From Insight to Action - Real-time Enterprise with SAP HANA

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Information is Exploding
In-memory computing technology impacts velocity, volume, and value

1,125x Faster reporting speed

Millions of Records on 140,000 materials calculated, planned and analysed in minutes

89% Overall Equipment Effectiveness

Global Steel & Mining Company

Global Natural Resources Company

Primary Metal & Mining
SAP HANA Innovation Overview

**HANA Accelerators**
- SAP Business Suite
- AnyDB
- Client

**HANA Analytics**
- (Content & Virtual Data Layer)
- SAP Business Suite / Non SAP
- HANA DB
- AnyDB
- Client

**BW on HANA**
- SAP Business Suite
- HANA DB
- AnyDB
- BW

**HANA Apps**
- (Next Generation & Strategic Investments)
- SAP Business Suite / Non SAP
- Apps
- HANA DB
- AnyDB

**Business Suite on HANA**
- SAP Business Suite
- ERP
- CRM
- SCM
- SRM
- PLM
- VDL
- BW
- Apps

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### Side-by-side scenarios

**In seconds:** Accelerating existing transactions of the Business Suite
- Ferrero S.p.A. – COPA RDS
- Colgate-Palmolive – COPA Custom Solution; TPM on HANA

**More Insight:** Exploring data loaded from Business Suite on any level of detail
- Adobe Systems Inc. – Ops. Reporting RDS
- Yoke Industrial – Ops. Reporting RDS

**Supercharged BW:** Fasten up your BW without disruption
- Lenovo – BW on HANA
- Hilti – BW on HANA

**Innovation:** Functional applications natively built on HANA, with an without Business Suite integration
- Bosch Siemens Hausgeräte GmbH – Cash Forecasting
- Centrica – Smart Meter Analytics

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### Integrated scenario

**All in One – Ultimate:** Business Suite solution fully integrated with and optimized for HANA as database
- Manufacturing Customer – Business Suite on HANA
- Primary Metals Customer – Business Suite on HANA

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Maximize return on assets and increase production volumes; increase revenue, improve margins and profitability
Manage the intersection of mine planning, asset lifecycle management and operational performance for each asset.
Initiate and manage capital and operational projects; align and measure against business objectives.

Optimize constrained supply chain assets; increase volume shipped
Provide instant insight into and simulation of supply chain availability and capacity based on planned and actual mine and mill production.

Improve asset availability and decrease labor and component costs; maximize return on assets
Increased detail for production and operational data enabling advanced condition monitoring and predictive maintenance resulting in optimised maintenance spend.
SAP CO-PA Accelerator
Line of Business: Finance

Capabilities
Real-time access to massive amounts of profitability data
Unlimited multi-dimensional analysis of CO-PA data
Accelerated cost allocation process
Flexible and unconstrained profitability reporting through CO-PA and SAP BusinessObjects BI tools
Rapid, non-disruptive deployment

Key Benefits
Speed of profitability reporting helps accelerate financial performance and efficiency
Powerful insights unlock opportunities to maximize profitability
Empowered users with access to trusted data to optimize profitable business decisions
Instant time-to-value with low cost of ownership

Provides real-time, flexible insights into customer & product profitability
Executive overview

BUSINESS TRANSFORMATION

The company’s top objectives:
- Leverage recent investment in global rollout of SAP® software by enabling the business with real-time analytics
- Accelerate responsiveness across all business functions
- Increase system performance

The resolution:
- Implement the SAP HANA® platform in conjunction with controlling and profitability analysis (CO-PA) and operational reporting in a nondisruptive manner
- Use a rapid-deployment solution to deliver within 3 weeks
- Leverage Capgemini for implementation and Every Angle for operational expertise

The key benefits:
- Incremental cost savings and operational excellence
- Reduced cycle time for repetitive financial processes
- Empowerment of the business with insight through interactive analytics

TOP BENEFITS

€.5
Million working capital reduction within a week

15,000x
Faster analysis and insight

40%
Shorter monthly close anticipated

“3-3-3 for SAP HANA: in 3 days, we successfully completed a proof of concept using our own CO-PA data; in 3 weeks, we were live and running; and within 3 seconds, we now run any CO-PA analysis.”

