2019

Data Chaos

Organizations face siloed and disconnected data that lacks business context.

Application Data with Business Context **SAP**

Data Lakes

The biggest trends in Data and Analytics

All trends show data is becoming more valuable –but also more complex.

1.

Analytics and Planning Combined
The integration of planning and with analytics is an essential prerequisite for modern corporate planning and corporate management.

2.

Augmented and Predictive Capabilities
Leveraging augmented and predictive planning & forecasting is an important goal for improved and efficient future corporate planning.

3.

The Rise of the "Data Supermarket"
When it comes to handling and consuming data, more organizations opt for a "supermarket" paradigm that brings all their data together.

4.

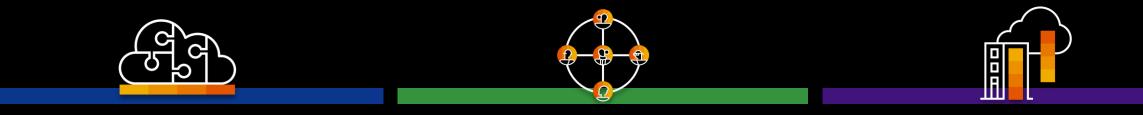**Data Culture and Governance as Enablers**
Decision makers consider a supporting data-driven culture and data governance as very important trends and enablers for self-service analytics and BI

From Data Chaos to **Data Value**

How can we increase the usage of data in the **business?**

SAP's Strategy & Direction
« Data to Value »

Driving integration, stakeholder empowerment and investment protection

Frictionless & Unified Data-to-Value Portfolio

Break down data silos by integrating with SAP source systems and external data easily & flexibly

Governed Data Access for all Stakeholders

Empower business and technical users alike to drive agility and data democratization

Flexibility & Investment Protection in Cloud Move

Drive time-to-value with pre-built business content and gradually move – retaining investments and skills

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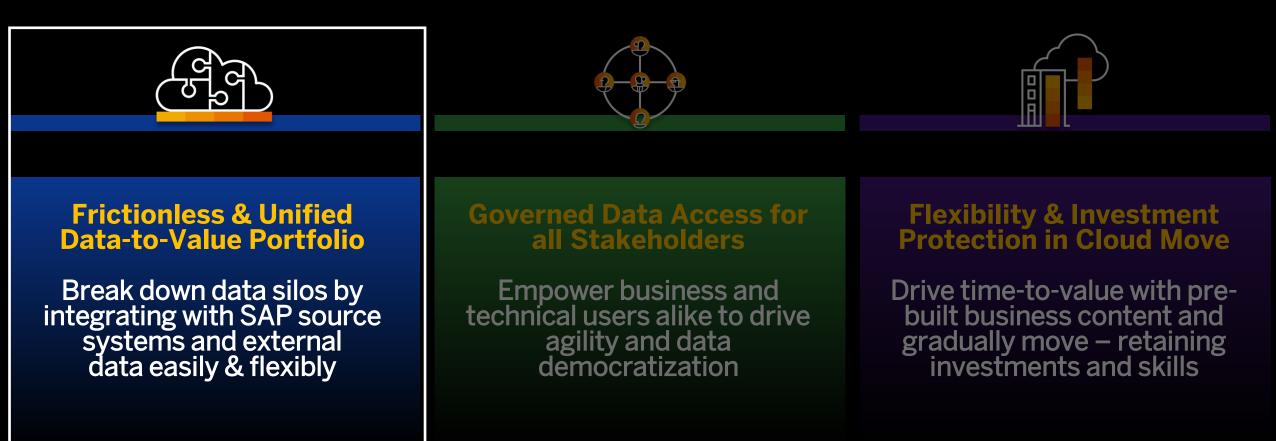## Governed Data Access for all Stakeholders

Empower business and technical users alike to drive agility and data democratization

Flexibility & Investment Protection in Cloud Move

Drive time-to-value with pre-built business content and gradually move – retaining investments and skills

SAP's Data-to-Value Portfolio is a Set of Tighly Integrated Solutions...
Unified Data & Analytics Solution Portfolio continuously growing together

SAP Analytics Cloud provides robust analytics for business intelligence and planning, aided by machine learning for quick business ready insights.
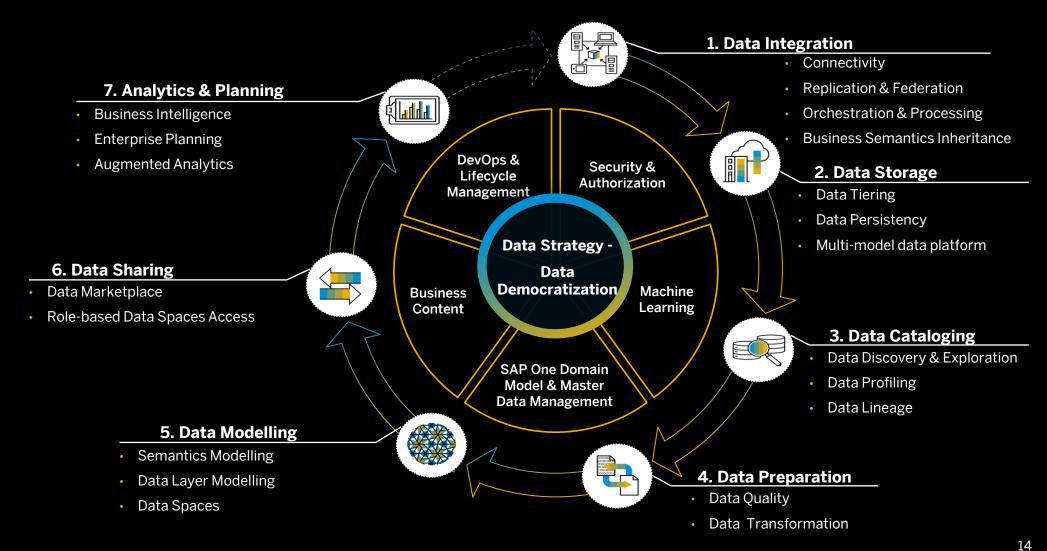
SAP Data Warehouse Cloud unifies data and analytics in a multi-cloud solution including data integration, data storage, data warehousing, and analytics capabilities with unique innovation for business user empowerment.

