



# **Analytics Trends, Best Practices and How SAP Can Help**

**Steve Bickerton**

# Agenda

1. Analytics Trends, Best Practices and how SAP Can Help
  - a) Evolution of Analytics
  - b) Data Democratization
  - c) Optimization of manual data work flows
  - d) Data Fabric / Orchestration tools go main stream

# Trend 1: Evolution of Decision Making



## Enterprise Reporting

Historical  
Static & Linear  
Top-down

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### IT

Curated data models and reports operationalized for the enterprise



## Self-Service Analytics

Dynamic  
Fast iterations  
Distributed

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### Analyst

Data & visualization tools for self-service storytelling



## Augmented Analytics

Intelligent  
Automated  
Predictive

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### Information Workers

Smart search and augmented insights for cost center managers, line managers, finance managers, category managers, branch managers, suppliers, customers

# SAP Analytics Cloud (End-2-End Analytics Platform)

Planning

SAP® Analytics Cloud  
One, Single



BestRun  
BR Forecast | USD

\$1.4 m (+2%)  
YTD R Expenses (USD)

BestRun\_Plan  
BR Forecast | USD

<b>Gross Margin</b> in Million USD	241.15	375.55	562.48
2017	2018	2019	

<b>Cost of Goods Sold</b> in Million USD	172.97	265.85	361.20
2017	2018	2019	

<b>Net Revenue</b> in Million USD	424.13	641.40	923.67
2017	2018	2019	

<b>COGS Product Design</b> in Million USD	10.09	14.63	18.50
2017	2018	2019	

<b>COGS Product Packaging</b> in Million USD	15.05	21.96	29.27
2017	2018	2019	

<b>COGS Shipping and Ha...</b> in Million USD	5.42	7.85	9.91
2017	2018	2019	

<b>Racing Revenue</b> in Million USD	122.37	194.16	308.36
2017	2018	2019	

<b>Cruise Revenue</b> in Million USD	60.82	99.02	144.23
2017	2018	2019	

<b>Youth Revenue</b> in Million USD	27.47	47.34	100.69
2017	2018	2019	

<b>Mountain Revenue</b> in Million USD	98.99	154.91	328.26
2017	2018	2019	

**Business Intelligence**

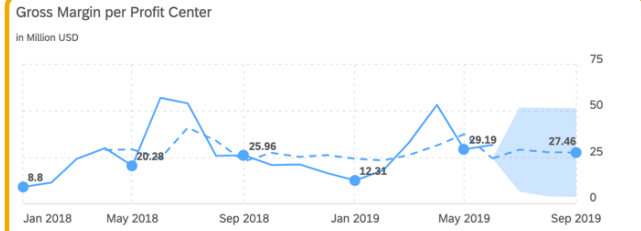
Net Revenue by Product  
in Million USD, %

Legend: BR Budget (white), BR Forecast (hatched)

Product	BR Budget	BR Forecast	Δ Budget%
Cruise	144.23	342.20	+4
Mountain	323.63	328.26	-5
Racing	100.69	308.36	+2
Youth	100.69	100.69	0

ⓘ The Net Revenue for Mountain+BR Budget is the top contributor, 53% above the average.  
[View more...](#)

Gross Margin per Profit Center  
in Million USD



Planning

Predictive



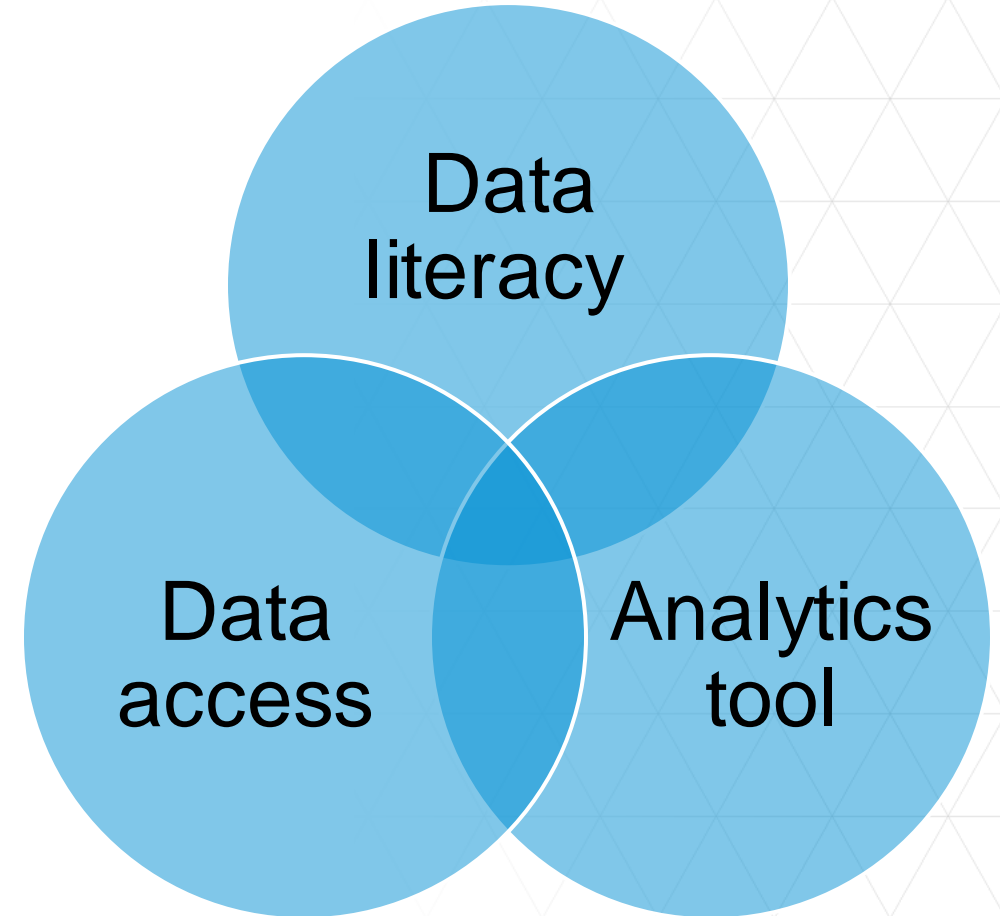
SAP & 3<sup>rd</sup> Party Cloud Data Sources and Applications



SAP, Business Objects & 3<sup>rd</sup> party Data Sources and Applications

## Trend 2: Data Democratization (and it's here to stay)

- Data democratization is not just getting access to data!
- Data democratization is the *ongoing process* of enabling everybody in an organization, irrespective of their technical know-how, to *work with data comfortably*, to feel *confident talking about it*, and, as a result, *make data-informed decisions and build customer experiences powered by data*.
- It implies strong data quality, trust, agility, data re-use. IT and Shadow IT need to collaborate



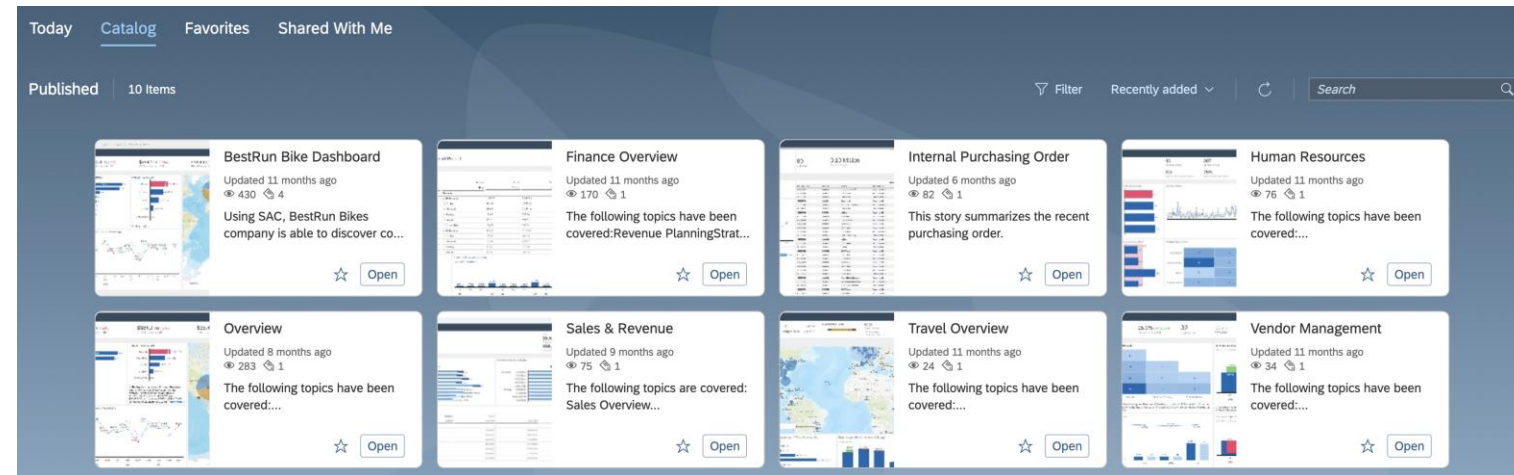
# Data Democratization Best Practices

1. Catalog all important assets you have for easy access. These include analytics and data sets.
  - a) If possible, display all, and link into your Governance Risk and Compliance system
  - b) Include subject matter data sets (e.g. BW queries)
  - c) Archive unused assets (stay clean)
2. Enhance existing solution and data sets (BOBJ universes, Webi and Crystal reports) with Predictive capabilities.



# BP 1: SAP Analytics Cloud Easily surface relevant insight with SAP Analytics Catalog

- Find the analytics you need – when you need them – in your home page
- Browse through visual cues to uncover analytics you didn't know
- Tailor the experience to best fit your unique business needs
- Run analytics that experts validated and certified for you
- Multi lingual



Data Sets



SAP Analytics:  
SAC & BusinessObjects



3rd-Party  
e.g. Tableau,  
Power BI



Cloud or On  
Prem



# BP 1: Analytics Hub **SAP Enterprise Analytics Store Example**

Filter Search Search 971 asset # of Views

### ADRM Operational Report

39,741 views (last 90 days)

Please read the What out about the latest Operational Report is assets delivered as

NA OP EMEA Core A MEE Core

Open report

**Overall rating**

★★★★☆  
Rated 3.94 by 413 users

**Unknown**

[How to get authorization](#) »

▼ Report

[Open Report](#) »

[+ Create personal bookmark](#)

▼ Related links

## Overview Details Authorization Ratings

### Presales Metrics Report For Employee

Role	Individual Contributor	Primary Industry	Public Sector
Primary Specialization	Product Sales	Market Unit	South
Primary Concentration	Product Sales	Missing Hours QTD	0.00

My QTD Performance :

	Missing Hours %	Remote Activities %	Utilization %	Mandatory Training Completion %	Composites Touched per IC	Face Time %
Actual	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Target	Less than or equal to 5%	Greater than or equal to 20%	Greater than or equal to 75%	100%	Minimum 2 to 4	Greater than or equal to 25%

