

# From Supply Chains to Demand Networks – SAP's Supply Chain Vision for the Chemical Industry

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# Trends and Market Forces in the Chemical Industry



## Globalization

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High Demand Shift to Asia

China will become self-sufficient and even export

M&A activities → bigger global players

Fight for market access

Volatile raw material and energy costs



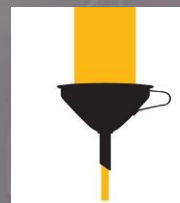
## Regulatory Pressure

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Stringent registration processes

Increasing complexity and frequency of new regulations

Political/social pressure on ecological behavior.



## Innovation

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Based on commoditization and competition, an innovative and tightly managed product portfolio is critical.

Combination of products & services is an emerging need

Innovation is a key imperative for growth.



## Operational Costs

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Cost and margin pressure impose to reduce operating costs and promote cost transparency

Increasing regulatory pressure requires 'transparent' and compliant processes

# Supply Chain Needs to Adapt to New Business Realities

New methods are required to respond as global supply chains are transforming into demand networks

## Volatile Markets

The customer has more knowledge about products and services than ever before (e.g. Social Networks)

## Innovative Manufacturing Technologies

The customer is demanding individualized products (e.g. print your food with 3D Printers)

## Growing Logistics Complexity

The customer expects flexible and speedy delivery of ordered products (e.g. delivery within the next hour)

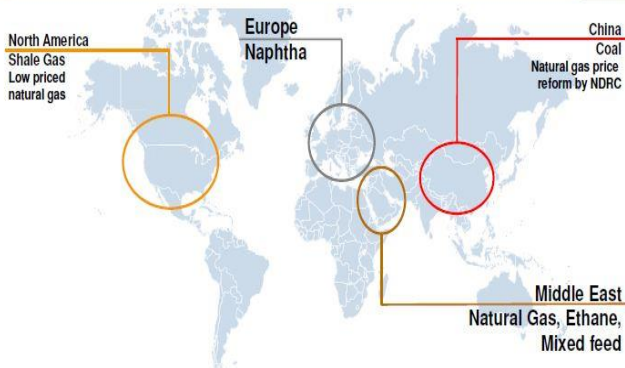


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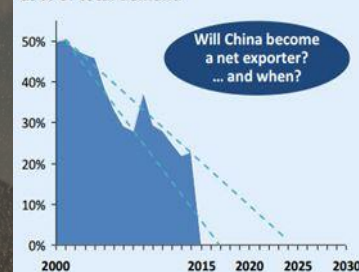
Raw materials landscape is diversifying based on regional differences



Chemical exports from potentially the US, Middle East and China in the long term will search for target markets !

### 5 Fight for market access

Chinese Polymer net imports as % of total demand



Schematic chemicals trade flows<sup>1</sup>



Impact on high cost feedstock regions like Europe and North Asia could be dramatic



# Are Supply Chain Organizations Prepared for Demand Networks?

## Major Challenges for Supply Chain Professionals



### Manage the Supply Chain in Real Time

Only 20% of Supply Chain Professionals have information available within a day



### Improve Short- & Long-Term Planning Results

Forecast accuracy for the first week is in average lower than 70%



### Orchestrate the Global Network of Partners

Less than ~10% of suppliers are directly connected to their customer's supply chain



### Execute the Supply Chain efficiently

About 10% of world-wide GDP is related to logistics spending



# SAP Supply Chain Solution Strategy

Enable Businesses to Transform their Supply Chains to Demand Networks



## Supply Chain Monitoring

Ensure integrity and predict issues of the DEMAND NETWORK



## Demand Driven Business planning

Sense & shape DEMAND. Balance DEMAND plans with NETWORK constraints for profitability