SAP Data Intelligence Cloud integrates, orchestrates, and enriches disjointed data into actionable business insights.
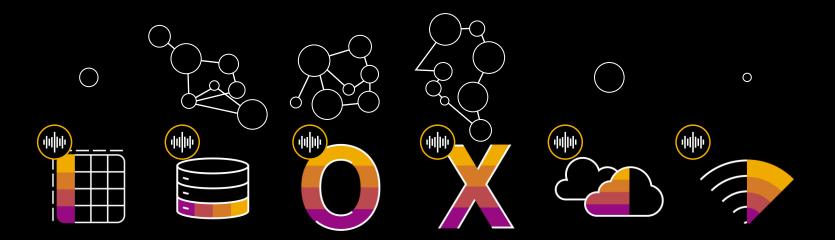
SAP HANA Cloud integrates data from across the enterprise, enabling faster decisions based on live data with its fully managed cloud database as a service.

SAP Analytics Cloud
- Business Intelligence
- Augmented Analytics
- Enterprise Planning

SAP Data Warehouse Cloud
- Data & Business Layer
- Spaces

SAP's Unified Data and Analytics

SAP HANA Cloud
- Multi-modal Engine
- Tiered Data Storage

SAP Data Intelligence Cloud
- Data Catalog
- Orchestration
- Integration
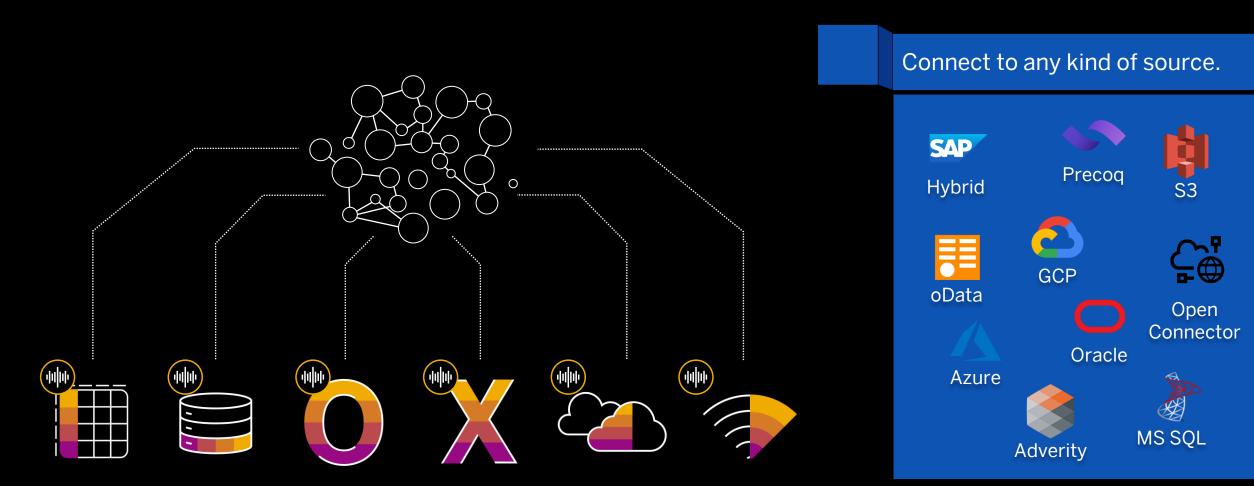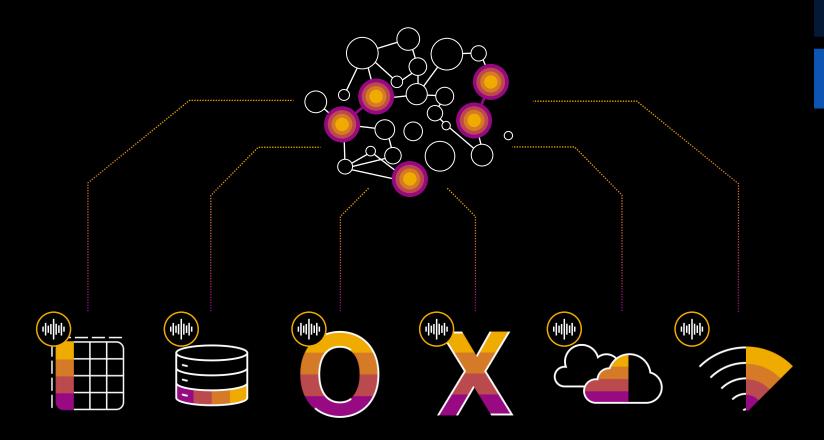
... covering the entire path to derive value out of data
From Data Integration to Analytics & Planning

7. Analytics & Planning
- Business Intelligence
- Enterprise Planning
- Augmented Analytics

6. Data Sharing
- Data Marketplace
- Role-based Data Spaces Access

5. Data Modelling
- Semantics Modelling
- Data Layer Modelling
- Data Spaces

1. Data Integration
- Connectivity
- Replication & Federation
- Orchestration & Processing
- Business Semantics Inheritance

2. Data Storage
- Data Tiering
- Data Persistency
- Multi-model data platform

3. Data Cataloging
- Data Discovery & Exploration
- Data Profiling
- Data Lineage

4. Data Preparation
- Data Quality
- Data Transformation

Central diagram:
- DevOps & Lifecycle Management
- Security & Authorization
- **Data Strategy - Data Democratization**
- Business Content
- Machine Learning
- SAP One Domain Model & Master Data Management

14

SAP Data Warehouse Cloud
the **central semantic layer** of your data landscape

Connect to any kind of source.

