Leveraging Predictive Analytics in SAP Analytics Cloud

Agenda

1	**Introduction**
2	**Predictive Analytics and Its Significance in SAP Analytics Cloud**
3	**SAP Analytics Cloud's Predictive Capabilities & Tools**
4	**Real-world Use Cases & Demo**
5	**Q&A**

Presenters

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Welcome

Why Crave InfoTech?

We Are In It For Joint Success!

We are an award-winning SAP PE-build, PE-Sell & PE-Services partner who can successfully implement complete enterprise solutions, minimizing total cost of ownership, with rapid deployment and a lasting impact for efficiency and total audit-ready compliance.

15+ Years of providing niche SAP consulting across industries

50+ Pre-packaged products for SAP EWM, IAM, AIN, PDMS & ASPM

50+ Enterprise customers served successfully

300+ Team size ensuring service delivery round the clock

Partners

Certifications

Awards

Crave is the Right Partner to Embark with You on Your Digital Journey

Crave InfoTech offers **50+ pre-packaged applications** focused on multiple industry use cases around SAP. Our applications are **80%-90% implementation ready** with the least deployment time or customizations required. Our pre-packaged apps compliment SAP's standard offerings, enabling 100% operational automation.

Our Core Competencies!

CRAVE
BUSINESS TECHNOLOGY PLATFROM (BTP)

- Keep Core Clean
- Side by Side Extensions – CAPM and RAP
- Integration Suite
- The Build – App Dev, Process Automation, Workflow and WorkZone
- Analytics: SAC, HANA Database and Data Science, AI, ML, and Predictive Analytics
- Enterprise Mobility - SAP MDK, SDK, fiori & UI_UX
- CALM
- Design Thinking

CRAVE
INTELLIGENT ASSET MANAGEMENT

- SAP EAM offerings – SAP PM/SM Implementation, Asset Manager, Work Manager, SAP IAM, & Predictive Maintenance
- SAP MRS
- SAP FSM
- Crave Field Workforce Management apps – Planner Workbench, Maintenance, Calibration & Approvals
- Barcode, QR Code and RFID enablement

CRAVE
INTELLIGENT WAREHOUSE MANAGEMENT

- Barcode, QR Code and RFID enablement
- RF devices in Warehouse
- ITS Mobile
- BTP Powered Mobile App
- Voice enabled order picking
- Smart order picking using Augmented reality
- Streamlined picking using indoor forklift mapping and forklift integration

CRAVE
INTELLIGENT SUPPLY CHAIN AUTOMATION

- Proof of Delivery
- Transport Management
- SAP Direct Delivery, Visit Management
- Picking & Truck Loading
- Last Mile Tracking
- Truck Latency Management
- Yard Management
- Venue mapping and inside plant routing
- Barcode & RFID enablement

CRAVE
INTELLIGENT ENTERPRISE

- RISE with S/4 HANA Cloud
- Fiori and UI/UX
- Ariba
- Implementation
- AMS Support
- Resource augmentation

Our Unique BTP Offerings

Extensibility

- Side by Side Extensions
- ABAP on BTP
- CAPM
- HANA Database and Data Science

Integration Suite – CPI

- PI_PO to CI Assessment and Migration
- ITK to CI Migration
- Boomi to CI Migration
- Other Integration tools to CI Migration
- Neo to CF migration

The Build

- Build App development
- Process Automation Powered by iRPA and Workflow,
- Work Zone

Digital Enterprise

- SAP MDK, SAP ios and Android SDK
- Enterprise Mobility – Mobile Service
- SMP to Mobile Services migration
- Fiori and UI/UX

Analytics

- SAC, Data Sphere & BW Bridge
- BI_BO to SAC
- AI, ML, and Predictive Analytics

Security and Administration

- SSO & Authentication
- Propagation
- Governance
- CALM

Introduction SAC and Predictive Analytics

SAP Analytics Cloud

Analytics and Business Intelligence

➤ Augmented analytics
➤ Self-service data modelling and preparation
➤ Data exploration and visualization
➤ What-if simulation

Enterprise Planning

➤ Predictive planning
➤ Extended planning and analysis
➤ Collaboration
➤ Scenario planning

Composable Analytics

➤ Flexible design
➤ Rich functionality
➤ Business-centric solutions
➤ High application developer productivity
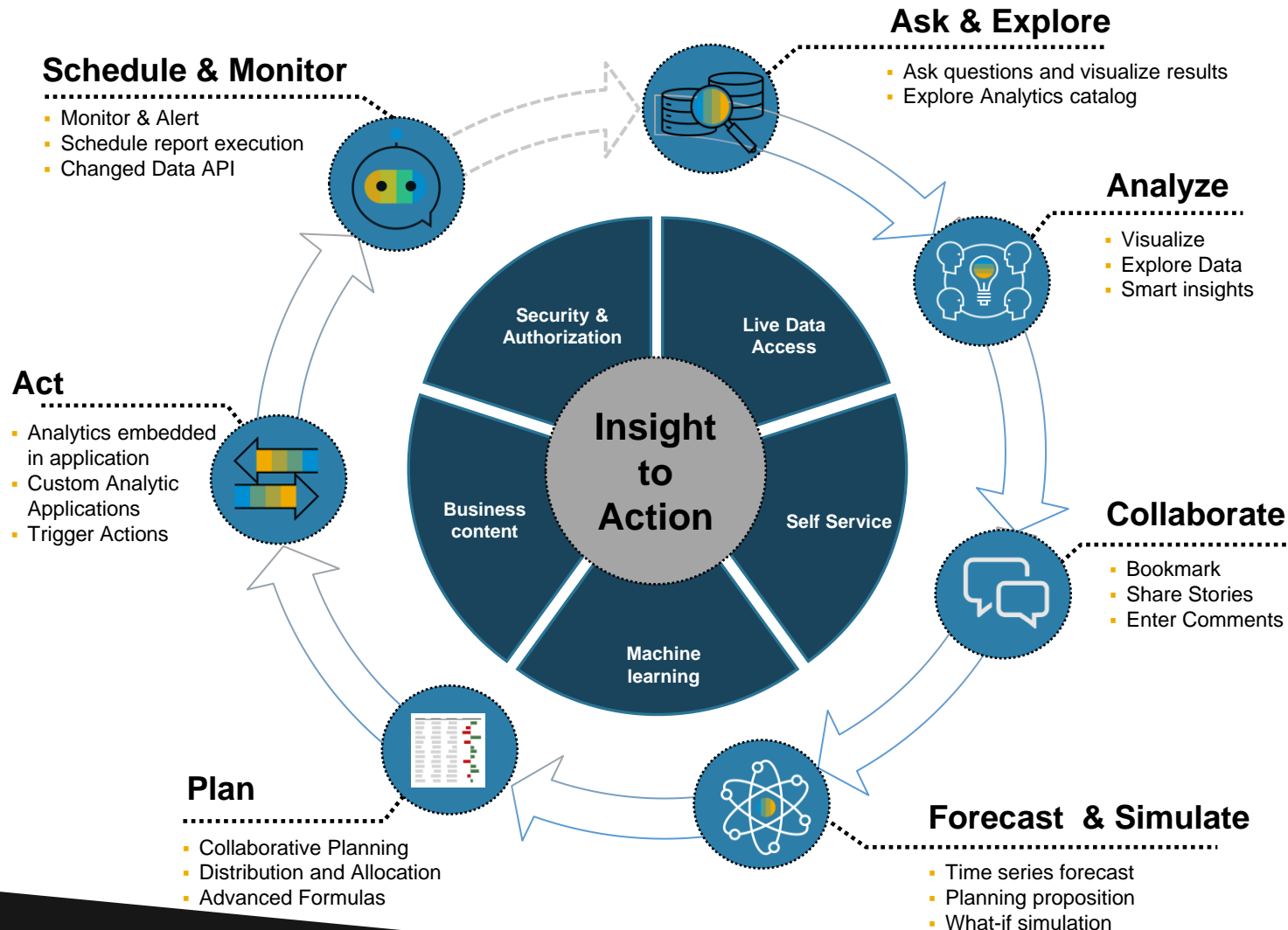

Prebuilt Business Content

Decisions without Doubt

Support closed-loop decision making
SAP data and analytics solutions

Ask & Explore
- Ask questions and visualize results
- Explore Analytics catalog

Schedule & Monitor
- Monitor & Alert
- Schedule report execution
- Changed Data API

Analyze
- Visualize
- Explore Data
- Smart insights

Act
- Analytics embedded in application
- Custom Analytic Applications
- Trigger Actions

Security & Authorization

Live Data Access

Insight to Action

Business content

Self Service

Machine learning

Collaborate
- Bookmark
- Share Stories
- Enter Comments

Plan
- Collaborative Planning
- Distribution and Allocation
- Advanced Formulas

Forecast & Simulate
- Time series forecast
- Planning proposition
- What-if simulation

- Increase agility with analytics and planning in one solution

- Utilize the full context of real-time SAP data

- Deliver high-performance analytics at scale

- Automate insights with machine learning

- Quickly compose specialized analytic apps

- Deliver analytics closer to the point of decision

- Connect financial and operational plans seamlessly integrated with SAP applications

SAP Analytics Cloud - Insight to Action

Decision making is
a **collaborative**
process

ASK

ANALYZE

PREDICT

PLAN

ACT

REPORT

INSIGHT
TO
ACTION

SAP Analytics Cloud - Integrated Planning and Analysis

Drive agile decisions

- **Instantly move from insight to action**
- **Simulate any scenario for better outcomes**
- **Automatically generate plans from predictions**

Derive unique insights

- **Utilize the full context of SAP data**
- **Bring analytics closer to the point of decision**
- **Accelerate projects with prebuilt SAP business content**

Create bleeding edge analytics

- **Automate insights with machine learning**
- **Quickly compose specialized analytics apps**
- **Deliver high-performance analytics at scale**

Enterprise Reporting

Design reports and distribute to the workforce on-demand or scheduled

Report Formatting
- Multi-page reports
- Report sections, headers and footers
- Paginated export to pdf and pptx

