



What's New in SAP Datasphere Q1 Edition 2024

Product Management SAP Datasphere
April 2024

Public



Agenda

- 01** General Product Updates
- 02** Updates in Data Integration and Modeling
- 03** Updates in CLI and Security
- 04** Updates on Business Content
- 05** Outlook



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General Updates

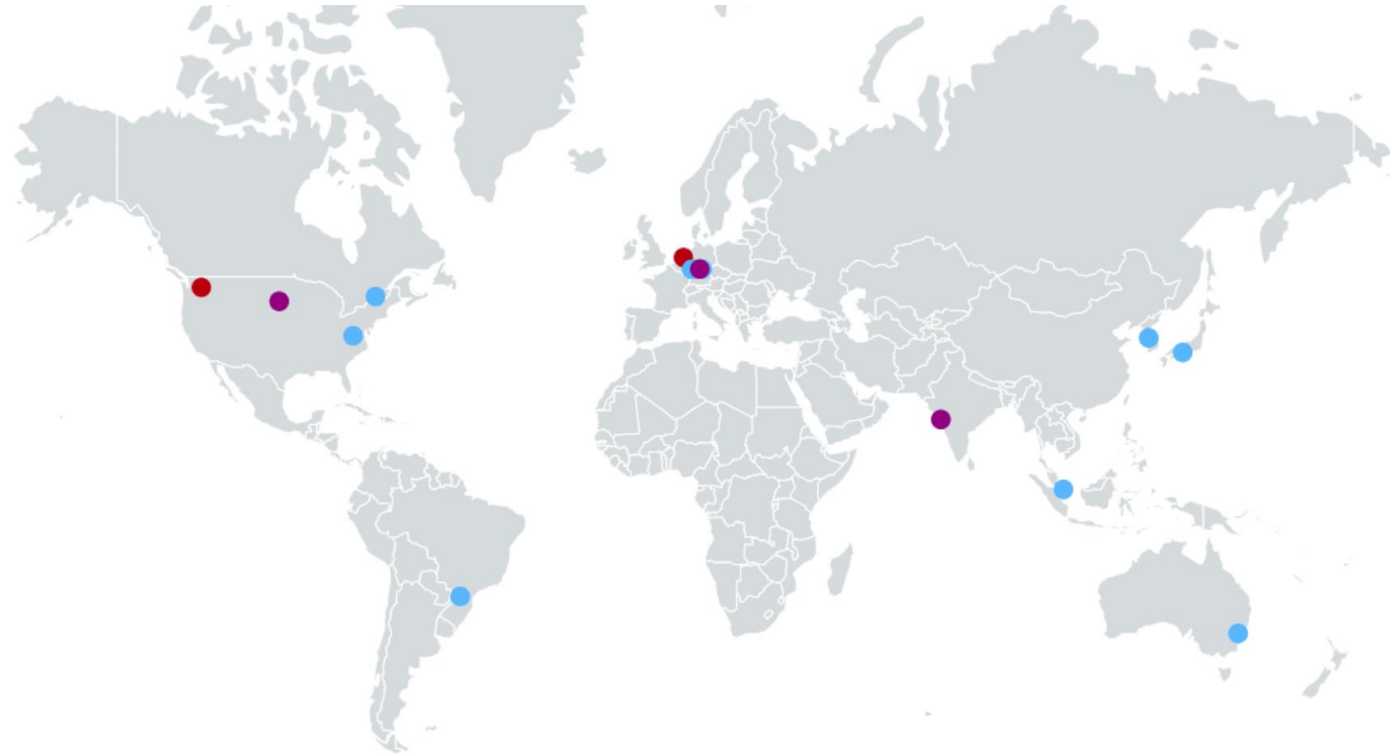
Data center update

Enhancement

- SAP BW bridge enablement of Google data centers (GCP) EU30, IN30 and US30

Business Value

- Extend SAP Datasphere and BW bridge to additional data centers offering more options for customers



Links

- [Discovery Center](#)

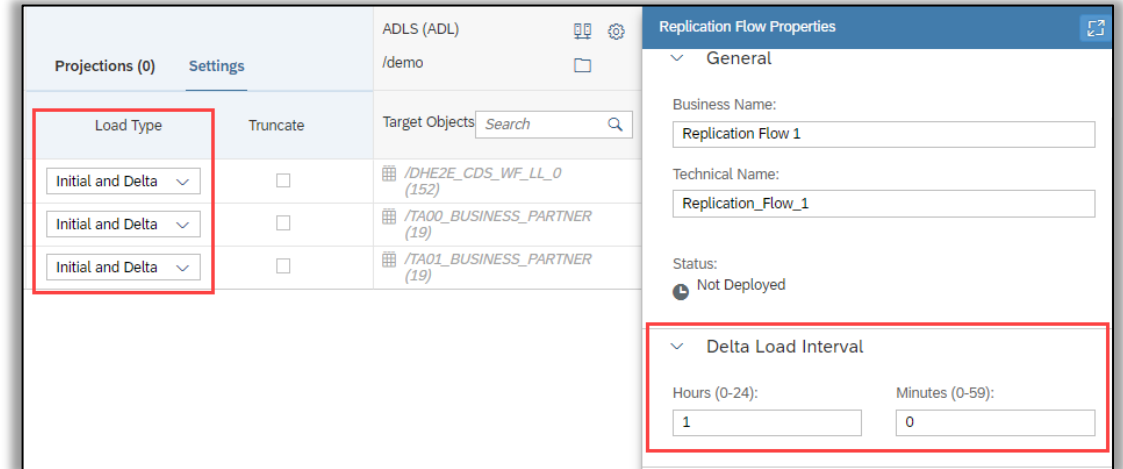


Data Integration

Configure real-time or delta interval for the replication flow

New Feature Enhancement

- Allow users to configure the delta load interval for replication flows based on their needs (previously fixed to 60 minutes)
- Value can be set from (near) real-time replication (= 0) up to 24h as a maximum delta load interval
- Default value will stay with the interval of 60 min / 1h
- Delta load interval can be configured on replication flow level and is valid for all added replication objects



Business Value

- Allow flexibility for customers to set a desired delta interval based on their needs
- Allow customers to perform (near) real-time replication with Replication Flows

Prerequisites / Links

- https://help.sap.com/docs/SAP_DATASPHHERE/c8a54ee704e94e15926551293243fd1d/25e2bd7a70d44ac5b05e844f9e913471.html?q=delta%20interval

Task framework: allow scheduling with a frequency up to 10 minutes

New Feature Enhancement

- Allow scheduling with a frequency up to 10 minutes

Business Value

- Less need to create multiple entities to archive higher frequency

Create Schedule for "BlackBeltDeltaTrF" ?

i Schedules are created in Coordinated Universal Time (UTC). The current UTC time is Jan 22, 2024 8:22:20.

Frequency

Enter As: ▼

Repeat: ▼

Every: ▼ Minute(s)

Reset Every Hour

Date Range for Scheduled Runs

Start Date: * 📅

End Date: 📅

At every 10 minute.