SAP
Hybrid

Precoq

S3

oData

GCP

Open Connector

Azure

Oracle

Adverity

MS SQL

SAP Data Warehouse Cloud
the **central semantic layer** of your data landscape

Connect to any kind of source.

Going beyond pure connectivity.

S/4 Business Content Generation

Adopt analytical modeling in SAP Data Warehouse Cloud jumpstarting new use cases.
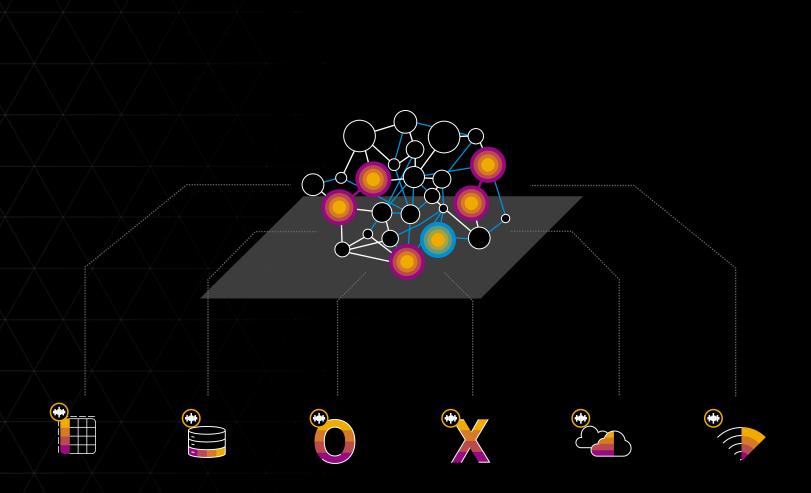
BW Model Transfer

Protect BW Investments - Translate BW Queries into SAP Data Warehouse Cloud native artifacts.

SAP's Strategy & Direction
« Data to Value »

Driving integration, stakeholder empowerment and investment protection

**Frictionless & Unified
Data-to-Value Portfolio**

Break down data silos by integrating with SAP source systems and external data easily & flexibly

Governed Data Access for all Stakeholders

Empower business and technical users alike to drive agility and data democratization

Flexibility & Investment Protection in Cloud Move

Drive time-to-value with pre-built business content and gradually move – retaining investments and skills

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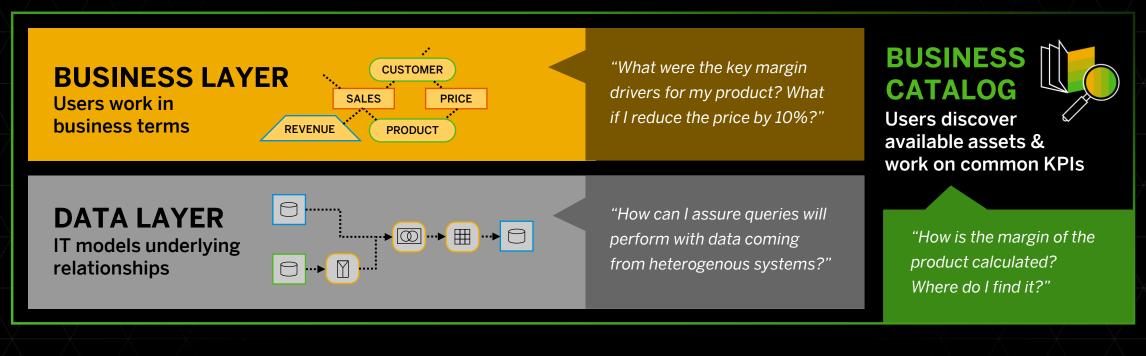
Going beyond pure connectivity.

Building one Semantic Layer.

Providing capabilities of **extensibility** for new and existing objects. While **ensuring governance and control**.

Guaranteeing accessibility and autonomy for any kind of users.

SAP Data Warehouse Cloud Modeling
Collaborate in business terms

„Unleashing the data driven business requires data democratization – with SAP Data Warehouse Cloud we empower business users to collaborate in business"

BUSINESS LAYER
Users work in business terms

CUSTOMER

SALES   PRICE

REVENUE   PRODUCT

"What were the key margin drivers for my product? What if I reduce the price by 10%?"

BUSINESS CATALOG
Users discover available assets & work on common KPIs

DATA LAYER
IT models underlying relationships

"How can I assure queries will perform with data coming from heterogenous systems?"

"How is the margin of the product calculated? Where do I find it?"

- Business entities and relationships with business language
- Model standardization and reuse for efficiency
- Independence for business users from IT

SAP Data Warehouse Cloud
the **central semantic layer** of your data landscape

Connect to any kind of source.

Going beyond pure connectivity.

Building one Semantic Layer.

Enriching Business Context.

Creating and maintaining **KPIs, Metrics, Steering Dimensions** on top of a well-defined semantic layer.

SAP Data Warehouse Cloud
the **central semantic layer** of your data landscape

Connect to any kind of source.

Going beyond pure connectivity.

Building one Semantic Layer.

Enriching Business Context.

Open for consumption.

