

SAP Business Intelligence

How to get the most out of your data

The semantic layer

Types of technical views:

- Attribute views - contain only attributes, a collection of dimensional data, are reusable and can be included in analytic views and calculation views.
- Analytic views - contains both attributes and measures. If an analytic view includes one or more attribute views, then the definitions of the attribute views are passed on to the analytic view.
- Calculation views - is a combination of attribute views, analytic views, and tables to reflect complex business scenario requirements.

How-To Guide

SAP Business One, version for SAP HANA
Document Version: 1.1 – 2015-11-05

PUBLIC

How to Work with Semantic Layers

SAP Business One 9.2, version for SAP HANA PL00

Predefined semantic layers for the Web client

The screenshot displays the SAP HANA Studio interface. On the left, a list of predefined semantic layers is shown, including various queries and measures. On the right, the 'SalesAnalysisByDocumentQuery' layer is selected, showing its columns, data types, dimensions, and other properties.

View Column	Table Column	SQL Data Type	Dimension	Not Null	Default	Comment
1 DocumentNumber	DocumentNumber	INTEGER				Document Number
2 BillToCountry	BillToCountry	NVARCHAR	100			Bill-To Country
3 ShipToCountry	ShipToCountry	NVARCHAR	100			Ship-To Country
4 DocumentOwner	DocumentOwner	NVARCHAR	160			Document Owner
5 BusinessPartnerChannelPartn...	BusinessPartnerChannelPartn...	NVARCHAR	100			BP Channel Partner
6 Installment	Installment	NVARCHAR	20			Installment
7 PostingDate	PostingDate	TIMESTAMP				Posting Date
8 PostingYear	PostingYear	VARCHAR	4			Posting Year
9 PostingQuarter	PostingQuarter	NVARCHAR	2			Posting Quarter
10 PostingMonth	PostingMonth	VARCHAR	2			Posting Month
11 PostingWeek	PostingWeek	VARCHAR	2			Posting Week
12 PostingDateSQL	PostingDateSQL	DATE				
13 PostingYearAndQuarter	PostingYearAndQuarter	NVARCHAR	6			Posting Year and Quar...
14 PostingYearAndMonth	PostingYearAndMonth	NVARCHAR	6			Posting Year and Month
15 PostingYearAndWeek	PostingYearAndWeek	NVARCHAR	6			Posting Year and Week
16 DueDate	DueDate	TIMESTAMP				Due Date
17 DueYear	DueYear	VARCHAR	4			Due Year
18 DueQuarter	DueQuarter	NVARCHAR	2			Due Quarter
19 DueMonth	DueMonth	VARCHAR	2			Due Month
20 DueWeek	DueWeek	VARCHAR	2			Due Week
21 DueDateSQL	DueDateSQL	DATE				
22 DueYearAndQuarter	DueYearAndQuarter	NVARCHAR	6			Due Year and Quarter
23 DueYearAndMonth	DueYearAndMonth	NVARCHAR	6			Due Year and Month

- Profitability Analysis
- Sales Analysis by Document
- Customer Open Balances And Credit Limit Comparison
- Purchase Analysis
- Purchase Analysis by Document
- Vendor Balance Analysis Query
- Inventory Status
- Inventory Transaction Documents
- Financial Analysis
- Sales Quotation Header
- Sales Quotation Details

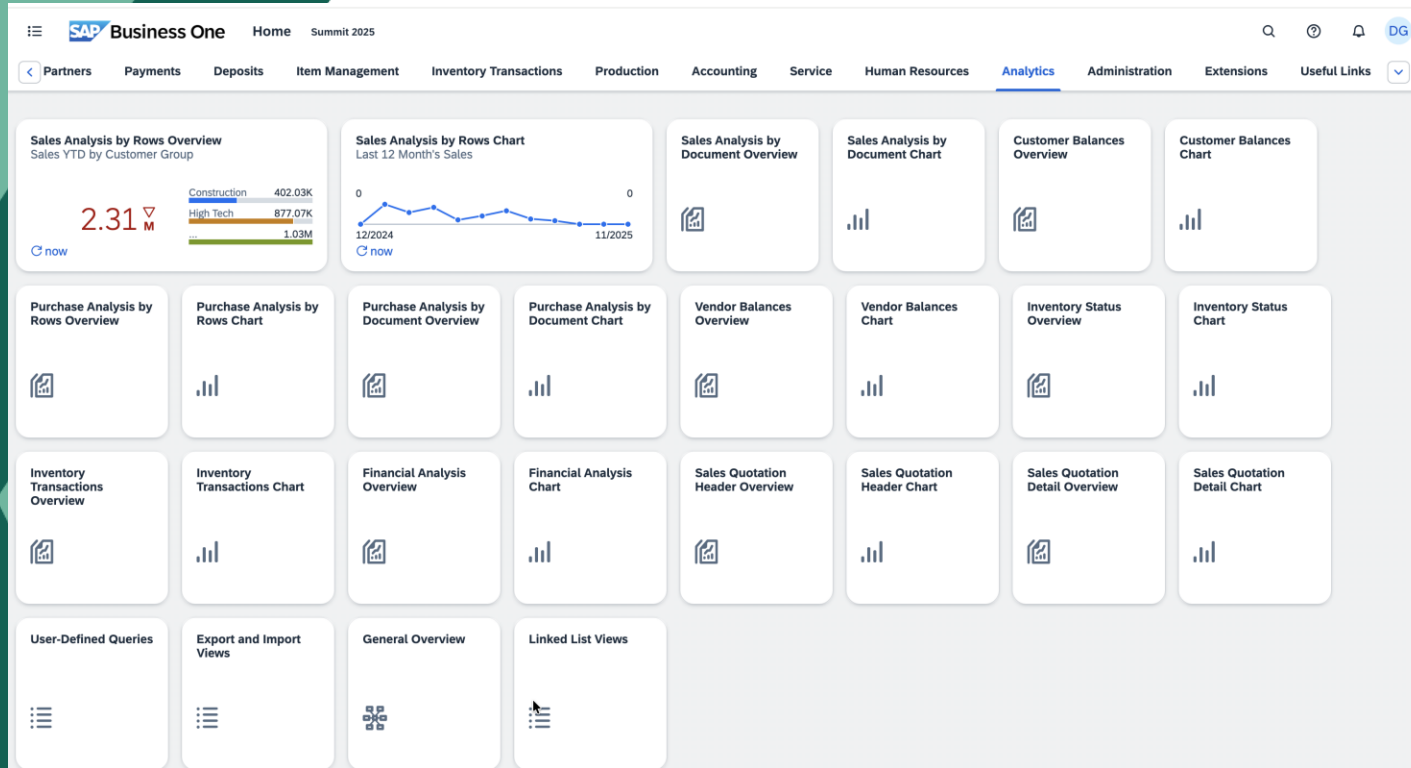
Web Client Analytics

SAP Business One, Web client provides both built-in and customizable analytics capabilities and content.

Apps

- User-Defined Queries
- Export and Import Views
- General Overview
- Linked List Views

There are additional SAP HANA-specific Overview and Chart tiles available.



