

Simplify your Life in Chemical Operations

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The SAP logo is located in the bottom left corner of the slide. It consists of the letters 'SAP' in a bold, white, sans-serif font, set against a blue rectangular background. The background of the entire slide is a photograph of a complex industrial chemical plant with numerous tall distillation columns, pipes, and storage tanks under a clear blue sky.

SAP



Agenda

- **Latest Technologies for chemical Operations**
- SAP HANA (In Memory Computing)
 - Examples
- Mobility
 - Examples
- Why SAP HANA and Mobility?

Leading chemical Companies...



... optimize assets, order fulfillment, and innovation to outperform competitors

They do it by...

Reliably meeting customer demand at maximized profitability

Achieve revenue and profit goals



Driving superior returns on product innovation

Grow market share with sustainable products



Safely optimize asset performance and utilization

Make optimal use of capital-intensive assets



Two powerful new technologies leverage these strategic advantages:

- **SAP HANA (In Memory Computing)**
- **Mobility**



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In Memory Computing helps accelerate sustainable Growth through timely and granular Insights and faster Response

Supply Chain Management

Ad hoc responses to changing market needs

- Rapid aggregation/disaggregation and analysis of supply chain data in context with economic data (cost, margin profit)
- Rapid “what if” simulations and optimizations

Sales and Product Strategy

Rapidly analyze product margin and compliance information

- Analysis of large data volumes at transactional data granularity in real time
- Faster response to changing product cost structures
- Faster screening and analysis of compliance data and scenarios at substance level

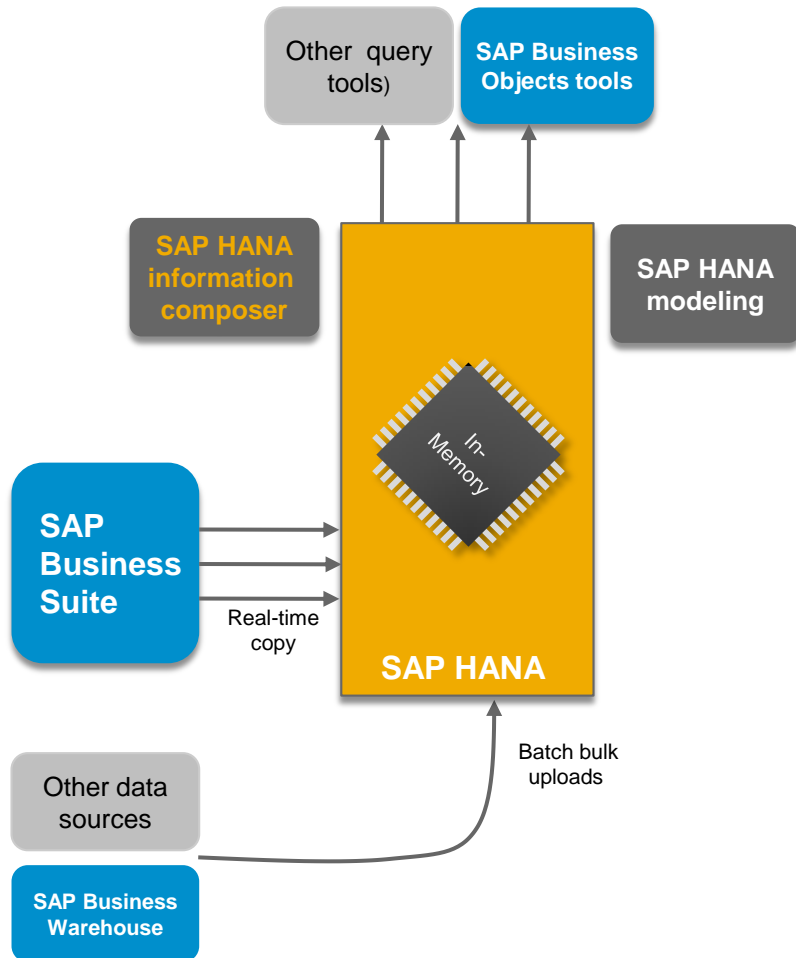
Manufacturing Operations

Analyze plant floor data understanding compliance and capacity requirements

- Analysis of maintenance data, energy consumption, and environmental impact of new formulations at equipment level in real time

SAP HANA

Simplify “Big Data” at real ‘*real-time*’

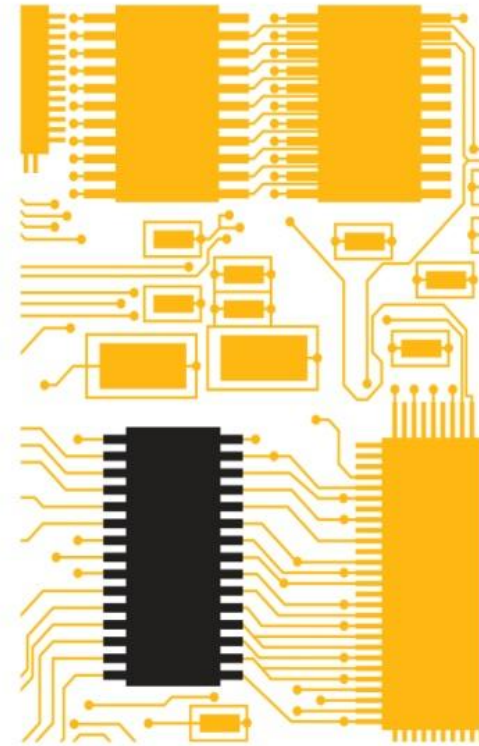


What is SAP HANA?