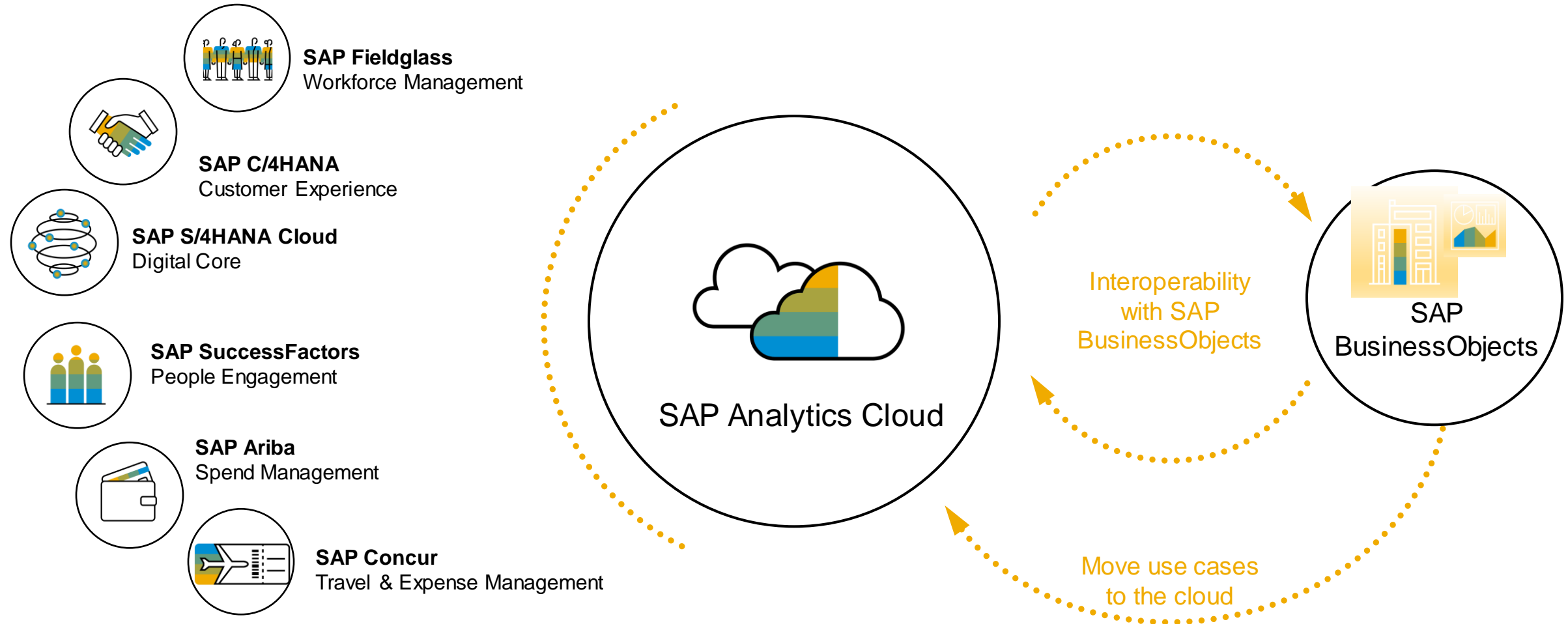
Benchmark :

	Missing Hours %	Remote Activities %	Utilization %	Mandatory Training Completion %	Composites Touched per IC	Face Time %
My Team - Public Sector	25.53%	20.52%	100.00%	100.00%	0.00%	25.00%
My Business Unit - South	25.53%	20.52%	100.00%	100.00%	0.00%	25.00%
My Market Unit - South	25.53%	20.52%	100.00%	100.00%	0.00%	25.00%
My Sub-Region - South	25.53%	20.52%	100.00%	100.00%	0.00%	25.00%
My Region - South	25.53%	20.52%	100.00%	100.00%	0.00%	25.00%
My Specialization - Product Sales	26.47%	14.43%	95.70%	100.00%	0.00%	25.30%
Target	Less than or equal to 5%	Greater than or equal to 20%	Greater than or equal to 75%	100%	Minimum 2 to 4	Greater than or equal to 25%



# BP2: Hybrid Analytics vision

## SAP Analytics Cloud and SAP BusinessObjects Working Together



# BP 2: SAP Analytics Cloud Predictive Smart Assist Features

Only analytics solution to bring together BI, Planning, and Predictive in the cloud.

Smart Assist features deliver insights with embedded machine learning – no data scientist required.

Get insights wherever you are with analytics available on any device.

Planning & Analysis

Business Intelligence

SAP® Analytics Cloud  
One | Simple | Cloud

Predictive

Smart Discovery

Search to Insight

Smart Insights

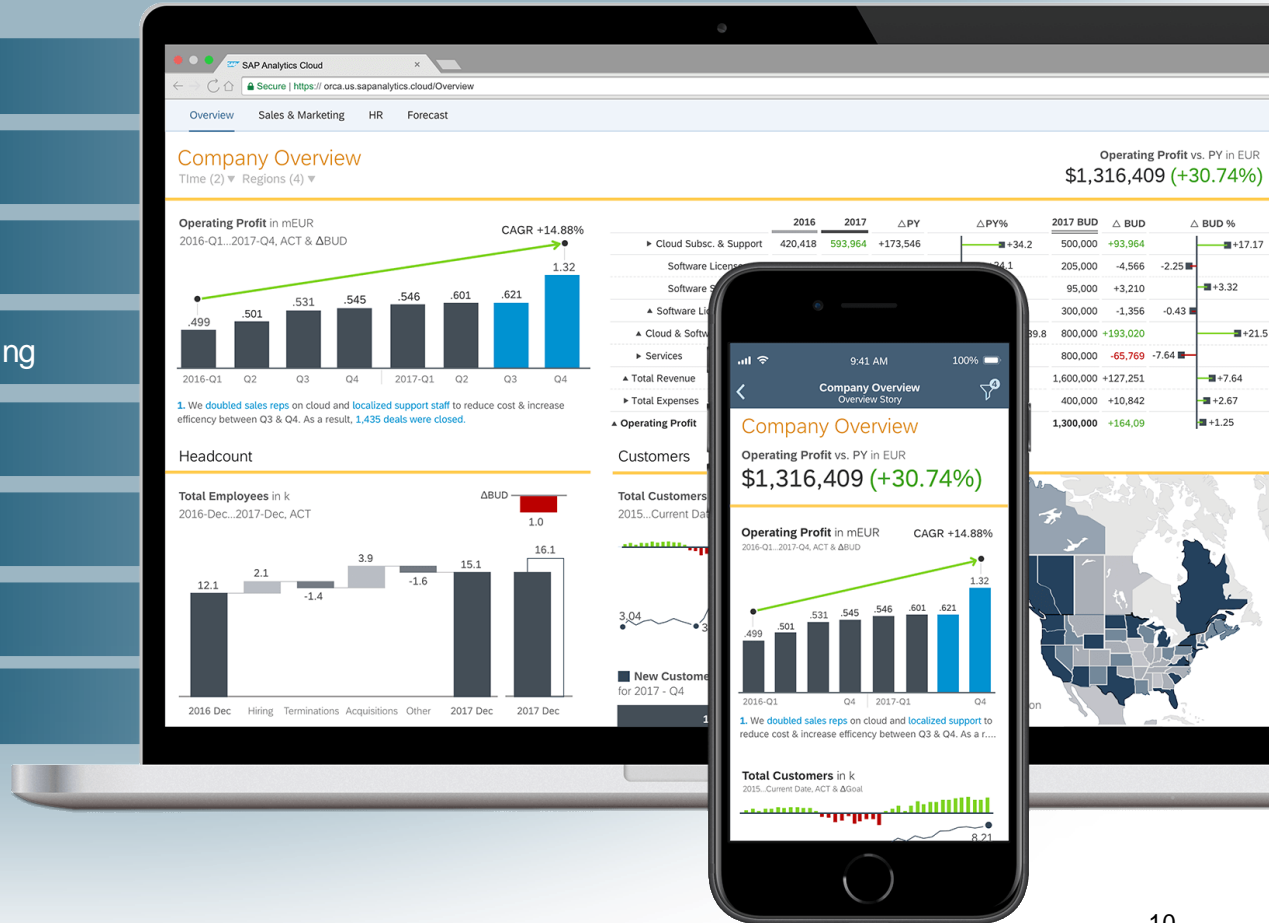
Time Series Forecasting

Smart Grouping

Smart Transformation

R-Visualizations

Smart Predict



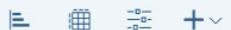


Story Data

File



Insert



Tools



Display



More



Designer

Controls

View

Page 1

Page 2



You've added **SalesDemo2018** to your Story.

Explore your data using machine learning algorithms to discover key influencers, unexpected values and more.




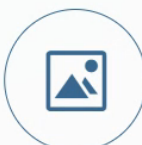


Run a Smart Discovery

Search to Insight

Search ...

Nothing Searched Yet  
Search for answers, discover new insights

# Add an object to the canvas.

-  Chart  
*Show Top 5 Sales Managers by*  
*Show Actuals vs Forecast Sales in North America*  
*Show Sales Revenue for the third quarter of 2017*
-  Geo Map
-  Table
-  Image
-  Shape
-  Text

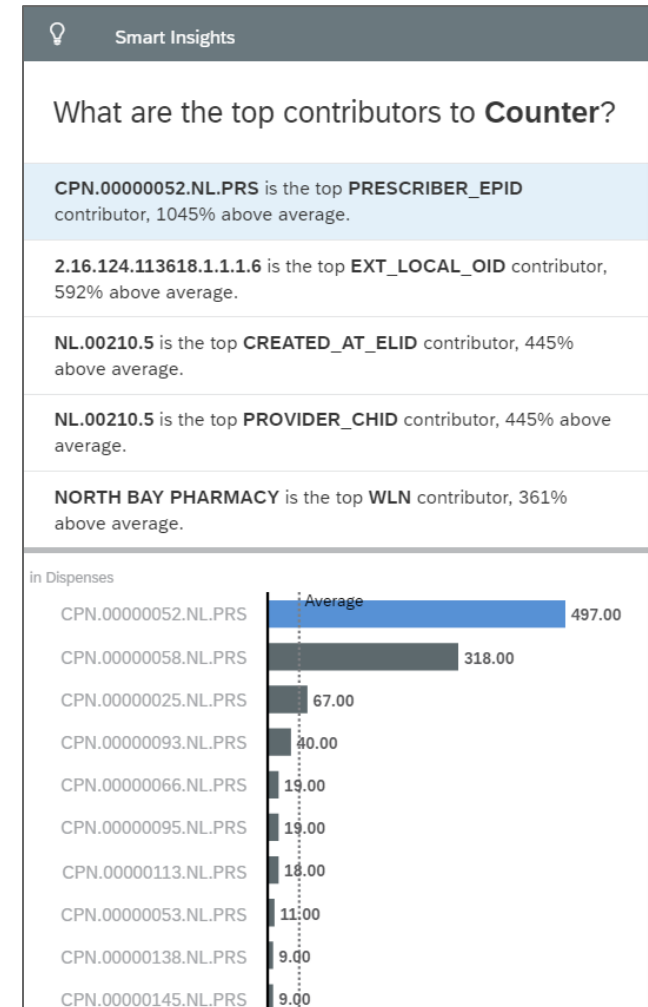
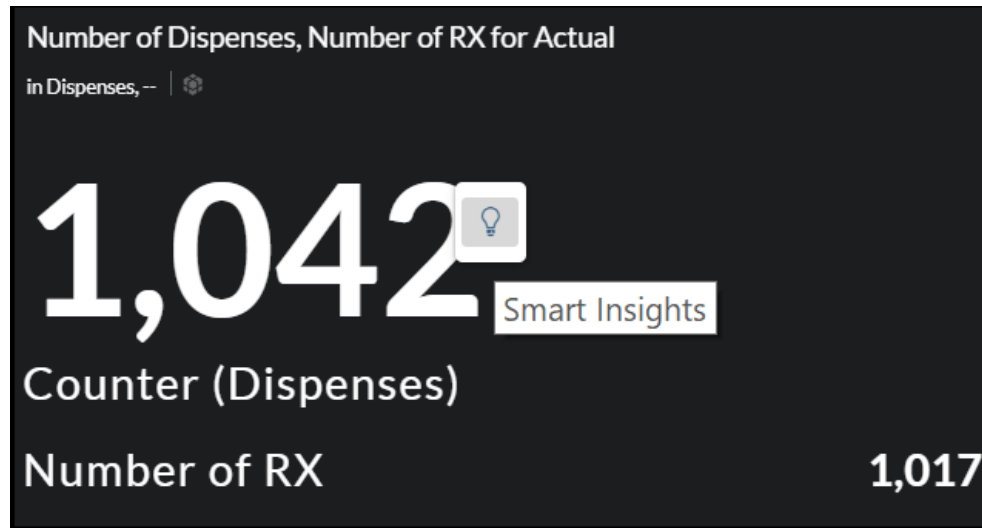
*\*the bold text is an example, try names specific to your data.*