Report Delivery
- Schedule and distribute reports to SAP Analytics Cloud and non-SAP Analytics Cloud recipients
- Burst personalized content to SAP Analytics Cloud recipients based on recipient authorization
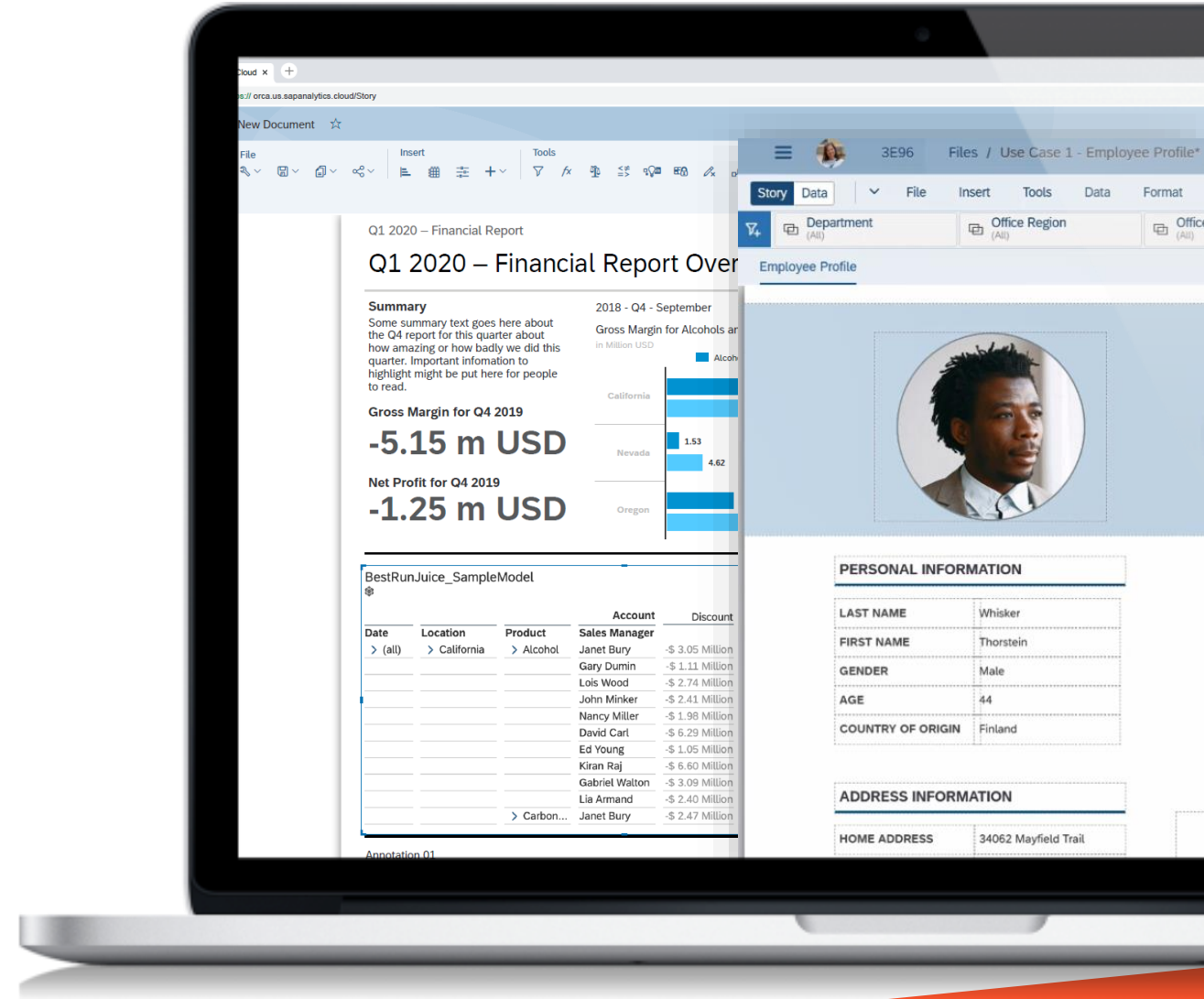
SAC AI Functionality and Features

- SAP Analytics Cloud offers a range of artificial intelligence and machine learning utilities for data analysis and planning activities.

- The platform supports predictive features for both imported data and live data models.

Supported Predictive Features

Acquired Data

Time Series Forecasting

Search to Insights

Smart Grouping

Smart Discovery

Smart Insights

Smart Predict

**Live Data**

Time Series Forecasting

Search to Insights

Smart Grouping

Smart Insights

Smart Predict

What-If Analysis

- ## **Simulate "what-if" scenarios to test possible outcomes**

  - Perform what-if visually with value driver trees and tables

  - Perform top-down bottom and bottom-up simulations

  - Answer questions like:
    - What if you increase discount by 20%?
    - What if you hire more staff?
    - What if costs of goods increased?[2]

Smart Insights
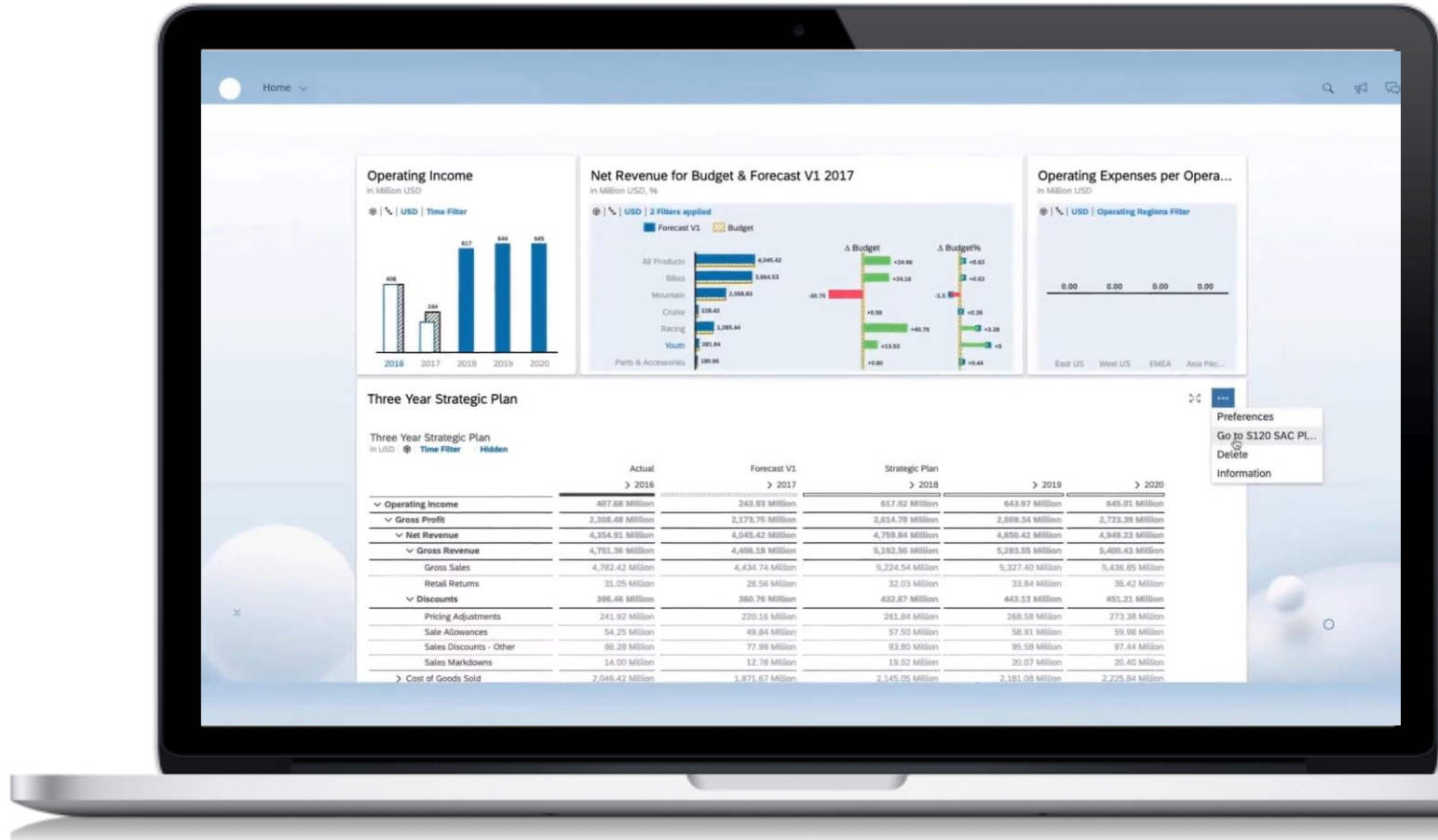
- **Insight in one click from dimension members contributing most to a data point or to its variance**

- **Tailored for BI Consumers**

  - Beyond filter & drill, open up exploration of underlying model

  - Natural language that explains top contributors

Smart Discovery
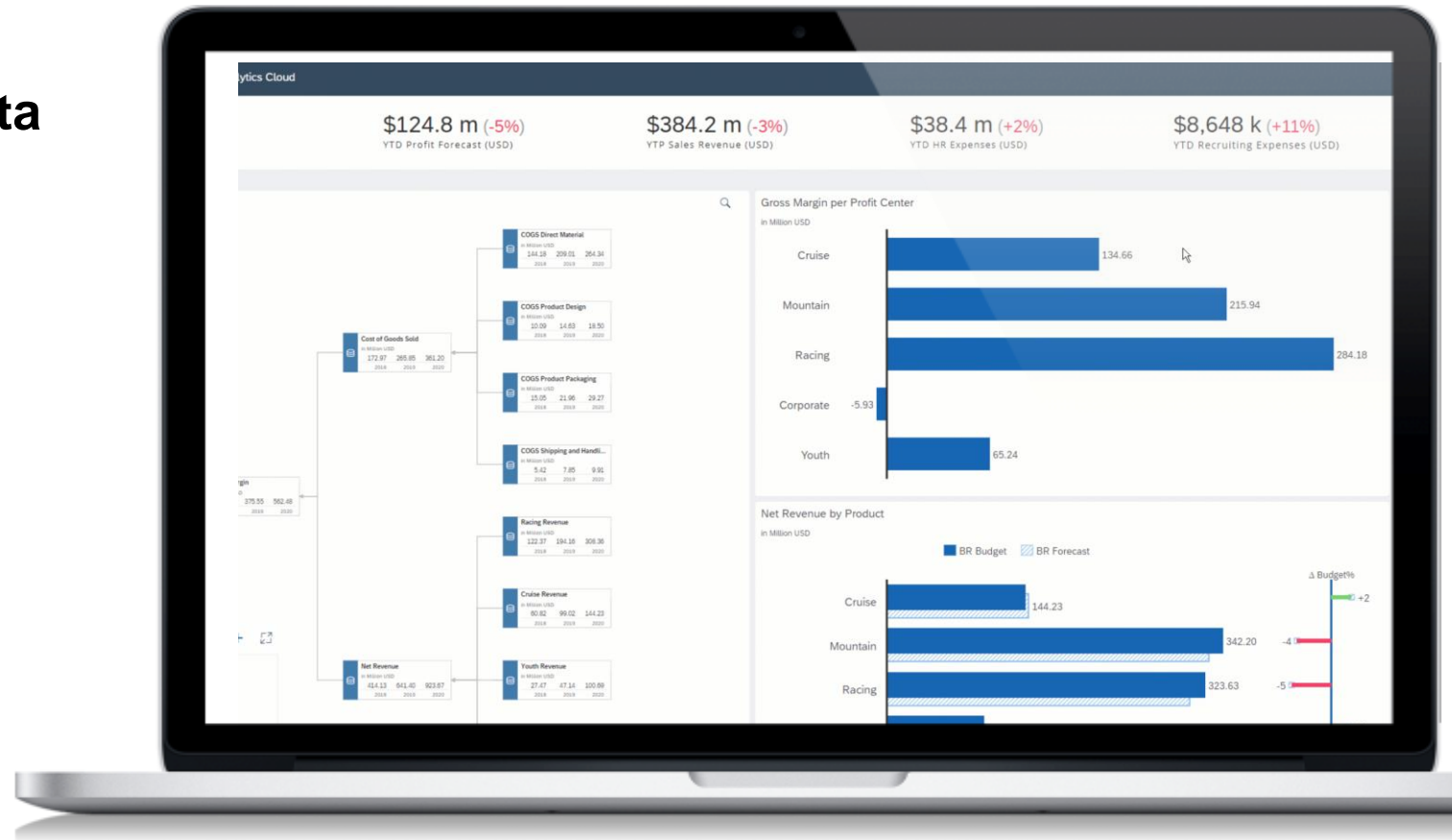
Leverage automated machine learning to discover patterns and relations in your data