- SAP HANA™ is a **modern platform** leveraging the power of in-memory computing
- Enables to **drive businesses in real-time** on an ever increasing **massive volume of data**
- Can be deployed as an **appliance** or **delivered via the cloud**

Integration of SAP HANA in your Business delivers immediate Benefits

- **Immediate answers** – up to 3600x faster analytics
- **Real-time access** – when it happens, you know it
- **Deeper insight** – interrogate more granular data
- **Simpler and more cost-effective** – manage large data volumes while reducing IT complexity
- **Act Broadly** – manage large volumes of data
- **Run Faster** – analyze at the speed of thought
- **Get Flexibility** – eliminate pre-fabrication requirements
- **Simplify Data Access** - role-based dashboards and screens



How SAP HANA Helps Chemicals

Opportunities for your business



Examples

Finance / Controlling

**Supply Chain /
Product Development**

Human Resources / IT

Manufacturing

Sales & Procurement

Sales & Operation Planning

Planned standard

Description

SAP HANA for Sales & Operations Planning to quickly respond to changed market needs

Current situation

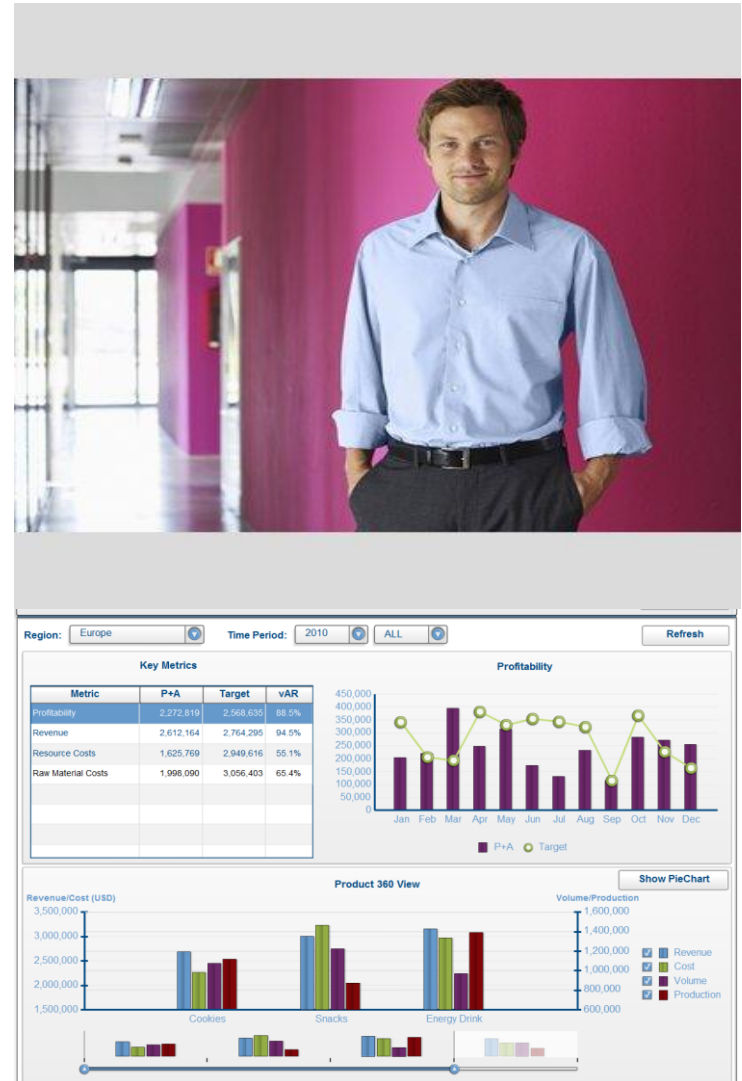
Increasing complexity in global supply chains, new competitors entering the market and erratic customer demand patterns raise the level of uncertainty and require ad hoc demand/supply balancing with simulation & optimization of possible response scenarios.

Value proposition

Ability to rapidly create what-if scenarios, analyze them in real-time against multiple criteria and revise them as needed during S&OP review meetings, thus accelerating the S&OP process

Result

Meet market needs in the most profitable way



Compliance Checks

Current situation

Companies in the chemicals industry have to comply with ever stricter statutory requirements and must, among other things, check that their products comply with legal requirements (REACH, RoHs, and so on) and with customer requirements.

It is not unusual for companies to market up to 100,000 products that consist of 10, 100, or even more substances.

Depending on the complexity of the products involved, companies may have to check millions of compliance rules that apply to substances, countries, end applications, customers, and so on.