Close

## BP 2: Smart Insights! Newfoundland Health

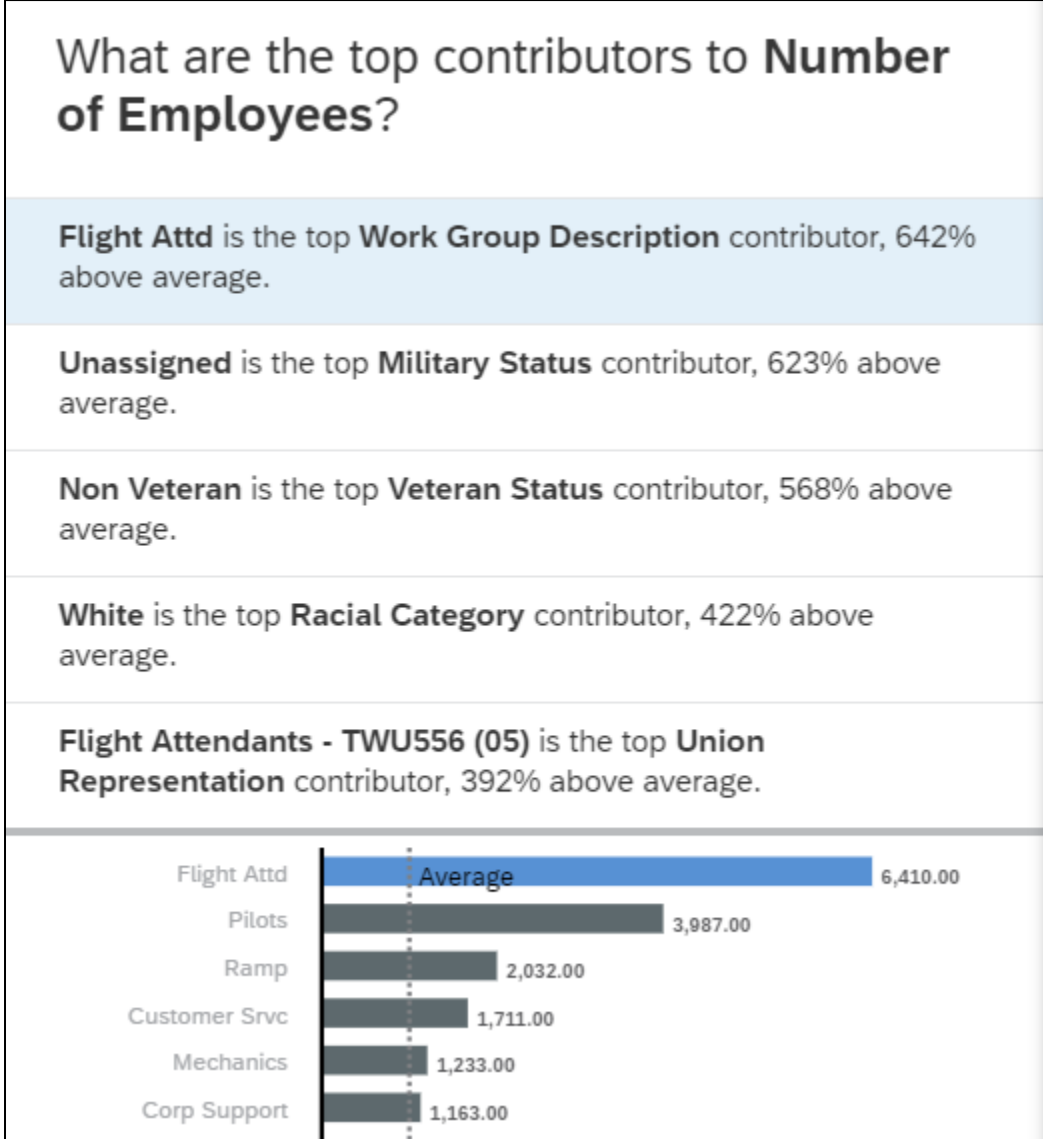
“*What is behind Opioid Prescription number?*”

- Smart Insights examines each of the dimensions in the data and detects members that have a significant influence on the data point we are interested in.
- Returns results in context

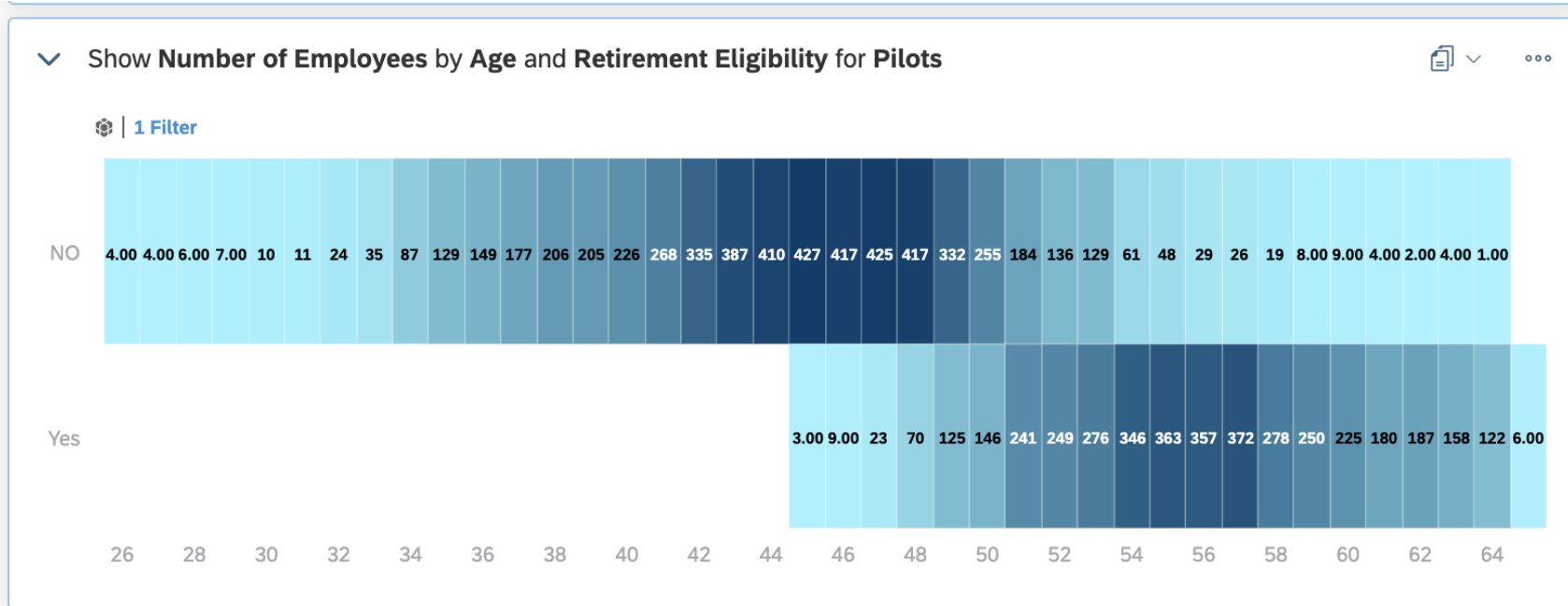


# BP 2: Predictive Insight to HR Planning for an Texas based Airline

## “What is behind the Retirement number?”



# BP 2: Natural Language **How many pilots are eligible for retirement?**



Recommendations for a new search

Last Tenure by Tenure Group

other actions

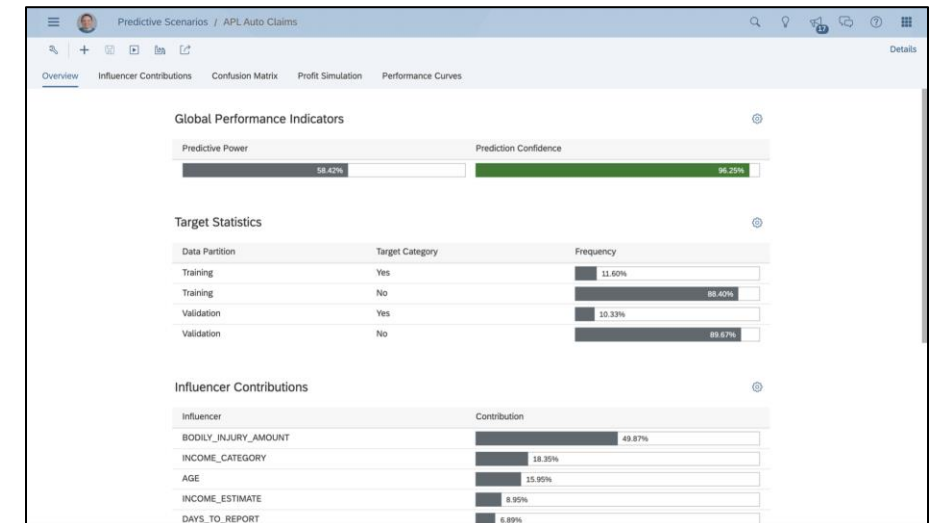
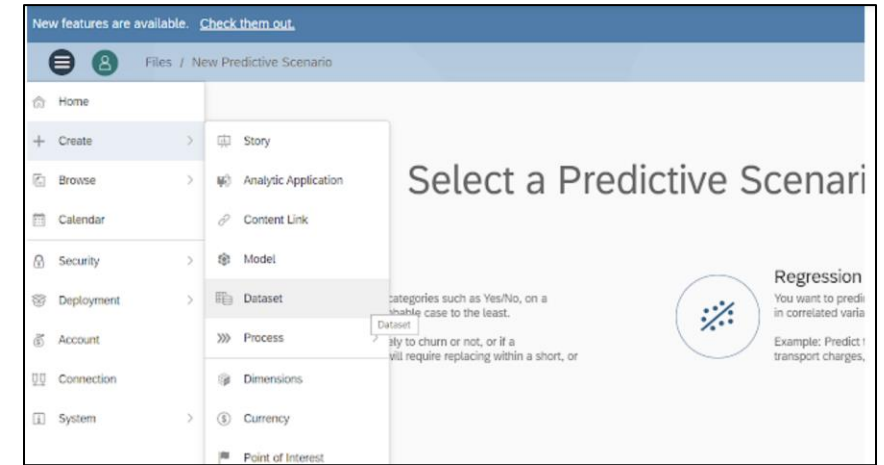
show **Number of Employees by Age and Retirement Eligibility for Pilots** show as heat map