Show Runs In: ▼

Pause Schedule: NO

Next Runs: ⚠️

- Jan 22, 2024 8:30:00
- Jan 22, 2024 8:40:00
- Jan 22, 2024 8:50:00
- Jan 22, 2024 9:00:00
- Jan 22, 2024 9:10:00

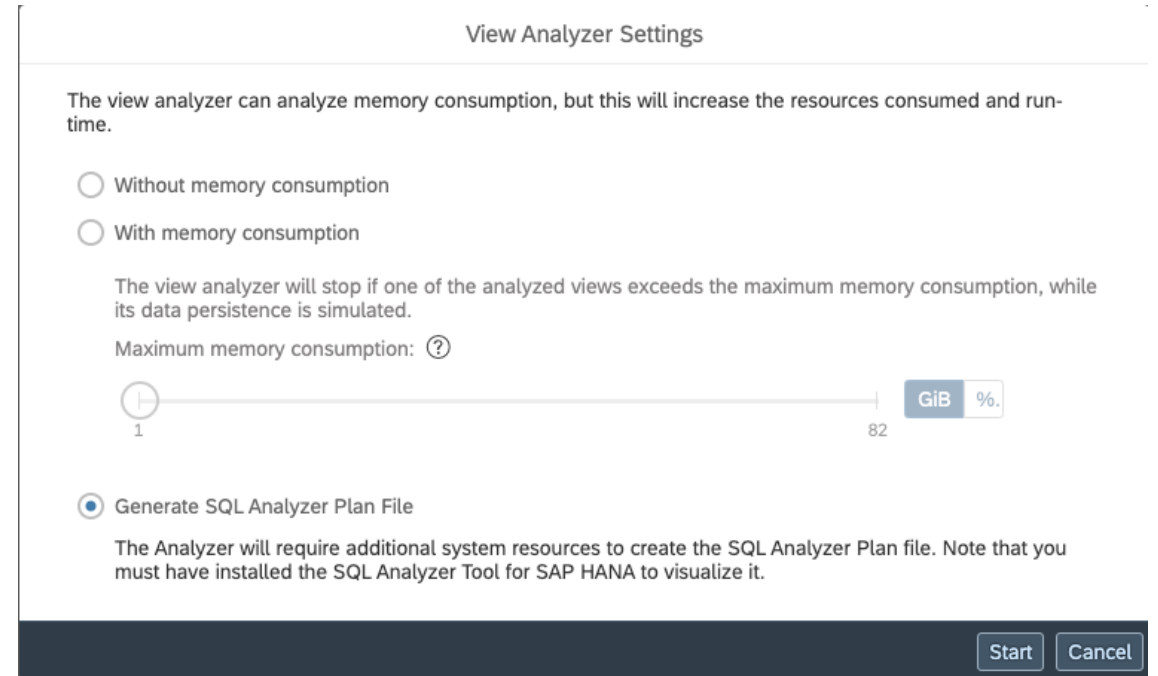
View persistency: generate SAP HANA SQL analyzer plan file (PlanViz)

New Feature Enhancement

- The view analyzer can now generate PlanViz files for download

Business Value

- Easier PlanViz creation for performance optimization



Remote tables: parameter support

New Feature Enhancement

- Support input parameter for SQL Views in Remote Tables
- Include the Remote Table Input Parameter in views

Business Value

- Support additional source entities

Input Parameters (1)

Name	Data Type
PAR	Integer

Associations (0)

Data: MY_PARAM_VIEW (2) Errors (0)

Input Parameters: PAR(2)

MY_SMALLINT	*MY_INTEGER	MY_BIGINT	MY_SMALLDECIMAL	MY_DECIMAL_FLOAT	MY_DECIMAL_17_2	MY_REAL
1	2	3	4	4	1.00	2
1	2	3	4	4	1.00	2

Remote tables: mass validation

New Feature Enhancement

- New mass check for changes in Remote tables
- Select entire connections to check

Business Value

- Simplify the check after mass changes like an update

The screenshot shows a web interface titled "Validate Remote Tables". At the top, there is a "Connection" dropdown menu set to "Northwind". Below this, a search bar is visible. The main content is a table with 10 rows, each representing a remote table. Each row has a checkbox in the first column, which is checked for all entries. The columns are: Business Name, Technical Name, Status, and Validated On. The status of the tables varies, with some showing "Runtime Error" and others "Deployed".

<input checked="" type="checkbox"/>	Business Name	Technical Name	Status	Validated On
<input checked="" type="checkbox"/>	Alphabetical_list_of_products	Alphabetical_list_of_products	Runtime Error	2024-01-22 10:17:42.245000000 UTC
<input checked="" type="checkbox"/>	Categories	Categories	Runtime Error	2024-01-22 10:17:51.176000000 UTC
<input checked="" type="checkbox"/>	Category_Sales_for_1997	Category_Sales_for_1997	Runtime Error	2024-01-22 10:17:58.448000000 UTC
<input checked="" type="checkbox"/>	Current_Product_Lists	Current_Product_Lists	Runtime Error	2024-01-22 10:18:05.689000000 UTC
<input checked="" type="checkbox"/>	CustomerDemographics	CustomerDemographics	Runtime Error	2024-01-22 10:18:13.989000000 UTC
<input checked="" type="checkbox"/>	Customers	Customers	Deployed	2024-01-22 10:18:21.610000000 UTC
<input checked="" type="checkbox"/>	Invoices	Invoices	Deployed	2024-01-22 10:18:25.630000000 UTC
<input checked="" type="checkbox"/>	Orders	Orders	Runtime Error	2024-01-22 10:22:10.312000000 UTC
<input checked="" type="checkbox"/>	Orders2	Orders2	Runtime Error	2024-01-22 10:18:38.164000000 UTC
<input checked="" type="checkbox"/>	Shippers	Shippers	Deployed	2024-01-22 10:18:45.868000000 UTC

At the bottom right of the interface, there are two buttons: "Validate" and "Cancel".

Transformation flow SQL editor

New Feature Enhancement

- New SQL and SQL script transformation in transformation flows
- Similar to the SQL View in the Data layer
- Convert graphical view transformations into SQL view transformations



Business Value

- An expert mode to create transformation with additional capabilities

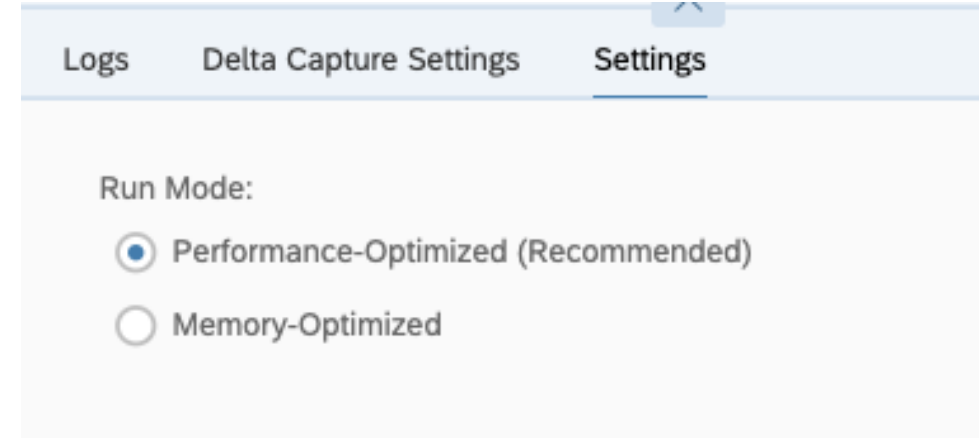
Low-memory mode for transformation flow & view persistency

New Feature Enhancement

- **Performance-optimized (recommended):** This is the recommended mode to run the transformation flow. SQL queries are processed directly in-memory. No intermediate result is stored on the disk to ensure a quicker data access and data consumption. However, this mode consumes memory resources and if your data model is very complex, it can result in an out of memory and the task failed.
- **Memory-optimized:** The mode uses an enhancement of the SAP HANA execution engine, which stores intermediate results of SQL statements on the disk. For example, you can use it when you get an out of memory error while running the task, as alternative to manual partitioning.