User Defined Query

dev-hana.ecs-online.com/webx/index.html#boOUQR-app

SAP Business One Manage User-Defined Queries Summit 2025

User-Defined Query

Search:

User-Defined Query				Create	Active	Inactive	Expand	Collapse
Category	Query	Details	Active					
<input type="checkbox"/> > System								
<input checked="" type="checkbox"/> General								
<input type="checkbox"/>	Calculation View - Customer LC Balances	Select * from "_SYS_BIC"."sap.summit2025.ar.case/Cust...	Y					>
<input type="checkbox"/>	Calculation View - Inventory Movement Sales and Purch...	Select T1."TransId", T1."TransType", T0."DocumentNumbe...	Y					>
<input type="checkbox"/>	Calculation View - Inventory Movements	Select T1."TransId", T1."TransType", T0."DocumentNumbe...	Y					>
<input type="checkbox"/>	Calculation View - Purchase Analysis	Select T1."TransId", T1."TransType", T1."CreatedBy", T0."...	Y					>
<input type="checkbox"/>	Calculation View - Sales Analysis	Select T1."TransId", T1."TransType", T1."CreatedBy", T0."...	Y					>
<input type="checkbox"/>	Calculation View - Vendor LC Balances	Select * from "_SYS_BIC"."sap.summit2025.ap.case/Ven...	Y					>
<input type="checkbox"/>	Documents	select T0."DocumentType", T0."DocEntry", T0."DocNum", ...	Y					>
<input type="checkbox"/>	Inventory Price Lists	SELECT T0."ItemCode", T0."SuppCatNum", T0."ItemNam...	Y					>
<input type="checkbox"/>	Journal Entry Transaction Ledger	SELECT T0."TransId", T1."TransType", T1."BaseRef", T1."...	Y					>
<input type="checkbox"/>	Sales Order Lines by Sales Employee	Select T0."ItemCode", T0."Dscription", T0."PriceBefDi", T...	Y					>

User Defined Query

dev-hana.ecs-online.com/webx/index.html#boOUQR-app&detail/UDQ_338_M1

SAP Business One User-Defined Query Summit 2025

User-Defined Query Sales Order Lines by Sales Employee

Edit Duplicate Remove Open in List View

General Columns Preview

Name: * Sales Order Lines by Sales Employee

Category: *

SQL Statement: *

```
1 Select T0."ItemCode", T0."Dscription", T0."PriceBefDi", T0."DiscPrct", T0."Price", T0."Quantity", T0."LineTotal", T0."ShipDate", T0."GrossBuyPr",
2 From RDR1 T0
3 Inner Join ORDR T1 on T0."DocEntry" = T1."DocEntry"
4 Left Outer Join OSLP T2 on T0."SlpCode" = T2."SlpCode"
```

You can press Ctrl + space bar to display a list of all available options.

Active: YES

Display as Tile on Home Page: NO

Columns

#	Name	Description	Type	Aggregation	Decimal Places	Link To	Match Unique ID With	Original
1	ItemCode	Item No.	Dimension	None	None	OITM		RDR1.ItemCode
2	Dscription	Item/Service Description	Dimension	None	None			RDR1.Dscription
3	PriceBefDi	Unit Price	Measure	Sum	Prices			RDR1.PriceBefDi
4	DiscPrct	Discount % per Row	Measure	Sum	Percent			RDR1.DiscPrct
5	Price	Price after Discount	Measure	Sum	Prices			RDR1.Price
6	Quantity	Quantity	Measure	Sum	Quantities			RDR1.Quantity

Utilizing the List View

The List View is utilized throughout the web client. It is both operational and analytical.

Ways that you can process the list view:

- Table view
- Chart view
- Card view

You can also tailor the List View with Adaptable Filters, Form Settings, and the results can be exported to Excel, shared, or saved as a tile.

The screenshot displays the SAP Business One web client interface for 'Manage Sales Orders'. The page title is 'All Sales Orders' and the user is 'Summit 2025'. The interface includes a search bar and several filter fields: Document No., Customer Code, Customer Name, Delivery Date, Status, and Sales Employee Name. Below the filters is a table of sales orders. The table has columns for Document No., Customer Code, Customer Name, Customer Ref. No., Posting Date, Delivery Date, Document Total, and Status. The table contains 20 rows of data, with a total of 22,928,689.89 \$ at the bottom.

Document No.	Customer Code	Customer Name	Customer Ref. No.	Posting Date	Delivery Date	Document Total	Status
1179	C60000	SG Electronics		08/06/2025	09/05/2025	2,100.00 \$	Open
1178	C23900	Parameter Technology		08/06/2025	09/05/2025	19,668.30 \$	Open
1177	C23900	Parameter Technology		08/03/2025	09/02/2025	11,484.57 \$	Open
1176	C50000	ADA Technologies		08/09/2025	09/08/2025	152.38 \$	Open
1175	C42000	Mashina Corporation		08/02/2025	09/01/2025	8,022.88 \$	Open
1174	C99998	Web Customer		08/13/2025	09/12/2025	43,561.00 \$	Open
1173	C42000	Mashina Corporation		08/13/2025	09/12/2025	10,696.73 \$	Open
1172	C42000	Mashina Corporation		08/11/2025	09/10/2025	13.25 \$	Open
1171	C23900	Parameter Technology		08/06/2025	09/05/2025	20,256.60 \$	Open
1170	C42000	Mashina Corporation		08/10/2025	09/09/2025	7,579.00 \$	Open
1169	C99998	Web Customer		08/07/2025	09/06/2025	51,546.25 \$	Open
1168	C50000	ADA Technologies		08/02/2025	09/01/2025	16,089.48 \$	Open
1167	C23900	Parameter Technology		07/29/2025	08/28/2025	11,595.87 \$	Closed
1166	C25000	Star Company		07/26/2025	08/25/2025	22,645.50 \$	Closed
1165	C99999	One Time Customer		07/25/2025	08/24/2025	32,445.00 \$	Open
1164	C60000	SG Electronics		07/15/2025	08/14/2025	35,872.50 \$	Open
1163	C70000	Aquent Systems		07/04/2025	08/03/2025	10,858.75 \$	Closed

Utilizing the List View

List View

Single data source

Filter bar

The screenshot displays the SAP Business One 'Manage A/R Invoices' dashboard. At the top, there is a search bar with 'Sales A/R Invoice' selected and a search filter 'Search In: "Sales A/R Invoice"'. Below this is a filter bar containing fields for Document No., Customer Code, Customer Name, Posting Date (set to '- 1 Year:Begin ... x'), Status, Item No. (Lines), and Posting Date (Year). A 'Go' button and 'Adapt Filters' link are also present. The dashboard features several key performance indicators (KPIs) and charts:

- Invoice Total and Gross Profit Per Quarter:** Shows a total of 51M. The chart compares Document Total (blue) and Gross Profit Total (orange) for 2023Q1, 2023Q2, and 2023Q3.
- Invoice Count per Quarter:** Shows a total of 54. The bar chart displays the Record Count for 2023Q1, 2023Q2, 2023Q3, 2023Q4, and 2024Q1.
- Customer Invoice Total Per Quarter:** A heatmap showing invoice totals for various customers (Zenik Corporation, Web Customer, River Inc, Parameter Technology, One Time Customer, Microchips-BA1, Microchips, Maxi-Teq, Mashina Corporation, Earthshaker Corporation, ADA Technologies) across quarters 2023Q1 to 2024Q1. A legend indicates values from 0 to 2.2M.
- Monthly Invoice Total by Customer:** A stacked bar chart showing monthly totals for 2023Q1 through 2023Q6, broken down by customer.
- Top 10 Customer Invoiced Sales:** A table with columns for Customer Name and Document Total.
- Top 10 Item Invoiced Quantity:** A table with columns for Item No. (Lines) and Quantity (Lines).
- Item Quantity Sold by Salesperson:** A chart showing sales by salesperson.
- Invoiced Sales by Salesperson:** A chart showing sales by salesperson.