# BP2: Smart Predict

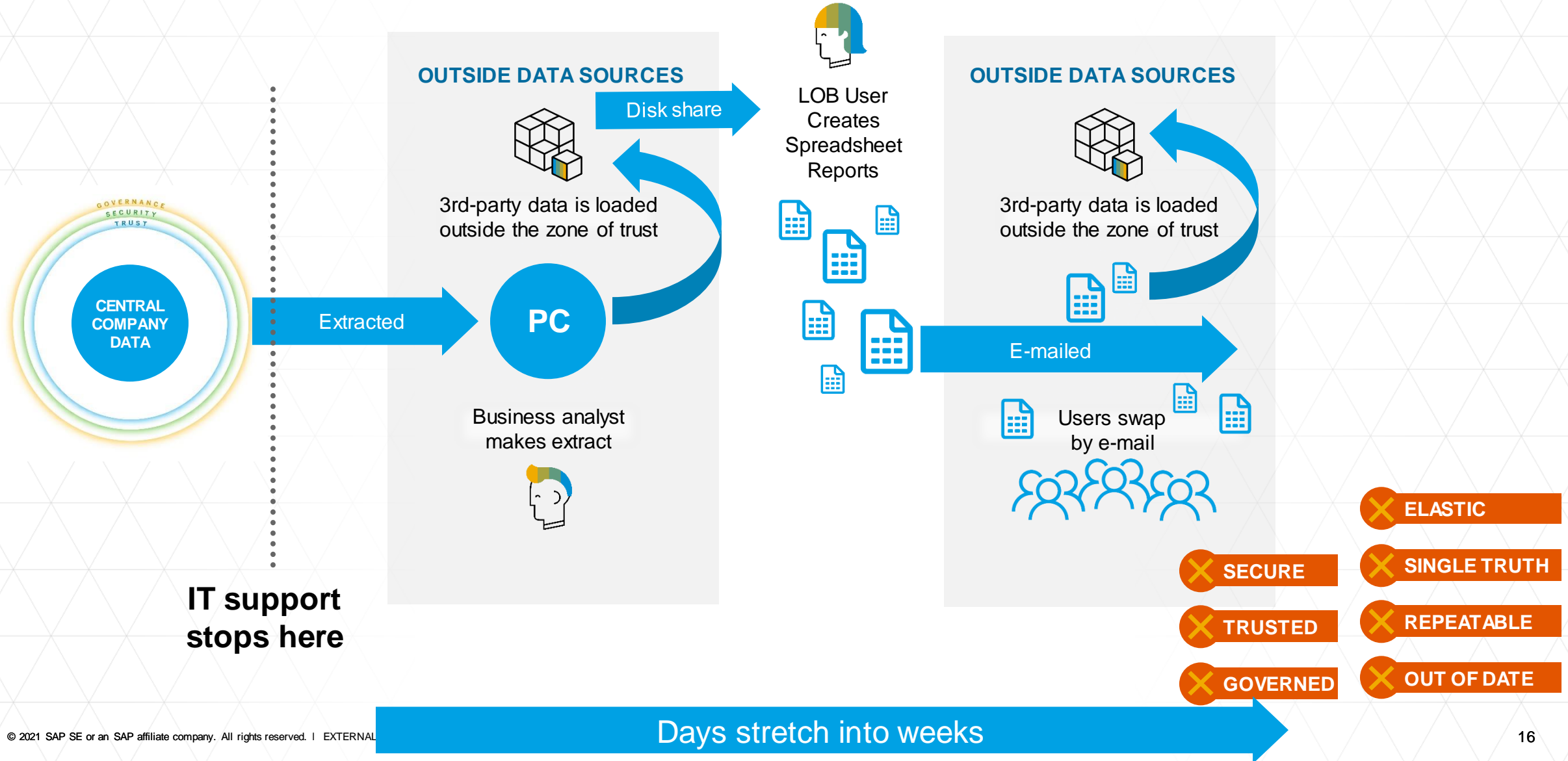
A self service machine learning solution in the cloud with support for data ingestion, model authoring and model management

## Predictive Modeling

- Solve business problems with the easy-to-use, automated modeler including classification, regression and segmented time series analysis
- Extend models with intuitive drag and drop modelling environment with support for using a wide variety of algorithms and data preparation nodes
- Compare models to find the best solution to the business question
- Operationalize predictive results by exporting output datasets
- Ability to export models to run in HANA (via APL)



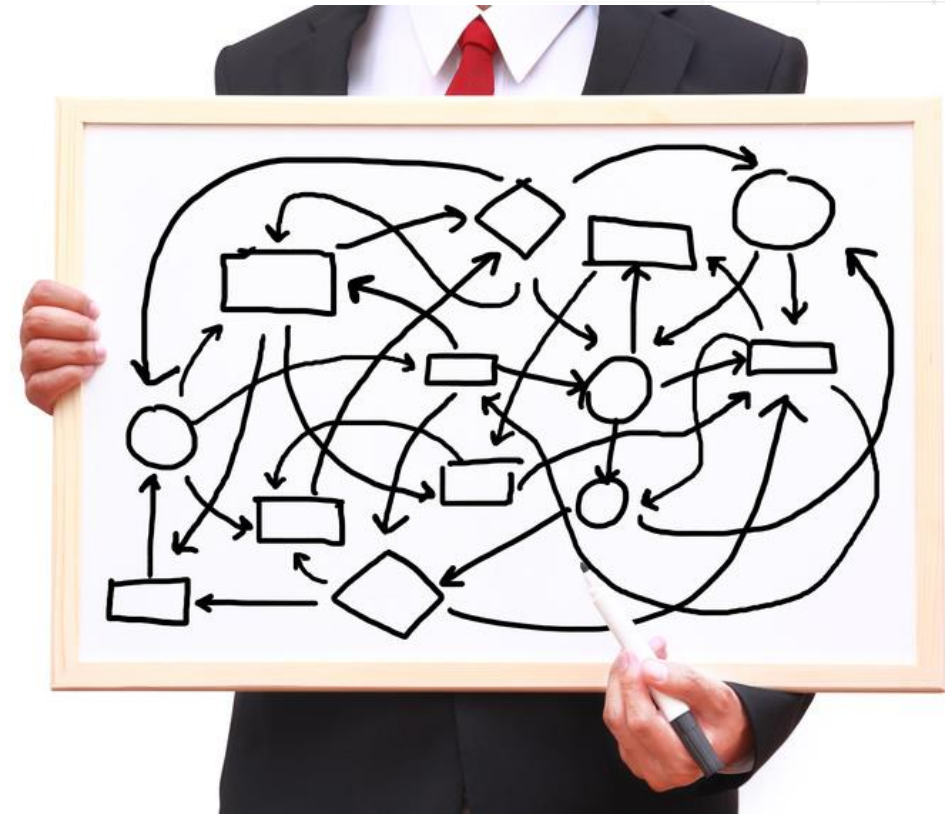
# Trend 3: Optimization of data work flows is now more important than ever!





# Stop the Work Flow Insanity: Data Innovation Best Practices

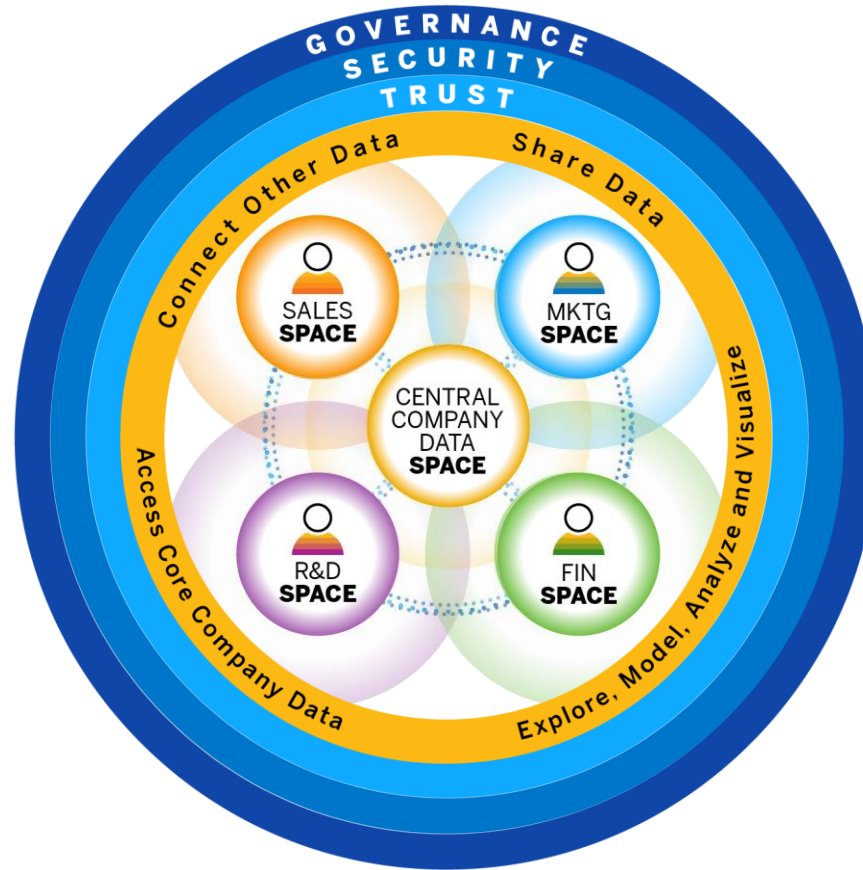
1. Realize Excel is here to stay. Allow users to bring data to a “Cloud Data Warehouse”.
  - a) Maximize IT and LOB collaboration
  - b) Security gets enforced
  - c) Inefficient work flows are solved!
2. For really big problems look to Data Fabric Orchestration tools.



# BP 1: SAP Data Warehouse Cloud Spaces empowers LOB Excel users while IT enforces security and governance

## Spaces are virtual

- Constantly Up-to-date
- Insulated pulls of resources
- Linked and Secure
- Bring Excel data
- Enterprise and 3<sup>rd</sup> Party data managed in spaces rather than being mixed outside the zone of trust



- ✓ SECURE
- ✓ TRUSTED
- ✓ GOVERNED
- ✓ ELASTIC
- ✓ REAL-TIME
- ✓ REPEATABLE
- ✓ SINGLE TRUTH



## Spaces empower users

- Work in sandbox environment
- Connect enterprise data and own data
- Analyze, plan, predict
- Create Stories
- Share insights



## Spaces empower IT

- Control provisioning and scale
- Enforce quality of service
- Govern enterprise data