Business Value

- More control over the execution
- Memory consumption of SQL statements is then lower because intermediate results are not stored in-memory but are saved on the disk



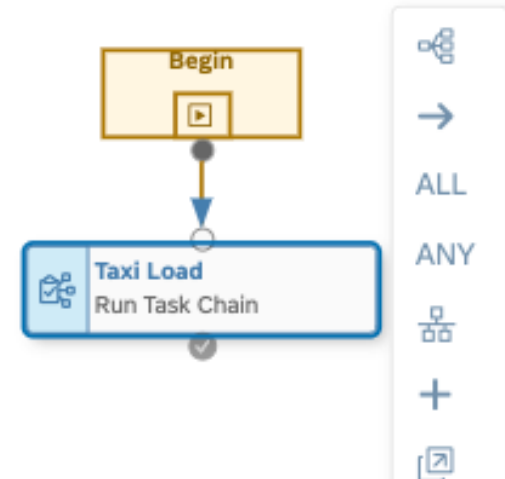
Links

- https://help.sap.com/docs/SAP_DATASPHHERE/be5967d099974c69b77f4549425ca4c0/f7da0290f5084e3db17c65b3d7c3140a.html?q=run%20mode

Task framework: allow nesting of task chains aka “meta chains”

New Feature Enhancement

- Add another task chain to a task chain as child



Business Value

- More modular design of task chains
- Better separation of responsibility
- Preparation for cross task chains

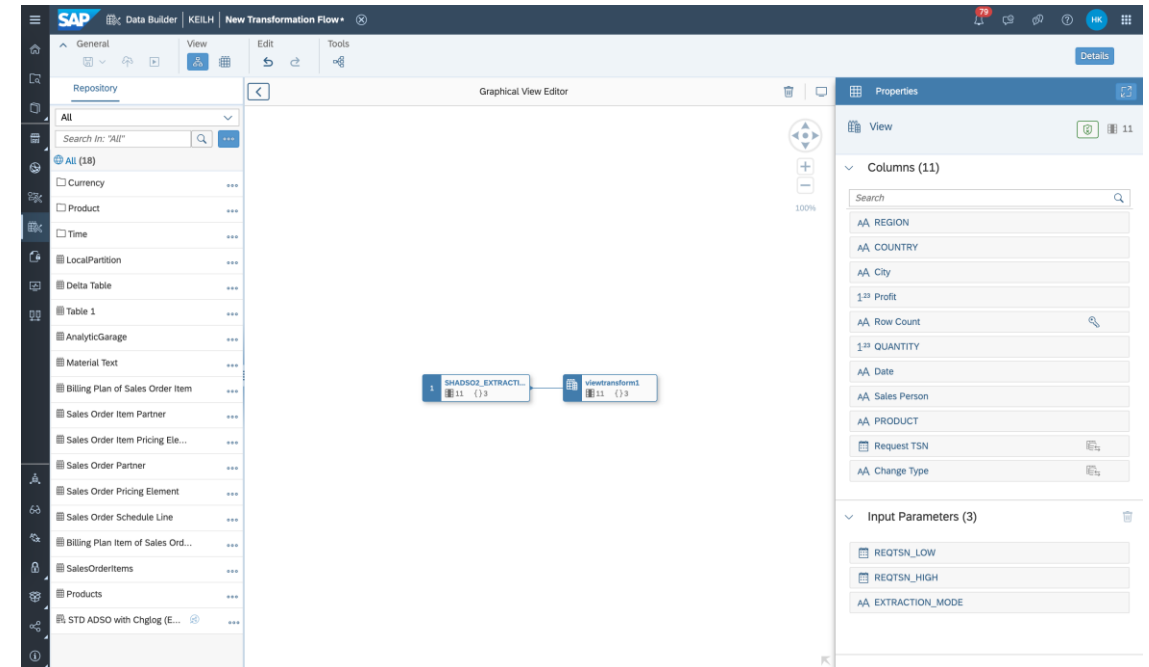
Transformation flow: SAP BW bridge as source

New Feature Enhancement

- Remote tables from the SAP BW bridge can now be used in transformation flows
- An advanced DSO with delta can be used as a delta source for transformation flow

Business Value

- Better integration with SAP BW bridge
- Less redundant data persistency



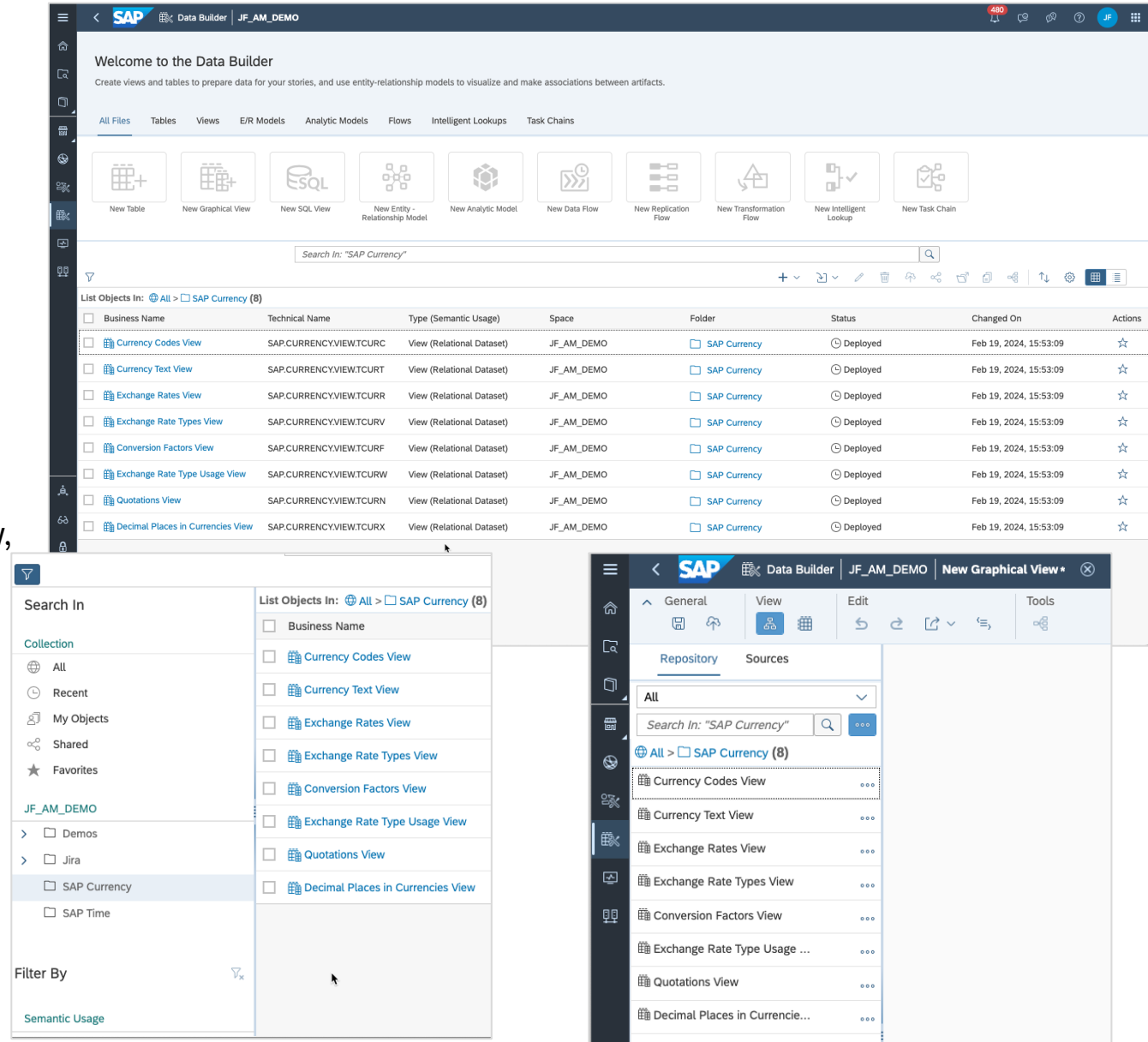


Modeling

Folders in repository explorer and data builder

New Feature

- Repository entities can now be structured in folders
- These support all standard folder properties like nesting, move, rename etc.
- Data builder UX aligned with repository explorer UX
 - Flexible filters
 - Rich search experience
 - Object collections
 - Table haptics minimally different with regards to sort workflow, column resize
- All editors also incorporate a revamped entity selection



