Agenda

Why HANA enables Innovation

Some examples (videos)

Business case discussion
Innovation through Data Exploitation
A Business Imperative…..

“Big Data isn’t just one more technology initiative. In fact, Big Data isn’t a technology initiative at all; it’s a business program that requires technical savvy”

“The (effective) use of big data will become a key basis of competition and growth for individual firms.”

Innovation means delivering solutions that take a business to the next level of success
AUTOMOTIVE

Manage safety and operational efficiency of large fleets in real-time.

Enabled processing and analysis of data from 600 fleets with 1000 assets (trucks and trailers) each, providing Pirelli with real-time data updates every 1-2 minutes for 16 hours per day, 6 days a week.
PUBLIC SECTOR

Identify traffic hazards across the city in real-time and plan road repairs

City of Boston uses a mobile app and HANA platform to crowd source road information and identify potholes and road hazards in the city streets
Smart Meter Analytics to better manage energy production and distribution in real-time

When manual forecasting of 3.15 Billion records every year could no longer cope, SAP HANA Innovation Award Finalist, Alliander, used SAP HANA to improve forecasting of peak energy usage in real-time and provide customers with greater insight into their energy consumption, helping them reduce their energy usage/spending.
Spirit Aerosystems set out to become more lean on a total cost perspective. HANA helped them achieve this with 25% reduction in production flow times, 30% reduction in inventory levels, and 40% reduction in overtime expenses.
Innovation and Differentiation

Real-Time Fraud Reduction (Bosch Siemens)

>50% Faster foreign currency revaluation (Zurich Ins)

30% reduction in assembly inventory levels (Spirit Aero)

25% improvement in production flow (Spirit Aero)

Reduced maintenance costs by approximately 1% to 2% (Alliander)

Reduce Shipping time from 2 days to 1.25 days (McKesson)

Extra Day of Testing Capacity (AMG)

Reducing return rates. 1% yields a seven-digit euro savings. (HSE24)
Innovation and Differentiation

Bookings, Billings and Backlog Analytics – LSI, Cisco, Altera, Jabil Circuits

Transaction Anomaly Detection – Bosch-Siemens

Supply Chain forecast based on Yield – Altera, Intel

Shop floor cycle time optimization and OEE – Spirit Aerosystems, Airbus

Fuel Optimization, Asset Optimization, Route Optimization – ARI, Aurizon, Linfox

Load Forecasting – Centerpoint Energy, Alliander, Sempra, Southern California Edison

Call Center Optimization – Centerpoint Energy, Alliander

Retail Analytics & Slow moving item identification – Palacio Di Hierro, Liverpool, Macy’s

Loyalty Analytics – Yodabashi, Burberry, Loblaws, Palacio Di Hierro

Revenue/Margin Assurance - Vodafone

Churn Analysis (Golden path) – America Movil, Vodafone

Total Margin Management – Conagra, Colgate

Trade Promotion Effectiveness – Kraft, Mondelez, SAB Miller

Asset utilization optimization – Surftengas, Qatar Gas, ARAMCO

Simplified Predictive Maintenance – Philips 66
Innovation and Differentiation

Predictive Maintenance & Service

Selected Co-Innovation Projects
The problem with current IT Landscape
Silos, delay and complexity hinders business agility and innovation

Application silos
Multiple data copies
Batch processing

Partial business view
No real-time insights
Limited ability to innovate
The solution: Make all data readily available to all applications
Reduce data movement and data latency – improve business agility & innovation

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Unified application workloads
Unified data – single copy
Real-time processes

Complete business view
Ability to react in real-time
Ability to innovate
The solution is only possible with in-memory data management

Only data in-memory enables all applications to become real-time

No waiting for data access and processing

All application logic (OLTP & OLAP) processed in one system

All data types processed in one system

Speed
Simplicity
Innovation
A radically new approach is required to unlock potential

40% executives worry that their organizations will not keep pace with technology change and lose their competitive edge.

McKinsey study, 2013
# SAP HANA Platform – Integration Services

Data from any source for a complete view of the business

## Application Services

## Database Services

## Integration Services

### Smart Data Access
- IBM DB2, Netezza, Oracle, MS SQL Server, Teradata, SAP HANA, SAP ASE, SAP IQ, HIVE

### Smart Data Integration
- IBM DB2, Oracle, MS SQL Server, Twitter, HIVE, OData, Custom Adapters

### Smart Data Streaming (CEP)

### Hadoop Integration

- Federation
- Loading
- Streaming

- Access information stored in data silos while keeping the data in place
- Replicate and move any type of data in real-time to the cloud and on-premise when necessary
- Capture and analysis live data streams and route to appropriate storage or dashboard
- Multiple access points from HANA to Hadoop data: thru Spark, Hive, HDFS and Map Reduce functions
SAP HANA data management and application platform transforms businesses

“Think about a problem you can’t solve— a 10 or 50 million dollar problem... and you apply HANA. That’s the real return.”