SAP HANA Cloud Services

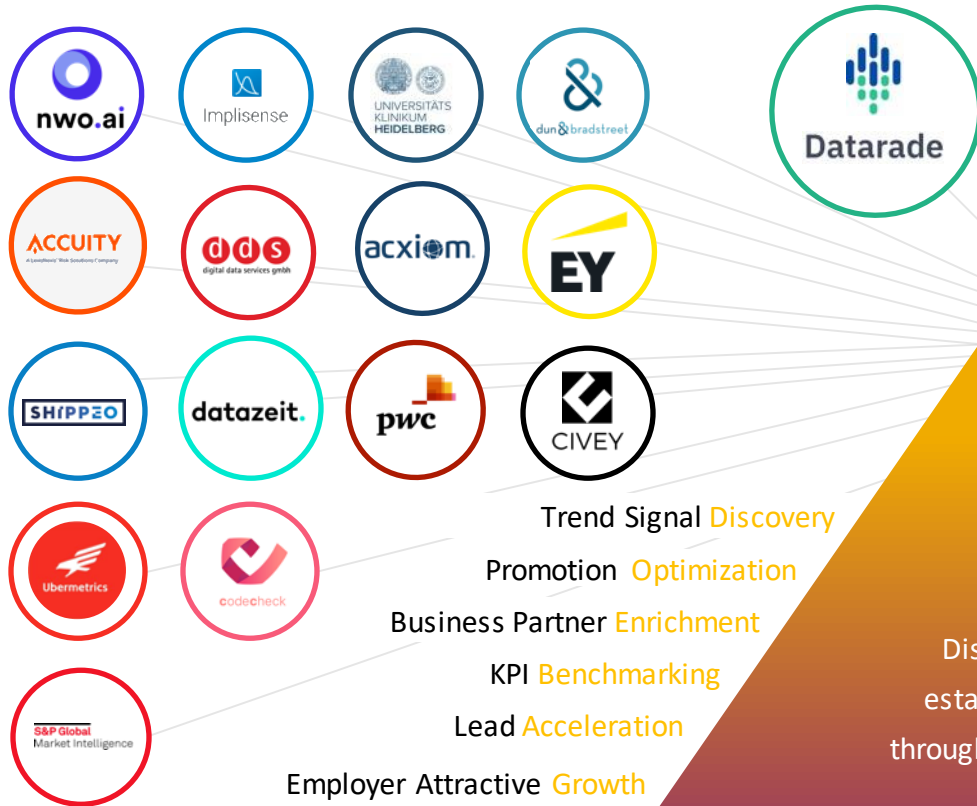
# SAP DATA WAREHOUSE CLOUD

Data Flow – Demo

THE BEST RUN 

# SAP Data Warehouse Cloud: data marketplace

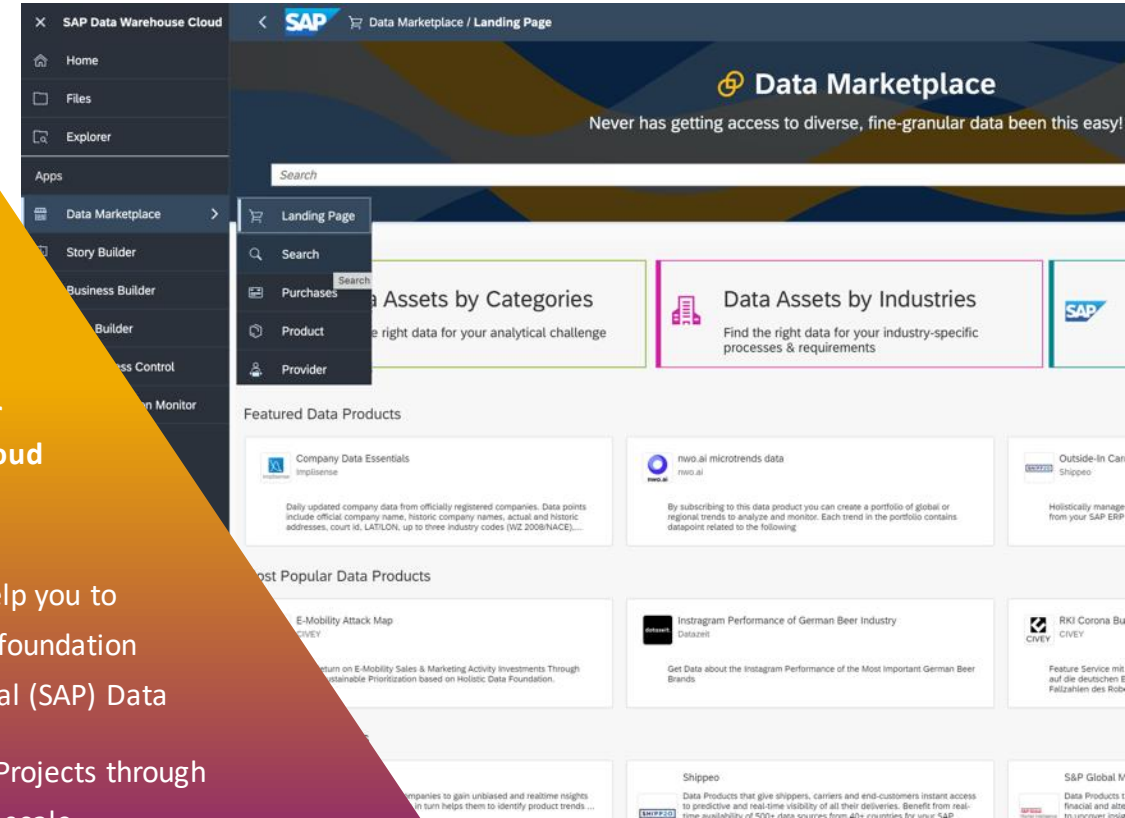
Heterogeneous portfolio of Data Providers and 3000+ Data Products



- 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



# With the **Data Marketplace** for SAP Data Warehouse Cloud you can. **Access in Clicks, Not Projects!**

1

**In-App Data Discovery Experience** for transparent evaluation of more than 100 Data Providers & 3000+ data products through the cooperation with [Datarade.ai](https://www.datarade.ai)

2

**Complimentary Deployment Channel** as you can bring your existing data provider license with no brokerage for SAP

3

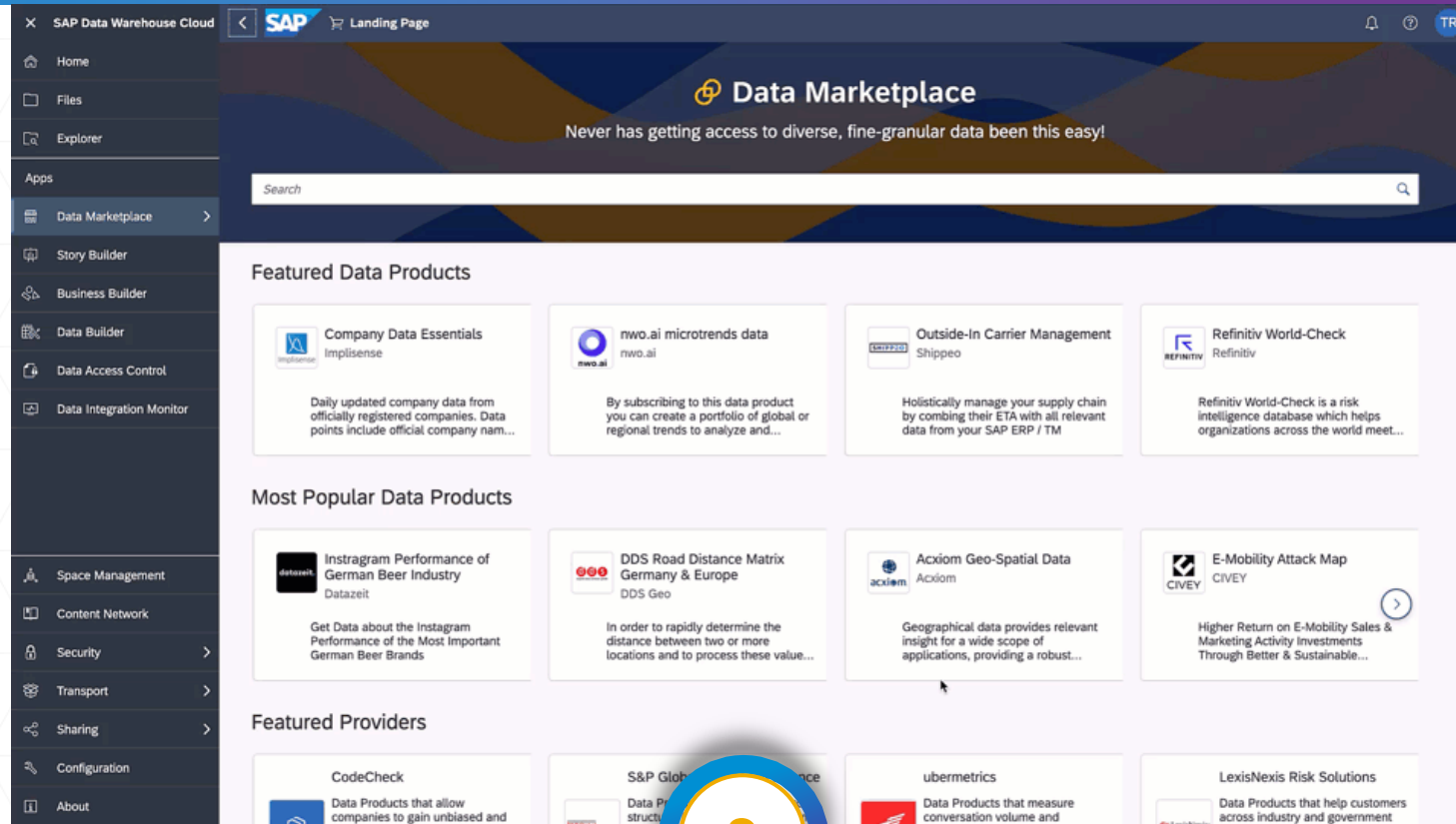
**Managed Data Integration & Update Management** for sustainable adoption of external data sources

5

**Seamless Consumption** with SAP Analytics Cloud, SAP Data Intelligence & SAP HANA Cloud or the 3rd Party Frontend Tool of Customer Choice

4

**Unparalleled Data Management Functionality** for Data Enrichment & Harmonization with SAP Data for Business & IT Users







- Home
- Files
- Explorer
- Apps
  - Data Marketplace
  - Story Builder
  - Business Builder
  - Data Builder
  - Data Access Control
  - Data Integration Monitor
  - Space Management
  - Content Network
  - Security
  - Transport
  - Sharing
  - Configuration
  - About



# Data Marketplace

Never has getting access to diverse, fine-granular data been this easy!

## Featured Data Products

 <p><b>Company Data Essentials</b> Implisense</p> <p>Daily updated company data from officially registered companies. Data points include official company nam...</p>	 <p><b>nwo.ai microtrends data</b> nwo.ai</p> <p>By subscribing to this data product you can create a portfolio of global or regional trends to analyze and...</p>	 <p><b>Outside-In Carrier Management</b> Shippeo</p> <p>Holistically manage your supply chain by combing their ETA with all relevant data from your SAP ERP / TM</p>	 <p><b>Refinitiv World-Check</b> Refinitiv</p> <p>Refinitiv World-Check is a risk intelligence database which helps organizations across the world meet...</p>
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## Most Popular Data Products

 <p><b>Instagram Performance of German Beer Industry</b> Datazeit</p> <p>Get Data about the Instagram Performance of the Most Important German Beer Brands</p>	 <p><b>DDS Road Distance Matrix Germany &amp; Europe</b> DDS Geo</p> <p>In order to rapidly determine the distance between two or more locations and to process these value...</p>	 <p><b>Acxiom Geo-Spatial Data</b> Acxiom</p> <p>Geographical data provides relevant insight for a wide scope of applications, providing a robust...</p>	 <p><b>E-Mobility Attack Map</b> CIVEY</p> <p>Higher Return on E-Mobility Sales &amp; Marketing Activity Investments Through Better &amp; Sustainable...</p>
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## Featured Providers

<p><b>CodeCheck</b></p> <p>Data Products that allow companies to gain unbiased and</p>	<p><b>S&amp;P Global Market Intelligence</b></p> <p>Data Products that help to source, structure, link, and deliver best-in-</p>	<p><b>ubermetrics</b></p> <p>Data Products that measure conversation volume and</p>	<p><b>LexisNexis Risk Solutions</b></p> <p>Data Products that help customers across industry and government</p>
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# SAP DATA Warehouse Cloud