- Auto-generates a dashboard filled with ML-driven insights

- Uncovers trends, key influencers, outliers and data distribution

Great for open ended exploration

- Augments traditional data exploration, with a 360 degree analysis of your data
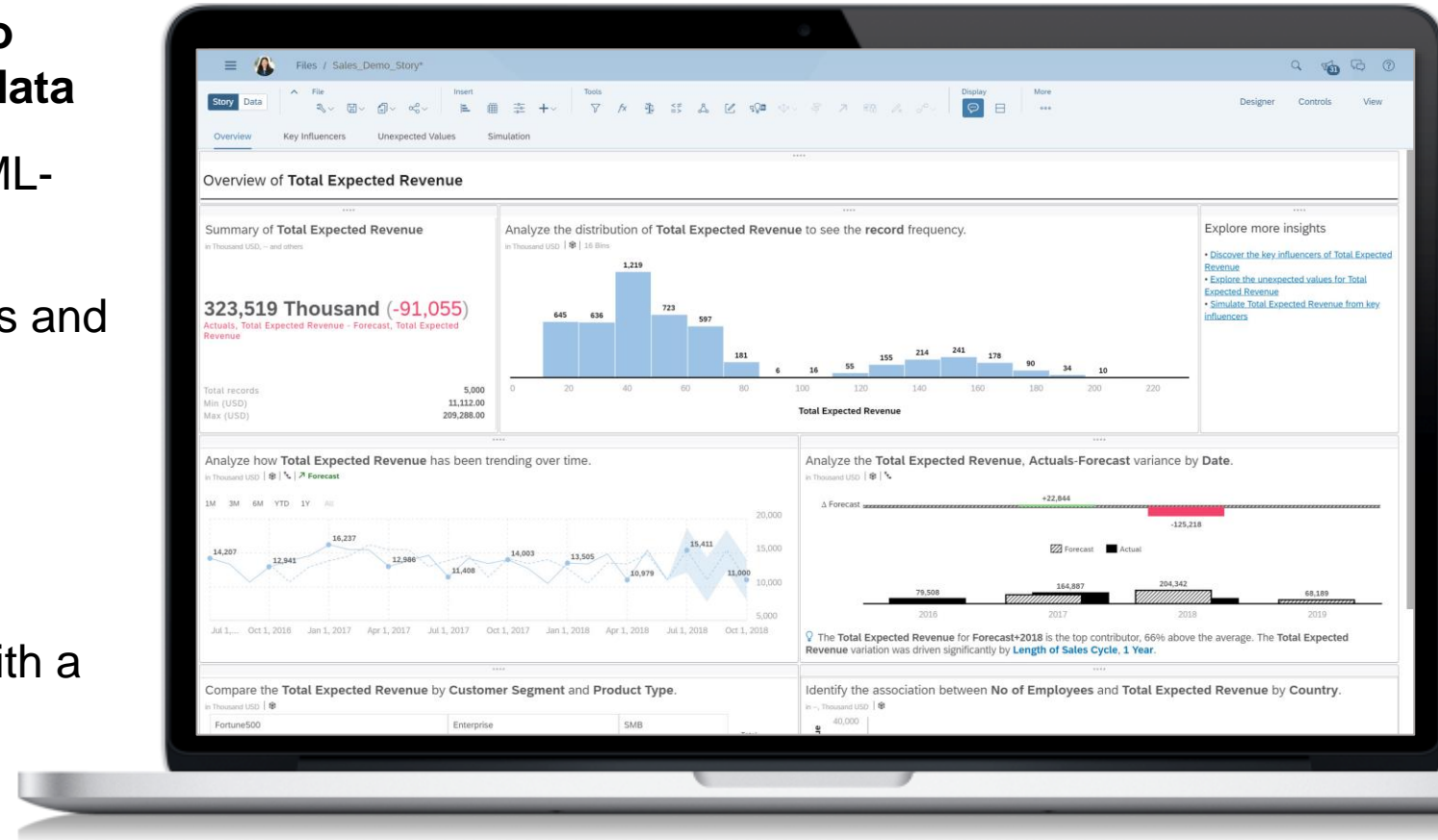
Time Series Forecasting

Predict future values of a series based on historical data to help you make more confident decisions

- Automatic forecasting on time series charts, line charts and planning tables

- Apply advanced options like linear regression, triple exponential smoothing and include additional inputs

- Forecast quality based on MAPE and is displayed as 0-5 rating

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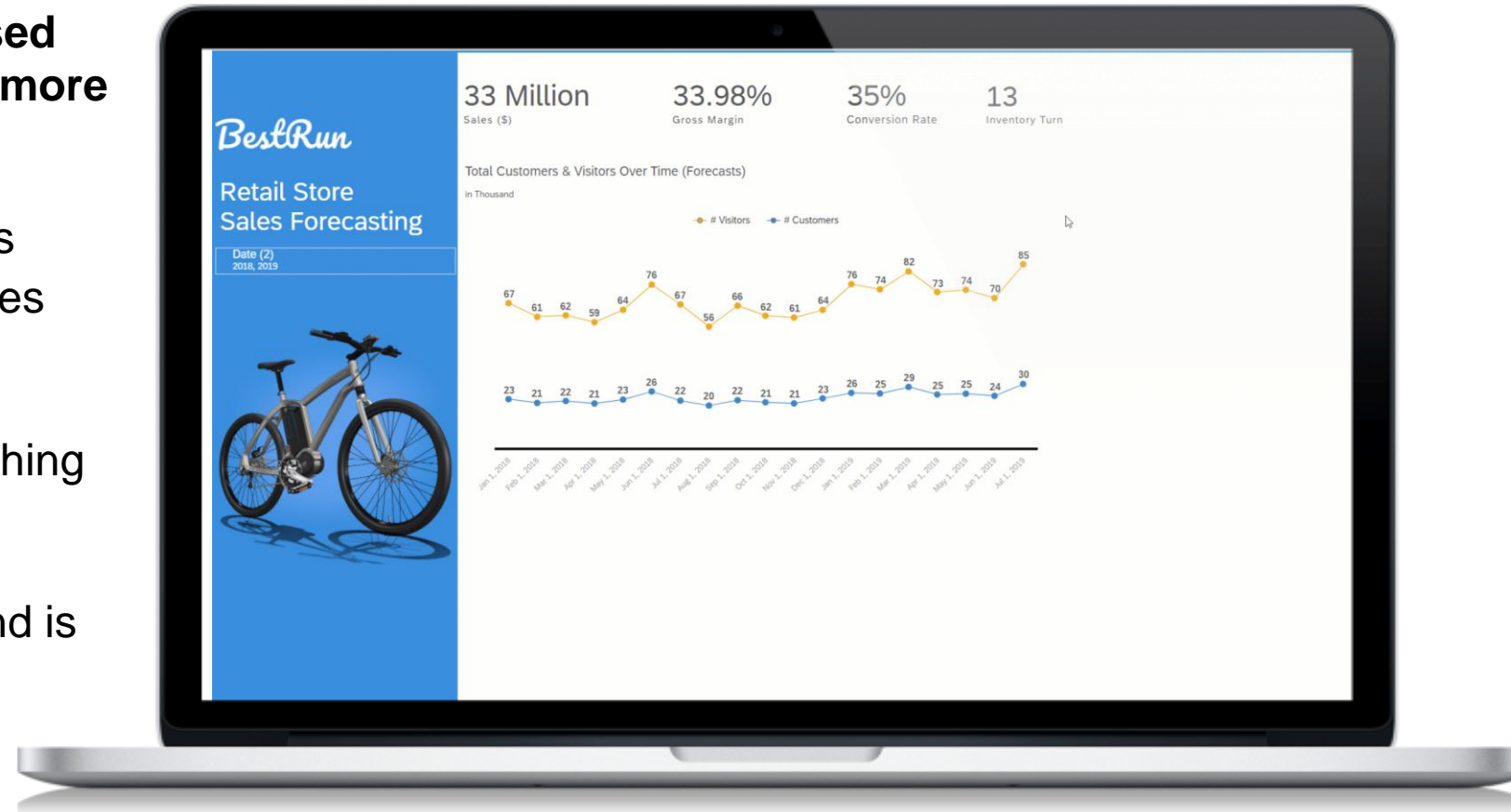
Build trusted and actionable predictions without the help of a data scientist