SAC as first class citizen, but yet open for relational and analytical consumption.
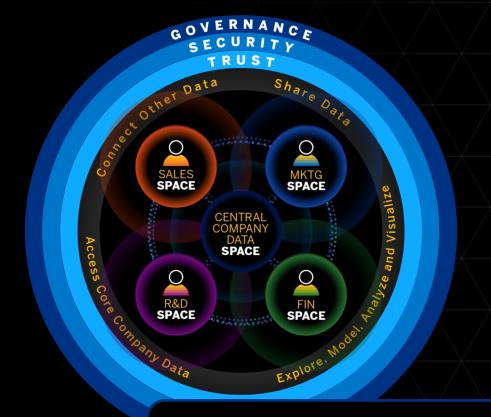
Unlock Data Insights
Unlock insights with integrity with our Spaces concept

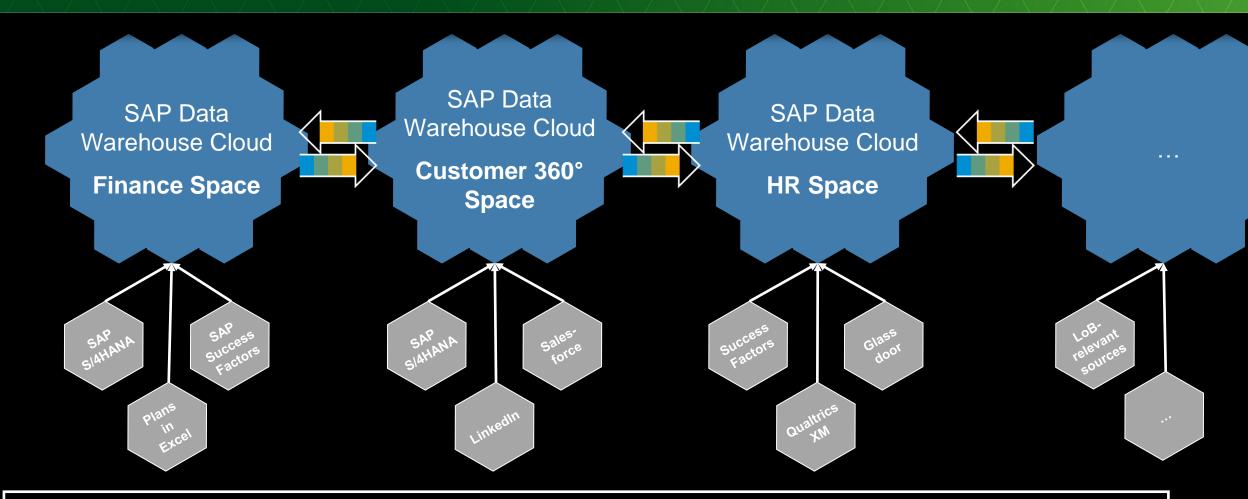*"Spaces **empower business users** and enable self-service modeling and data integration while **ensuring governance"***

SAP Data Warehouse Cloud

SALES

FINANCE

IT

SHARE

Data Model Change Requests

New Extract Requests

SHARE

GOVERNANCE SECURITY TRUST

CENTRAL COMPANY DATA

- Heavy reliance on IT
- Delays and compliance risks
- Inaccurate insights

GOVERNANCE SECURITY TRUST

Connect Other Data

Share Data

Access Core Company Data

Explore, Model, Analyze and Visualize

SALES SPACE

MKTG SPACE

CENTRAL COMPANY DATA SPACE

R&D SPACE

FIN SPACE

- Self-service data modeling for all users
- Semantic business layer
- Data sharing and collaboration
- IT governance of resources and security

Spaces
Exceeding KPIs in your business process with the right data

SAP Data Warehouse Cloud
Finance Space

SAP Data Warehouse Cloud
Customer 360° Space

SAP Data Warehouse Cloud
HR Space

...

SAP S/4HANA

SAP Success Factors

Plans in Excel

SAP S/4HANA

Sales-force

LinkedIn

Success Factors

Glass door
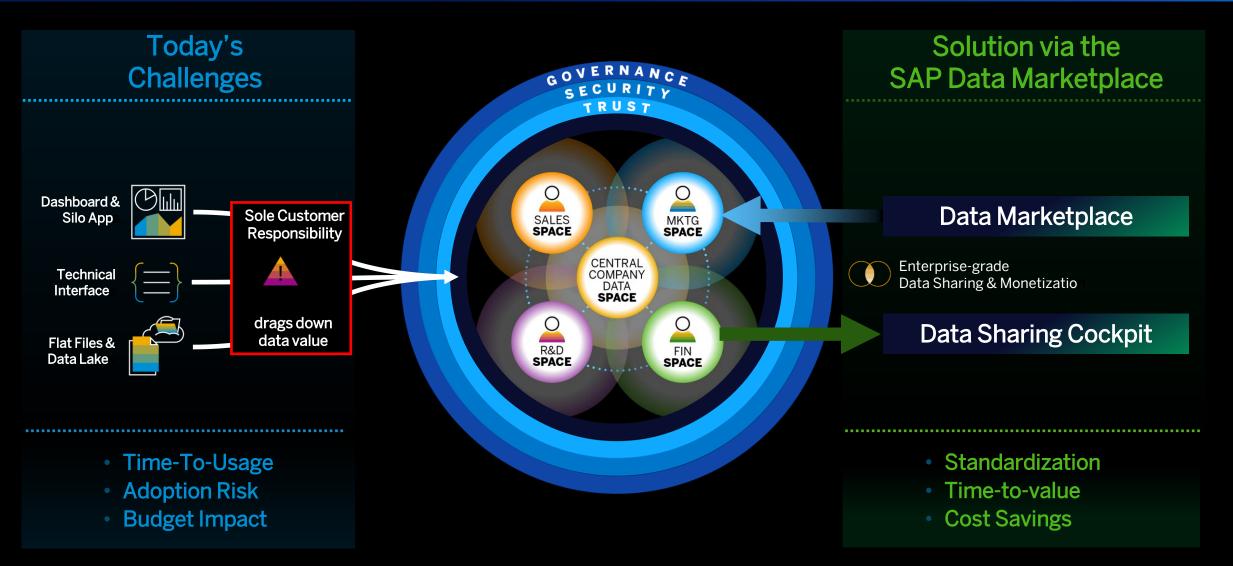
Qualtrics XM

LoB-relevant sources

...