James Cocca, CIO, Spirit AeroSystems

“I can run my business differently. I can optimize for revenue; for fill rate; run different scenarios and [find] opportunities we didn’t have before.”

Jody Giles, CIO, Under Armour

“We aren’t spending 4 weeks to add and test new BI requirements – it’s done in 20 minutes.”

Pawel Mierski, Molson Coors
Innovation Award Candidates 2015

Willem Eelman
CIO, Unilever
Under Armour

increase in fill rates through order allocation and rescheduling
Kaeser Kompressoren

Connected Assets for New Service Offerings
Centerpoint Energy

marketing intelligence, customer interactions, and load forecasting.
Mercedes AMG

Extra Testing Capacity
Pirelli optimize the running of fleet vehicles.
Hamburg Port Authority

smartPORT logistics for Faster goods turnover
Where are the drivers for a business case for HANA?

### Architecture Simplification
- **10%**
  - Servers (including move from AIX to Linux, HANA vs. Oracle, BWA)
- **30%**
  - Storage reduction
  - Software (DB, BI, Analytics, Operational Reporting)
  - Other Data centre costs (network, energy, floor spaces etc.)
  - Data centre administration

### People Productivity
- **30%**
  - BI Operations costs
  - BI Project Costs
  - Application Operations
  - Application Project
  - Shadow IT
  - Reconciliation efforts

### Business Benefits
- **60%**
  - Business people productivity
  - Cost savings (reduced inventory)
  - Additional revenue (increased up-sell, reduced churn)

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Project Efficiency ~60% reduction

Current Mode of Operation (CMO)

Traditional RDBMS

- 6 Weeks Define
- 4 weeks Develop 2 days data
- 3 weeks Test
- 3-4 weeks Rework
- 2 weeks Tune
- 2 weeks Backload
- 4 weeks Volume Test
- 2 weeks Report
- 2 weeks Implement

~7 month project

Future Mode of Operation (FMO)

SAP HANA (column-store in-memory DB)

- 4 weeks Define
- 4 weeks Develop/Test/Rework unlimited data!
- 1 day Tune
- 1-3 days Backload
- 2 weeks Report D'ment & Volume Test
- 1-2 weeks Implement

~3 months project

• Replicate rather than ETL
• Avoid physical model (4-6 layers/ & transformations)
• Single Modelling Tool (Power Designer)

• Less Development
• Activate replication rather than ETL
• No physical layers
• Less Testing
• Replication easier to test
• Fewer transformations
• Faster, iterative test/fix/test
• Model-driven development

• No index (re)-build
• No need to change physical data model (e.g. aggregations)
• No embedded calculation
• Only need to set parameters

• Virtual Model
• Replication or ETL can go 50X faster (e.g. BW PoC)

• Higher self-service/analysis means less reports to build
• No need to renew sematic layer

• Virtual Model
• Easily transported
• Faster reload (no intermediate physical layers, in-memory)

"We took an analytic that took us 6 months to develop and we redeployed it on HANA in two weeks. Results come back so quickly now, we don't have time to get coffee." Justin Replogle, Director – IT, Honeywell
The Opportunity to Simplify and Improve Productivity - at reduced cost (TCO)

1. Less servers and storage
2. Less layers of software
3. Simpler Administration
4. Lower BI run cost
5. Faster time to deliver BI projects
6. Reduced ‘Shadow IT’ costs

The HANA architecture lends itself well to an initial TCO impact analysis. Based on preliminary analysis with customers, we established that the overall TCO impact of the roadmap will be beneficial to operating costs. (i.e. excluding the substantial business benefits from in-memory technology).
Identified use-cases were qualified/prioritized and phased for implementation

**Feasibility**

(Implementation complexity (Ex. RDS, Easy Modeling), Defined and available Data sources, Technical & Business Dependencies)

**Value**

(e.g. Cost Savings, Strategic Benefits, Key Differentiator, Compliance, TCO Impact)

**High**

5

III

**Low**

2

2

HANA Applicability

**Low**

3

3

4

4

5

Short - to Mid-term (2013-'14)

Mid- to Long-term (2014-'15)

Long-term (2016+)

**Feasibility**

Support sales strategy

Enable Pricing Decisions, Cost Roll-ups, Margin Analysis

Track customer Service level

SKU Level sales analysis

Accelerated “zsalesrep” (billing info)

Productivity Improvements by various use-cases (credit limit, factory loss, ad-hoc reports ..)

Real-Time Plan vs. Actual

Alerts and Impact Analysis in Procurement

Analyze Tinting Machine Data

SKU Level sales analysis

Track customer Service level

Support sales strategy

Enable Pricing Decisions, Cost Roll-ups, Margin Analysis

Alerts and Impact Analysis in Procurement

Analyze Tinting Machine Data
Realize Business Innovation Idea(s)

- Re-think existing problems to unlock spaces to realize the business innovation
- Visualize the impact of disruptive technology related to your business
SAP HANA changes the game

ONE platform
ONE copy of the data
LESS integration
MORE innovation

SAP HANA combines key technologies to enable business innovation
Thank you

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