- 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"
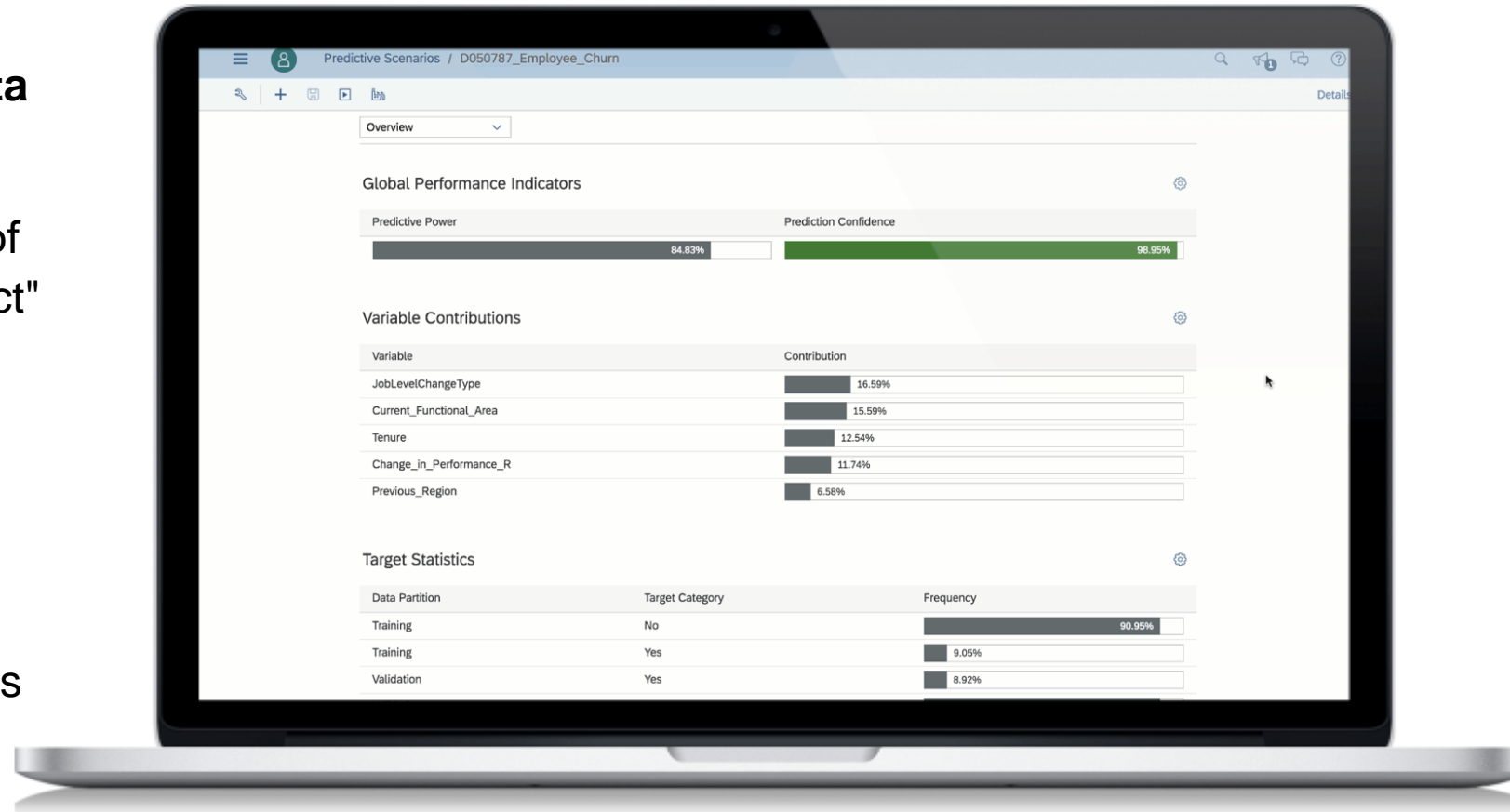
Enterprise Planning

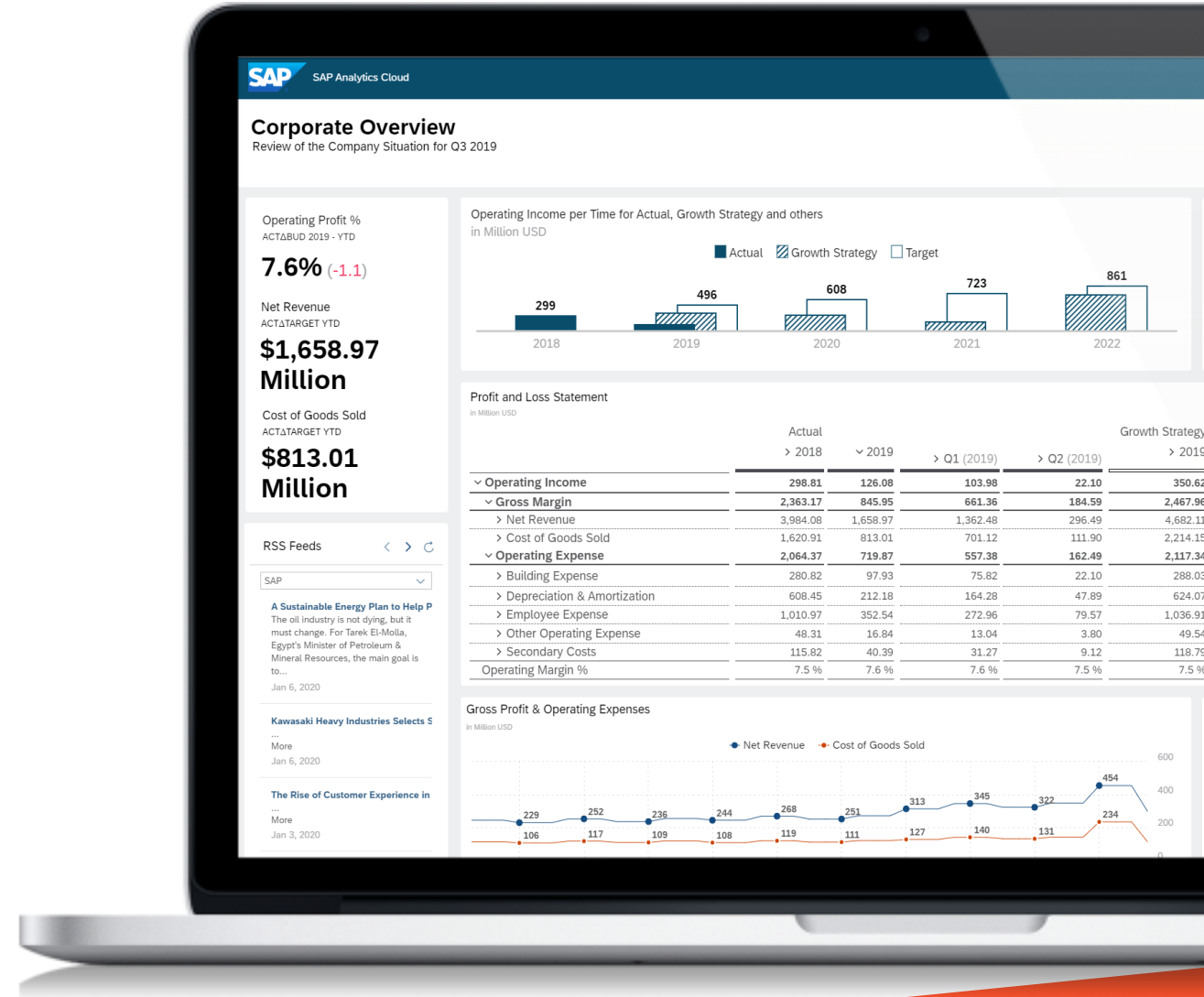## Eliminate barriers between Planning & Analysis

- Enterprise BI, Planning, and Predictive capabilities are augmented with rich collaboration capabilities to promote a true end-to-end Planning & Analysis experience

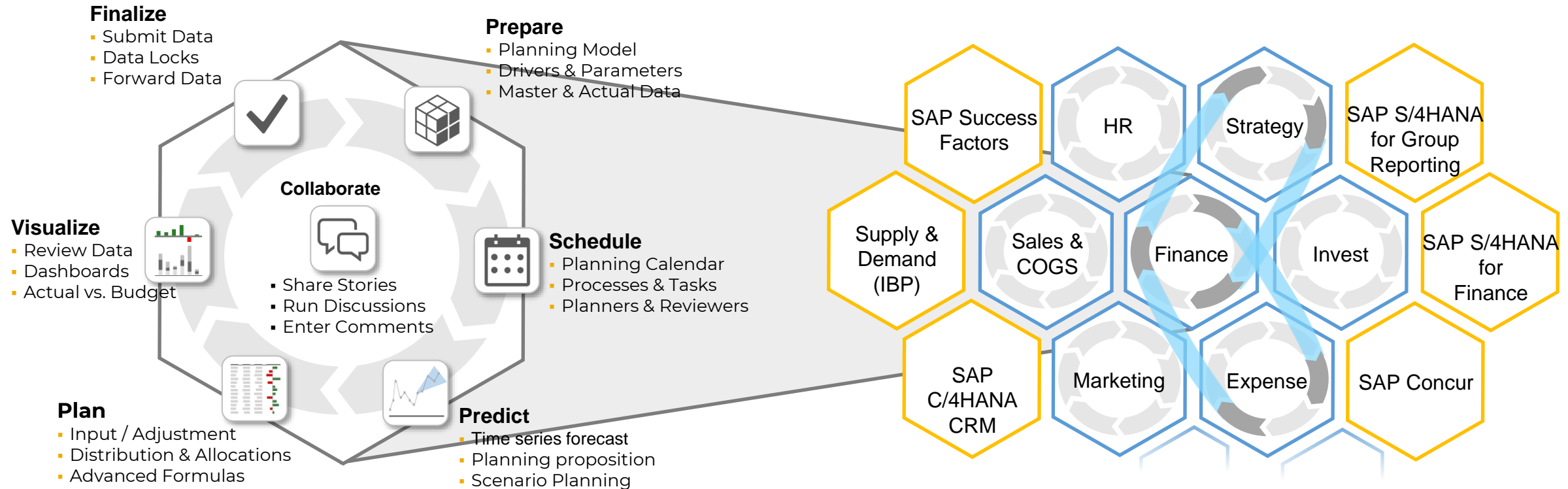## Access powerful planning capabilities

- Rich driver based planning, end-user versioning and simulations, robust scenario analysis, and end-to-end process management all combine to facilitate a more considered planning process

Deliver planning for an Intelligent Enterprise

- Harmonize planning on a single platform by leveraging best-in-class connectivity to SAP solutions, and pre-delivered Best Practice content to accelerate time-to-value

Extended Planning & Analysis (xP&A)

Finalize
- Submit Data
- Data Locks
- Forward Data

Prepare
- Planning Model
- Drivers & Parameters
- Master & Actual Data

Collaborate
- Share Stories
- Run Discussions
- Enter Comments

Visualize
- Review Data
- Dashboards
- Actual vs. Budget

Schedule
- Planning Calendar
- Processes & Tasks
- Planners & Reviewers

Plan
- Input / Adjustment
- Distribution & Allocations
- Advanced Formulas

Predict
- Time series forecast
- Planning proposition
- Scenario Planning

SAP Success Factors

HR

Strategy

SAP S/4HANA for Group Reporting

Supply & Demand (IBP)