Value proposition

Determine quickly regulatory requirements with improved transparency. Reduce cost and time through more accurate management of regulatory requirements.

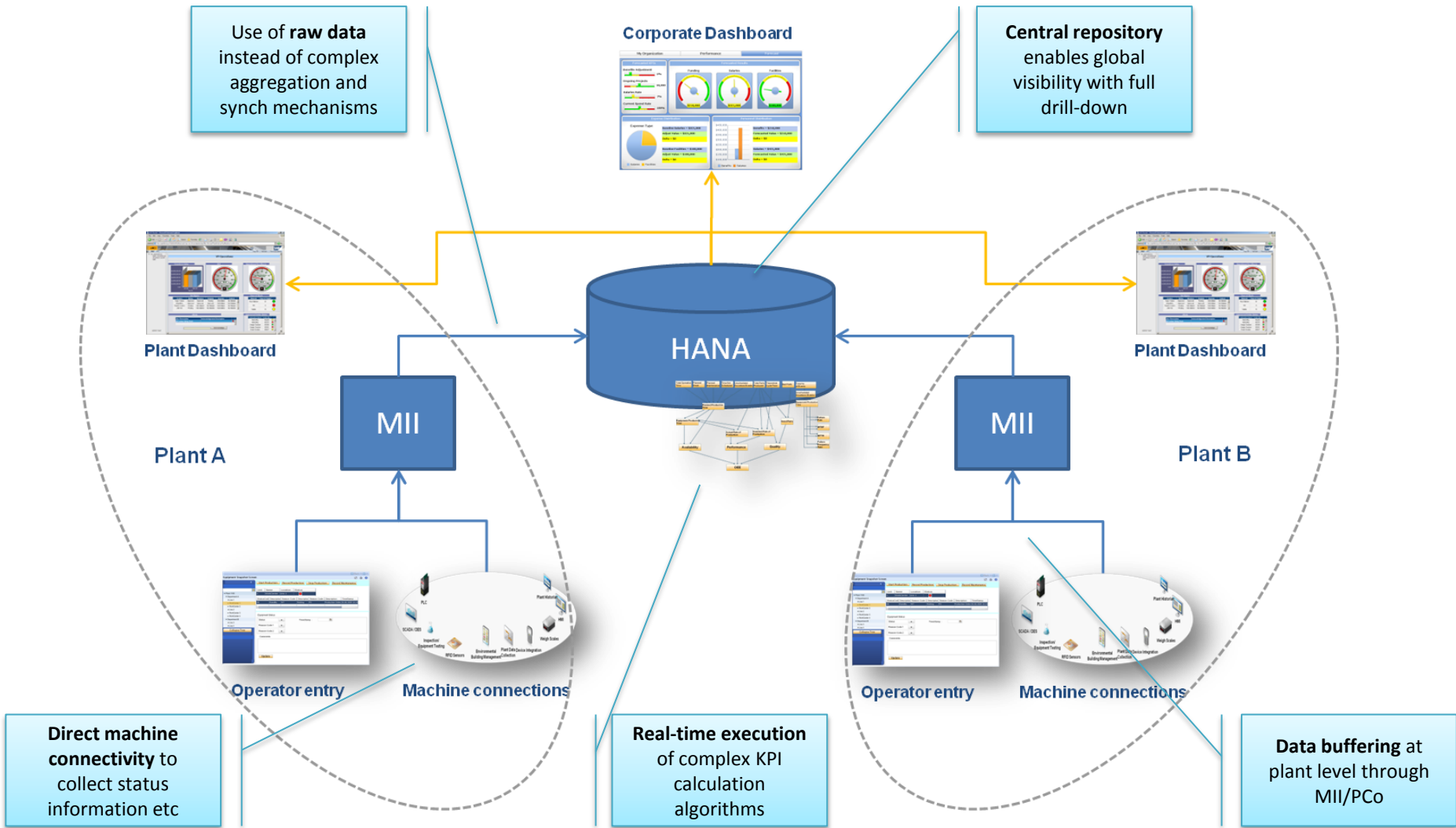
Result

Protecting revenue and brand value, reduce risk of supply chain disruption



Overall Equipment Effectiveness on HANA

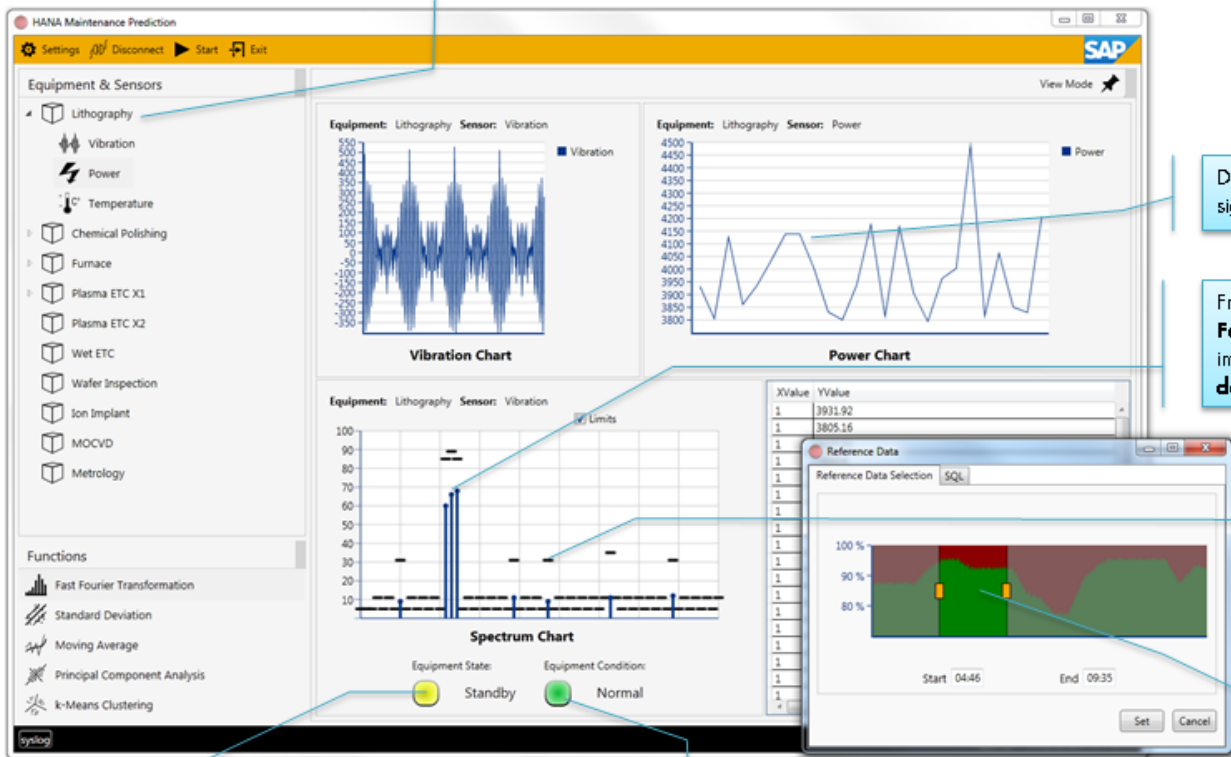
Planned Innovation



Example

Analysis Production Data

One out of 1000 tools that are used in a modern fab to produce semiconductors



Display of **realtime vibration** signal

Frequencies analyzed using a **Fast-Fourier-Transformation** implemented as a HANA database operator

Limits computed from the measurements of a production day with **high yield**

Historical yield data used to select optimal configuration

Current processing step the machine is in.

Realtime analysis of the tool condition, based on an analysis of the signals, allowing for triggering **maintenance jobs** or **tool shutdown**



Prevents decrease of yield

Simplify and speed-up your big Data Handling by HANA

For not disrupting business and for lowering IT cost

- Less bother** > Empowered employees use self-services
- No “shadow IT”** > Employees can define and publish their own reports, leaving IT to focus on their main tasks
- One real-time view** > Analytical and business process data combined
- Ready to deploy** > Start now by adding SAP HANA to your existing environment
- Simplify** > Consolidate equipment, backup, and maintenance
- Optimize** > Lower IT infrastructure and personnel costs by changing the way things are done