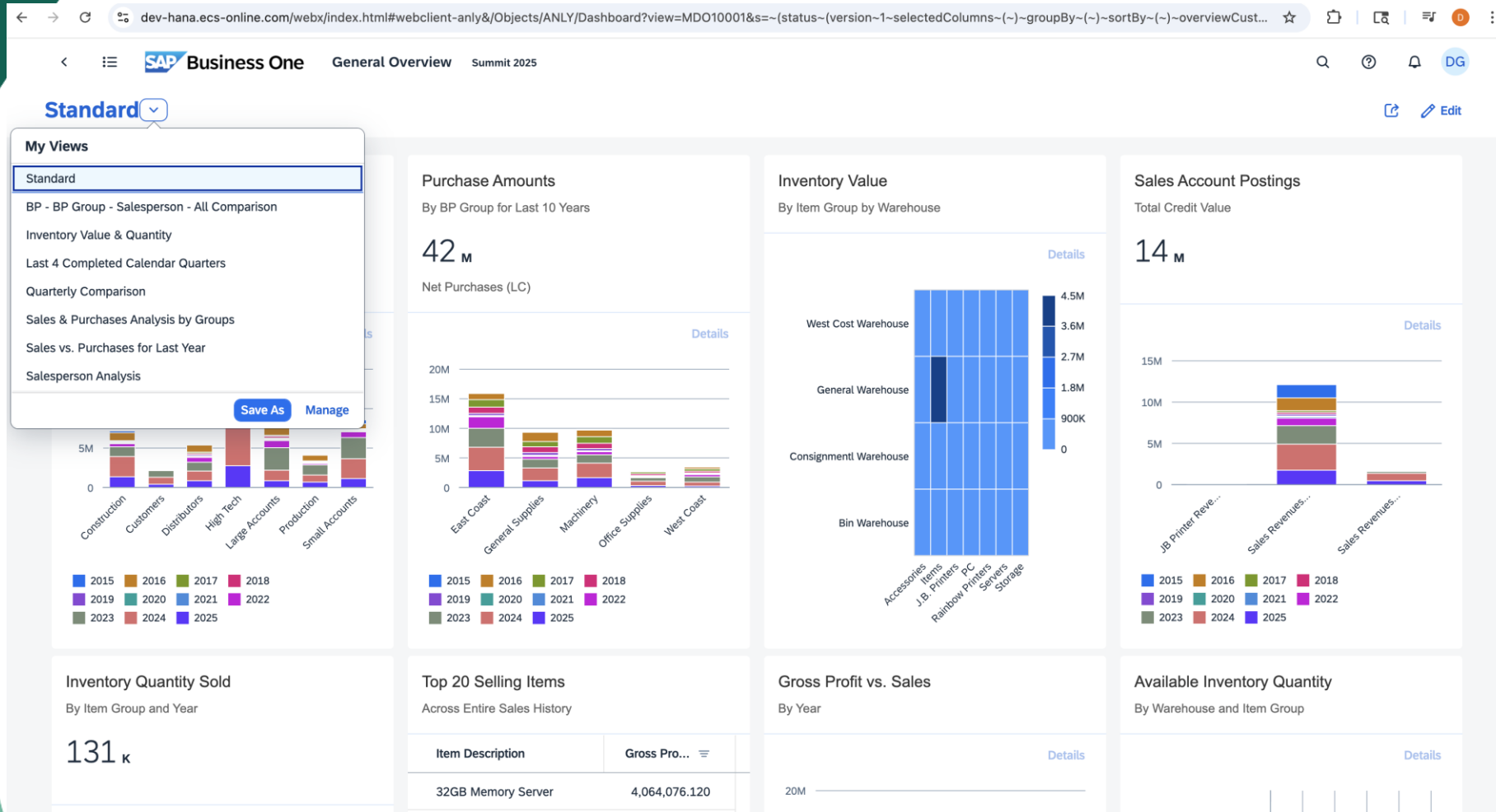
Linked List View

The screenshot displays the SAP Business One interface for configuring a Linked List View. The left sidebar shows a navigation menu with categories like CRM, Sales, Purchasing, Business Partners, Payments, Deposits, Item Management, Inventory Transactions, Production, and Accounting. The main area is titled 'Business Partners - Detailed View... Setup' and contains a 'Link Settings' section. This section includes fields for 'Link Name', 'List View', 'View', and 'Public'. Below these fields is a table for configuring 'Cards', 'Card Filter Fields', and 'Object Fields'.

Cards	Card Filter Fields	Object Fields
<input type="checkbox"/> Invoice Totals Per Quarter by BP Group - BP	Business Partner Name (CardName)	BP Name (CardName)
<input type="checkbox"/> Invoice Totals Per Quarter by BP Group - BPG	Business Partner Group Name (GroupName)	Group Code_Name (GroupCodeName)
<input type="checkbox"/> Invoice Totals Per Quarter by BP Group - SP	Salesperson/Buyer Name (SlipName)	Sales Employee Code_Name (SlipCodeName)

Linked Views facilitate contextual analytics. You can create links from nearly any list views, or from the header and table sections in detailed views of applicable business records, to other list views, General Overview views, selected Configuration views, User-Defined Table views, User-Defined Object views, or UDQ views to get record-specific data.

General Overview



General Overview

General Overview

Multiple data sources

No filter bar

The screenshot shows the SAP Business One General Overview dashboard. The dashboard includes several key performance indicators (KPIs) and charts:

- Sales Amounts:** Net Sales (LC) of 83 M. Chart shows sales by BP Group for the last 10 years.
- Purchase Amounts:** Net Purchases (LC) of 43 M. Chart shows purchases by BP Group for the last 10 years.
- Inventory Value:** Chart shows inventory value by Item Group by Warehouse.
- Sales Account Postings:** Chart showing sales account postings.
- Inventory Quantity Sold:** 243 k. Chart shows quantity sold by Item Group and Year.
- Top 20 Selling Items:** Table listing top selling items across the entire sales history.
- Gross Profit vs. Sales:** Chart showing gross profit vs. sales by year.

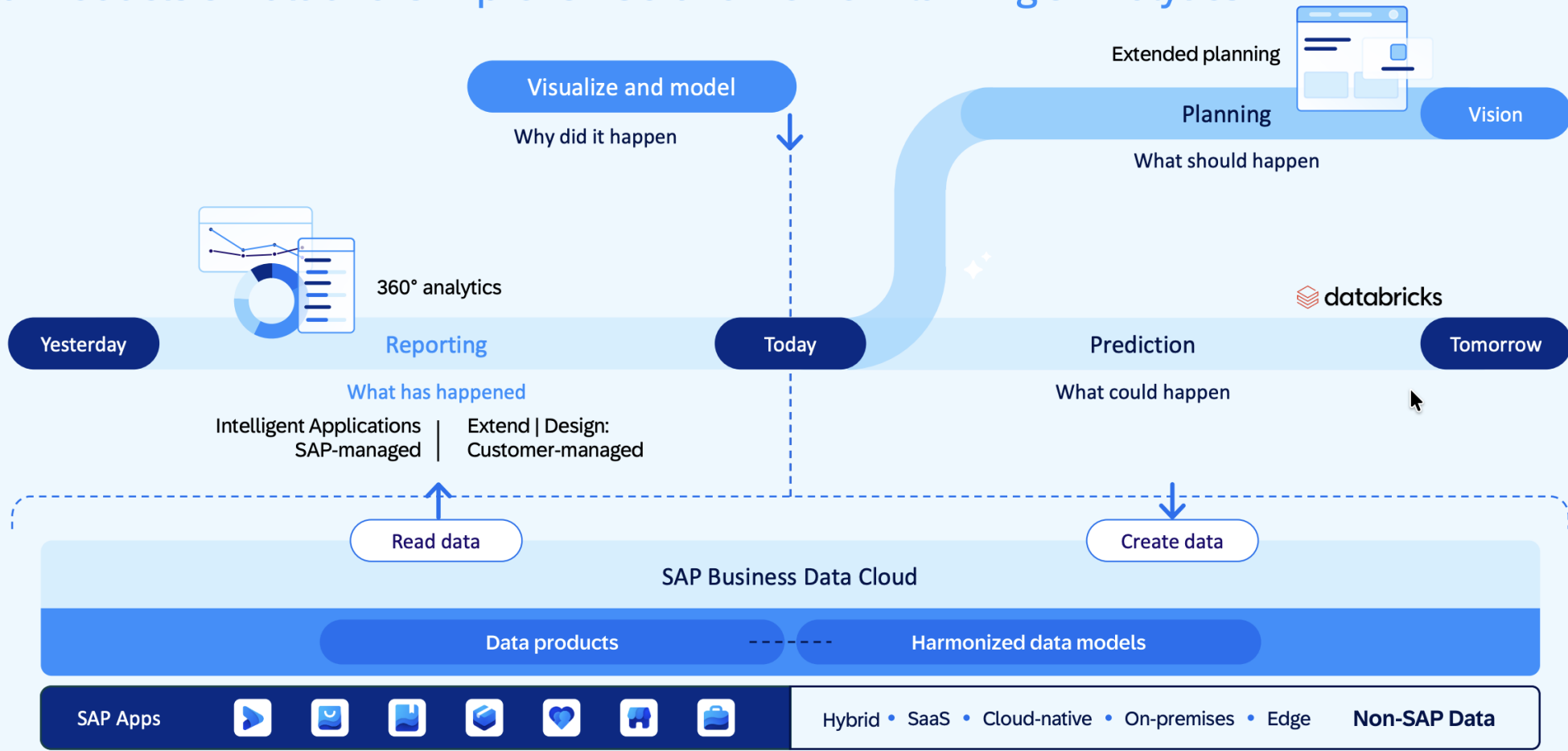
An **Edit Card** overlay is shown, displaying a KPI for **Total sales this year** with a value of **165 k** and an **Open balance**. The card includes a configuration panel with the following settings:

- Data Source:** A/R Invoices
- Title:** Total sales this year
- Subtitle:** By quarter
- KPI:** Formula
- KPI Formula:** DocTotal - PaidSum
- KPI Description:** Open balance
- Show Legend:** ON
- Content Type:** Bar chart
- Sort By:** Not Sorted
- Sort Order:** Ascending
- Y-Axis Measure:** Document Total x

The configuration panel also includes a **Posting Date** filter set to `{Year:Begin...Year:End (01.0... x)}`. The dashboard interface includes a search bar with the text "Sales A/R Invoice" and "Search In: 'Sales A/R Invoice'", and a user profile for "JB".

Intelligent Decisions with SAP Analytics Cloud

Data Products & Databricks improve TCO and ROI for Planning & Analytics



SAP Analytics Cloud

ONE consumer for Planning & Analytics in Business Data Cloud

Analytics catalog
Centralized portal

Mobile app
iOS and Android

Stories

Data Analyzer

Just Ask

MS Office integration

Business analytics

- Data Exploration
- Dashboards and Visualizations
- Artificial Intelligence

Enterprise planning

- Planning and Simulation
- Collaboration and Workflows
- Predictive Forecasting

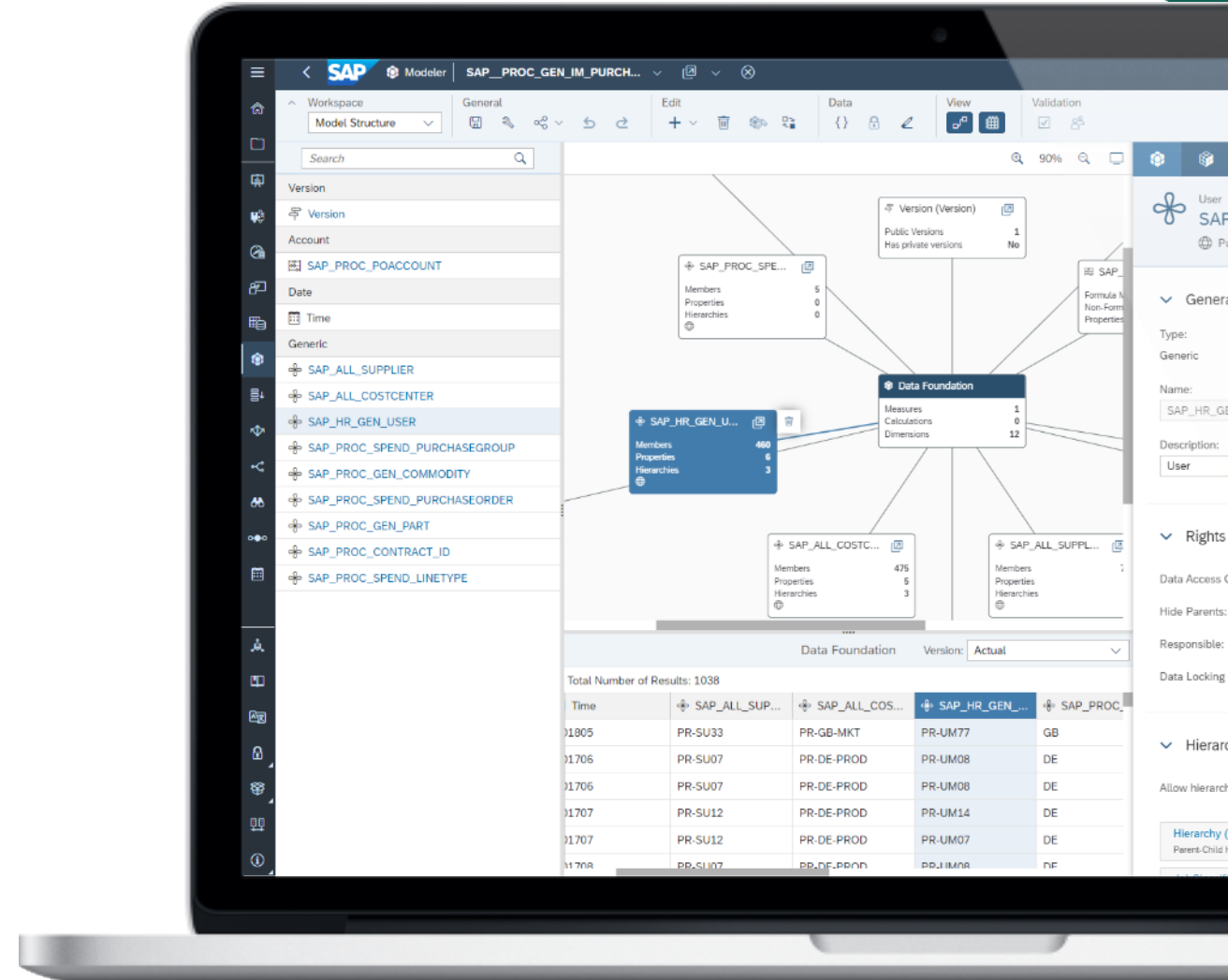
Analytics and Business Intelligence

Daryl's opinion:
Affordable for almost every B1 customer

Data Modeling

Model your imported data and define dimensions, measures, hierarchies and more, in preparation for analysis and planning