## Deploy and build on pre-defined content packages

### SAP Content

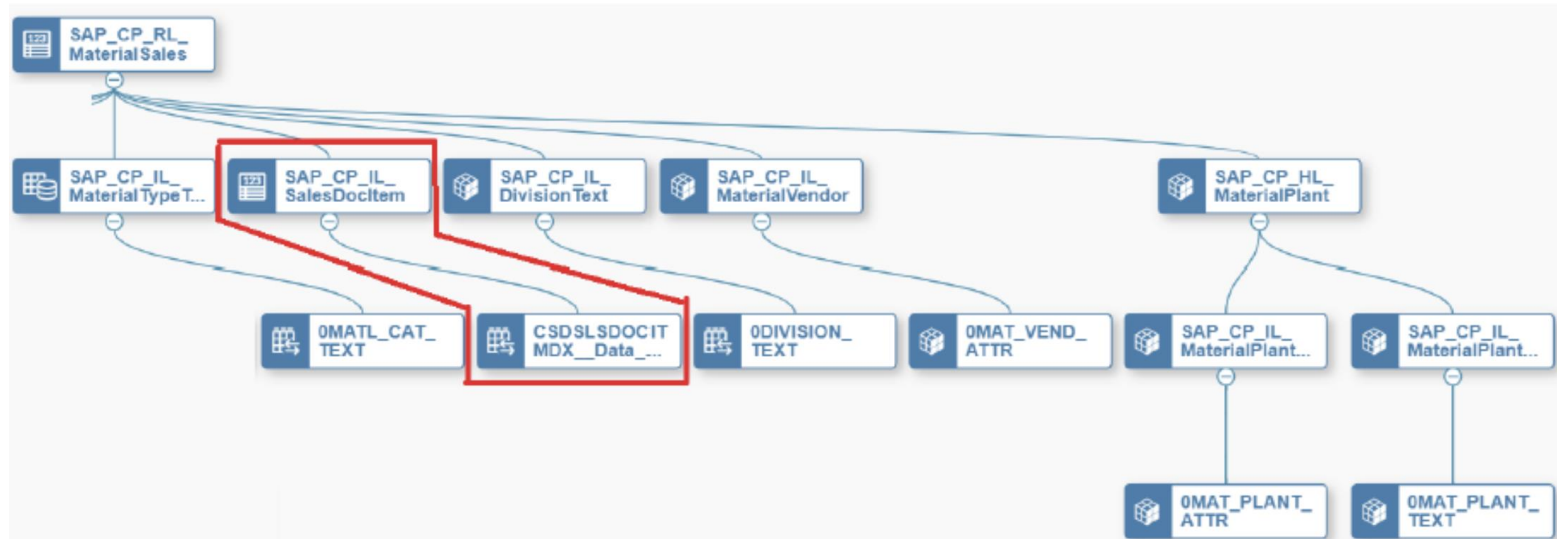
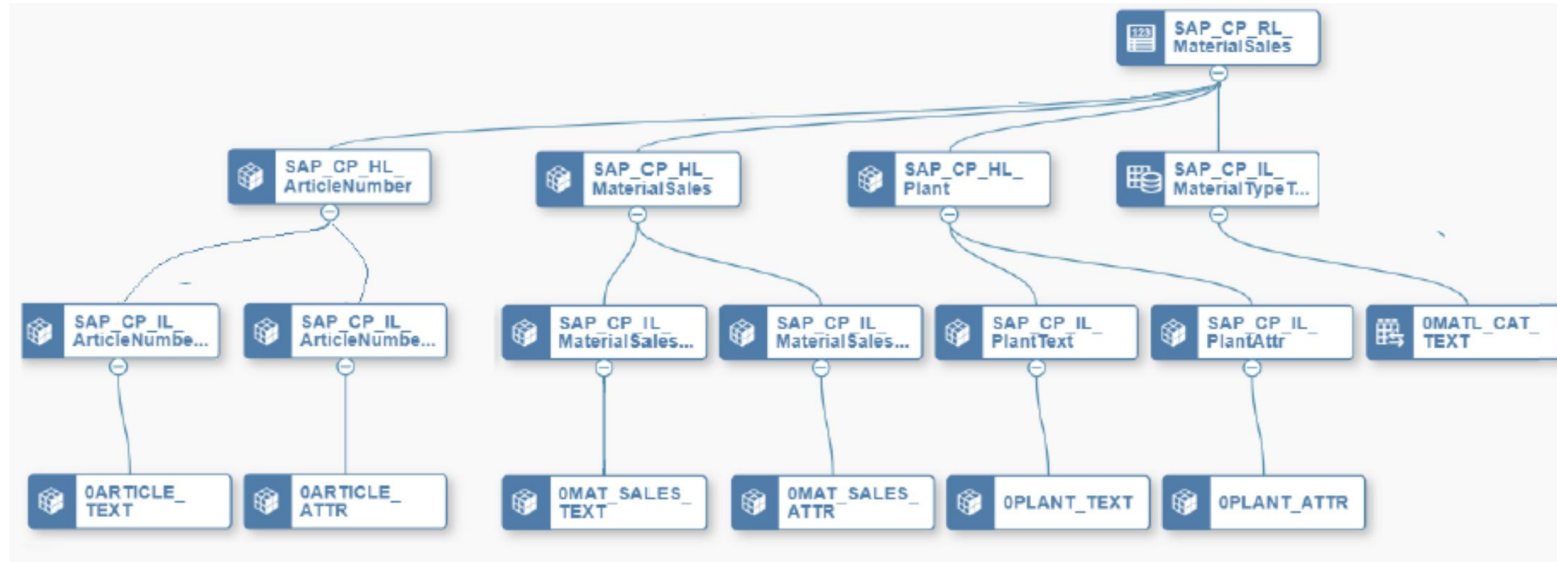
- SAP Ariba: Enterprise Analytics for Procurement **new**
- Automotive: Responsive Supply Network, Sales and Inventory
- Consumer Products: Revenue Growth Management (Foundation)
- Finance for S/4HANA Cloud **new**
- Financial analytics dashboard for SAP Analytics Cloud
- Retail: SAP Consumer Sales Intelligence
- Statistical Process Control (SPC) Toolkit **new**
- Telecommunication: Customer Value Management (CVM) **new**
- Utilities: Meter to Cash
- SAP Supply Chain Management
- All BW content
- [More information](#)

### Partner Content also listed on [SAP Store](#)

- |   |   |
|---|---|
|    | Marketing Analytics                           |
|    | Customer Service Insights                     |
|    | E-Commerce - Cross Marketplace Insights       |
|    | Procurement Cockpit                           |
|    | Sales Dashboard                               |
|    | Optimizing Order Fulfillment with ML          |
|    | SuccessFactors / Attendance Tracker           |
|   | Sales Insights (SAP BW & Salesforce)          |
|  | MOSAIC – Margin-Optimized Sales Intelligence  |
|  | Lyra Integrated Capacity Planning (EAM & HCM) |
|  | Financial Reporting for SAP Business One      |
|  | EWM Insights                                  |

# SAP DATA Warehouse Cloud

## Deploy and build on pre-defined content packages



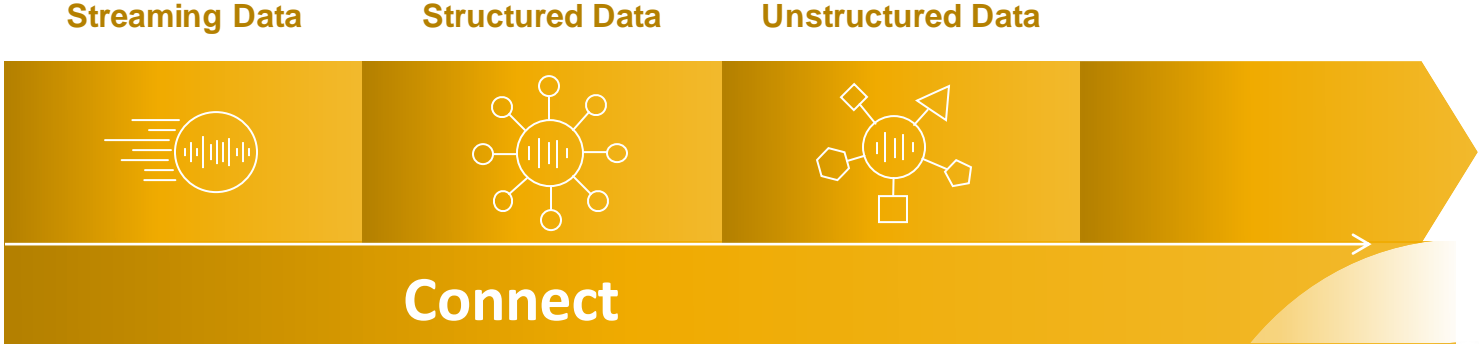


## Trend 4: Fabric Tools go main stream

- According to a [Forrester analyst](#), 60% to 73% of enterprise data goes unused for analytics.
- Data fabric is a new way to think about the old problem of leveraging disparate data for analytics.
- If IT can provide a unified data architecture that serves as an integrated layer connecting data endpoints and processes, it can make mission-critical data more discoverable, pervasive and reusable across all environments of an organization, including hybrid and multicloud environments.
- This tool can also remove weeks of LOB effort!