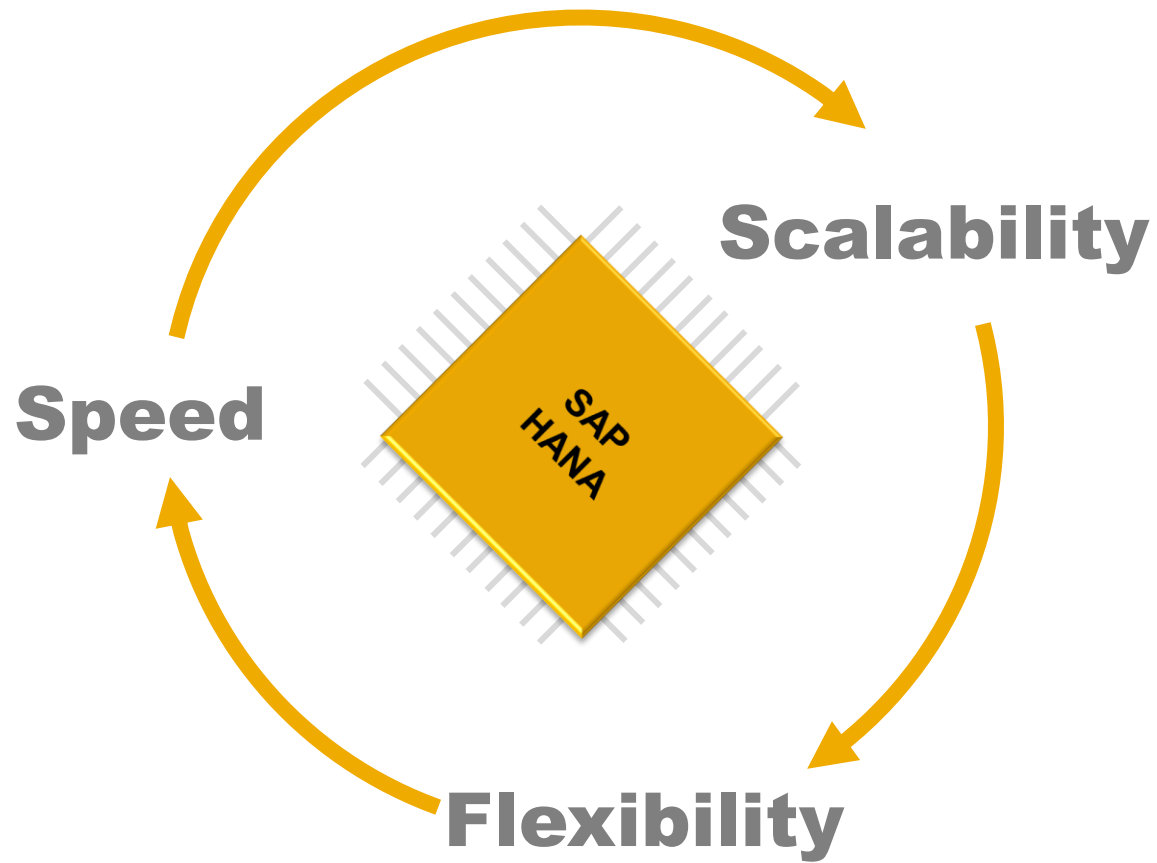
In-Memory Computing supported by SAP

Ground-Breaking Technology Specifically-Tuned for Chemical Companies



- **Only SAP** combines transactional and analytical applications enabled by in-memory computing
- **Only SAP** can conduct analysis, performance management, and operational execution in a single system with real-time links between insight, foresight, and action
- **Only SAP** can enhance existing investments with in-memory capabilities without disruptions or changes to IT roadmaps
- **Only SAP** collaborates with industry leading partners to deliver in-memory computing solutions tailored to your business