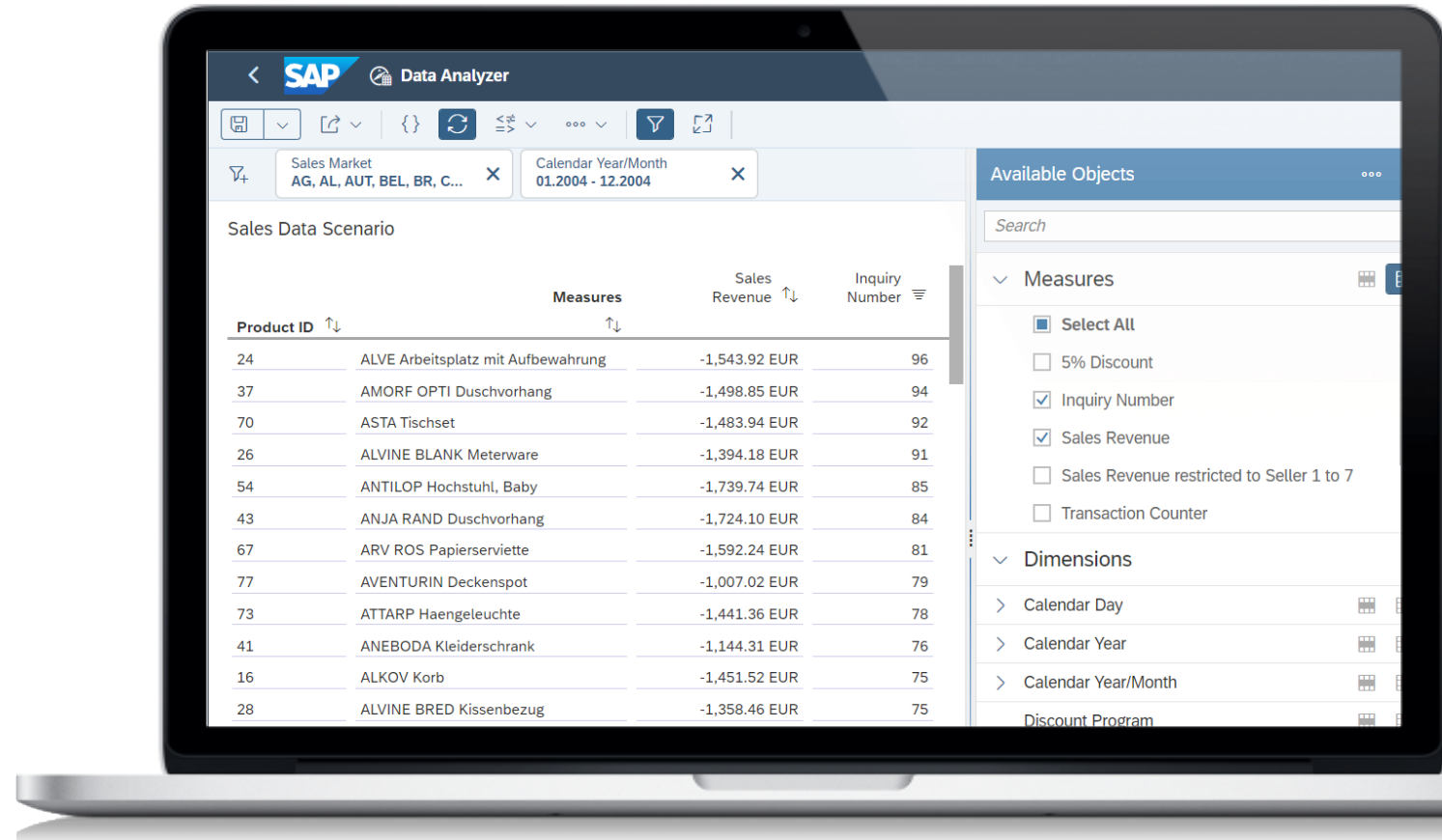
- Define your measures and dimensions, hierarchies, setting units and currencies, and formulas
- Enable Model Data Privacy to define row and column level data security
- View related objects where model is in use, such as planning work flows, stories and applications



Data Analyzer

Query your data instantly and perform ad-hoc analysis in a pivot-table style analysis view

- Standalone exploration tool with easy access from the side navigation bar
- Contextual exploration either in story overlay or new browser window
- Explore your data visually in chart
- Save Insights, share and publish
- Launch or share your data analysis via URL parametrization



Dashboards & Visualizations

- Design and deliver stunning, interactive enterprise dashboards across all lines of business
- Extensive visualization library, geo maps
- Custom calculations, calculated dimensions, aggregations and more
- Easily comment, collaborate and share content
- Highly Interactive with Linked Analysis, Ranking and Sorting, Filtering and Drill Functionality.



Story Presentation

Modern in-context user experience with continuous insights and collaboration.

Cross story navigation

- 360 degree view of the organization across diverse lines of business that promotes collaborative decision making.

Immersive presentation experience

- Distraction free user interface that enables your users to focus on the insights.

Enabling decision makers to steer their business clearly.



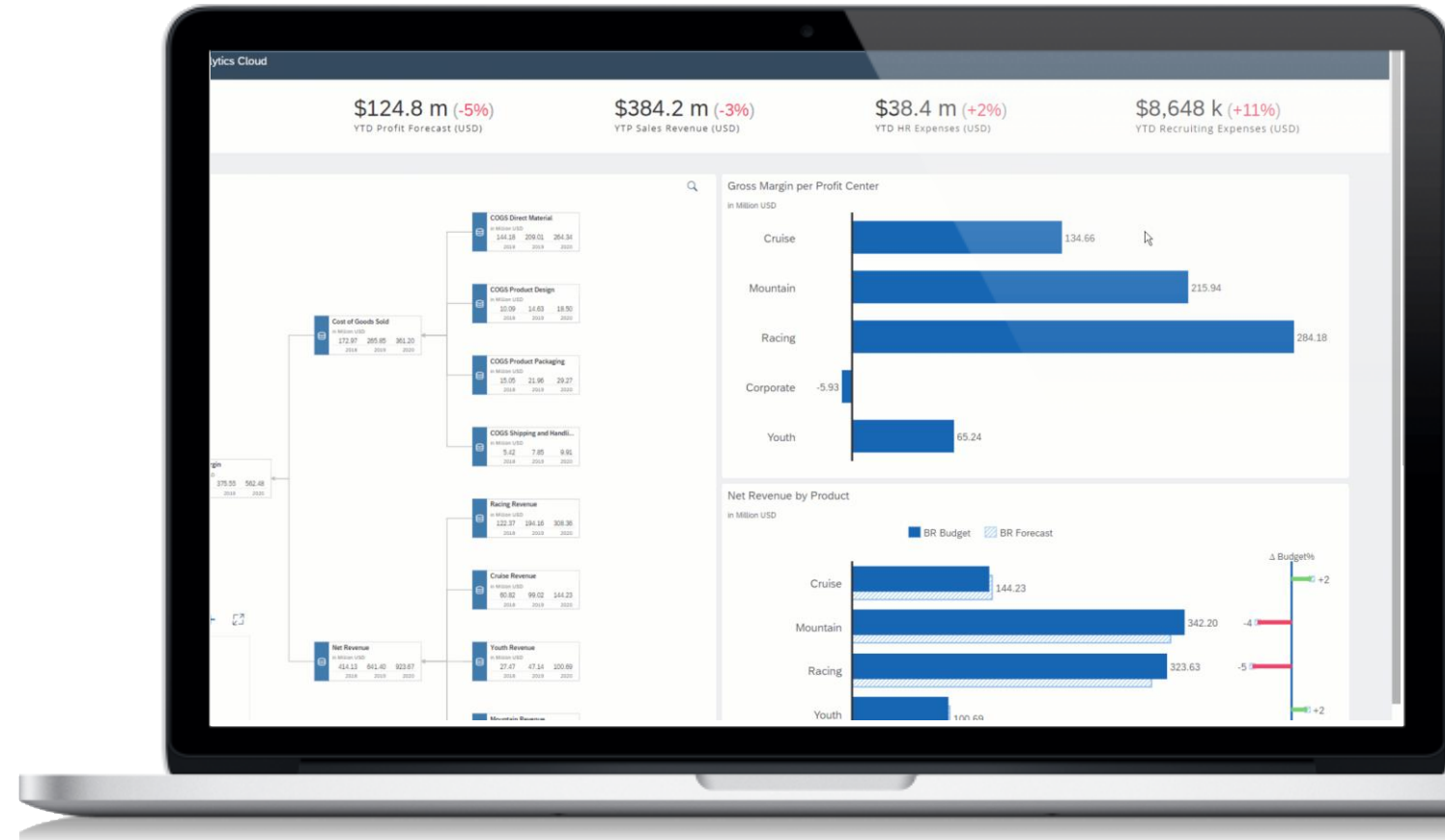
Smart Insights

Explain a data point or its variance with top contributors

- Deviation analysis across the data model
- Based on dimensions cardinality & hierarchies stats

In Context Insights for Businesspeople

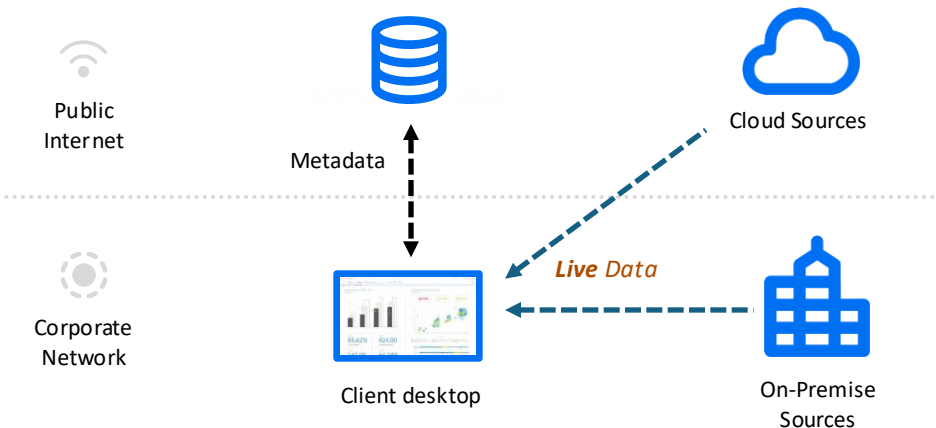
- Open up data exploration beyond filter & drill
- Natural language explains top contributors