Sales & COGS

Finance

Invest

SAP S/4HANA for Finance

SAP C/4HANA CRM

Marketing

Expense

SAP Concur

1 **Strong planning capabilities** to create powerful planning solutions within the company

2 **Link operational and financial planning** to improve alignment and performance

3 **Integrate with enterprise applications** for one source of the truth

Blog

Predictive Planning

Combine the power of planning and predictive forecasting to accelerate planning cycles

- Planners generate accurate forecasts on top of actuals to accelerate their day-to-day planning activities

- Add predictive forecasts back to planning models to support data-driven business decisions

- All without the need for machine learning expertise
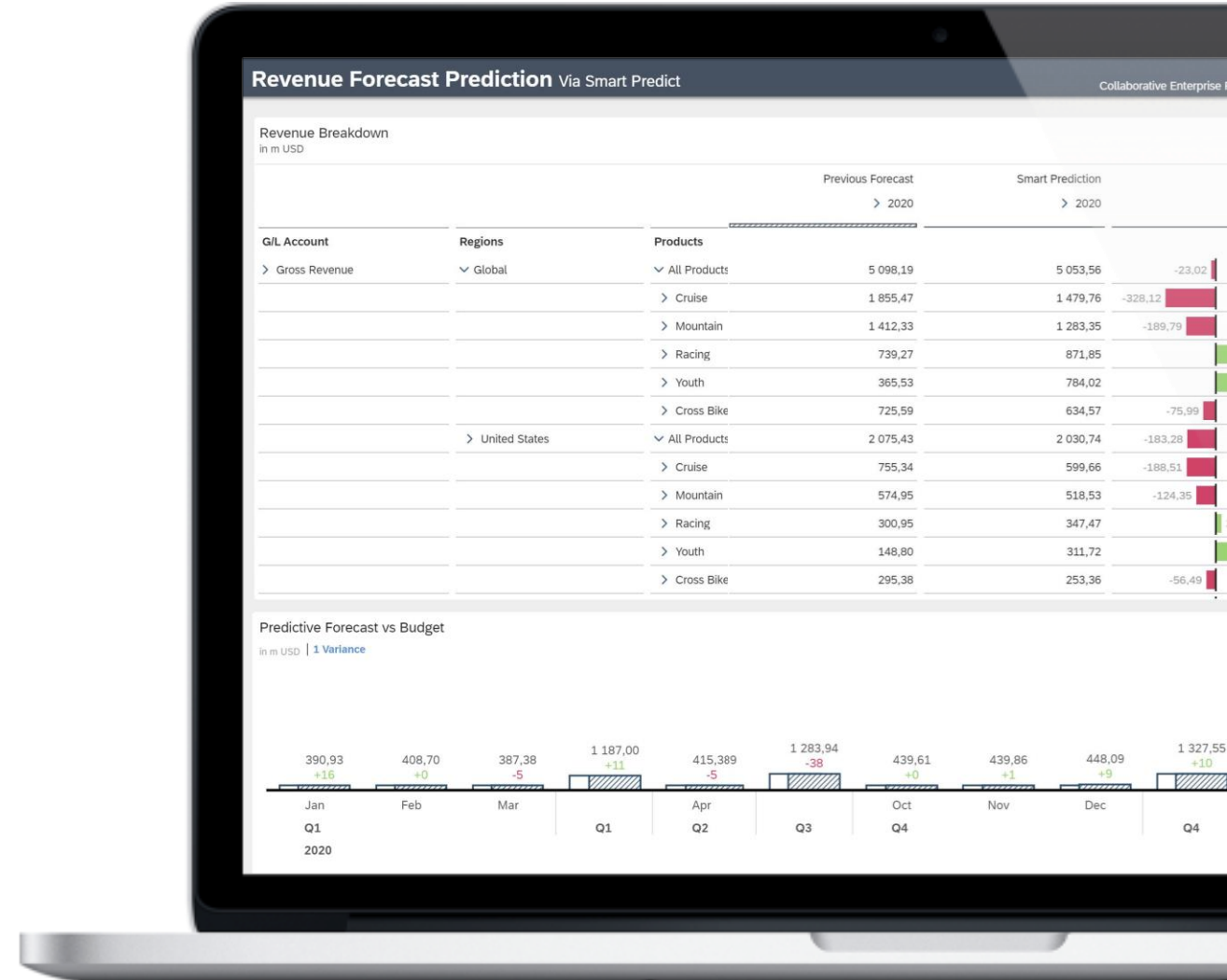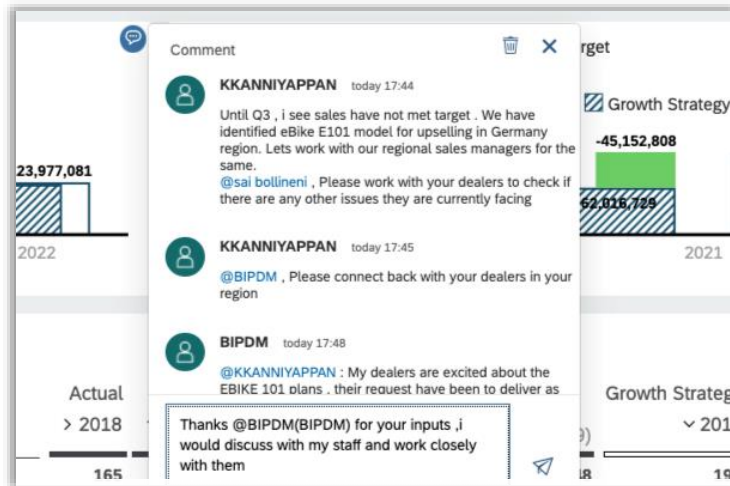
SAP Analytics Cloud Mobile

Stay informed and connected to your analytics, any time, any place with SAP Analytics Cloud Mobile App

- View your analytics from your iOS and Android devices

- Build stories with responsive layout and view from desktop or device

- Native mobile experience allows you to interact with your content intuitively and with ease

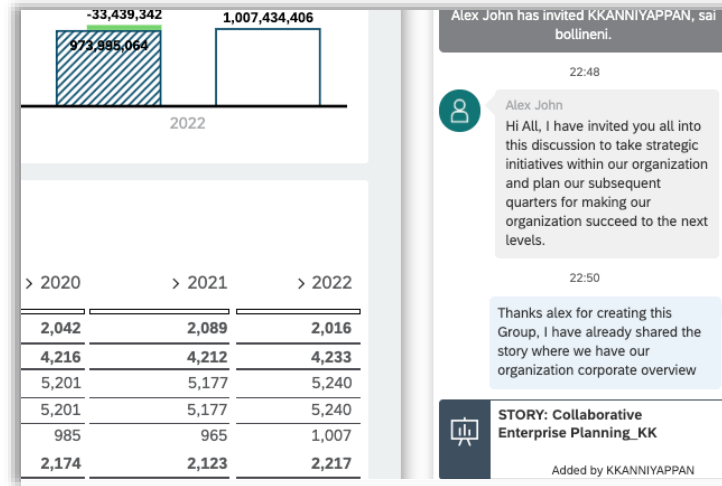- Supports single-sign-on for easy access to analytics on mobile
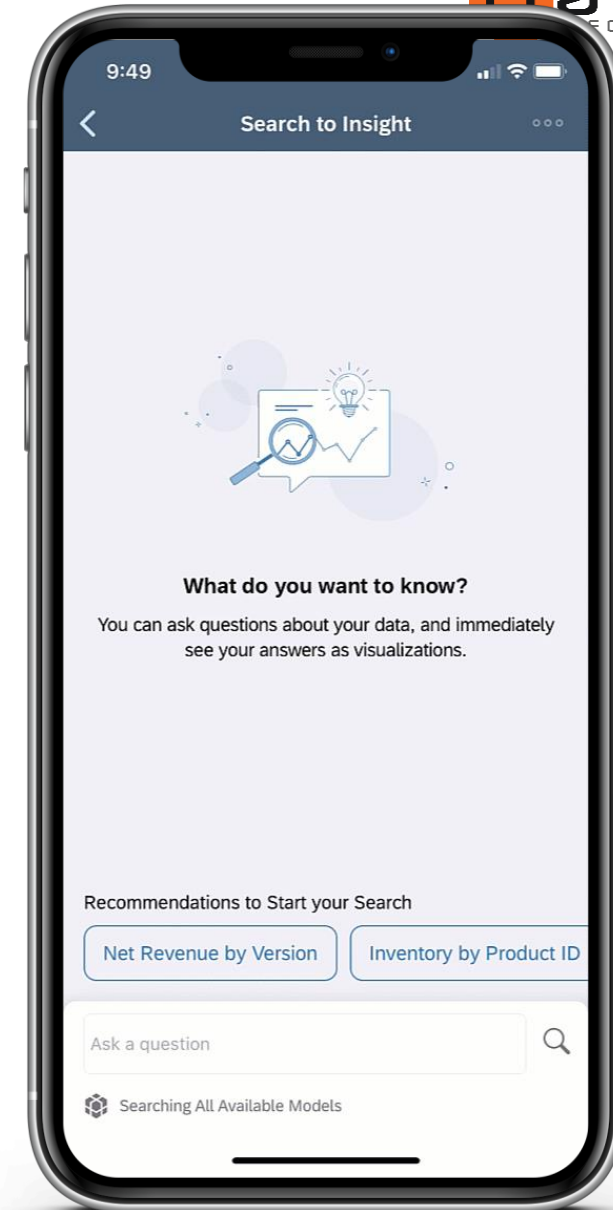
Collaboration

Increase engagement, and accountability with built in collaboration capabilities

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.
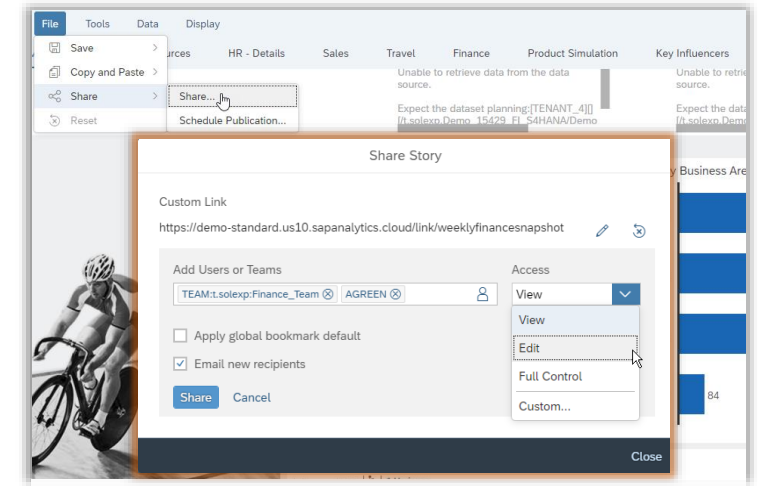
Sharing