## Response and Supply Orchestration

Manage Customer response and orchestrate the supply NETWORK



## Logistics & Order Fulfillment

The DEMAND NETWORK requires speed & efficiency in Logistics

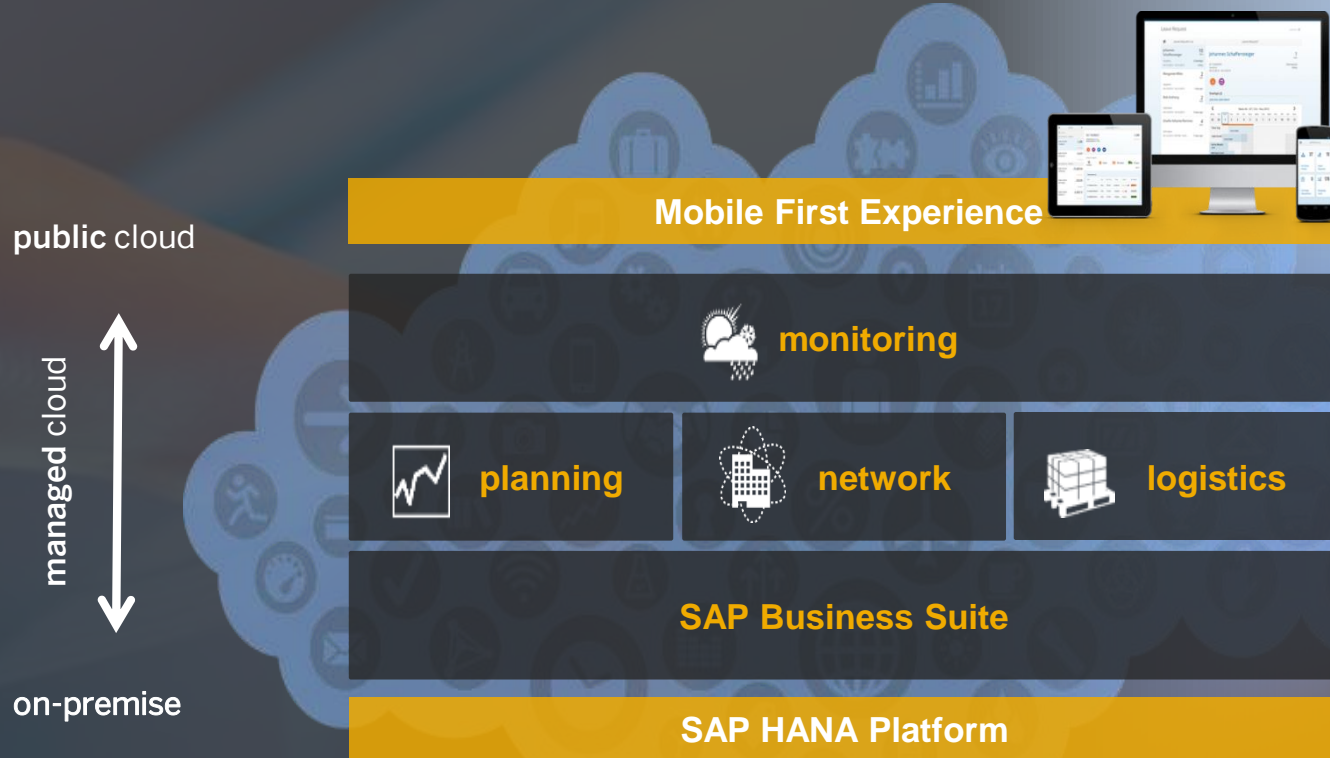
## [THE DEMAND NETWORK]



Powered by **SAP HANA**

# SAP Supply Chain Architecture Sketch

Simplified and Harmonized Solution Architecture for Demand Networks





# SAP Integrated Business Planning

Speeding up the Supply Chain requires a new Supply Chain Planning approach

## Mobile First Experience

Introduce state-of-the-art user experience with communication capabilities (SAP JAM) and MS Excel Spreadsheets

## Built on SAP HANA

Demand Networks require real-time monitoring and a focus on short-term planning

## One Harmonized Data Model

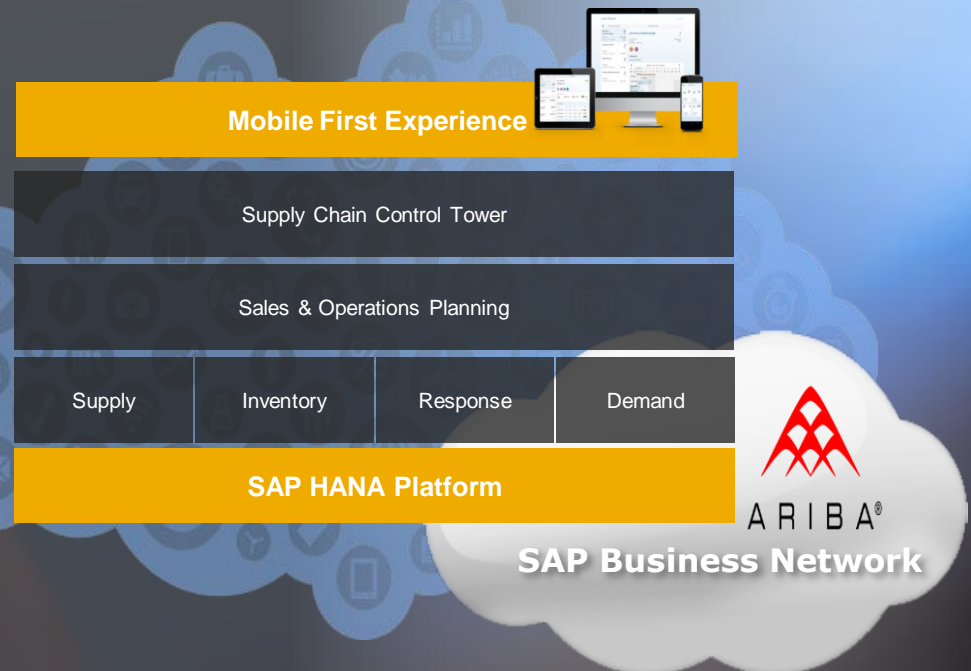
Avoid any latency due to integration efforts and leverage the SAP ERP data model