Import more metadata of open SQL objects

New Feature Enhancement

- For views in open SQL schema, input parameters are now considered during object import
 - Note: their default values are not imported, but can be defined newly in the imported entity
- For tables in open SQL schema, default values of columns and Not Null property of columns are now considered during object import

```

1 DROP VIEW "JF_AM_DEMO#DEMO"."OUTLIER_CLUSTERING_VIEW";
2 CREATE OR REPLACE VIEW "JF_AM_DEMO#DEMO"."OUTLIER_CLUSTERING_VIEW"
3 (IN groupNumber INTEGER) AS
4 (SELECT "Customer_Id", "CLUSTER_ID", "SCORE" FROM "JF_AM_DEMO#DEMO"."APPLY_OUTLIER_CLUSTERING_FUNC"(:groupNumber))
5 WITH READ ONLY

```

Business Value

- Increases the flexibility and interoperability SAP Datasphere modelling entities and objects in the open SQL Schema
- Parameters in open SQL view help in creating flexible and reusable logic that leverages all of SAP HANA SQL including e.g. custom procedures or SAP HANA Cloud engines for geospatial, graph or machine learning

Columns (3)

	Business Name	Technical Name	Data Type	Text / Association	Default Value	Not Null
<input type="checkbox"/>	Customer...	Customer...	Integer			<input type="checkbox"/>
<input type="checkbox"/>	CLUSTER...	CLUSTER...	Integer			<input type="checkbox"/>
<input type="checkbox"/>	SCORE	SCORE	Double			<input type="checkbox"/>

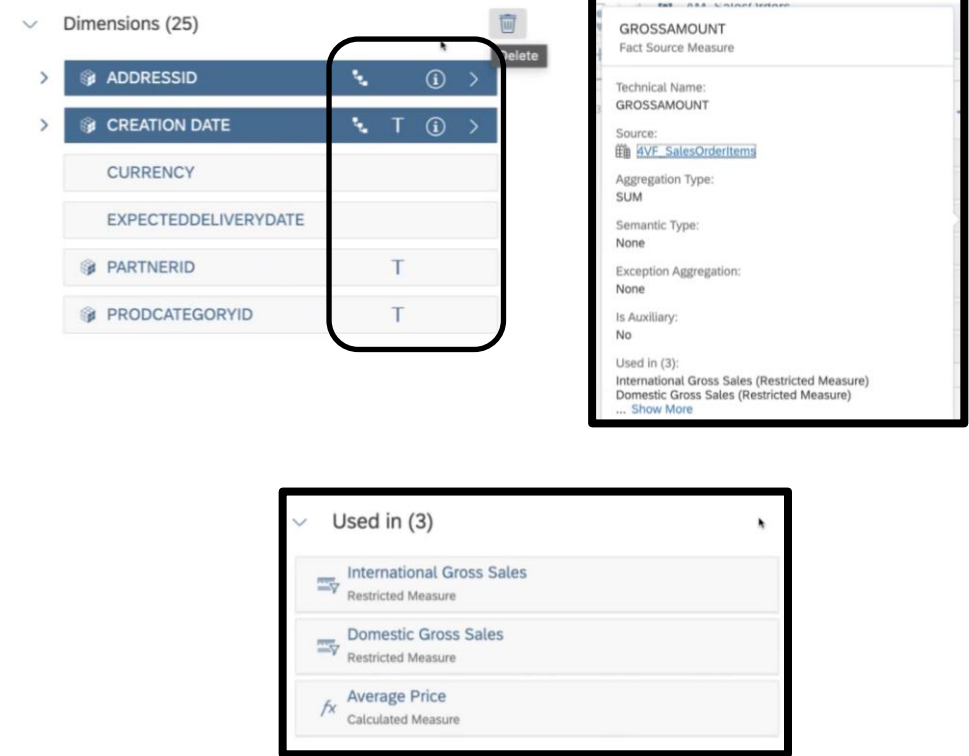
Input Parameters (1)

Name	Data Type	Default Value
GROUPNUMBER	Integer	Integer

Analytic model: UX improvement to show inherited information

New Feature Enhancement

- Provide better UX for understanding measures and dimensions in analytic models by showing information that is inherited from the underlying view definitions, like
 - Data types
 - Time-dependency
 - Hierarchies
 - Semantic types
 - Exception aggregation details
 - Aggregation type
- Displayed in multiple intuitive areas
 - Listing
 - Info button
 - Properties panel
- Also new
 - “Where-used” information
 - Group delete dimensions



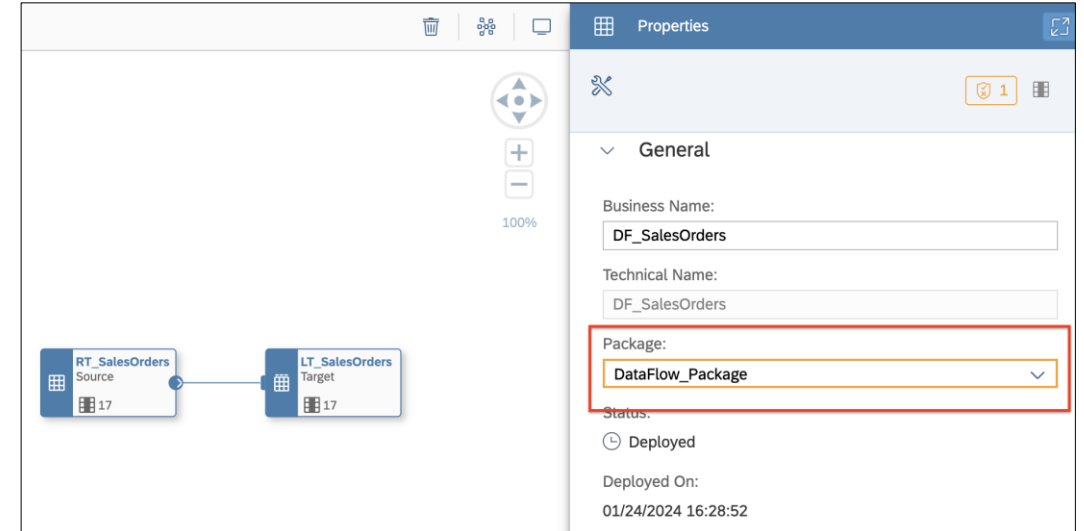
Business Value

- Easier to see and understand inherited modeling in analytic models

Repository package assignment in data layer editors

New Feature

- Allow data layer modeler to assign objects to packages from the modeling screen
- Support extended to the following object types
 - Data Flows
 - Intelligent Lookups
 - Replication Flows
 - Task Chains
 - Transformation Flows