SAP HANA



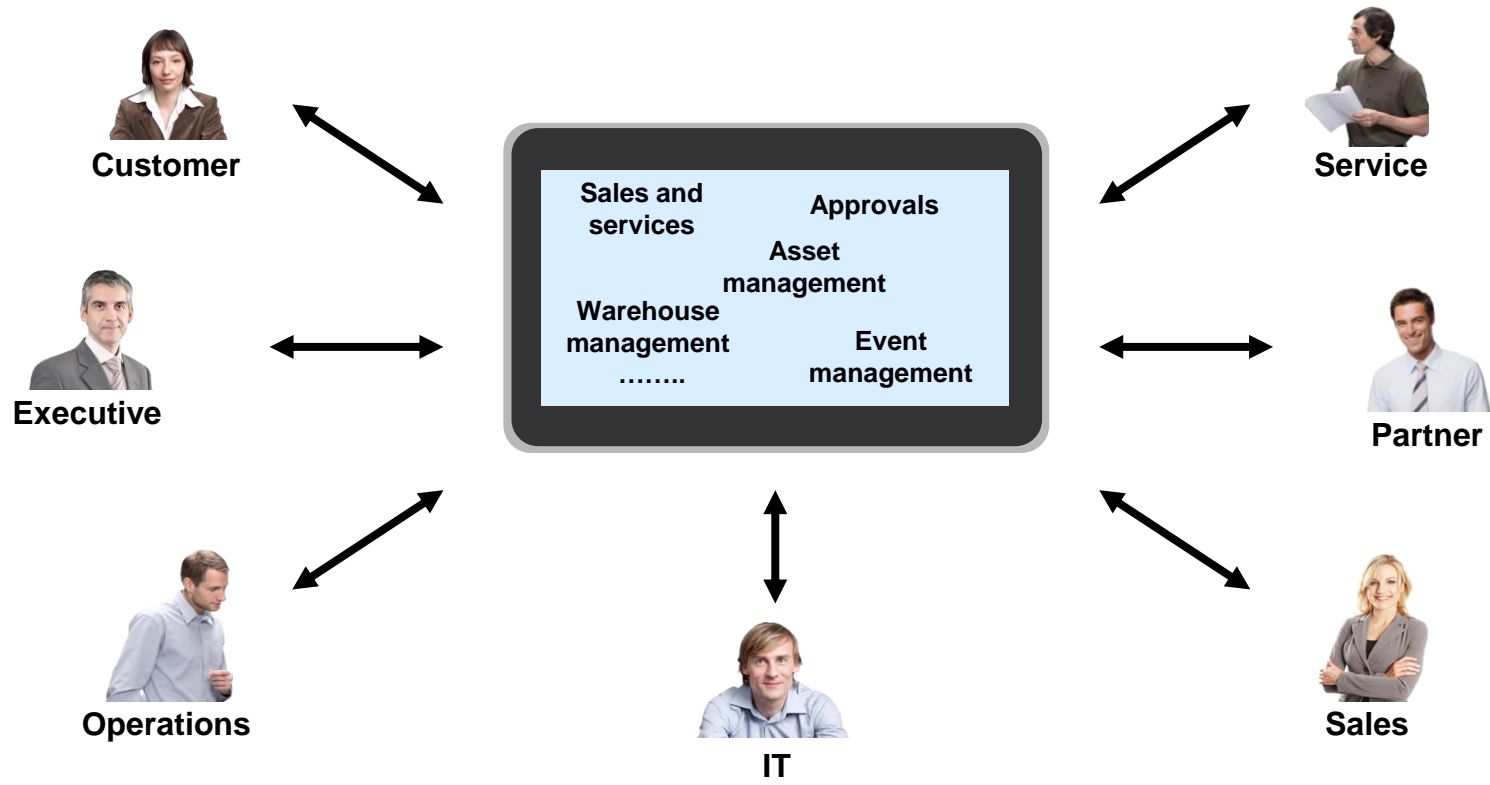


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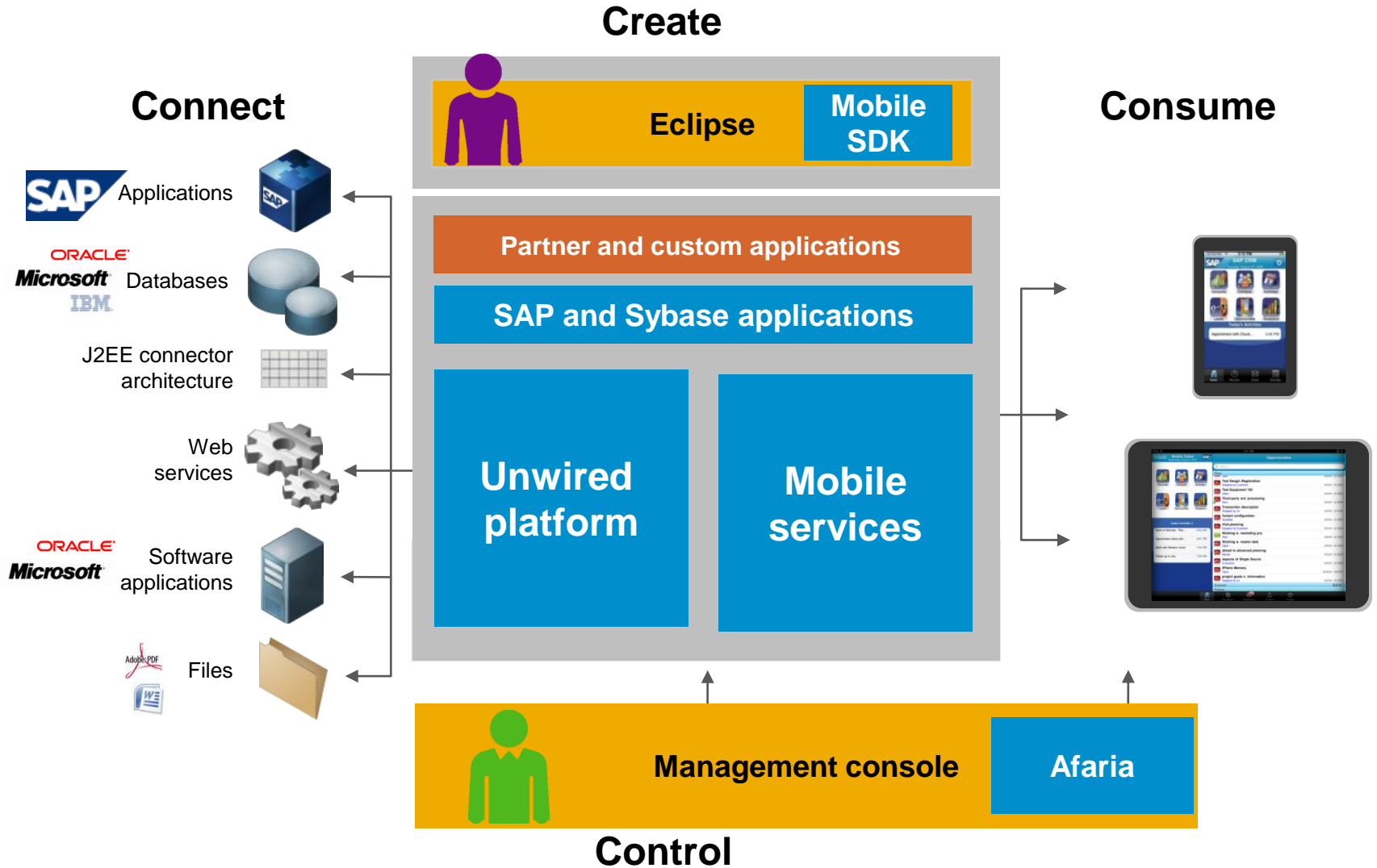
Mobility simplifies and accelerates Business Processes and Decision Making

Mobility enables you to **connect to enterprise data**
consume information
control your business anytime, anywhere