Spaces are virtual work areas for individuals, teams, projects, departments or data domains. Spaces empower users to connect to data, integrate data, create data models, analyze, plan and build stories & dashboards and enable collaboration amongst teams.
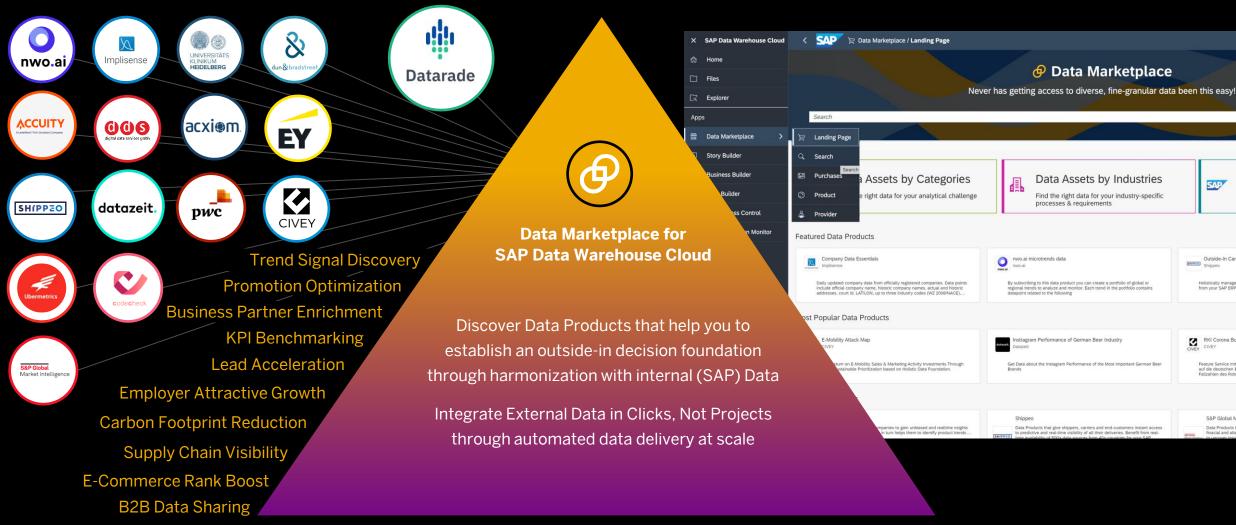
Lets talk about **External Data**

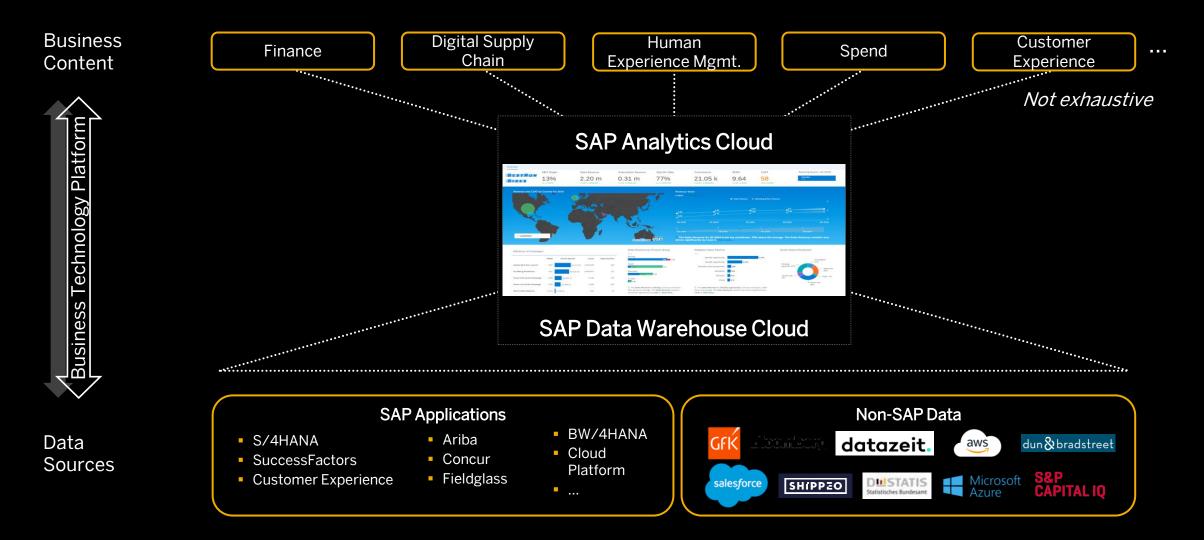# Leveraging External Data via Data Warehouse Cloud
data exchange and data monetization