## New Planning Algorithm

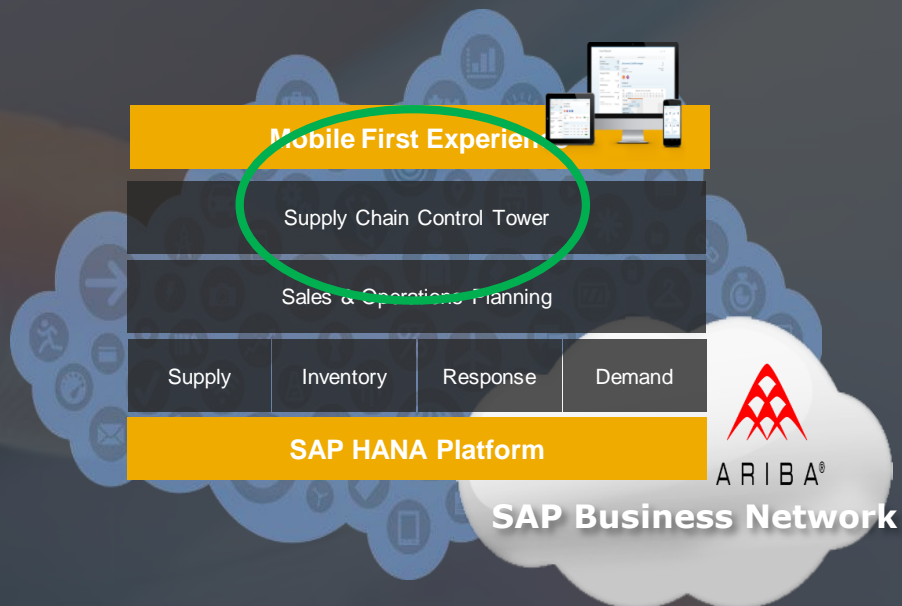
Leverage predictive analytics (e.g. demand sensing) algorithm in combination with optimization

## Cloud First Approach

The solutions will be provided in the SAP Cloud but also be made available on-premise



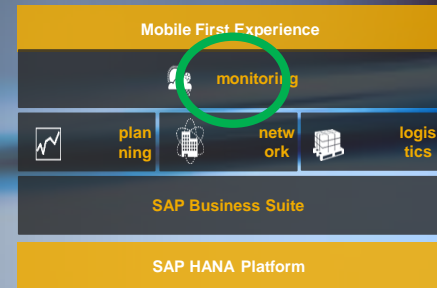
# Example innovations and roadmap



- *End to End Visibility across the supply chain for Performance Management, Operational Reporting and Simulation*
- *SCM Event Management, Serialisation of products and full Batch Management and Traceability*