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

Pre-Built Content Packages for LoB and Industry Use Cases

Line of Business

- Asset Management
- Environmental Health and Safety
- Experience Management
- Finance
- Human Resources
- Integrated Business Planning
- Liquidity Planning
- Marketing
- Procurement
- Product Cost Planning
- Project and Portfolio Mgmt
- Project Management
- Sales and Distribution
- Supply Chain
- Trade Management
- Transportation
- Travel & Expense
- Treasury Management
- Vendor Management
- + many more

Industry

- A&D
- Agriculture
- Banking
- Chemicals
- Consumer Products
- Health Care
- High Tech
- Higher Education
- Insurance
- Mill Products
- Mining
- Oil & Gas
- Professional Services
- Public Sector
- Real Estate
- Retail
- Sports
- Telecommunications
- Utilities
- + many more

SAP Sources

- SAP Ariba
- SAP BW
- SAP BW/4HANA
- SAP Business ByDesign
- SAP Business One
- SAP Concur
- SAP Cloud for Customer
- SAP Datasphere
- SAP Fieldglass
- SAP Field Service Management
- SAP HANA
- SAP Integrated Business Planning
- SAP Integration Suite
- SAP Intelligent Asset Management
- SAP Marketing Cloud
- SAP Master Data Governance
- SAP Qualtrics
- SAP S/4HANA
- SAP S/4HANA Cloud
- SAP Solution Manager
- SAP SuccessFactors
- + many more
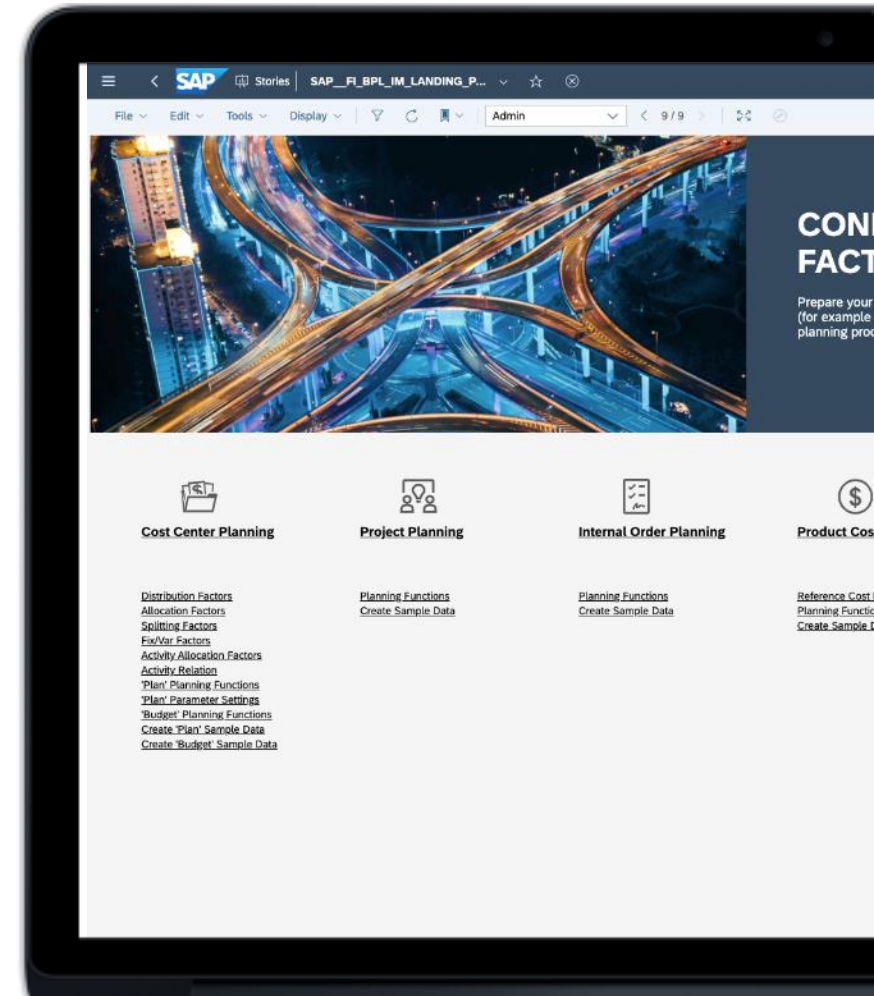
Schedule Publications

Streamline and optimize information delivery by scheduling delivery of analytics to users

- Schedule stories and analytic applications to SAP Analytics Cloud users, teams and non-SAP Analytics Cloud recipients

- Burst personalized content to SAP Analytics Cloud recipients based on recipient authorization

- Specify format (.pdf or .pptx), prompts, variables, bookmarks, story filter and page range for schedules

- Manage schedules via calendar and configure custom SMTP server for delivery
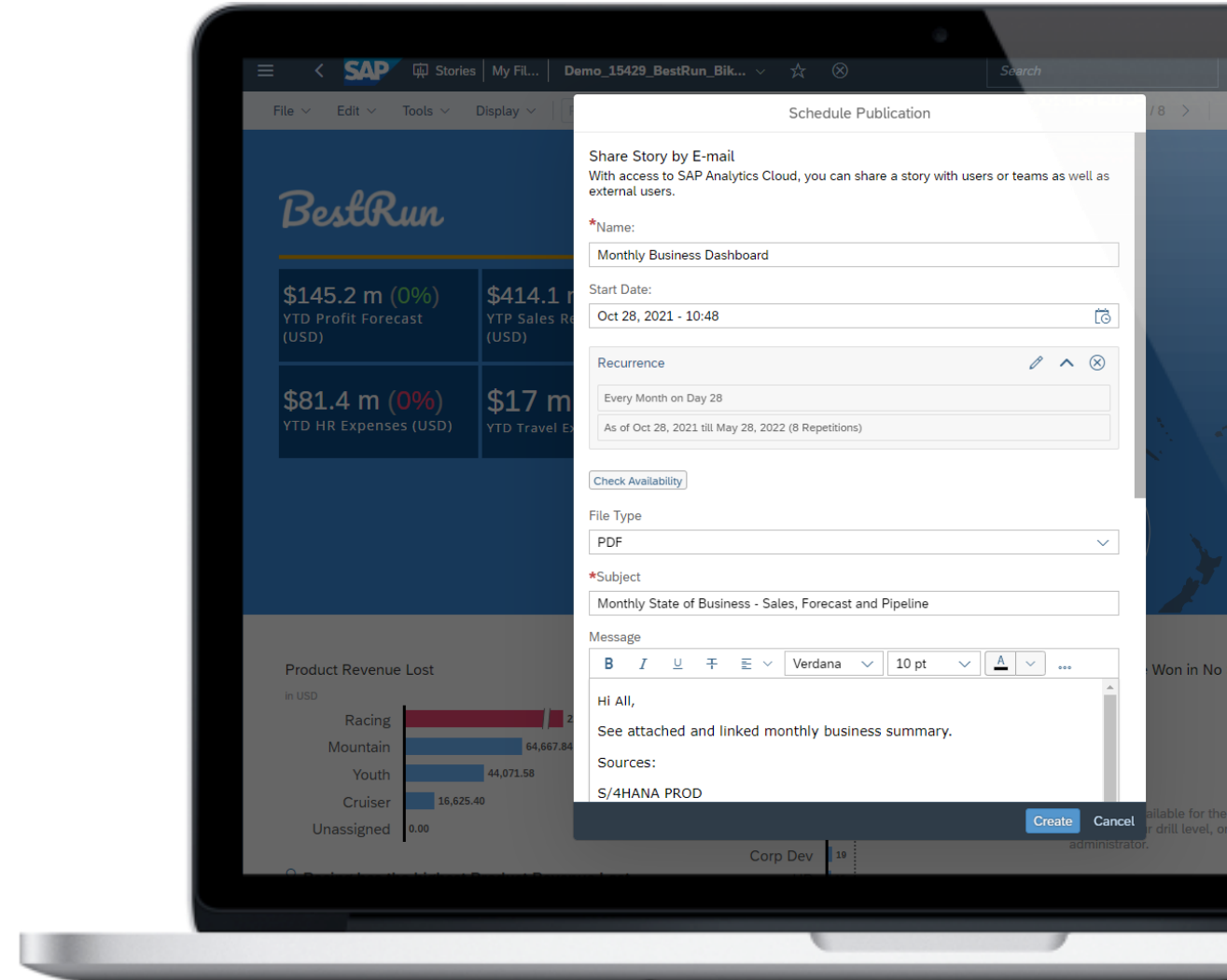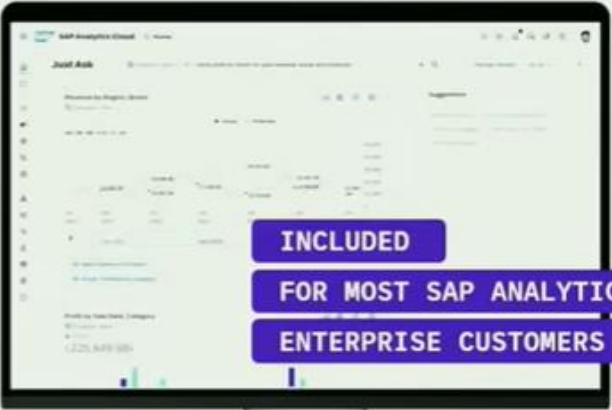
Just ASK