Today's Challenges

Dashboard & Silo App

Technical Interface

Flat Files & Data Lake

Sole Customer Responsibility

⚠️

drags down data value

- Time-To-Usage
- Adoption Risk
- Budget Impact

GOVERNANCE SECURITY TRUST

SALES **SPACE**

MKTG **SPACE**

CENTRAL COMPANY DATA **SPACE**

R&D **SPACE**

FIN **SPACE**

Solution via the SAP Data Marketplace

Data Marketplace

Enterprise-grade Data Sharing & Monetizatio

Data Sharing Cockpit

- Standardization
- Time-to-value
- Cost Savings

SAP Data Marketplace Offers Rich Set of Providers
3000+ Data products included from the start

Trend Signal Discovery
Promotion Optimization
Business Partner Enrichment
KPI Benchmarking
Lead Acceleration
Employer Attractive Growth
Carbon Footprint Reduction
Supply Chain Visibility
E-Commerce Rank Boost
B2B Data Sharing

**Data Marketplace for
SAP Data Warehouse Cloud**

Discover Data Products that help you to
establish an outside-in decision foundation
through harmonization with internal (SAP) Data

Integrate External Data in Clicks, Not Projects
through automated data delivery at scale

Business Content
Continuously growing library of pre-built packages by SAP and Partners

Business Content

| Finance | Digital Supply Chain | Human Experience Mgmt. | Spend | Customer Experience | ... |

Not exhaustive

Business Technology Platform

SAP Analytics Cloud

SAP Data Warehouse Cloud

Data Sources

SAP Applications
- S/4HANA
- SuccessFactors
- Customer Experience
- Ariba
- Concur
- Fieldglass
- BW/4HANA
- Cloud Platform
- ...

Non-SAP Data
GfK, Bloomberg, datazeit, aws, dun&bradstreet, salesforce, SHIPPEO, DESTATIS Statistisches Bundesamt, Microsoft Azure, S&P CAPITAL IQ

SAP's Strategy & Direction
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Drive time-to-value with pre-built business content and gradually move – retaining investments and skills

SAP Data Warehousing Statement of Direction
SAP Data Warehouse Cloud as strategic target solution

SAP continues to innovate Data Warehousing to enable the Intelligent Enterprise.

SAP BW & BW/4HANA

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

With long-term support commitment until 2040, SAP BW/4HANA remains a key solution in SAP's portfolio and will be improved in the hybrid capabilities.

SAP Data Warehouse Cloud

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

SAP Data Warehouse Cloud provides unique innovation beyond classical data warehousing – driving agility, business empowerment and time-to-value.

Today   *Flexibility to gradually move at customers' pace*   Future
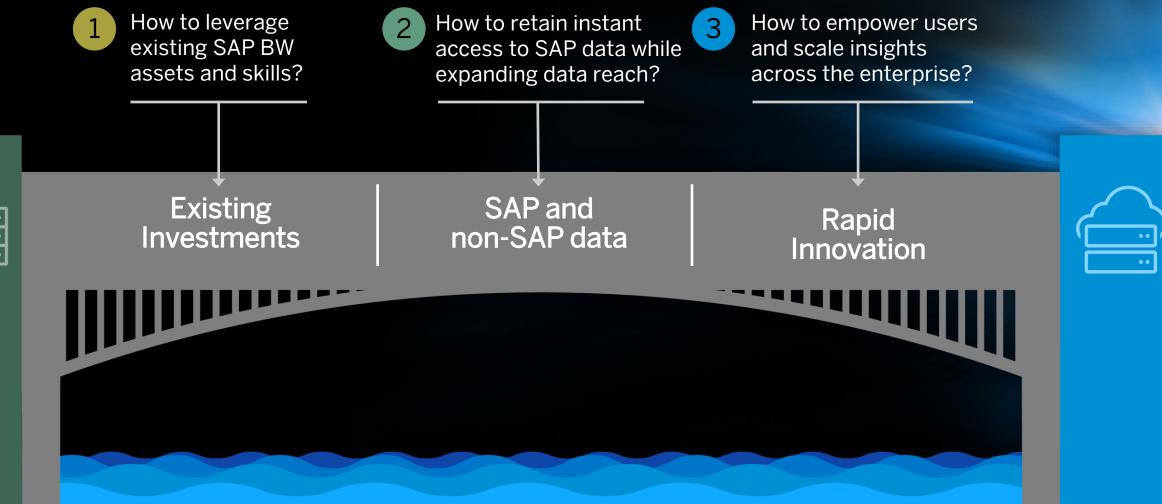
1 Hybrid deployment option
Innovate with SAP Data Warehouse Cloud while extending SAP BW or BW/4HANA – transferring data models

2 Re-use & integration option
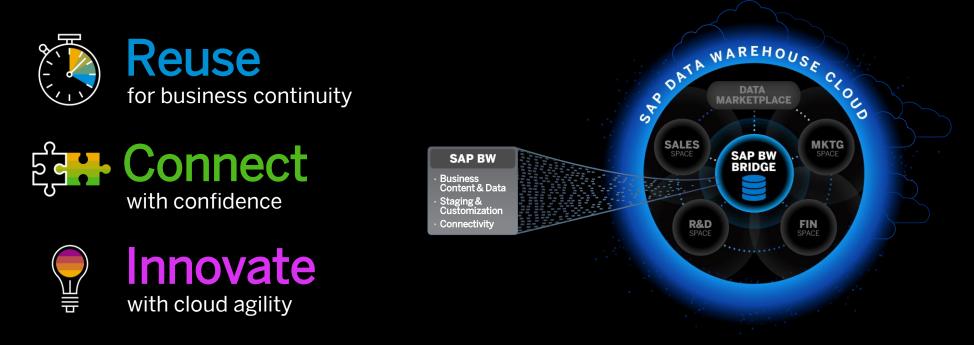Leverage the BW-based data ingestion & staging options with a tool-supported move