Regier Jacobs, CIO, Provimi Holding
Profitability Analysis for Mines with SAP HANA

**Description**
Drill-down analysis of Mine and Mill profitability combining reserve, asset, logistics, production and operations data with financial data.

**Current situation**
Due to the large amount of data from different systems it is difficult to align required grades, capacity and mine and mill plans and actuals with customer demands to optimize profitability.

**Value proposition**
Finally able to use the complete data sets from reserves, mine planning, production, quality and asset management to gain a deep understanding of the cause of production and operational issues and align with customer demands.

**Result**
Deliver increased volumes to meet customer expectations and reduce issues cause by not meeting volume or quality specifications.

*Note: All timing estimates are for anticipated general product release dates and are not indicative of the products being HA NA ready*
SAP HANA at Essar Group

Company or Organization
Essar Group

Headquarters or Location
Global; Mumbai, India

Industry
Conglomerate: Primary Steel, Oil & Gas, Construction

Products and Services
Primary Steel, Construction

Employees
> 75,000

Revenue or Budget
> €12 Billion (USD 17B)

Web Site
http://www.essar.com

Implementation Partner
SAP

Essar Group
Primary steel company with operations in oil & gas exploration, power, mobile networks and construction.

Essar Projects – a Project Variance Report
Essar Projects is a global engineering, procurement and construction (EPC) company that offers strong capabilities in engineering, sourcing, construction, fabrications and project management to both the Essar Group and the outside world.

The company’s business issue
As all of their projects are Capex oriented (material, infrastructure), they need to be monitored closely and constantly to maximize the margins for the individual projects. Ideally, they wanted real-time visibility into project financials and the planned vs. actual values of a contract/project. Essar had originally developed a custom report in their current landscape for doing project valuations that computes the margin, cost, revenue comparison of the original contract against the anticipated planned and actual values for a project. This report currently takes a 15 hr run and the IT team took 5 months to develop the system.

The Resolution
Transition the reporting platform to SAP HANA Platform.

The result
The entire process scenario was done in HANA within 1 week and the report takes 48 seconds to run.

ERP reporting
Takes 15 hour to run the custom report

HANA reporting
Response time 48 seconds

“Apart from 40/15 hours to 48 seconds which is awesome, another major take away is the BO Explorer. Here there was a great flexibility to drill down to the individual data elements from the explorer at near real time, which was not feasible in the conventional BO dashboards. I am pretty impressed with the work your team did in crunching the 6 months effort to 8 days in rebuilding the query in HANA and reducing the 40/15 hours to 48 seconds by HANA”

CIO, CM Ram, Essar Group
Overall Equipment Effectiveness
Overview

Description
OEE is a Plant Performance Management Solution with:
- Universally accepted set of metrics in mining and processing.
- Clear focus to the key success drivers for mining enterprises (Quality, Availability and Performance)
- Analytical capabilities to analyze the root causes for performance losses

Benefit
- Reduced mining and processing cost through waste reduction
- Maximized return on capital investment by improving asset utilization
- Increased volume shipped and customer satisfaction by constant monitoring on Speed of Production and Quality
- Continuous improvement of mining and milling performance
SAP BW powered by SAP HANA

SAP’s strategic Enterprise Data Warehouse solution using SAP HANA as the underlying in-memory database including complete DBMS capabilities

- SAP HANA In-Memory platform replacing the traditional relational database system for SAP BW
- SAP HANA-optimized DataStore Objects
- SAP HANA-optimized InfoCubes
- In-Memory planning engine powering planing and simulations
- Consumption of HANA artifacts created via HANA studio
- BW staging from HANA
SAP HANA at Surgutneftegas

Company or Organization
Surgutneftegas

Headquarters or Location
Russia

Industry
Oil and Gas

Products and Services
Oil products

Employees
> 100,000

Revenue or Budget
US$ 19 Billion

Web Site

Implementation Partner
SAP

The company's business issue
- Stock analysis and stock forecasting for entire range of materials (~ 140,000)
- Ensure in-time delivery of needed material and avoid out-of stock situations
- Determine value of stock
- Existing solution with long processing time (>12 hours)

The resolution
- Stock analysis and forecasting based on HANA

The result
- Significant reduction of reporting time (several seconds for single material, couple of minutes for the entire stock overview and forecasting)

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"We use about 140,000 different materials, which creates several million records per year which have to be analyzed to determine which materials should go to which locations. With SAP in-memory computing technology we can manage the provisioning and delivery of material and technical resources. I am convinced that this technology has a great future."