SAP Analytics Cloud

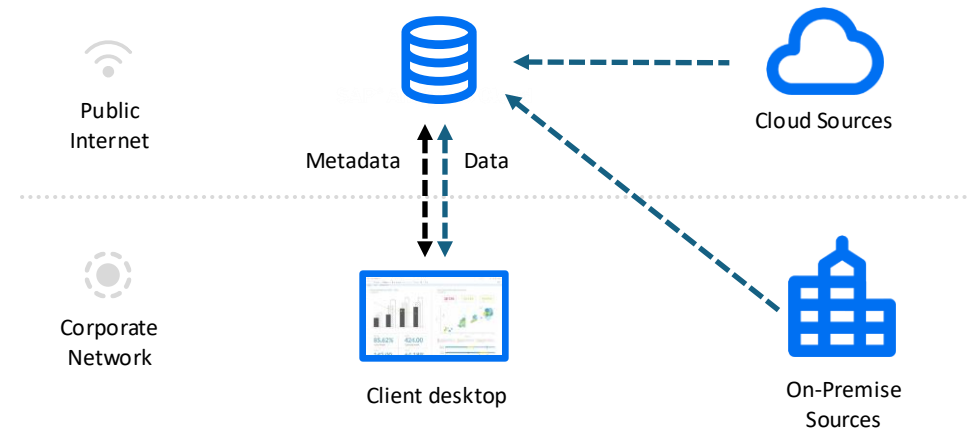
Live Data Connectivity

- Data is never replicated to cloud – real-time data is streamed directly to client machine
- Leverages source system's existing business metadata and data authorizations



Acquired (Imported) Data Connectivity

- Data is imported into SAP Analytics Cloud
- Users can prepare, wrangle and model data
- Data is refreshed on demand or via schedule



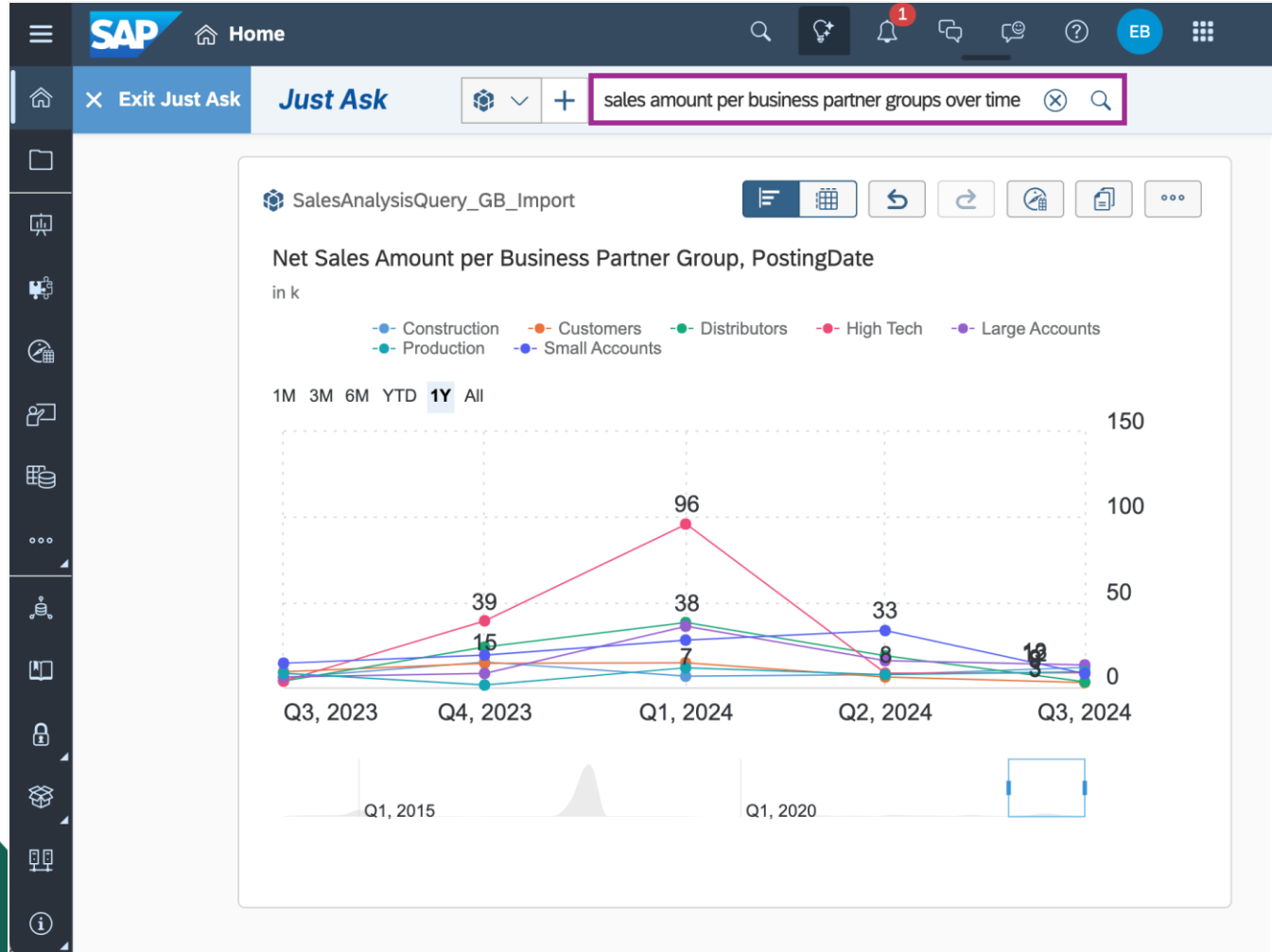
Choosing a Live Connection or Import Data

	Live Connection	Acquire(Import) Data
Supported Data source*	<u>SAP HANA</u> , other SAP Cloud applications and BI solutions	<u>SAP HANA</u> , other SAP applications and BI solutions, <u>MS SQL</u> , and more
Data replication to SAP Analytics Cloud	No	Yes
Data location	Customer Landscape	SAP Analytics Cloud
Data Volume Maximums	In theory, no limitation	Refer to the link
Data Modeling and Wrangling	on the source system	On SAP Analytics Cloud
Augmented features - Smart Insight, Smart Predict, Predictive Forecast	Yes for On-premise SAP HANA	Yes
Augmented features - Smart Discovery and Just Ask	No	Yes
Planning	No	Yes

* Refer to the [link](#) for full list

Just Ask for Natural Language Query by AI

available in Imported Data Connection



- **Ask questions in natural language and get answers Immediately**
 - Get answers in charts and tables
 - Leverage autocompletion, recommendation and sample questions
 - Powered by AI, that automatically infer similar words based on meaning and generates query
 - Custom synonyms for metadata and master data
- **Information consumers to get answers on their own**

What's the difference between Just Ask & Joule?