SAP BW Bridge

Embracing innovation in the cloud while protecting existing investments

1 How to leverage existing SAP BW assets and skills?

2 How to retain instant access to SAP data while expanding data reach?

3 How to empower users and scale insights across the enterprise?

Existing Investments

SAP and non-SAP data

Rapid Innovation

SAP BW Bridge
Reuse existing investments and skills of SAP BW in SAP Data Warehouse Cloud
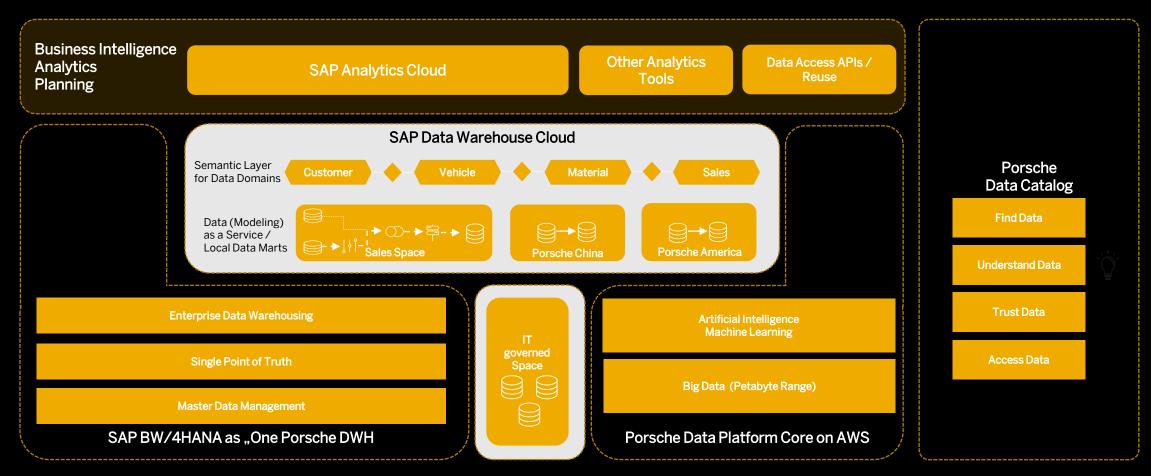
With SAP BW bridge **for SAP Data Warehouse Cloud,** you can reuse your existing SAP BW investments to innovate and extend your data reach in the public cloud without compromising instant connectivity to SAP Business Suite & SAP S/4HANA data

Reuse
for business continuity

Connect
with confidence

Innovate
with cloud agility

SAP BW
- Business Content & Data
- Staging & Customization
- Connectivity

SAP DATA WAREHOUSE CLOUD

DATA MARKETPLACE

SALES SPACE

MKTG SPACE

SAP BW BRIDGE

R&D SPACE

FIN SPACE

SAP BW Bridge is already GA ☺ (tool-supported move from Q1.2022)

Hybrid Deployment for Innovation
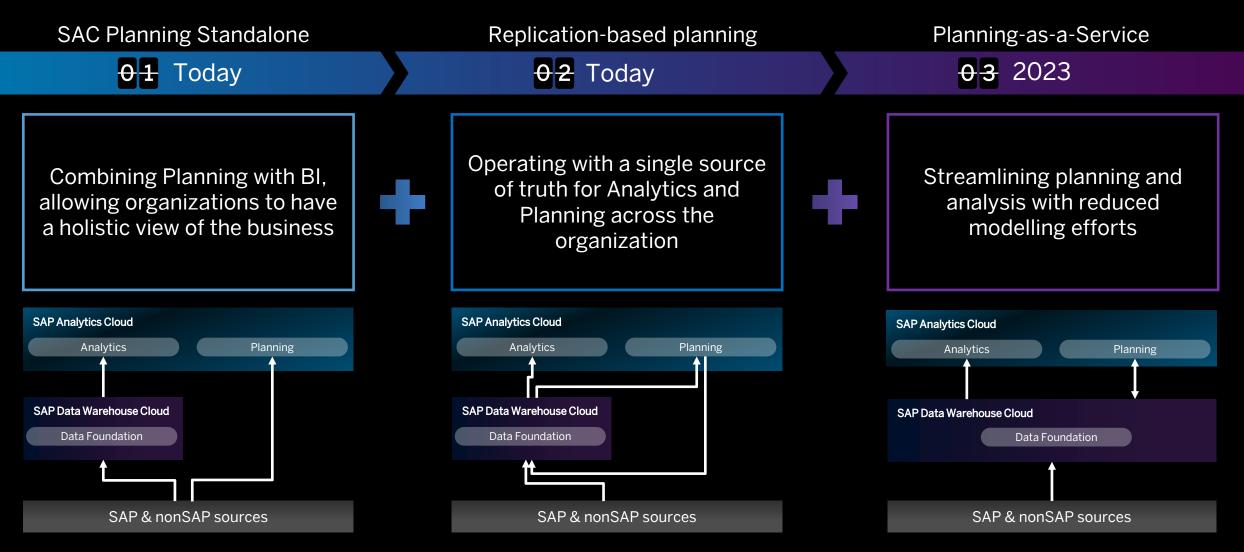## Example Data Management Architecture @Porsche

Business Intelligence Analytics Planning

| SAP Analytics Cloud | Other Analytics Tools | Data Access APIs / Reuse |

SAP Data Warehouse Cloud

Semantic Layer for Data Domains: Customer — Vehicle — Material — Sales

Data (Modeling) as a Service / Local Data Marts

Sales Space | Porsche China | Porsche America

Enterprise Data Warehousing

Single Point of Truth

Master Data Management

SAP BW/4HANA as „One Porsche DWH

IT governed Space

Artificial Intelligence Machine Learning

Big Data (Petabyte Range)