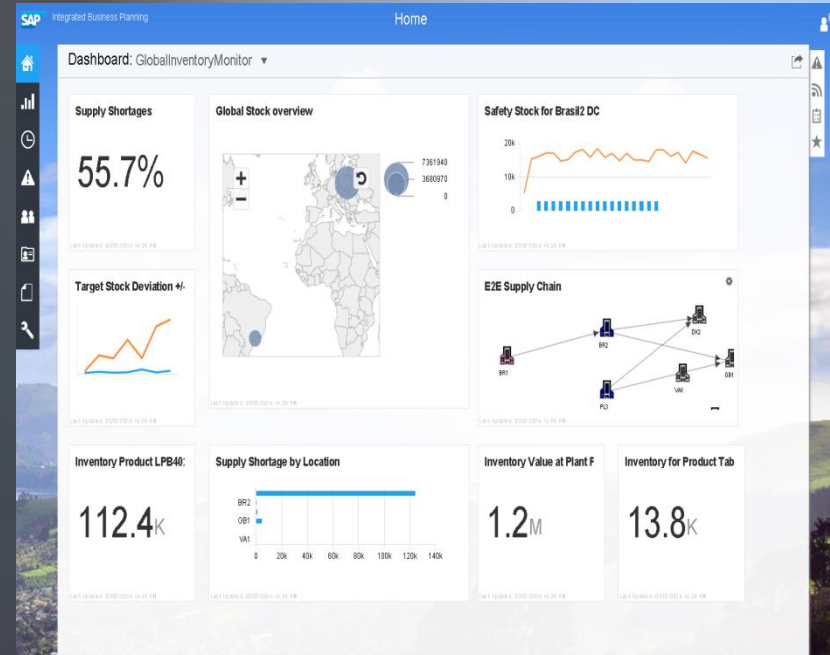


# SAP Supply Chain Control Tower



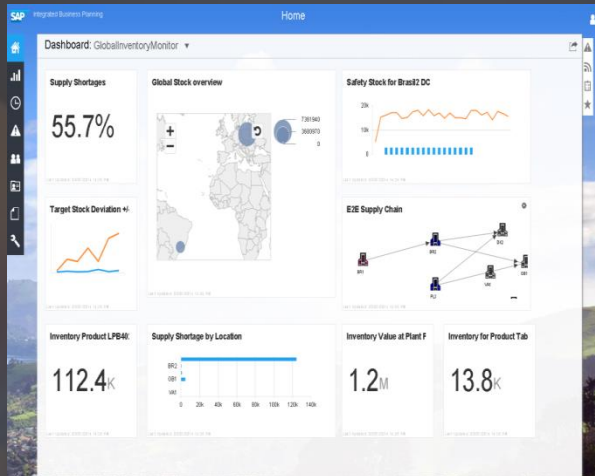
**Enable supply chain professionals to navigate, analyze and profitably manage the end-to-end supply chain in real-time**

- Increase end-to-end visibility
- Increase on-time delivery performance to customer
- Decrease overall inventory levels while reducing risk
- Increase supply chain agility and reduce supply chain cost