Rinat Gimranov, CIO; Surgutneftegas

**BW reporting**
- Load 10 hours
- Calculation 2 hours
- Refresh 10-20 seconds

**HANA reporting**
- Adhoc query for a single material < 5 seconds
- Calculation for 5 months < 20 minutes
Real-time Condition-based Maintenance with SAP HANA

Description
Large amounts of sensor data analyzed in real-time to monitor equipment health and predict issues before they turn into real problems

Current situation
Fixed and mobile equipment maintained on a periodic schedule regardless of actual equipment condition

Value proposition
Capture continuously streaming sensor data to predict failures, declining quality and optimizing utilization

Result
Reduced downtime, higher quality output, higher yield with less maintenance expenditures

Available with:
SAP HANA 1.0 SP3
Predictive Maintenance on SAP HANA

Typical Business Challenges

- Current maintenance strategies that are based on time based replacements or repair are highly inefficient
- Condition based maintenance strategies can offer an efficient alternative that can have large impact on availability of assets,
- Efficient condition based maintenance needs careful trend analysis so that inspection frequencies are optimum and assets have lowest risk

SAP In-Memory Computing

Needs

- Normal inspections and condition records have large volume of interdependent data points with complex relation between them. Recording them and analyzing them in real time brings significant impact on assets performance.
- Normal preventive maintenance also have impact on trend s in recorded conditions. Analyzing such interdependencies can be challenging but can give more accurate estimates of time between potential failure and actual failure.
- Such analysis needs multiple attributes of asset and corresponding interrelations. Such evaluation needs in memory based real time evaluation.

Expected benefits

- Reduced time based maintenance
- Reduced planned down time
- Improved asset utilization
- Reduced unplanned breakdown or failures

SAP In-Memory Computing - potential business impact

- Processing of large volumes of structured as well as unstructured information and prepare predictive strategies to manage assets
- Provide open interface to external statistical model that can provide risk based optimization for asset management strategies
Description:
A cloud-based business network solution for monitoring and predicting supplier performance and minimizing supply chain disruptions

Capabilities
Proactive notifications of deterioration in supplier performance and significant news events pertinent to your supply base
Performance benchmarks comparing supplier KPIs to performance of others in the network
Multi-tiered network visibility – Leverage business social networking tools to gain visibility into risk embedded in supply base
Predictive analysis to identify potential future supplier issues leveraging enterprise performance data and 3rd party content (e.g. supplier risk rating)

Key Benefits
• Proactively monitor and mitigate supplier risk
• Minimize supply chain disruptions
• Achieve best-in-class supply base
• Secure extended supply chain
Customer-Specific Solutions Powered by SAP HANA
In-Memory Computing with SAP Custom Development

Our Offerings
Development of customer-specific solutions
- Based on SAP HANA
- Integrated into your process landscape
- For transactions, analytics, prediction, optimization

Accelerate existing applications
Extend HANA-based solutions

Our Experience
Global network of experienced developers.
Combining SAP HANA expertise with deep application & industry knowledge.

Your Advantage

Business Success
Combining the speed of SAP HANA with your unique processes to build differentiating solutions that help you to stay ahead of the competition

Fast Time to Value
Delivering your solutions fast with SAP developers who know SAP and latest technologies best

Protect Investment
Ensuring your solution runs smoothly over time by offering maintenance, aligning with SAP future product and technology roadmap, and leveraging SAP development methodologies
SAP Business Suite powered by SAP HANA

SAP HANA is used as database and foundation of SAP Business Suite and applications

- **Insight like never before** – explore all data inside the business suite instantly and at any level and make operational reporting a business self service

- **Agility like never before** – streamline processes by turning batch in online and changing the way processes run in todays suite

- **Innovation like never before** – leverage the HANA platform to drive side-by-side innovations to the suite, sharing data and platform

- The story will start with ERP on HANA for some selected pilot customers end of 2012
Top ten reasons why customers choose SAP HANA
Bringing your company to the next level

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
Thank You!

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