Porsche Data Platform Core on AWS

Porsche Data Catalog

Find Data

Understand Data

Trust Data

Access Data

OUTLOOK

Future of SAP Planning
SAP Analytics Cloud and SAP Data Warehouse Cloud growing together

SAC Planning Standalone	Replication-based planning	Planning-as-a-Service
01 Today	02 Today	03 2023

Combining Planning with BI, allowing organizations to have a holistic view of the business

+

Operating with a single source of truth for Analytics and Planning across the organization

+

Streamlining planning and analysis with reduced modelling efforts

SAP Analytics Cloud
- Analytics
- Planning

SAP Data Warehouse Cloud
- Data Foundation

SAP & nonSAP sources

SAP Analytics Cloud
- Analytics
- Planning

SAP Data Warehouse Cloud
- Data Foundation

SAP & nonSAP sources

SAP Analytics Cloud
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SAP Data Warehouse Cloud
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SAP & nonSAP sources

* This is the current state of planning and can be changed at anytime

ONE Catalog Vision
A single View across Data Assets for Transparency & Collaboration

Enterprise Business Data Catalog

SAP Analytics Cloud Assets
- Measures, Dimensions, Filters, Rows, Columns, Object types,
- Underlying data tables
- 3rd Party Reports (same pattern)

SAP Data Warehouse Cloud Assets
- Spaces, Tables, Views, Columns, Data Types, ER Models, Data Flows, Data Builder Objects, Descriptions
- Business Builder Objects, Dimensions, Analytical Datasets. Fact Models, Consumption Models
- Glossary (KPI Definitions, Entity Definitions, Measure Definitions

SAP Data Intelligence Assets
- Data Flows (Pipelines) ETL Jobs, DQ Rules, Transformations,
- Tables, Views, Schemas, Sources, Columns, Data Types,
- Glossary Terms (Data Stewards)

Other Assets
- Purpose of Use, Authorizations,

A unified enterprise catalog across SAP Data Warehouse Cloud, Data Intelligence & Analytics Cloud helps customers organize for #GenerationData

SAP's Data-to-Value Portfolio
Unified Data & Analytics Solution Portfolio continuously growing together

SAP Analytics Cloud
- Business Intelligence
- Augmented Analytics
- Enterprise Planning

SAP Data Warehouse Cloud
- Data & Business Layer
- Spaces

SAP's Unified Data and Analytics

SAP HANA Cloud
- Multi-modal Engine
- Tiered Data Storage

SAP Data Intelligence Cloud
- Data Catalog
- Orchestration
- Integration

Tight integration between SAP Analytics Cloud and SAP Data Warehouse Cloud
SAP Data Warehouse Cloud as foundation for SAP Analytics Cloud Planning

Pre-build Business Content
by SAP and partners spanning across SAP Analytics Cloud, SAP Data Warehouse Cloud and SAP Data Intelligence Cloud

Cross-solution inventory and metadata management
ONE Catalog planned for 2022

WRAP-UP & NEXT STEPS

SAP's Data Warehouse and Analytics Strategy & Direction
Key Takeaways

Frictionless & Unified Data-to-Value Portfolio

❖ Unified Data & Analytics portfolio growing together

❖ Superior connectivity to SAP sources with openness

❖ Time-to-value through Business Content & Marketplace

Governed Data Access for all Stakeholders

❖ Unlocking data insights with integrity & governance

❖ Data Warehousing for casual business users

❖ Business Layer modeling in business terms

Flexibility & Investment Protection in Cloud Move

❖ Flexible deployment options in the private and public cloud

❖ Hybrid scenarios to combine public cloud with on-premises

❖ Tool-supported move from SAP BW to SAP DWC

High Traction of SAP Data Warehouse Cloud Adoption
Three main categories of use cases in current customer reference cases

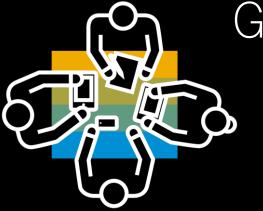|			
BUSINESS EMPOWERMENT	**PORSCHE** — Empowers Sales with enterprise data with S/4, BW/4, DWC, and SAC	**QUADPACK** — Accelerates real-time finance analytics with S/4, DWC, and SAC	**PETROSEA** — Achieves agile decision making with DWC, SAC, and Digital Boardroom
SAP INTEGRATION	**idorsia** — Simplifies data landscape with S/4, SuccessFactors, Concur, DWC, and SAC BI & Planning		**HYUNDAI ELEVATOR CO., LTD.** — Optimizes Supply Chain with ECC, DWC, and SAC
OPENNESS	**milcobel** — Empowers finance with profitability insights via S/4, DWC, BOBJ, and SAC	**MBCC GROUP** — Accelerates analytics across lines of business with S/4 and DWC	**pwc** — Connects global data for a single source of truth with BW/4, DWC, and SAC

Key Takeaways

1 SAP Data Warehouse cloud is the strategic Cloud Data & Analytics Platform for S/4 HANA

2 SAP Data Warehouse Cloud can seamlessly integrated in a SAP and Non-SAP architecture (Federated / Replication)

3 SAP BW Bridge is a Feature in SAP DWC not a Product which help Customers to leverage their huge SAP investments

Get your **free trial for up to 90 days**

https://www.sap.com/products/data-warehouse-cloud/trial.html

User the sample content

THANK YOU !

Florian Hamon

Senior Director, Data and Analytics

Center of Excellence
Business Technology Platform
EMEA North

SAP Analytics Cloud
Join the Community
Info, Guides, Blogs & webinars
Online Documentation on help.sap.com

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