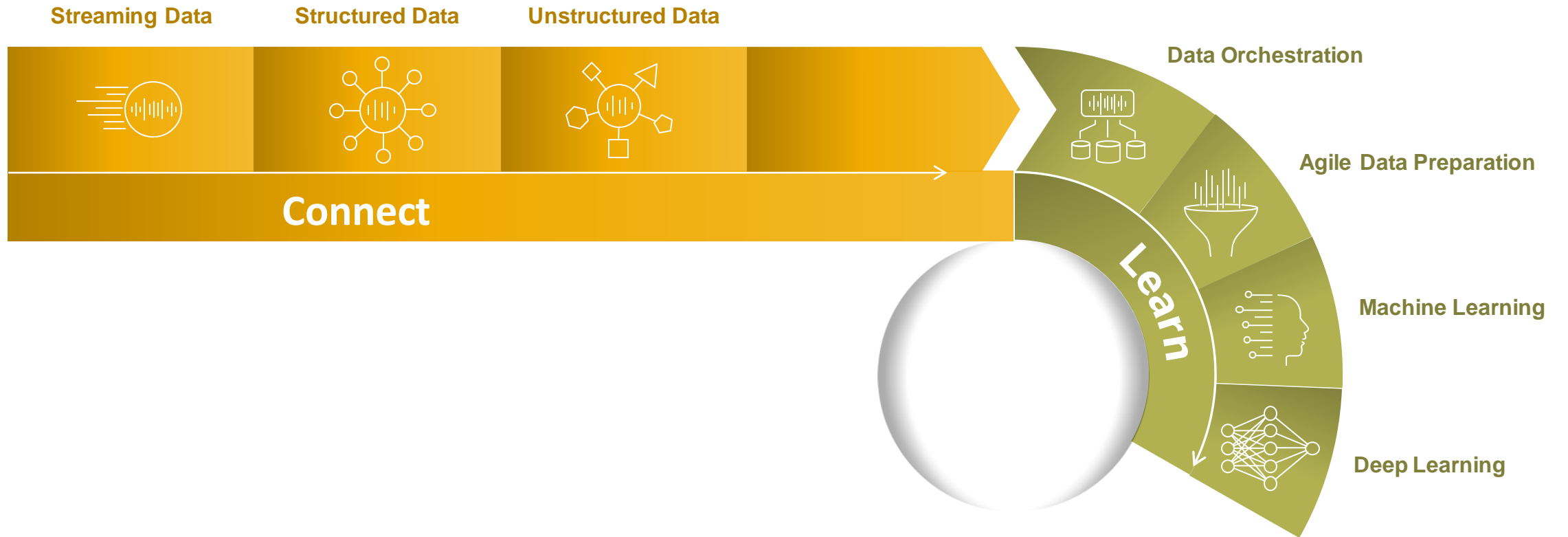


# SAP Data Intelligence: The Foundation of the AI Assembly Line

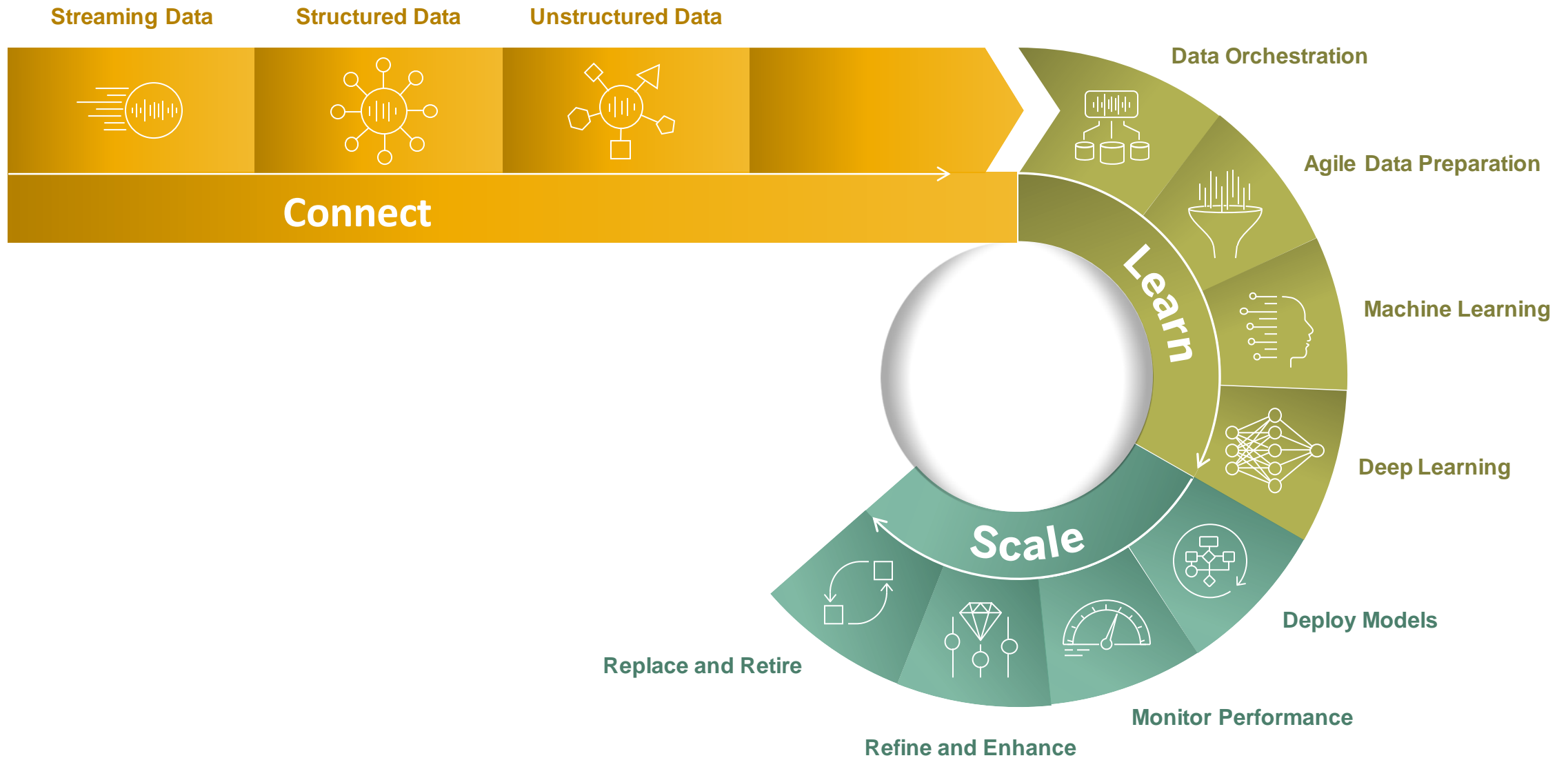




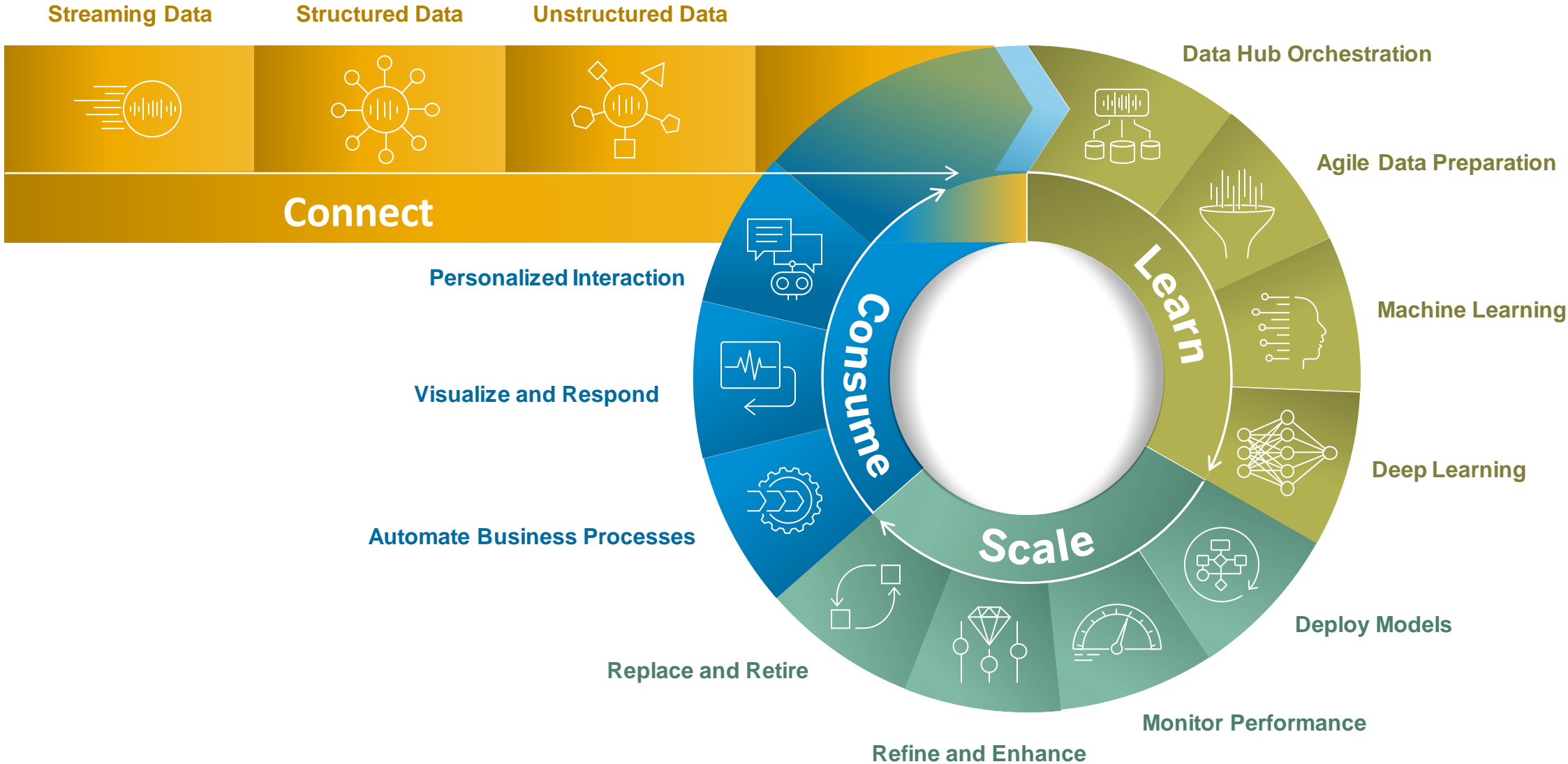
# SAP Data Intelligence: The Foundation of the AI Assembly Line



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# SAP Data Intelligence – Core Capabilities



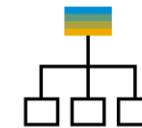
## Data Integration

**Connect** and **integrate everything**, structured, unstructured or streaming



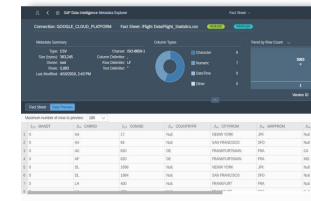
## Data Processing

**Extract meaning from data**, orchestrating any mix of engines



## Data Catalog

**Discover, classify, profile, understand** and **prepare** all your enterprise data assets



# SAP Data Intelligence – Data Integration

Data pipelines integrate disparate data across distributed infrastructures



Structured Data



Unstructured Data



Streaming Data

Logos for SAP products and connectors:

- ABAP, SAP ABAP, SAP IoT, SAP IQ, SAP BW, SAP DWC, SAP HANA & HANA Cloud, SAP Open Connectors, SAP IoT, SAP Enterprise Messaging

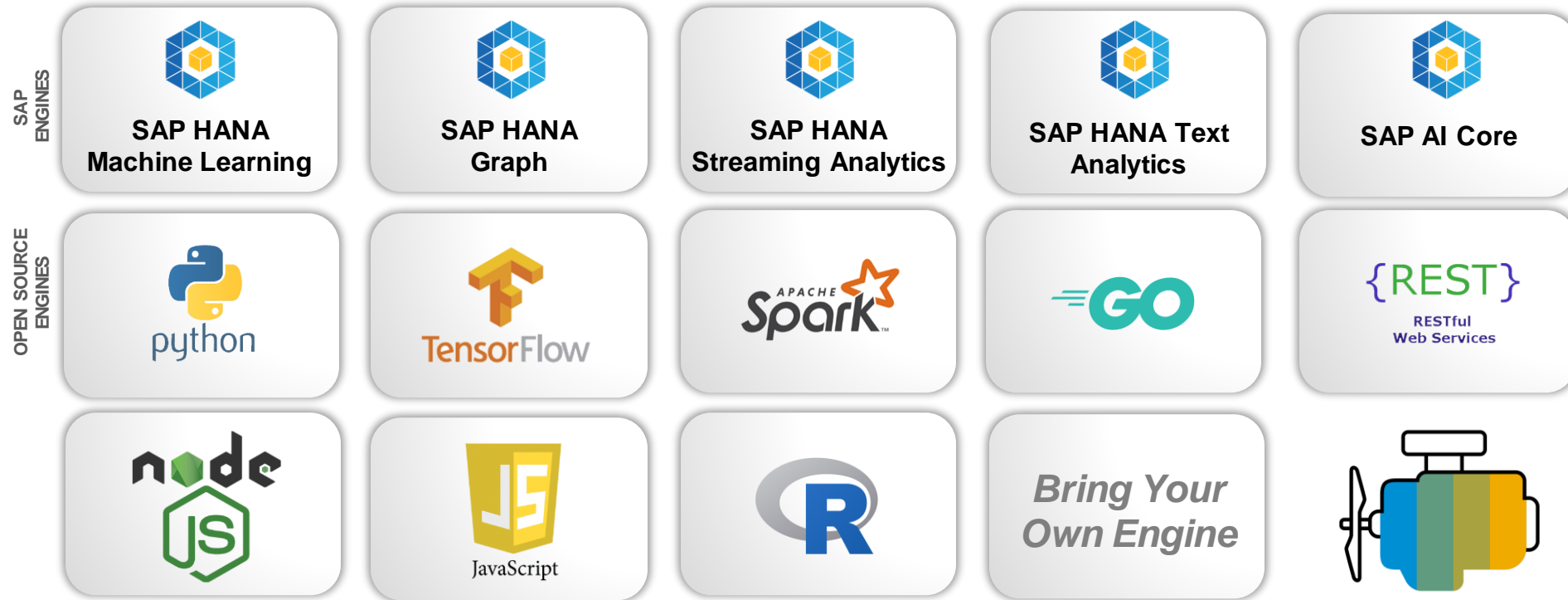
Logos for various data sources and cloud providers:

- Microsoft SQL Server, IBM DB2, OPENAPI INITIATIVE, Alibaba Cloud, Amazon Redshift, Amazon S3, NATS, kafka, ORACLE, MySQL, amazon REDSHIFT, Google Cloud Platform, hadoop, amazon web services™ S3, WAMP, Microsoft Azure, Google BigQuery, Microsoft Azure, Google Cloud Pub/Sub, MQTT.ORG, ODBC

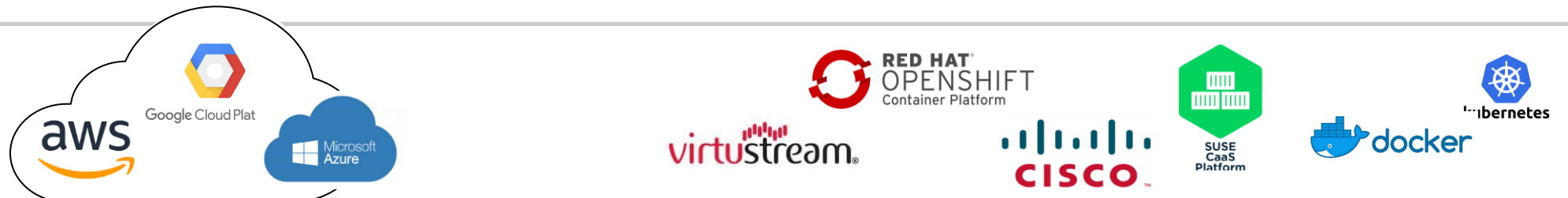
Custom: Bring Your Own Connectivity

# SAP Data Intelligence – Data Processing

Orchestrate several heterogeneous data processing engines



... across distributed infrastructures, cloud and on-prem, minimizing data movements

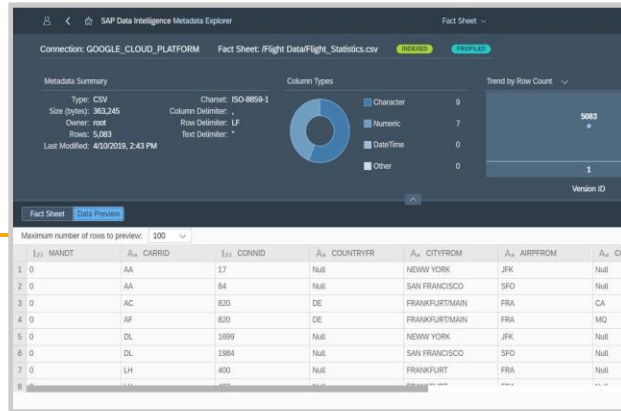




# SAP Data Intelligence – Data Catalog

A centralized Data Catalog for your enterprise data governance

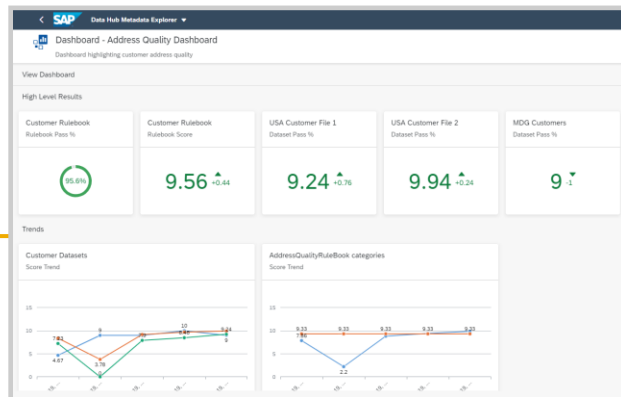
Data discovery,  
browsing and  
profiling



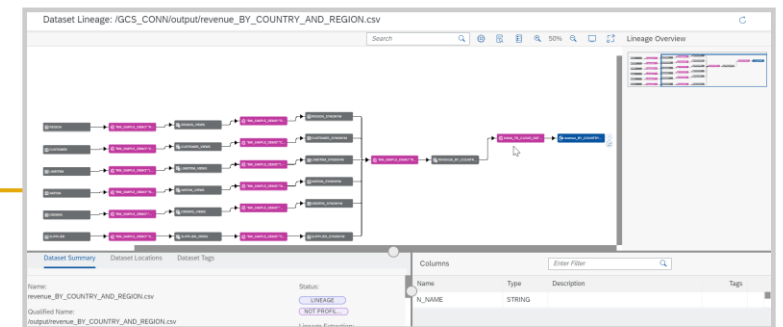
Self-service Data  
Preparation

The screenshot shows the 'Self-service Data Preparation' interface. It features a table with columns: EMPNO, ENAME, JOB, MGR. The table contains data for employees like Scott, Clark, Ward, Blake, Ford, Martin, James, Jones, Miller, Allen, Turner, Smith, and Adams. To the right of the table is a 'Preparation' menu with various actions: Change Case, Fill, Trim, Replace, Duplicate, Rename, Split, Combine, Convert To Date/Time, Convert To Number, Clear, and Remove.