Business Value

- Enable the modeler to assign existing and new objects to repository packages

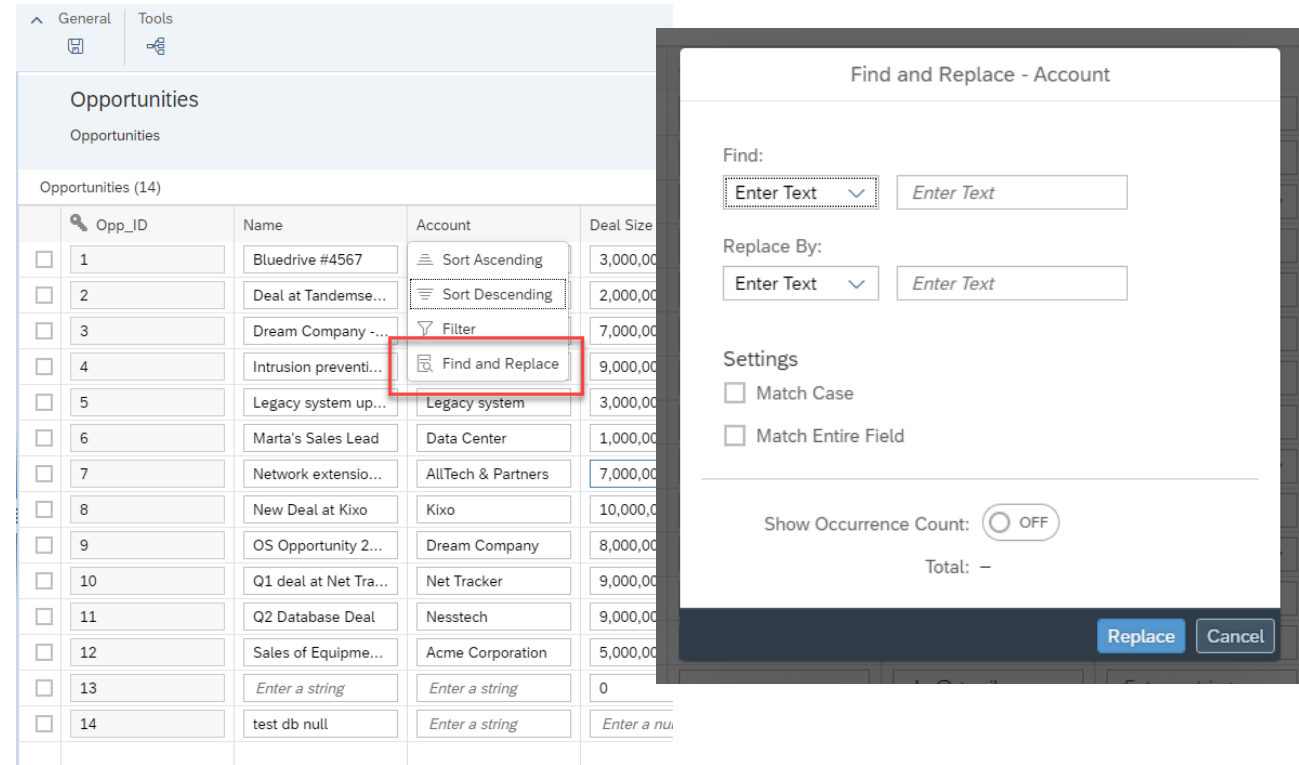
Data maintenance: support find and replace in column value of a filtered set

New Feature Enhancement

- Find & replace all occurrences in one column of a filtered set
- Change data within a few clicks
- Use feature to replace NULL values or empty fields

Business Value

- Enabling business users to groom, clean and change data directly in SAP Datasphere
- Reduces the effort to get proper data for analytical use case
- Simplifies data maintenance processes and increases the efficiency of business users





CLI & Governance

Automatic CLI CRUD integration: read, delete and list

Extension of the existing command line interface

- Allow discovery and CRUD operation on the following data builder and business builder objects
 - Local / remote tables
 - Graphical / SQL views / Intelligent Lookups
 - Analytic Models
 - Data Flows / Replication Flows
 - Task Chains
 - ER Models
 - Data Access Controls
 - Business Entities
 - Fact / Consumption Models

Business Value

- Automate tasks without the need to access the SAP Datasphere UI
- Get rid of manual, repetitive tasks

```
PS C:\Users\I517998> datasphere objects -h
Usage: datasphere objects [options] [command]

manage modeling objects

Options:
  -h, --help                display help for command

Commands:
  remote-tables [options]   manage remote tables
  local-tables [options]    manage local tables
  er-models [options]       manage er models
  views [options]           manage views
  analytic-models [options] manage analytic models
  task-chains [options]     manage task chains
  data-flows [options]      manage data flows
  replication-flows [options] manage replication flows
  transformation-flows [options] manage transformation flows
  data-access-controls [options] manage data access controls
  business-entities [options] manage business entities
  fact-models [options]     manage fact models
  consumption-models [options] manage consumption models
  intelligent-lookups [options] manage intelligent lookups
  contexts [options]        manage contexts
  types [options]           manage types
  help [command]            display help for command

Only command-specific options are listed here. To learn more about available generic options, visit https://tinyurl.com/yck8vv4w
```

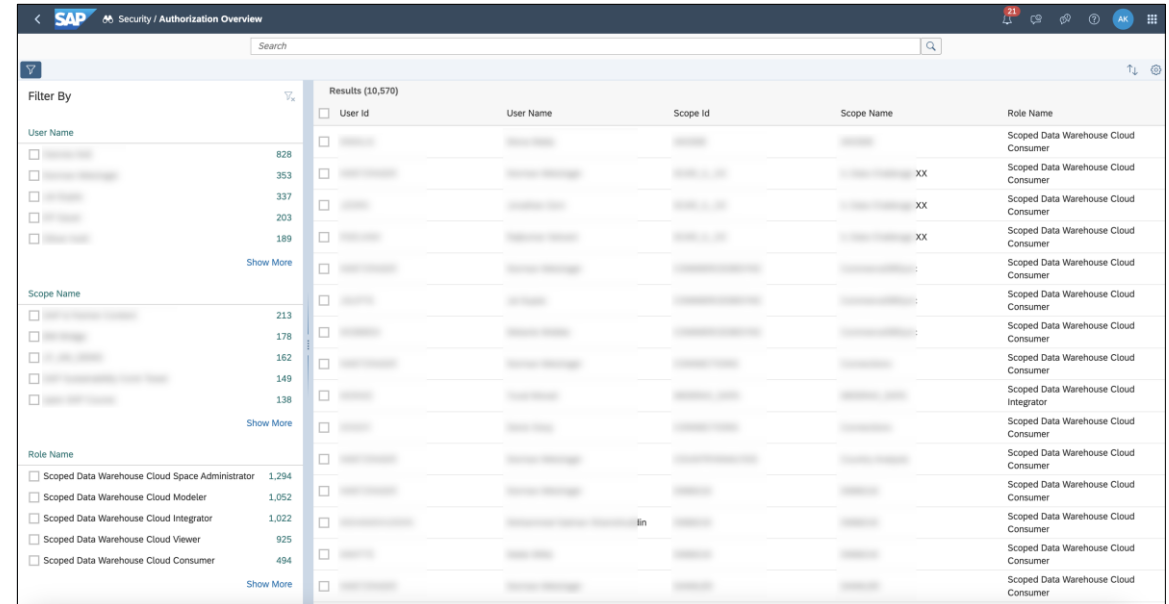
Links

- [SAP Datasphere CLI on npmjs.com](https://www.npmjs.com/package/datasphere-objects)
- Create / update planned in Q2 2024

User and roles management overview screen

New Feature Enhancement

- Overview about the permissions granted and scopes assigned to a user
- Filter with
 - User name
 - User ID
 - Scope Name
 - Scope ID
 - Role Name



Business Value

- Administrators can easily see all the users, roles, and spaces in the tenant and how they relate to each other

Links

- [Help Documentation](#)

Row level security: support for boolean operators

New Feature

- Support for data access controls with operators and value pairs
- Support for complex AND and OR combinations
- Supported operators – All, Is null, Not null, Equal, Not Equal, Greater than, Less than, Contains Pattern / Like, Between

Business Value

- Reduce administration effort significantly by defining groups of authorized values instead of explicitly naming every authorized value

The screenshot shows the configuration page for 'DAC_Boolean (DAC_Boolean)'. It is divided into 'General' and 'Criteria' tabs. The 'General' tab includes fields for Business Name (DAC_Boolean), Technical Name (DAC_Boolean), Package (None), Owner (Enter the Owner of This Data Access Control), Structure (Operator and Values), Permissions Entity (DAC_Boolean_Permission), and Identifier Column (UserName (UserName)). The 'Criteria' tab includes a selection box for columns from the permissions entity and dropdowns for Restriction Column (Restriction_Group), Criterion Column (Criterion_Name), Operator Column (Operator), First Value Column (LowerValue), and Second Value Column (UpperValue). At the bottom, there is an 'Available Criteria' table with columns for Apply, Business Name, and Technical Name.