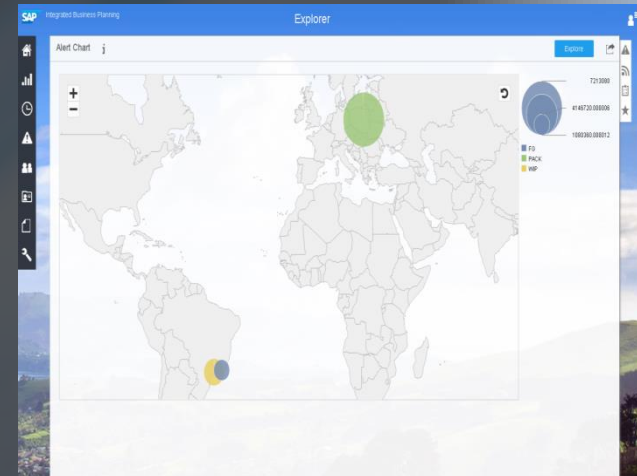


# SAP Supply Chain Control Tower sample use cases

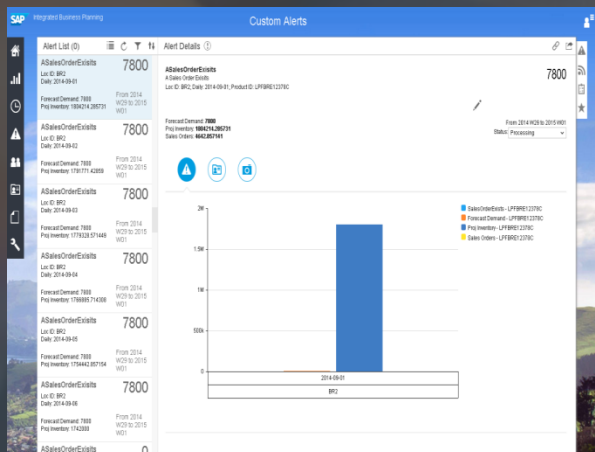
## KPI Library & Dashboards



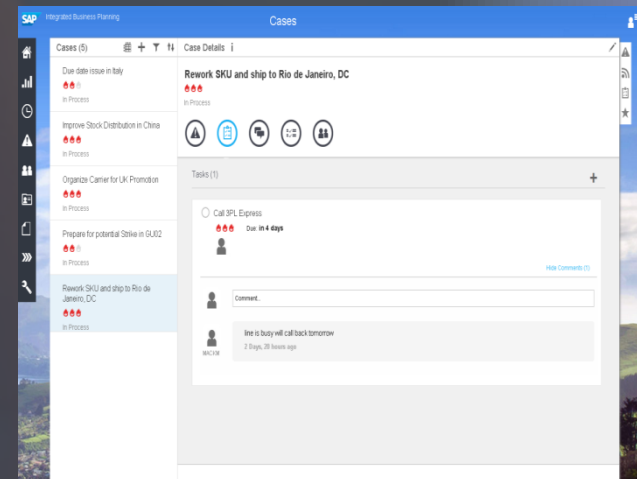
## Global visibility & Analytics



## Alerting to Action



## Collaboration with Task & Case Mgmt.



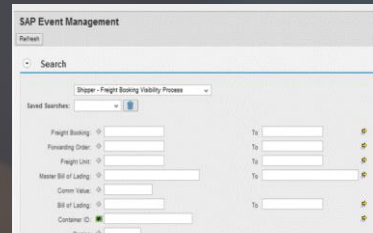


# Process Visibility & Goods/Assets in-Transit

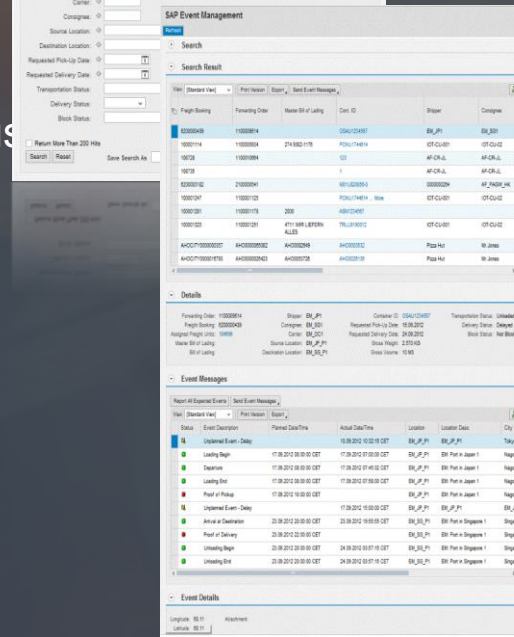
## With SAP Event Management

### Key Features

- Capture business events and check against milestones
- Notify stakeholders & adjust the business process if required
- Real-time reporting and analysis for insight-into-action and risk mitigation

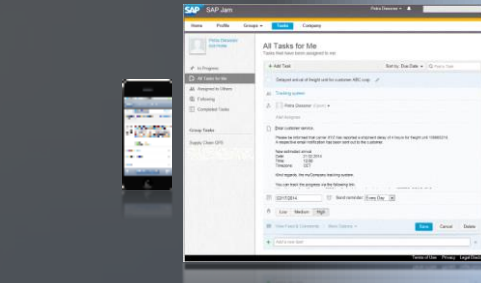


SAP Event Management Search interface. The search criteria include: Freight Booking, Forwarding Order, Freight Unit, Master Bill of Lading, Commodity, Bill of Lading, Container ID, Carrier, Consignee, Destination Location, Requested Pick-Up Date, Requested Delivery Date, Transportation Status, and Delivery Status. A 'Search' button is visible at the bottom.

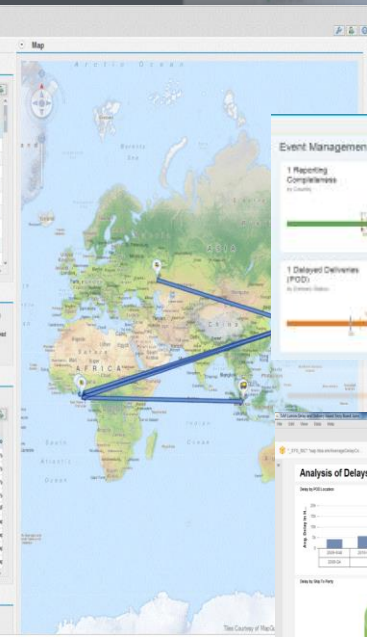