Just ASK
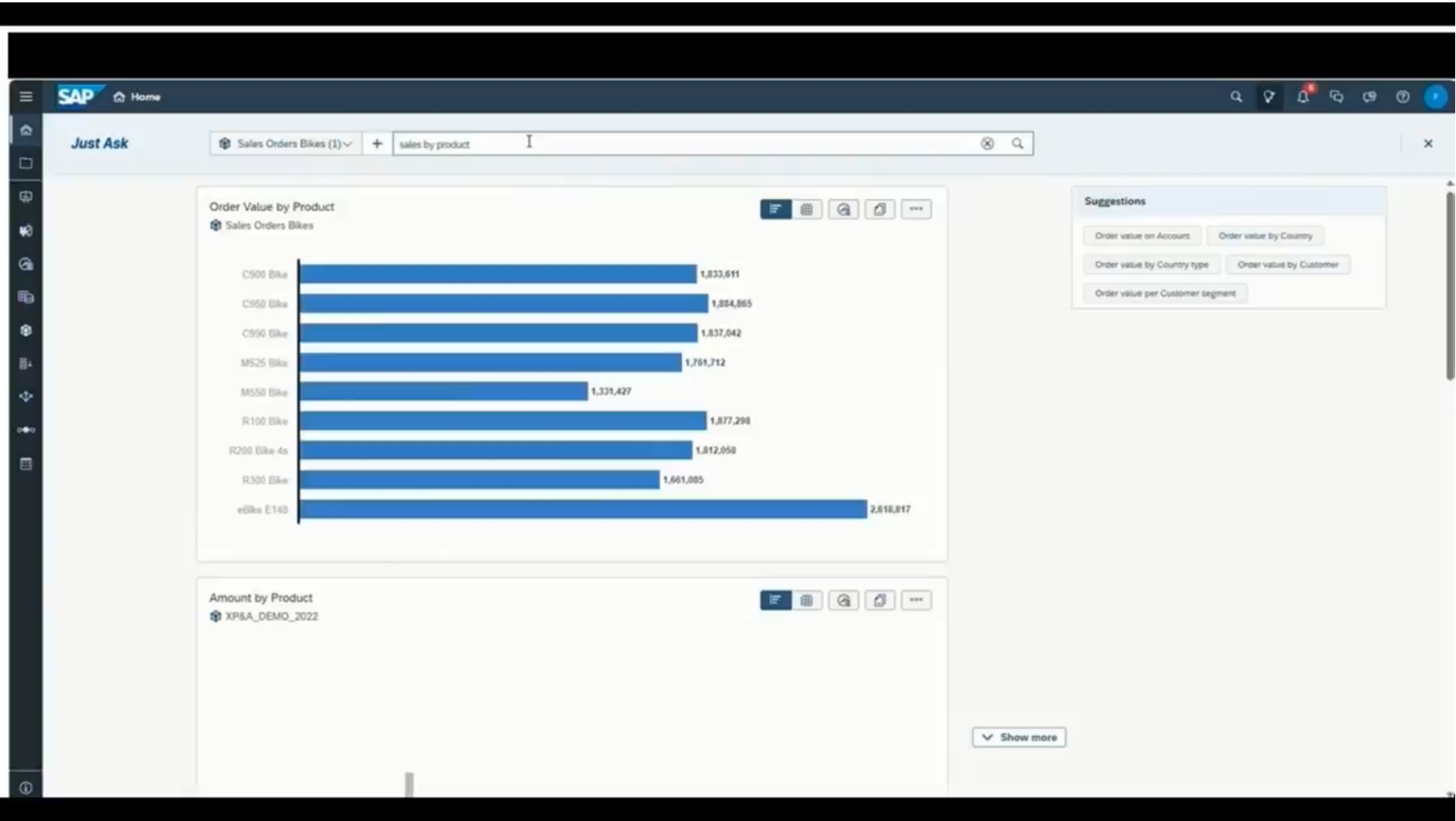
Why SAP Analytics Cloud?

- **Analyze, predict and plan** all in one unified user experience

- **Connect live** to cloud and on-premise data sources and break down data silos

- **Make confident decisions** with automated insights powered by machine learning

- **Collaborate with ease;** add discussions, comments or share content on desktop or mobile

- **Innovate rapidly** with new innovations and features automatically added every quarter

- **Scale flexibly** to support users & enhance capabilities without increasing IT costs

- **Cloud software-as-a-service** solution fully hosted and maintained by SAP

Real-world Use Cases & Demo

Intelligent Customer Segmentation Reporting and Analysis

Customer Segmentation Use Case :- In the context of reducing customer attrition rate (churn), customer segmentation is employed to group customers based on their behaviour, preferences, and needs. By analysing these segments, businesses can target personalized retention strategies, improve sales forecasting accuracy, and address customer complaints and satisfaction issues effectively, ultimately enhancing customer loyalty and reducing churn rates.

RFM Analysis : R – Regency – How recently sales happened

F – Frequency - How Frequently sales happened

M – Monitory –What Monitory Value with time Frame
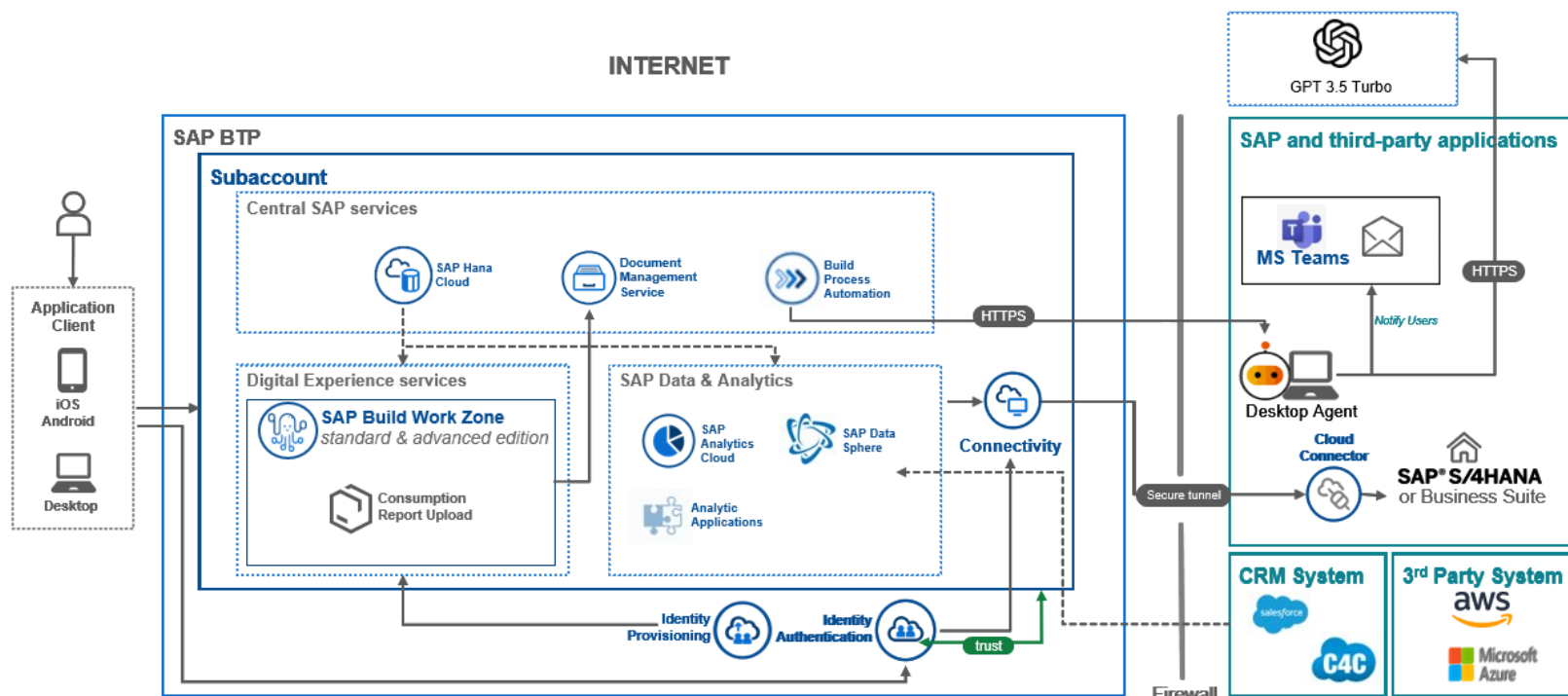
Bill of Material (BOM)
SAP Analytics Cloud | SAP Build | Data Sphere | SAP S4 HANA | SAP BTP | SAP EHS

Business Challenge
✓ Identifying Relevant Segmentation Criteria
✓ Real-Time Customer Insights
✓ Personalization at Scale
✓ Monitoring and Measuring Success
✓ reducing customer attrition rate
✓ Inaccurate Sales Forecasting

Solution – At a Glance

SAP BTP Platform will help to build application bring manual data upload and Datasphere connect Multiple data source.
SAP Analytics Cloud Dashboard will insights on
✓ Analyze, Predict and Plan
✓ Connect live to cloud and on-premise
✓ Augmented Analytics
✓ Smart Insights and Discovery

Business Benefits
  Customer will get Reports with actionable insights and
   Track the performance
✓ Enhanced Customer Engagement
✓ Increased Conversion Rates
✓ Maximized ROI
✓ Improved Customer Loyalty
✓ Competitive Advantage
✓ Reduced Churn
✓ Optimized Pricing Strategies

Customer Segmentation Dashboard

Augmented Analytics Dashboard
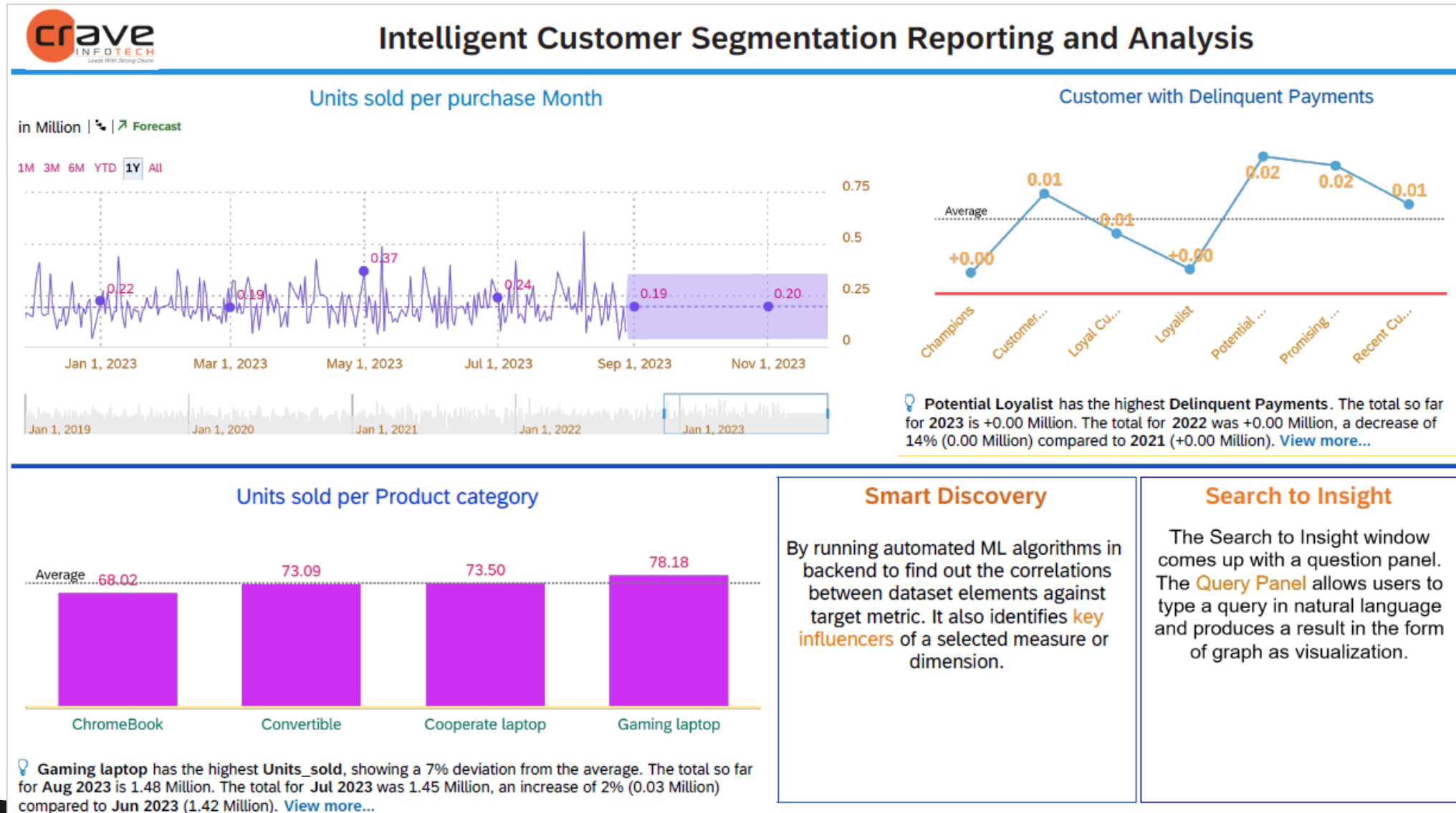
Smart Discovery