Apply	Business Name	Technical Name
<input checked="" type="checkbox"/>	SALESORG	SALESORG
<input checked="" type="checkbox"/>	PRODUCTNAME	PRODUCTNAME
<input checked="" type="checkbox"/>	PARTNERID	PARTNERID

Links

- [Help Documentation](#)

Row level security: support for hierarchies

New Feature Enhancement

- Support for data access controls where criteria are defined as hierarchy values
- Objects with semantic usage hierarchy containing parent-child relationships are supported

Business Value

- Reduce administration and development effort along with flexibility in managing changes in hierarchy authorizations

The screenshot shows the configuration interface for a Data Access Control (DAC) hierarchy. It is divided into two main sections: 'General' and 'Criteria'.

General Tab:

- Business Name:** DAC_Hierarchy
- Technical Name *:** DAC_Hierarchy
- Package:** None
- Owner:** Enter the Owner of This Data Access Control
- Structure:** Hierarchy
- Permissions Entity *:** DAC_Permissions
- Identifier Column *:** UserID (UserID)

Criteria Tab:

- Business Name:** Criterion 1
- Technical Name *:** Criterion_1
- Hierarchy Entity *:** LT_CountryRegion_Hierarchy
- Criterion Column:** Values (Values)

Additional text in the 'General' tab: "The permissions entity must include an identifier column providing user IDs recognized by your identity provider formed as follows: 'amogh.kulkarni@sap.com'"

Links

- [Help Documentation](#)

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Business Content Q1 2024

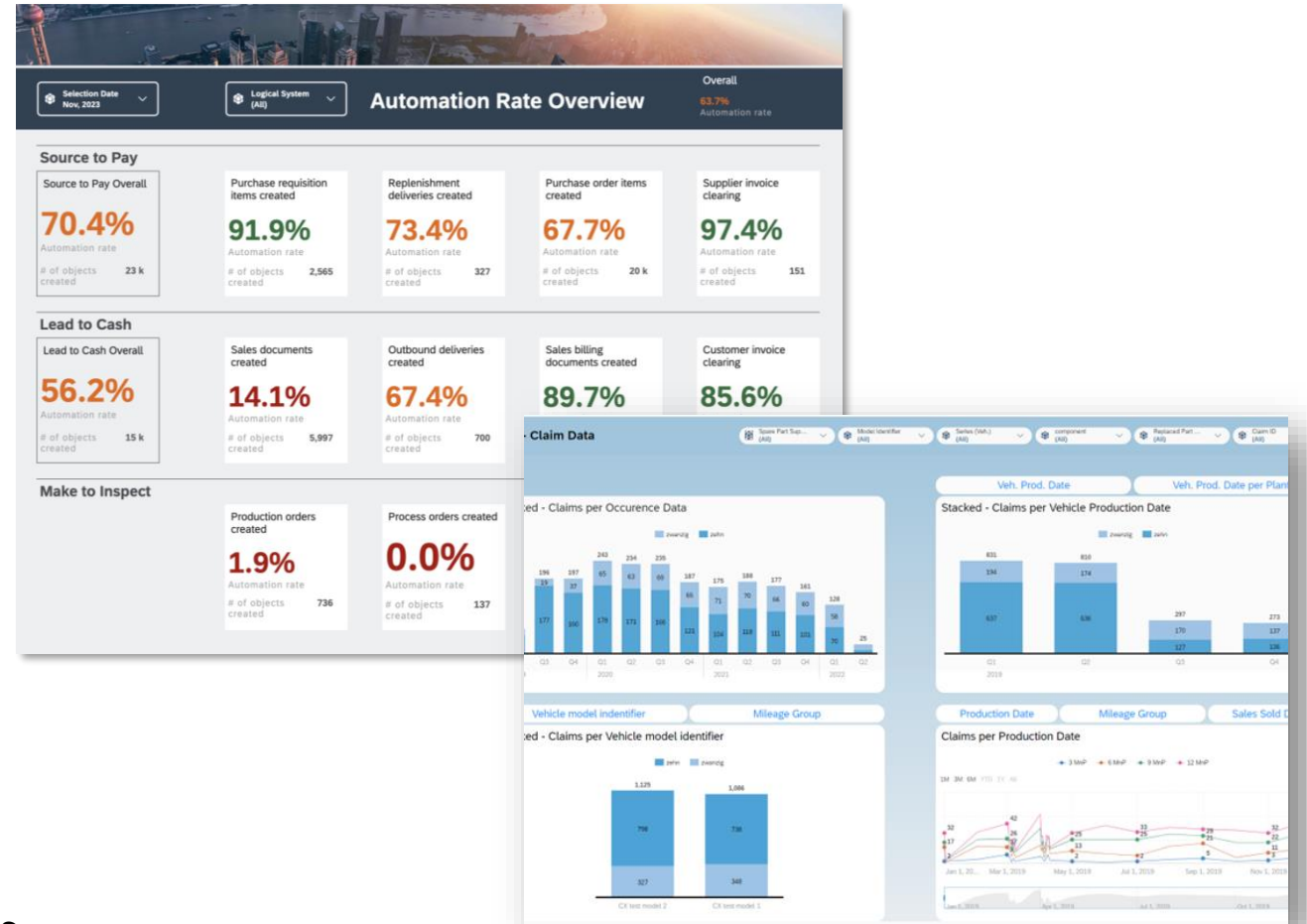
SAP Datasphere content update

New Feature / Enhancement

- Enterprise Asset Management: Plant Maintenance SAP for S/4HANA and S/4HANA Cloud
- Quality Management (Catena-X)
- SAP Signavio – Process Insights
- Master Data: Hierarchies for G/L Account, Cost Center
- Datasphere Documentation @ SAP Help Portal
- Community Content (GitHub)

Business Value

- Preconfigured business content leverages SAP knowledge on integrated business processes and master data
- Content uses modeling best practices and helps to reduce implementation times and cost and accelerates the adoption
- All recent content uses latest SAP Datasphere and SAP Analytics Cloud functionalities (Analytic Model, Replication Flow, Optimized Story Experience)
- Community Content: Additional content that enhances the Business Content



Prerequisites / Links

- [SAP Datasphere content – Documentation](#)
- [SAP Datasphere content – Community page](#)
- [SAP Community Content GitHub](#)

Content for SAP Analytics Cloud and SAP Datasphere: Enterprise Asset Management: Plant Maintenance Analysis for SAP S/4HANA

The Plant Maintenance Analysis content focuses on maintenance orders and on maintenance notifications with their related causes, activities and tasks.

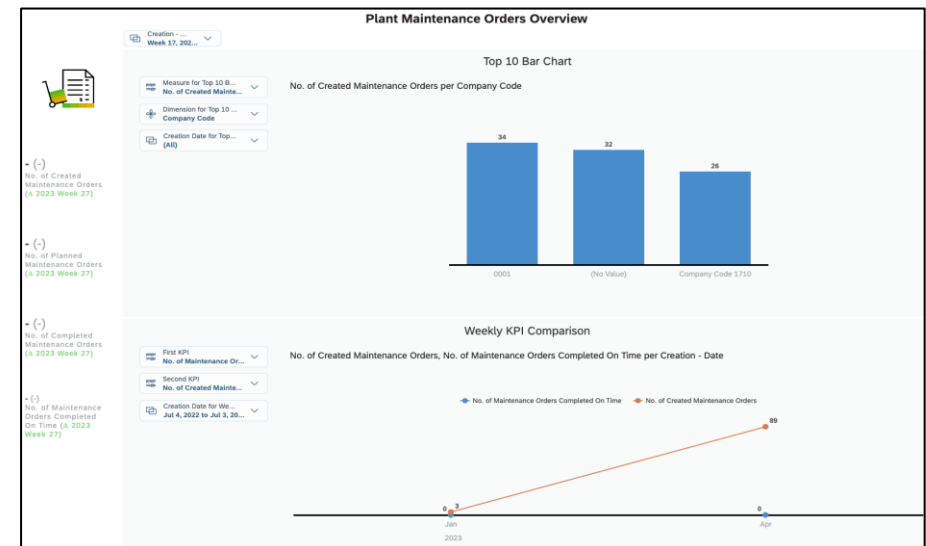
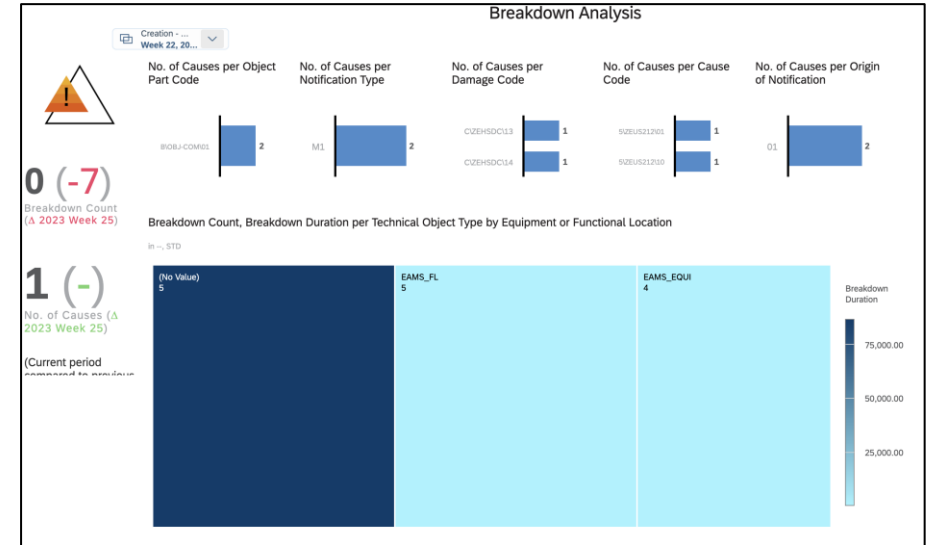
Plant Maintenance Analysis:

- Analyze data on maintenance notifications based on various key figures
- Get an overview and insights into maintenance notification tasks, causes and activities on a weekly basis
- Analyze maintenance orders on characteristics like unplanned, outstanding or timely completed orders using timeline charts
- Get insights in maintenance cost based on baseline-, planned-, actual- and estimated cost New
- Show maintenance order operations per Work Center and Plant New
- Technical object breakdown per plants, technical objects, notification types and more
- Breakdown analysis among other things for damages, causes, objects and location

Data Connectivity:

SAP Datasphere live connection (connected to S/4HANA or SAP S/4HANA Cloud)

This package includes SAP Datasphere data models for maintenance orders, maintenance order operations and costs (New), maintenance notifications and maintenance notification items, causes, activities and tasks.



Content for SAP Analytics Cloud and SAP Datasphere: SAP Signavio Process Insights

Business Requirement:

Management roles and process experts need to have **easy-to-consume process performance data** available at different levels of their organization.

A **company-wide visibility** of process data is as decisive for our customers as a **breakdown by key dimensions** steering their business.

As business changes daily, **process performance evolution** needs to be available via time trends.

Solution:

The analytical content delivered in SAP Datasphere and SAP Analytics Cloud builds on multiple process metrics from SAP Signavio Process Insights.

It lifts the insights into core processes to a new level by offering performance analysis

- on a corporate overview level, **allowing executive management steering**
- a deep dive by freely selectable key entities to **highlight process deviations** inside the organization and
- a trend analysis to **understand the past and steer the future**

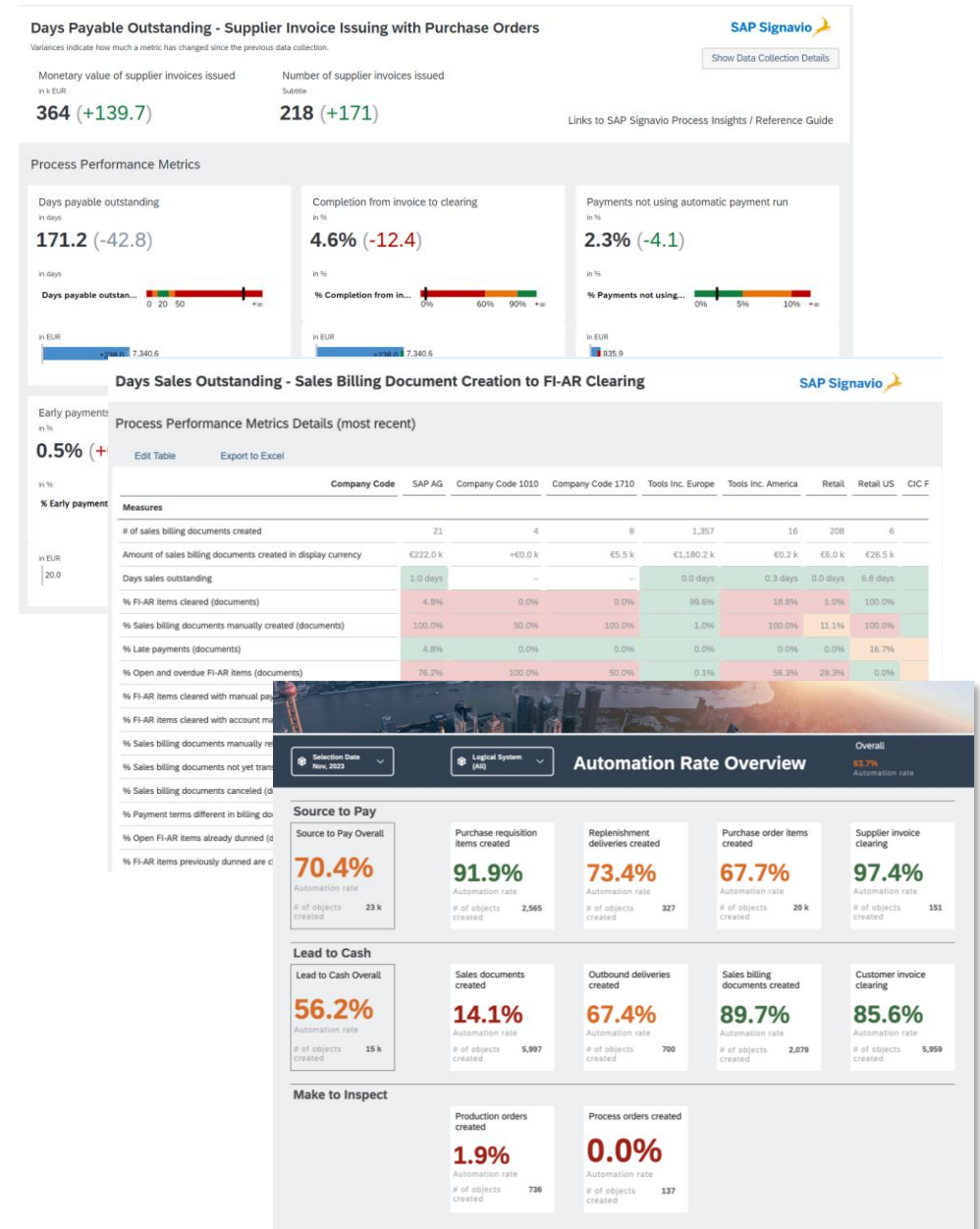
Scope:

Process Performance Indicators covered by this analytical content include

- **Days Payable Outstanding** – Supplier Invoice Issuing with Purchase Order
- **Days Sales Outstanding** – Sales Billing Document Creation to FI-AR Clearing
- **Automation Rate Overview & Detailed Analysis** New
 - **Source to Pay**
 - **Lead to Cash**
 - **Make to Inspect**

Data Connectivity:

The story is based on a SAP Datasphere live connection (based on an OData API of SAP Signavio Process Insights).



Content for SAP Analytics Cloud and SAP Datasphere: SAP Quality Management

Business Value

Collaborate effectively along the supply chain in order to prevent, detect and remediate quality issues.

Key-Features

- **Data Management & Exchange** to consolidate quality data from multiple systems
- **Reporting & Monitoring** of quality data to identify emerging issues
- Easy-to-execute **Machine Learning** delivering reportable insights
- Core Catena-X principles: **Data Sovereignty** and **Interoperability**

Solution

The analytical content delivered in SAP Datasphere and SAP Analytics Cloud builds on standardized Catena-X datasets that enable the consumer to analyze quality related issues.