SAP Event Management Search Results table. The table displays a list of events with columns for Event ID, Event Name, Event Date, Event Type, Event Status, Event Location, Event Description, Event Details, and Event Actions. The table is filtered by 'Freight Booking' and 'Forwarding Order'.

Event ID	Event Name	Event Date	Event Type	Event Status	Event Location	Event Description	Event Details	Event Actions
10000001	Freight Booking	2012-10-10	Booking	Confirmed	Shanghai	Shanghai to London	Shanghai to London	View Details
10000002	Freight Booking	2012-10-10	Booking	Confirmed	Shanghai	Shanghai to London	Shanghai to London	View Details
10000003	Freight Booking	2012-10-10	Booking	Confirmed	Shanghai	Shanghai to London	Shanghai to London	View Details
10000004	Freight Booking	2012-10-10	Booking	Confirmed	Shanghai	Shanghai to London	Shanghai to London	View Details
10000005	Freight Booking	2012-10-10	Booking	Confirmed	Shanghai	Shanghai to London	Shanghai to London	View Details



SAP Event Management All Tasks for Me interface. The interface shows a list of tasks with columns for Task ID, Task Name, Task Date, Task Type, Task Status, Task Location, Task Description, Task Details, and Task Actions. The tasks are filtered by 'Freight Booking' and 'Forwarding Order'.