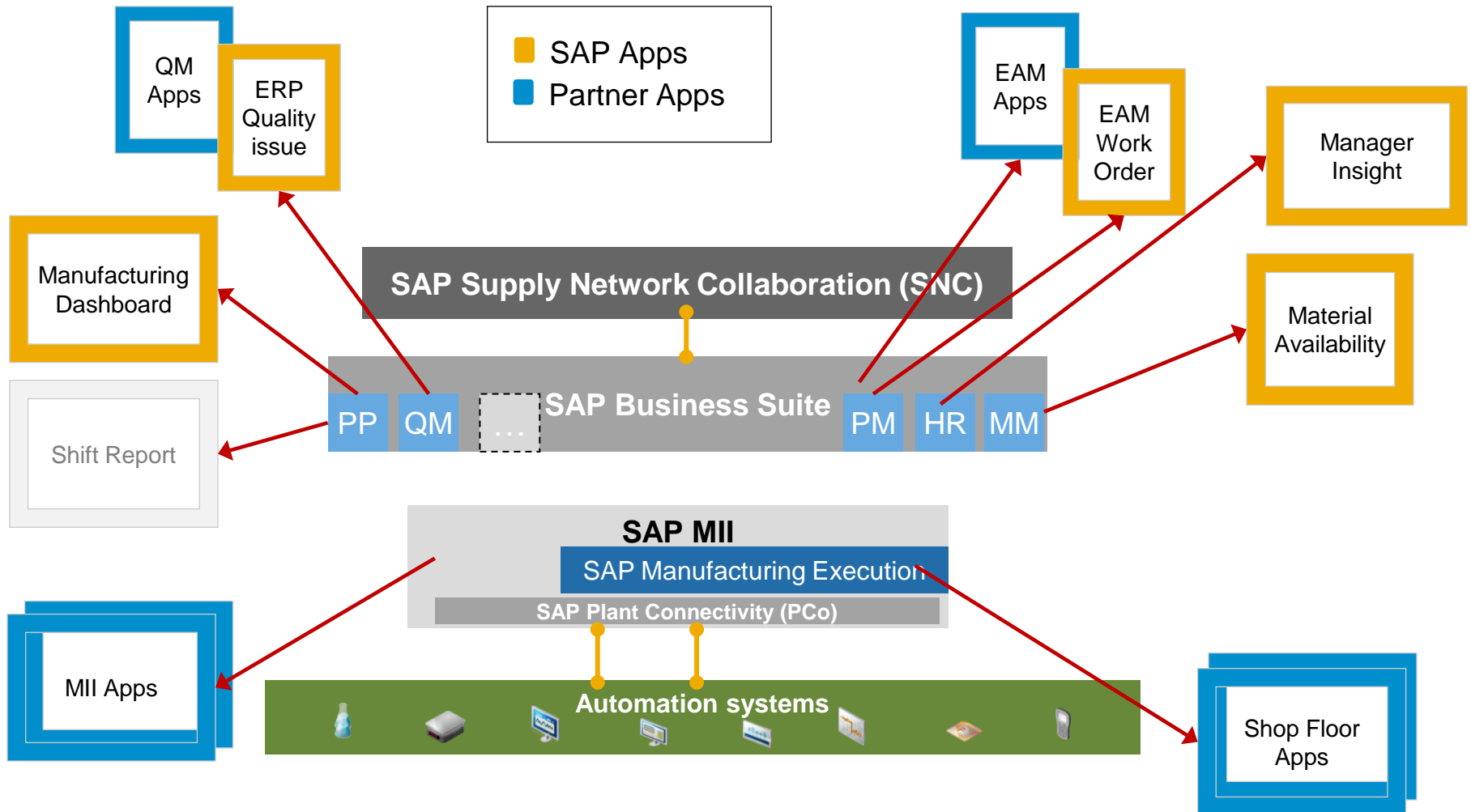


Simplify a complex Manufacturing IT Landscape

SAP mobility platform, services, and applications



Mobilizing SAP Manufacturing



How Mobility helps the Chemical Industry

Opportunities for your Business



Examples

Corporate Executives

Logistics

Warehouse Mgmt.

Sales

Asset Management

Available NOW

Executive Dashboards and KPI Reporting

Description

Executives and line of business managers need access to KPIs, such as revenue, profitability, days sales outstanding, capacity utilization, and so on – anytime, anywhere.

Current limitations

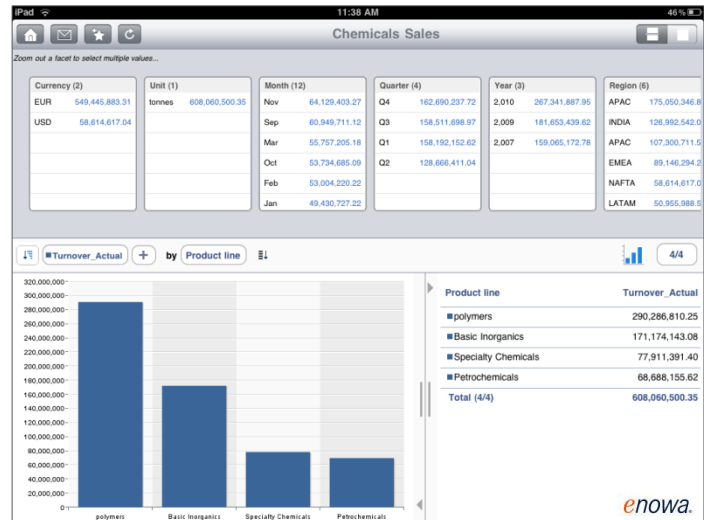
Chemical companies start to deploy point solutions to provide very limited data access. These solutions are not on common enterprise-wide mobility platforms. Also, security aspects could be a cause for concern.