- On the Overview Team lead level the consumer gets comprehensive summary of all relevant quality issues
- On the Quality Engineer Diagnose dashboard the consumer can extensively analyze all diagnostic data sent from the car fleet
- On the Quality Engineer Claim dashboard the consumer gets an detailed overview of all identified claims






Detect defects up to
10 weeks
earlier

Reduce warranty
claims by up to
25%

Reduce financial
accruals for future
recalls by up to
20%

Save up to
1 FTE
through more efficient
processes

SAP Datasphere Content – Overview all SAP packages

- SAP Ariba: Enterprise Analytics for Procurement
- SAP Ariba: Spend Analysis
- SAP Automotive: Responsive Supply Network, Sales and Inventory
- SAP Business Networks - Value Analytics
- SAP Consumer Products: Revenue Growth Management - Foundation
- [Enterprise Asset Management: Plant Maintenance Analysis for SAP S/4HANA and SAP S/4HANA Cloud \(*\)](#) 
- [Finance Foundation for SAP S/4HANA and SAP S/4HANA Cloud \(*\)](#)
- Financial Analytics Dashboard for SAP Analytics Cloud
- SAP Monitoring Content (Data Integration Tasks)
- SAP Retail: POS Analytics
- Quality Management 
- [Sales Analysis for SAP S/4HANA and SAP S/4HANA Cloud \(*\)](#)
- [Service Analysis for SAP S/4HANA and SAP S/4HANA Cloud \(*\)](#)
- SAP Signavio - Process Insights 
- [Solution Order Analysis for SAP S/4HANA Cloud \(*\)](#)
- Statistical Process Control (SPC) Toolkit
- SAP Supply Chain Management: Life Sciences Dashboard
- SAP Sustainability Control Tower Integration
- SAP Telecommunication: Customer Value Management (CVM)
- SAP Utilities: Meter to Cash
- Working Capital Dashboard for SAP S/4HANA and SAP S/4HANA Cloud

(*) [Datasphere Content Foundation](#)

Thank you

Contact information:

content.sapdatasphere@sap.com



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Outlook

Upcoming Innovations

Preview
subject to change

Q2 2024

Future

Support **Confluent Kafka** as target (Q2) and source (Q3) in replication Flows.

Scheduling of **Replication Flows** and use cloud object stores as a source while enabling flexible scalability.

Define stable objects with **Compatibility Contracts** including lifecycle management.

Expanding **Data center coverage** with Google Cloud Platform and Microsoft Azure.

Adding objects **beyond relational data** to Data Products in Data Marketplace (2025).

Support for use of local tables with delta capture as sources in **Replication Flows** with delta and initial load support.

License-specific data selection for **Data Marketplace** also via CLI.

Catalog Metadata extraction for SAP BW bridge.

Semantic Onboarding support for SAP HANA Cloud calculation view.

Stacking of Analytic Models with central measure definition and Support for display and navigation attributes

Make the **SCIM API** available.

Command line interface CRUD for data builder and business layer objects.

Introduction of **Namespaces** for modeling entities (Q4).

Analytic Model **repointing** in SAP Analytics Cloud Stories.

Catalog expanding crawling reach to SAP BW, SAP S/4HANA, SAP ECC, and SAP HANA.

Support **Non-Cumulative Key figures** and further SAP BW, SAP BW/4HANA capabilities.

Enabling **GenAI** through API first and accelerating business outcomes through e.g. automated modeling.

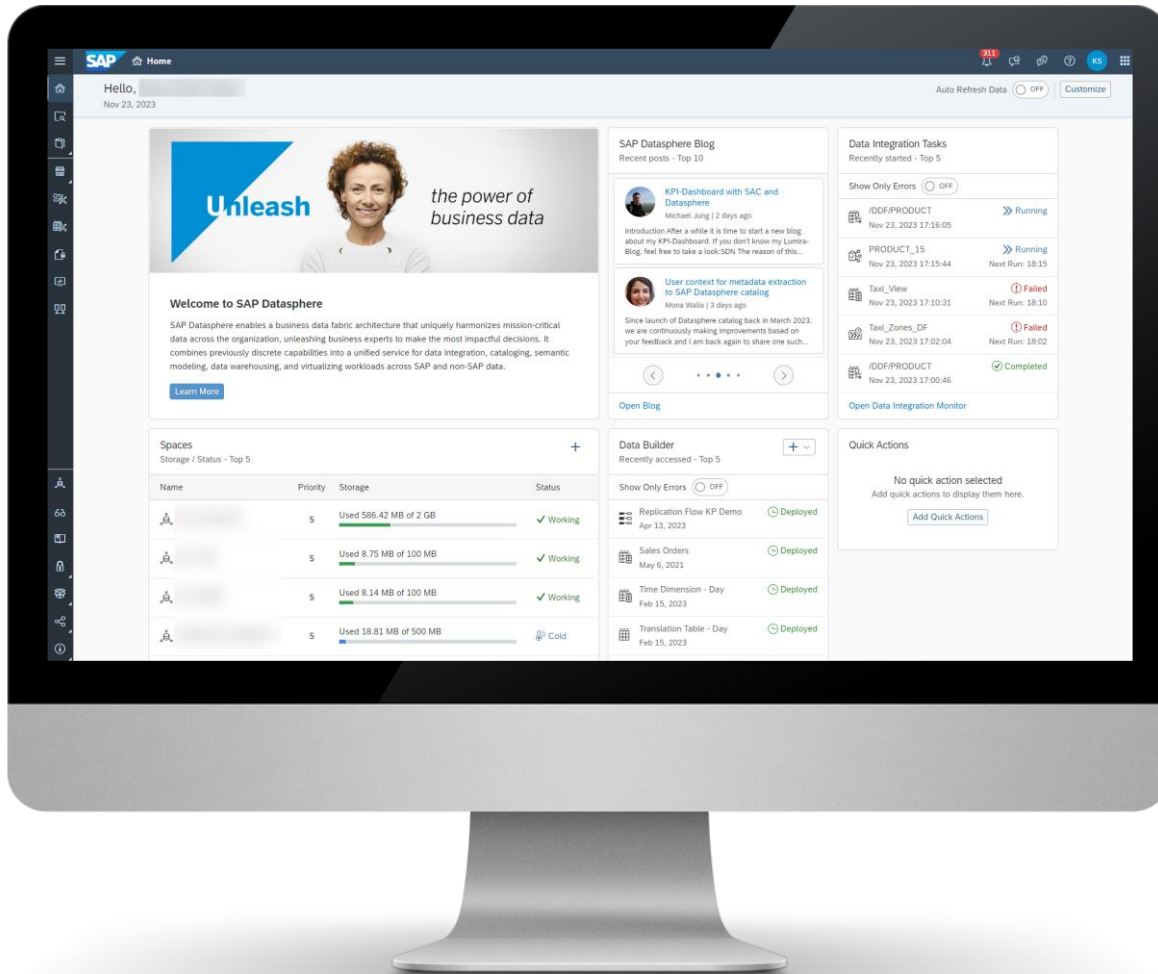
Direct access to the **OData API** from the model editor (analytic model, view).

Translation dashboard for **multilingual content support**.

On demand compute during peak consumption scenarios.

Direct **Multi-Fact modeling** and **Business Layer support** in the Analytic Model.

More information



- Check out the product page on sap.com and get access to a [guided experience trial](#) system
- Get started with [documents & videos](#)
- Use the [tutorials](#) and our [learning journey](#) to learn more
- Stay updated using the [release navigator](#)
- Join the [community](#) and check out the [best practices](#) recommendations
- Add your ideas and requests for new features on the [SAP Datasphere customer influence](#)
- Online Documentation on [SAP help](#)

Thank you.

Contact information:

Your Product Management Team for
SAP Datasphere