Smart Discovery

This Smart Discovery analyzed Units sold for Retailers name from laptop/World1_GMap. It identified 6 columns as key influencers. These key influencers are based on a snapshot of your data from Sep 6, 2023.

We've excluded Cost-to_comp, Total_Price, rating from the predictive model, because they are highly correlated with Units_sold.

We aggregate all the relevant measures and dimensions to the level of the entity. For your dimensions that can have several values for one

Key influencers of Units sold for Retailers

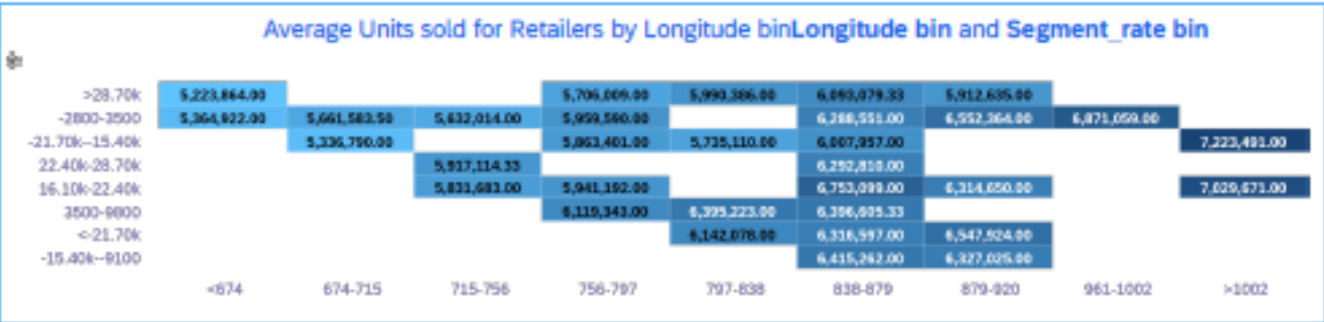| Influence		Column	Correlations
••	MODERATE	Segment_rate	-
•	WEAK	Longitude	-
•	WEAK	Latitude	-
•	WEAK	Conversion Rate (Promising to Loyal)	-
•	WEAK	Delinquent Payments	-
•	WEAK	Cross-selling Rate (Promising)	-

List B
- ○ Segment_rate bin
- ◉ Longitude bin
- ○ Latitude bin
- ○ Conversion Rate (Promising to Loyal) bin
- ○ Delinquent Payments bin
- ○ Cross-selling Rate (Promising) bin

Average Units sold for Retailers by Longitude binLongitude bin and Segment_rate bin

	<674	674-715	715-756	756-797	797-838	838-879	879-920	961-1002	>1002
>28.70k	5,223,864.00			5,706,009.00	5,990,386.00	6,093,079.33	5,912,635.00		
-2800-3500	5,364,922.00	5,661,583.50	5,632,014.00	5,959,590.00		6,288,551.00	6,552,364.00	6,871,059.00	
-21.70k–15.40k		5,336,790.00		5,063,401.00	5,735,110.00	6,007,957.00			7,223,491.00
22.40k-28.70k			5,917,114.33			6,292,810.00			
16.10k-22.40k			5,831,683.00	5,941,192.00		6,753,099.00	6,314,650.00		7,029,571.00
3500-9800				6,119,343.00	6,395,223.00	6,356,605.33			
<-21.70k					6,142,078.00	6,316,997.00	6,547,524.00		
-15.40k–-9100						6,415,262.00	6,327,025.00		

Distribution of Retailers by Longitude bin and Segment_rate bin

|	<674	674-715	715-756	756-797	797-838	838-879	879-920	961-1002	>1002
>28.70k	1			6	1	3	1		
-2800-3500	1	2	1	1		1	3	1	
-21.70k–-15.40k		1		1	1	1			1
22.40k-28.70k			3			1			
16.10k-22.40k			1	1		1	1		1
3500-9800				2	2	3			
<-21.70k					1	1	1		
-15.40k–-9100						1	1		

Intelligent Ecological Balance Reporting and Analysis.

Sustainability Use case

Use case – Intelligent Ecological Balance Reporting and Analysis focused with Ambitions of Sustainability KPI's Zero Emissions, Zero Wastes and Zero Inequality and considered 21 Core Metrics by World Economic Forum's - International Business Council Framework

- Carbon Footprint Tracking,
- Resource Consumption Analysis,
- Environmental Impact Assessment,
- Stake-holder Engagement,
- Scenario Planning.
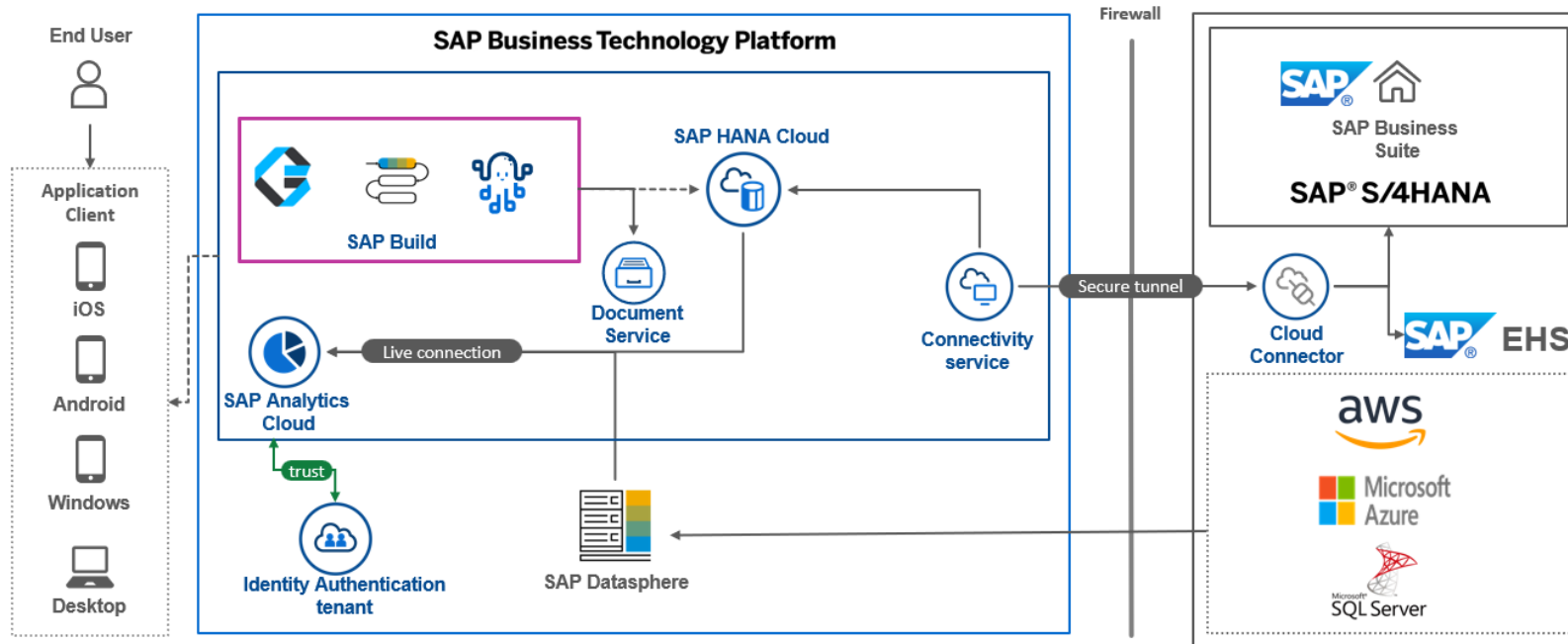
Bill of Material (BOM)

SAP Analytics Cloud | SAP Build | Data Sphere | SAP S4 HANA | SAP BTP | SAP EHS

Business Challenge

- ✓ Lack of awareness on Sustainability Goals
- ✓ Limited resources,
- ✓ Short-term thinking
- ✓ Dashboards and Insights,
- ✓ Regulatory challenges,
- ✓ Limited stakeholder engagement

Solution – At a Glance

SAP BTP Platform will help to build application bring manual data upload and Datasphere connect Multiple data source.
SAP Analytics Cloud Dashboard will insights on

- ✓ Define - Strategic Ambitions,
- ✓ Measure – Baseline/ Actual
- ✓ Set -Targets,
- ✓ Track – Performance,
- ✓ Find Actionable Insights
- ✓ Implement - Action

Business Benefits

Customer will get Reports with actionable insights and Track the performance

- ✓ Reducing carbon footprint,
- ✓ Water conservation, Waste reduction,
- ✓ Ethical labor practices, Energy efficiency,
- ✓ Sustainable supply chain,
- ✓ Corporate social responsibility,
- ✓ Circular economy

Find out more – SAP Analytics Cloud

Check out the **https://www.sap.com/products/technology-platform/cloud-analytics.html** website, which has valuable resources for fast-tracking your knowledge of SAP Analytics Cloud for planning and a rich support section designed to help you get the highest quality answers quickly and easily from SAP experts

Read our blog

SAP Analytics Blog

Free trial

SAP Analytics Cloud Trial

Customers

Innovation Stories

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Q&A

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