Data quality  
rules and  
scorecards

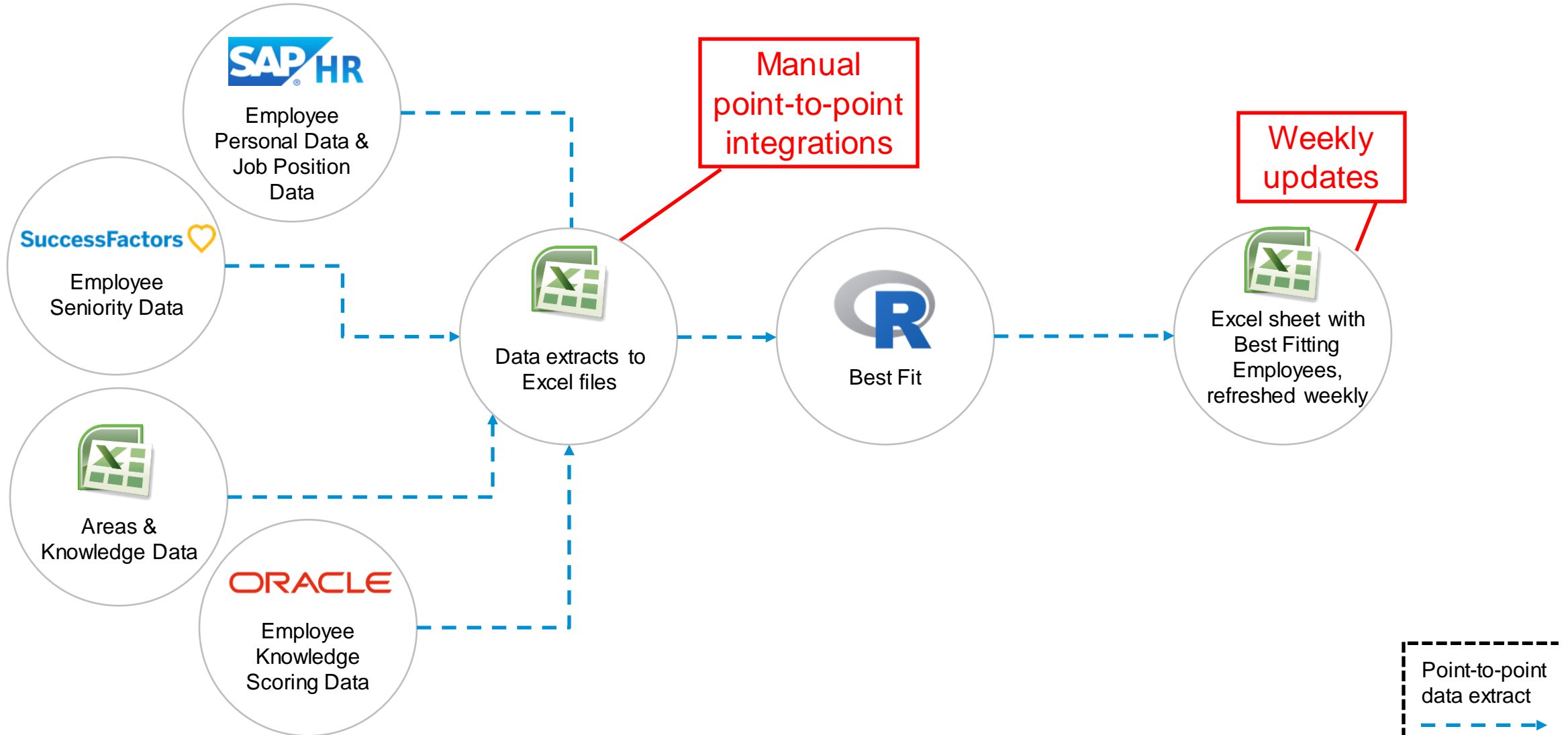


Data  
lineage



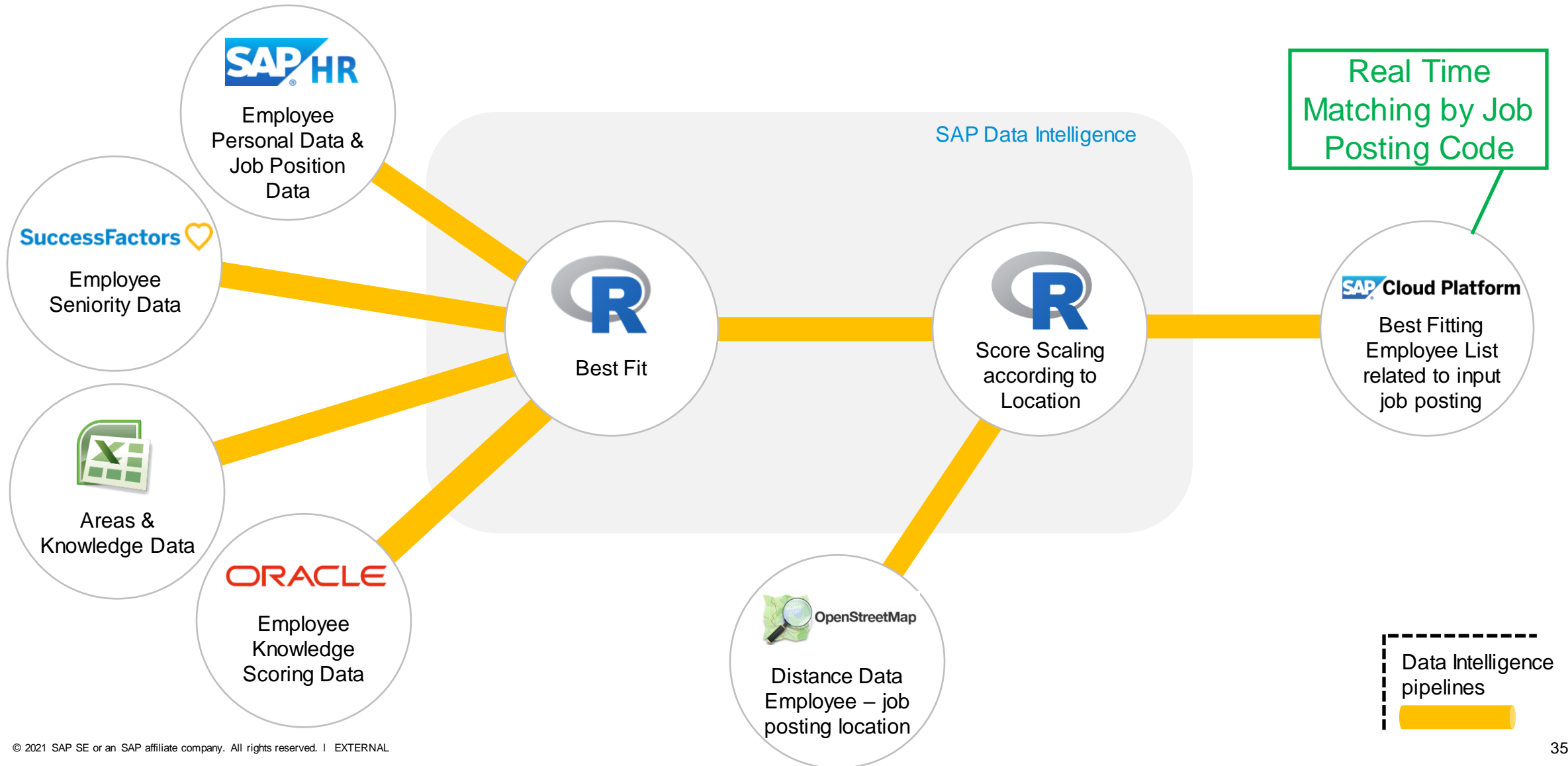
# BP2: Solve some Big Data Problems!!

The as-is before automation: manual integration and weekly batches



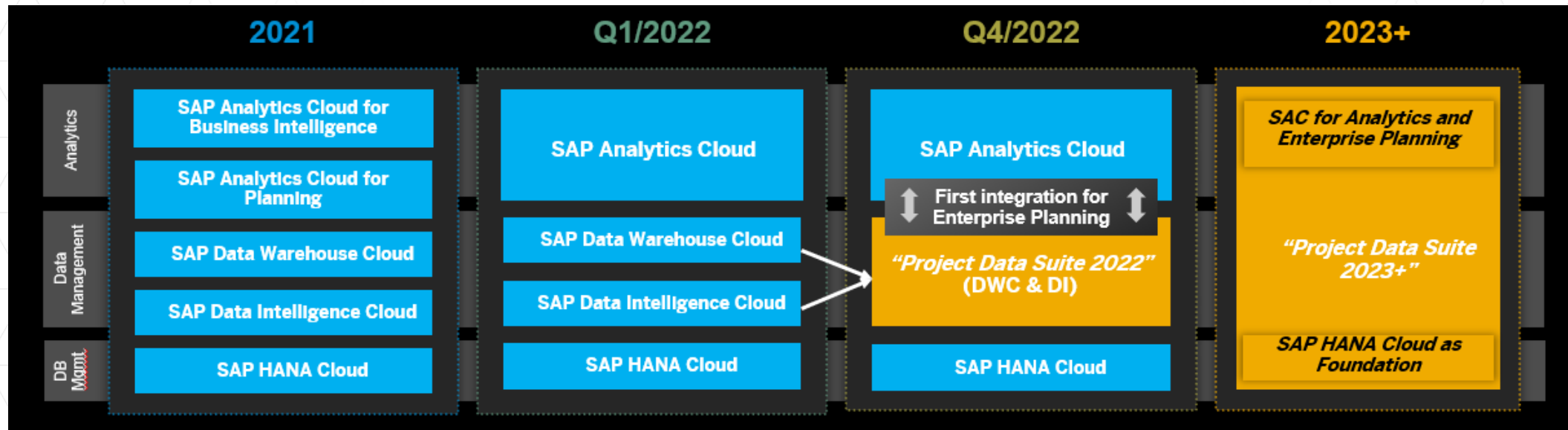
# HR Best Fit with SuccessFactors

The solution with Data Intelligence: streamlined operationalization, real-time insights



# SAP Data Warehouse Cloud + Data Intelligence= best tool on market

- SAP will bring Data Intelligence into Data Warehouse Cloud. This will provide DWC with a market leading Data Fabric tool allowing for greater data manipulation (virtual and physical), cataloging, meta data management and



Subject to Roadmap Caveats

Steve Bickerton

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