It all about questions in natural language



Just Ask: SAP Analytics Cloud NLQ

- SAP Analytics Cloud users can get answers on their own
- Analytical question and answer
 - Answers are numbers, charts & tables
 - Support for acquired data models and SAP Datasphere models
 - Question in natural language in English, German, Spanish, French & Italian



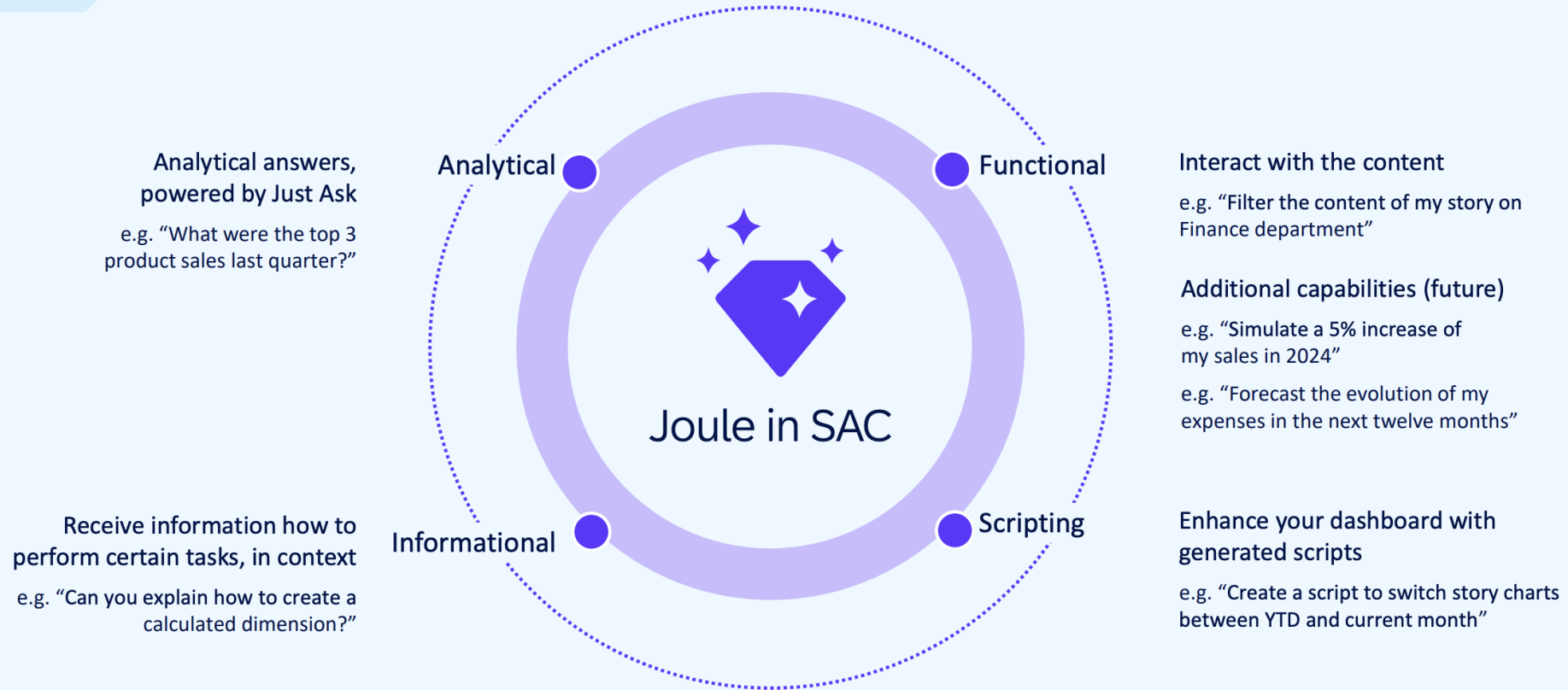
Joule: SAP AI conversational assistant

- SAP Business application users are more efficient
- In context-conversation with transactional, navigational and informational capabilities
- + Analytical capability powered by just ask
 - Same language understanding and prerequisites
 - No additional cost (Joule base capability)
- In SAC, Joule will also empower story developer and planners to be more efficient ⁽¹⁾

(1) Planned Q1 26

Planning & Analytics powered by AI

Joule capabilities in SAP Analytics Cloud



The generative AI capabilities to serve the different intents are always operated in SAP landscapes. No data leaves SAP landscapes.

Enterprise Planning

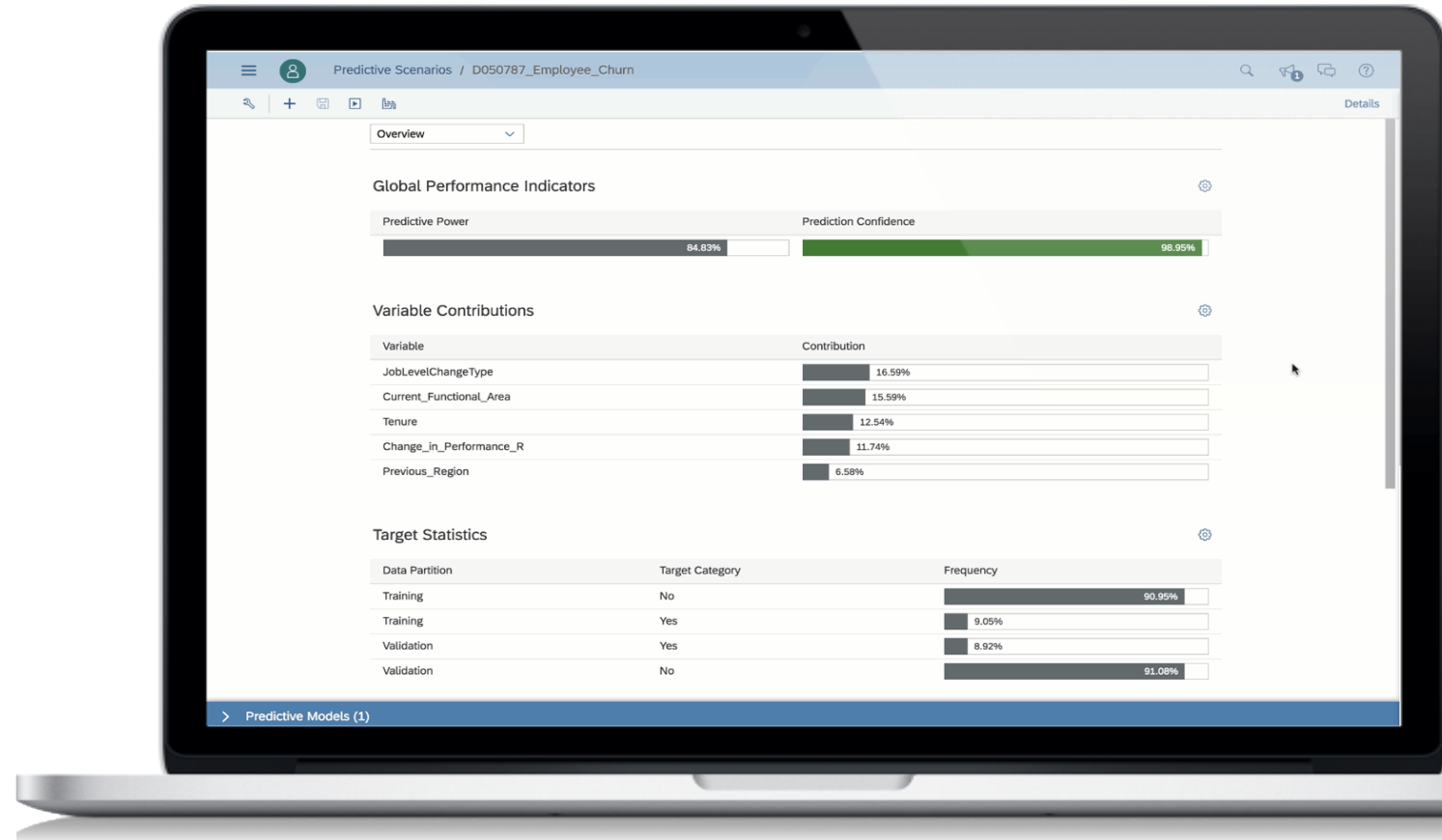
Daryl's opinion:

Awesome, but more expensive = a better fit for
larger B1 customers

Smart Predict

Build trusted and actionable predictions without the help of a data scientist

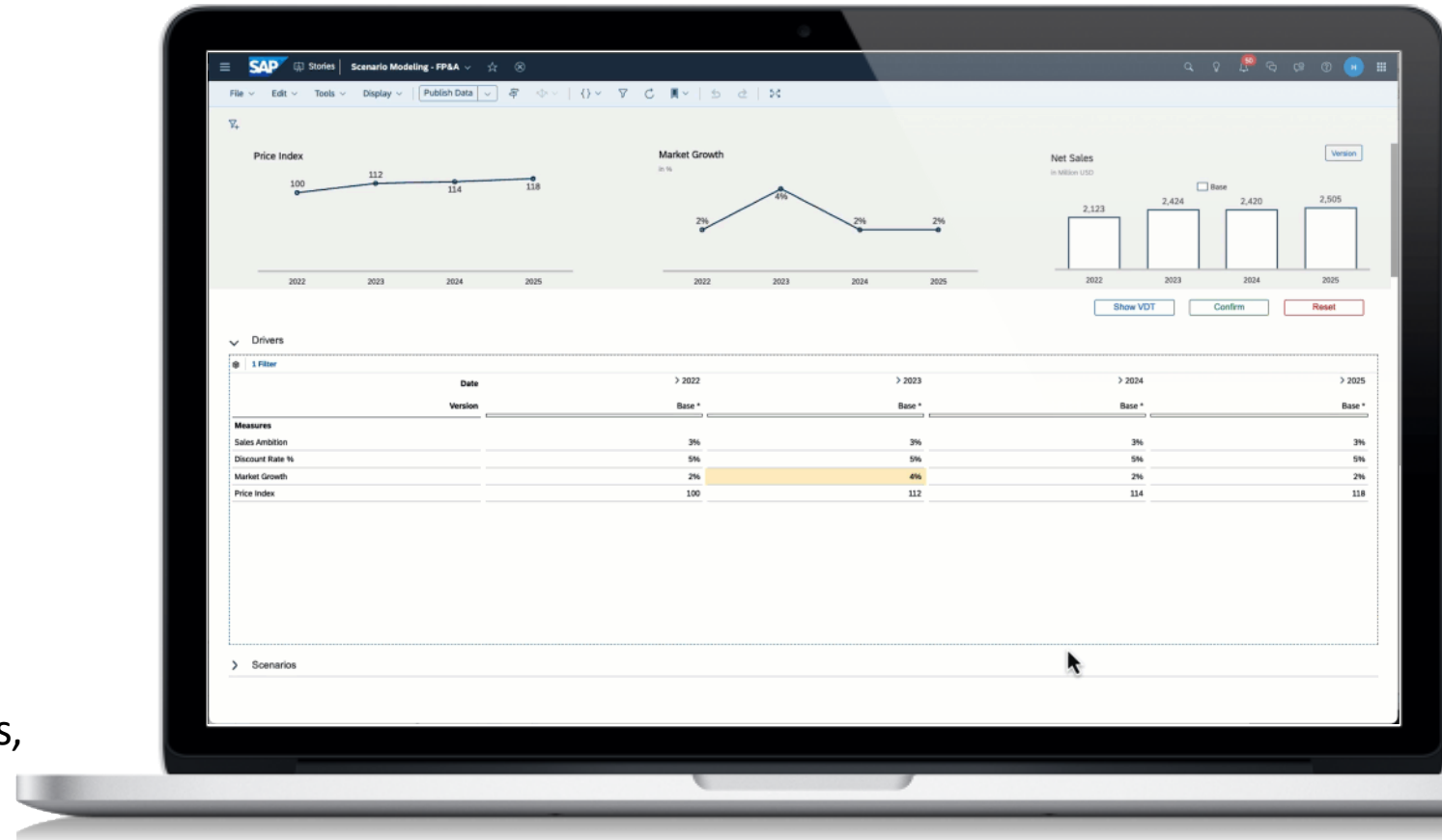
- Classification: "Create a sorted list of prospects to focus on for this product"
- Regression: "Give me revenue estimates for each customer for the next 6 months"
- Time Series: "Forecast revenue for each product and each point of sales daily for the next 30 days"



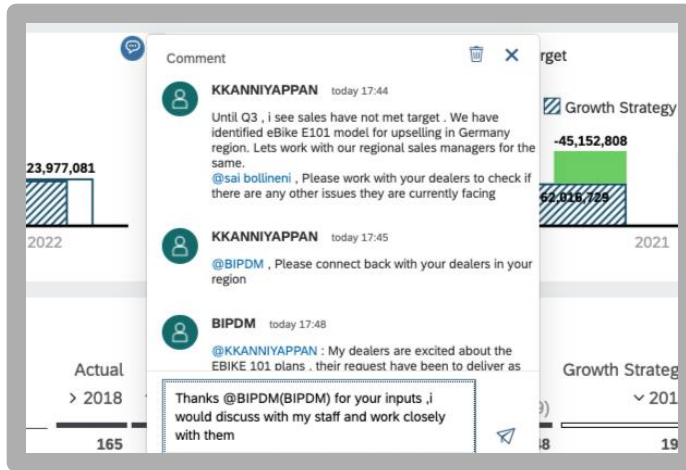
What-if Analysis & Simulation

Use version management capabilities to create scenarios and simulate outcomes

- Create multiple versions to reflect different scenarios (e.g., best case, worst case, expected)
- Make top-down or bottom-up changes
- Step backward and forward through data changes and see the impact in real-time
- Perform what-if visually using value driver trees
- Compare different versions inline using charts, tables or value-driver trees

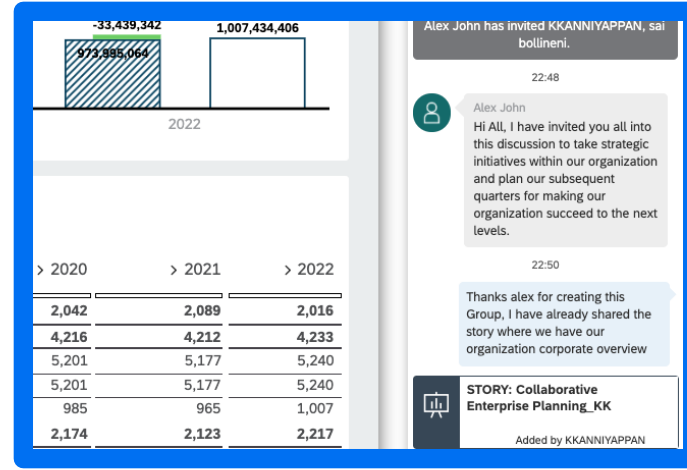


SAP Analytics Cloud



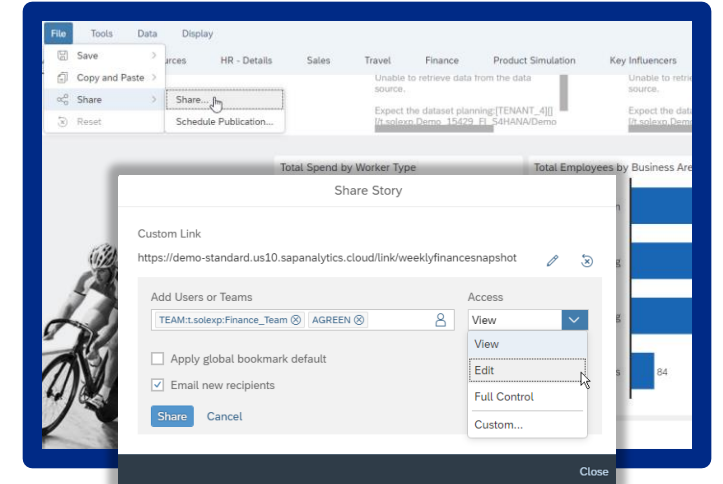
Commenting

Comment on stories, applications and event specific data point table cells. Like, reply, address other users as @UserName



Discussions

Start discussions on your analytics to collaborate with other SAP Analytics Cloud users and teams, on the desktop or on your mobile device.



Sharing

Easily share private or public stories and bookmarks to any SAP Analytics Cloud user or team via a customized link