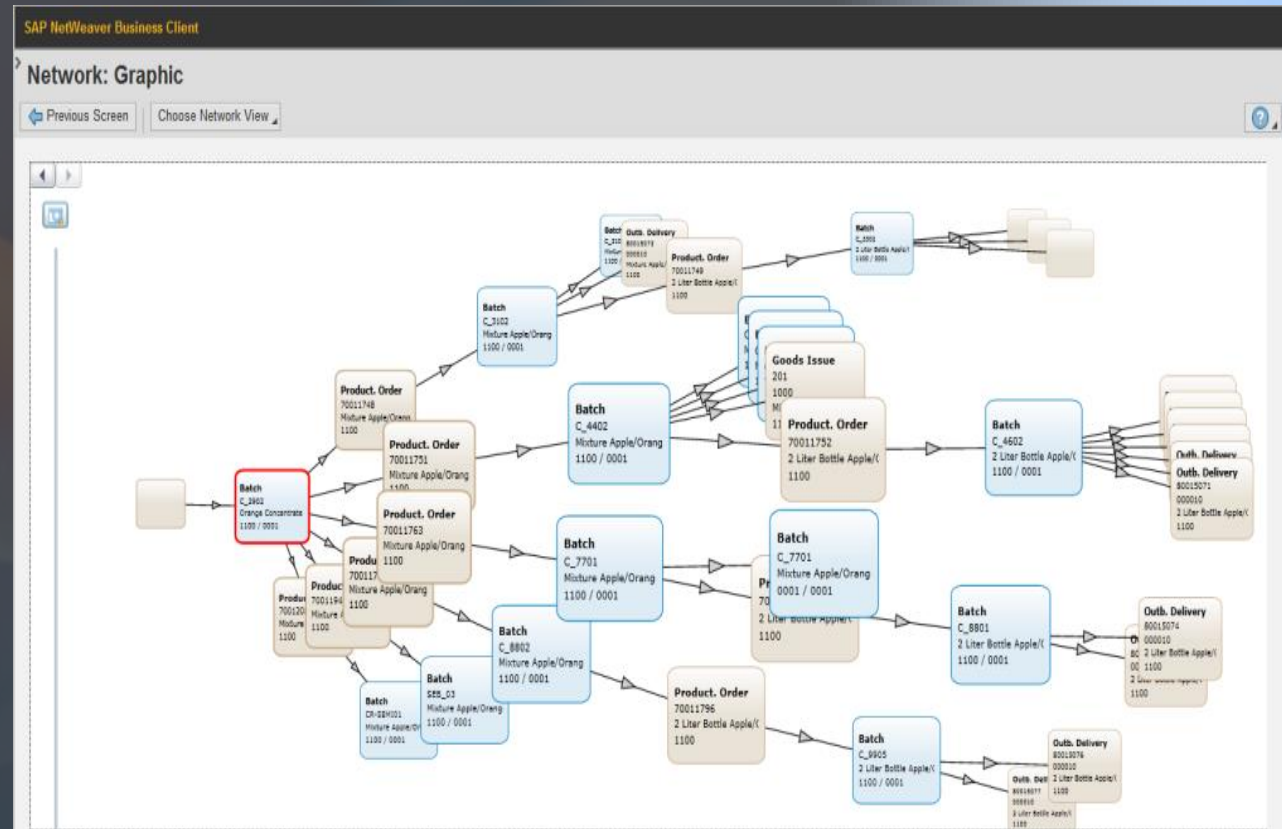


# Product Genealogy

## With SAP Global Batch Traceability

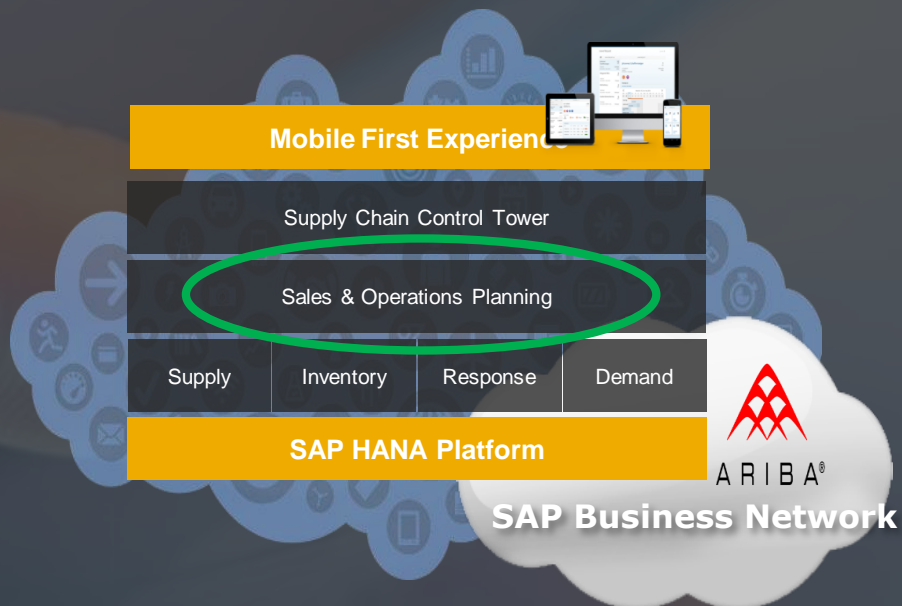
### Key Features

- Capture & link batch usage across distributed systems
- Graphically explore/investigate the batch issue
- Fast Reporting to drive precision recall, withdrawal or hold





# Example innovations and roadmap



- *Market and Consumer Insight with Demand Signal Management.*
- *Collaborative Demand Planning for both simple and advanced use cases*
- *‘Demand Sensing’ based on inventory, POS, order feeds for short term and daily forecasting and exception management*

# SAP Integrated Business Planning for sales and operations

**Deliver a cross departmental sales and operations plan balancing the impact on inventory, service levels and profitability**

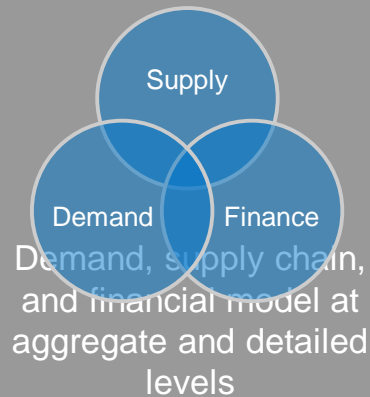
- Create the optimal business plan to drive revenue growth and increase market share
- Effectively balance demand and supply and attain financial targets
- Increase speed and agility of planning and drive most profitable responses
- Improve forecast accuracy and on-time delivery through aligned and integrated Business Planning across short, mid and long term