Value proposition

Make decisions based on real-time data and analytics capabilities, anytime, anywhere. Get insight into your business. Get alerts early, and be able to analyze all dimensions of your business.

Outcome opportunity

Make more educated decisions. Have faster response times to all areas of the business: sales and marketing, R&D, procurement, manufacturing, and logistics.



Available NOW

Mobile Logistics – Tracking & Tracing

Description

Mobile logistics covers areas such as tracking and tracing of fleets or monitoring shipment conditions of sensitive materials, like temperature, humidity, or other parameters.

Current limitations

It is difficult to capture real-time data in transit, often based on manual processes. It is almost impossible to monitor in-transit shipment conditions without “intelligent” tags.

Value proposition

Visibility of in-transit shipments and quick response to unexpected events is crucial. Mobile applications help to determine substance conditions during transit, such as temperature, humidity, and others. Truck drivers can use smart phones for communication and data transfer; scanners provide real-time visibility and updates on shipment status and conditions.

Outcome opportunity

Increased visibility into truck and freight status and condition of goods improves logistics effectiveness.



Mobile Asset Management

Description

Mobile asset management applications involve the tracking and monitoring of business assets, with a particular emphasis on location, condition, and state. Plant equipment, storage tanks, containers, and vehicles are just a few of the business assets tracked and monitored to improve operational efficiencies and reduce operating costs.

Current limitations

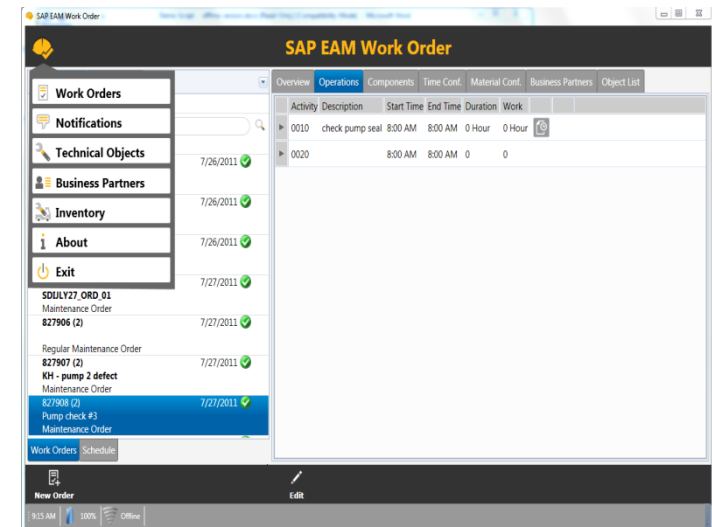
Most asset management processes today are paper based, with no immediate access to equipment or spare parts data, equipment history, and actual run time.

Value proposition

Help ensure asset availability and thus high-potential capacity utilization. Improve visibility of assets in the supply chain. Streamline processes that have to do with assets.

Outcome opportunity

Minimize manufacturing or supply chain interruptions due to asset malfunction or breakdowns. Improve asset tracking and inventory control across multiple facilities.



Mobile Warehouse Management

Description

Warehouse management processes are often a mix of automated and manual processes to store and manage inventory.

Current limitations

As a result of manual processes, labor and administrative costs are high, visibility to available inventory is limited, and easily locating product to quickly fulfill orders can be challenging.

Value proposition

Mobility in the warehouse eliminates the need for manual stock tracking. Mobile warehouse management improves stock rotation, eases order splitting, simplifies transfers, speeds order processing, enables swift picking and fulfillment, and optimizes replenishment ordering.

Outcome opportunity

Using mobility with a warehouse management system allows you to process orders faster and more accurately, resulting in lower processing costs and better up-to-date inventory visibility, to increase customer satisfaction.





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Top 10

Reasons why chemical Customers choose SAP

1

All Data

Manage massive data volume at high speeds

2

Any Source

Gain insights from structured and unstructured data

3

Real-Time

Enable real-time interactions across your value chain

4

Analysis

Unlock new insights with predictive, complex analysis

5

Applications

Run next-generation applications

6

Cloud

Step up to the world's most advanced cloud

7

Innovation

The ultimate platform for business innovation

8

Simplicity

Fewer layers, simpler landscape, lower cost

9

Value

Innovation without disruption adds value to legacy investments

10

Choice

Open choice at every layer to work with your preferred partners



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