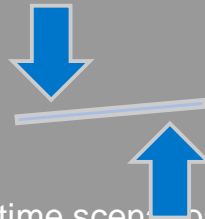


# Key features of SAP Integrated Business Planning for sales and operations

## Complete scalable model



## Real-time what-if scenario planning



Real-time scenarios and simulation on entire model

## Social collaboration



Transparent communication, record decisions

# Where does SAP Integrated Business Planning for sales and operations fit across enterprise planning?



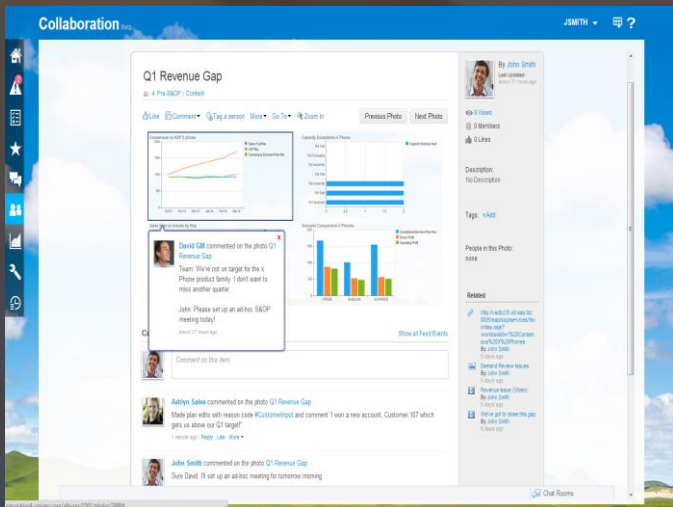


# SAP Integrated Business Planning for sales and operations sample use cases

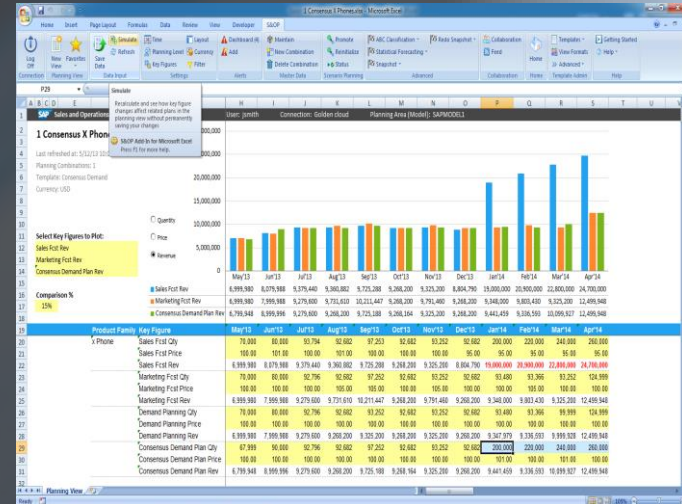
## S&OP process management



## Collaboration



## Simulation



## Dashboard analytics



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# Integrated Business Planning: Fast adoption across industries



## Consumer Products



EL ARABY



## Chemicals



SURGUTNEFTGAS  
OPEN JOINT STOCK COMPANY



## Mill Products & Mining



Excellent Minerals Solutions



## Pharma



## High Tech



## Manufacturing

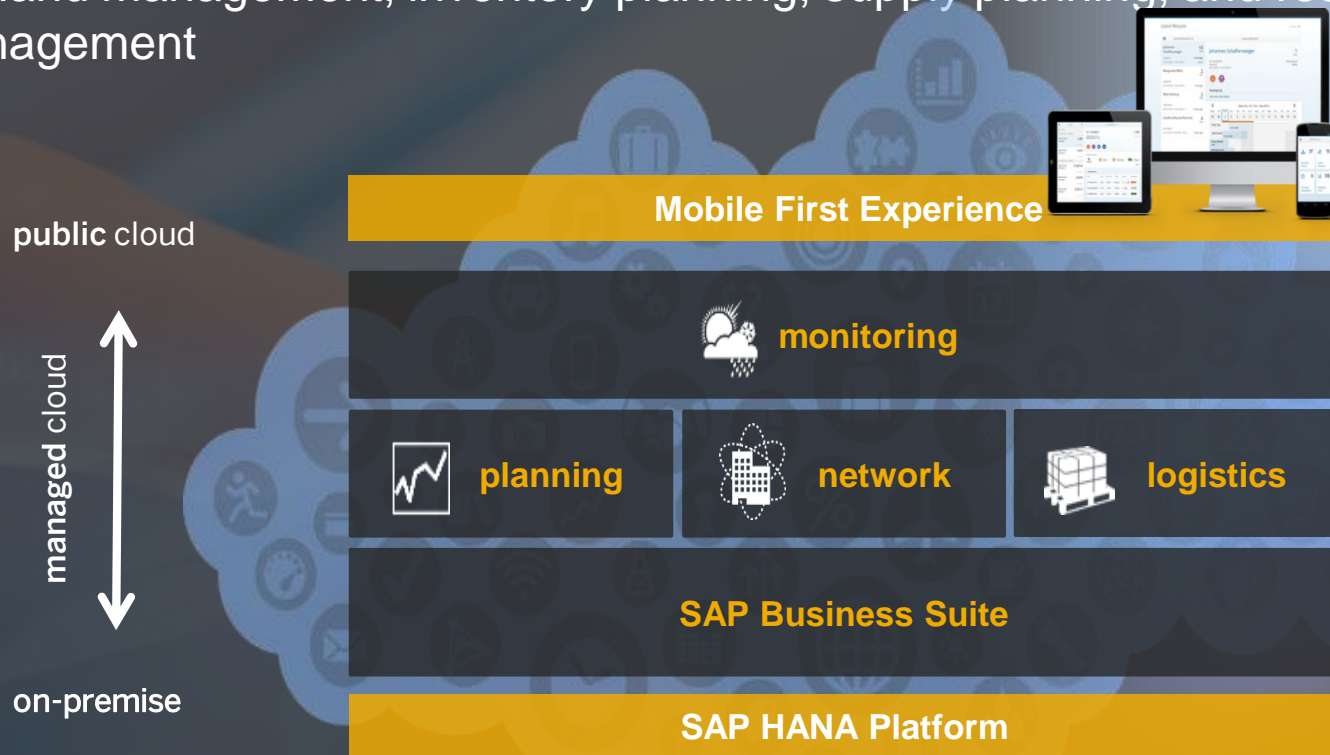


TRANSNET



# SAP Supply Chain Platform for Demand Networks

World class solution for supply chain monitoring, sales and operations planning, demand management, inventory planning, supply planning, and response management



- ❑ **Real Time Supply Chain Platform**
- ❑ **State of the art User Experience**
- ❑ **One Harmonized Data Model**



# Thank you!



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