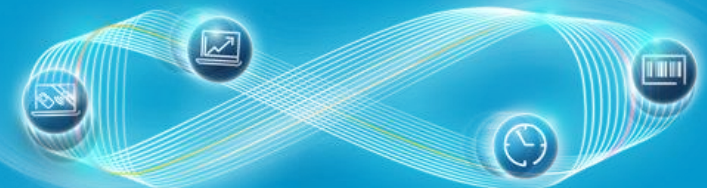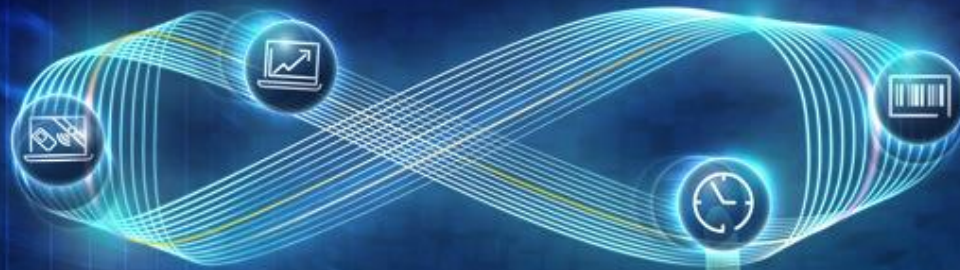# SAP HANA & Digital Transformation
Luis Angel Campero
June 2016

AGENDA

- SAP HANA Overview

- SAP HANA implementation options

- SAP Suite on HANA (SOH)

- SAP HANA and BI

- SAP HANA and Big Data

- SAP HANA Apps

- SAP HANA Infrastructure options

- Capgemini capabilities on SAP HANA

- Digital Transformation

SAP HANA Overview

The Ask

	Cost Effective Management for Large Data Volumes
	Immediate Answer to Any Questions
	Current and Complete Information

4

The Answer - SAP HANA

Ground breaking in-memory Solution

Up to 3600x time Faster Analysis

Real time Access to complete Data

Proof Point

Experience the real-time Enterprise in action

A live analysis by a consumer products company reveals how SAP HANA analyzes current point-of-sale data in real time—empowering this organization to review segmentation, merchandising, inventory management, and forecasting information at the speed of thought.
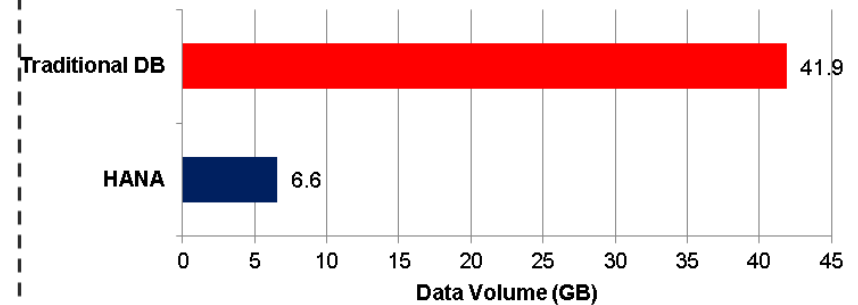
70 retailers

460 billion records

50 terabytes of data

0.04 seconds analysis response time

on any device, anywhere, anytime

Data Compression with HANA

	Data Volume (GB)
Traditional DB	41.9
HANA	6.6

Query Run-Time Comparison

	Traditional DB	HANA
Query 3	2660	5.1
Query 2	1320	5.1
Query 1	1050	3.2

Query Run-Time (seconds)

■ Traditional DB ■ HANA
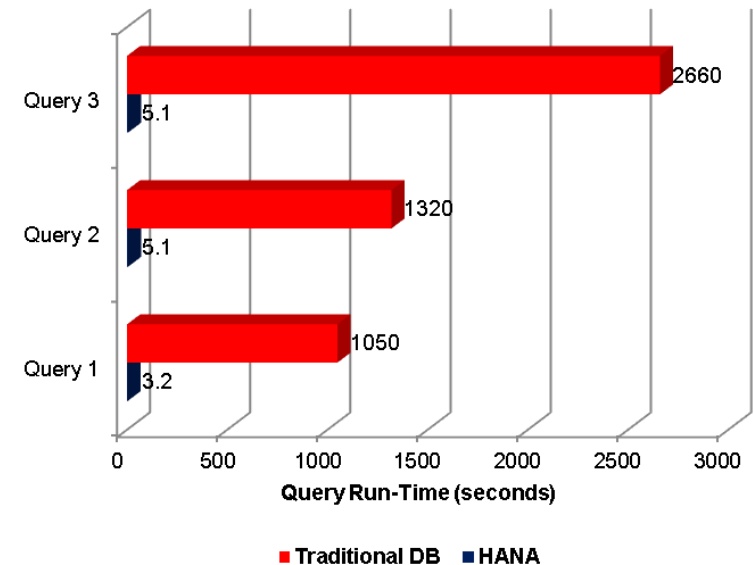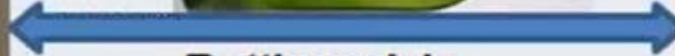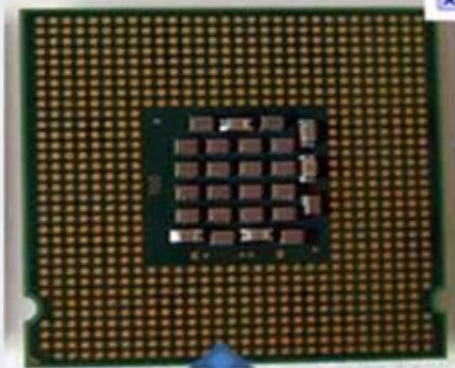
The Bottle Neck

TRADITIONAL COMPUTING

Processor / CPU

Bottleneck in
Data Transfer
Mechnical Heads Consume
Lot of Time in I/O
O/S Paging File Adds to the Overhead

Extremely Fast Communication and Data Transfer
Data Transfer in nano Seconds

Challenges
RAM is expensive
RAM has limited capacity
Data in RAM is volatile

What is In-Memory Computing

RAM is the New Disk

Some Statistics on Memory

Cost of 1 MB of RAM

Year	Price
1970	> $250
2001	< $.01

Access and Read Times for Disk and Main Memory

Action	Time
Main Memory Access	100 ns
Read 1 MB from Memory	250,000 ns
Disk Seek	5,000,000 ns
Read 1 MB from Disk	30,000,000 ns

SAP HANA offers improvements at strategic, operational and IT architecture level

Real-time integration between process and analysis

↓

New business opportunities for our customers

Better performance for transactions

↓

High business impact because HANA affects daily corporate processes

Real-time analytics on transactional data

↓

No data has to be transported between systems anymore

Simplified technical landscape and lower TCO

↓

Operational reports do not require additional BW; Reduction of data volumes
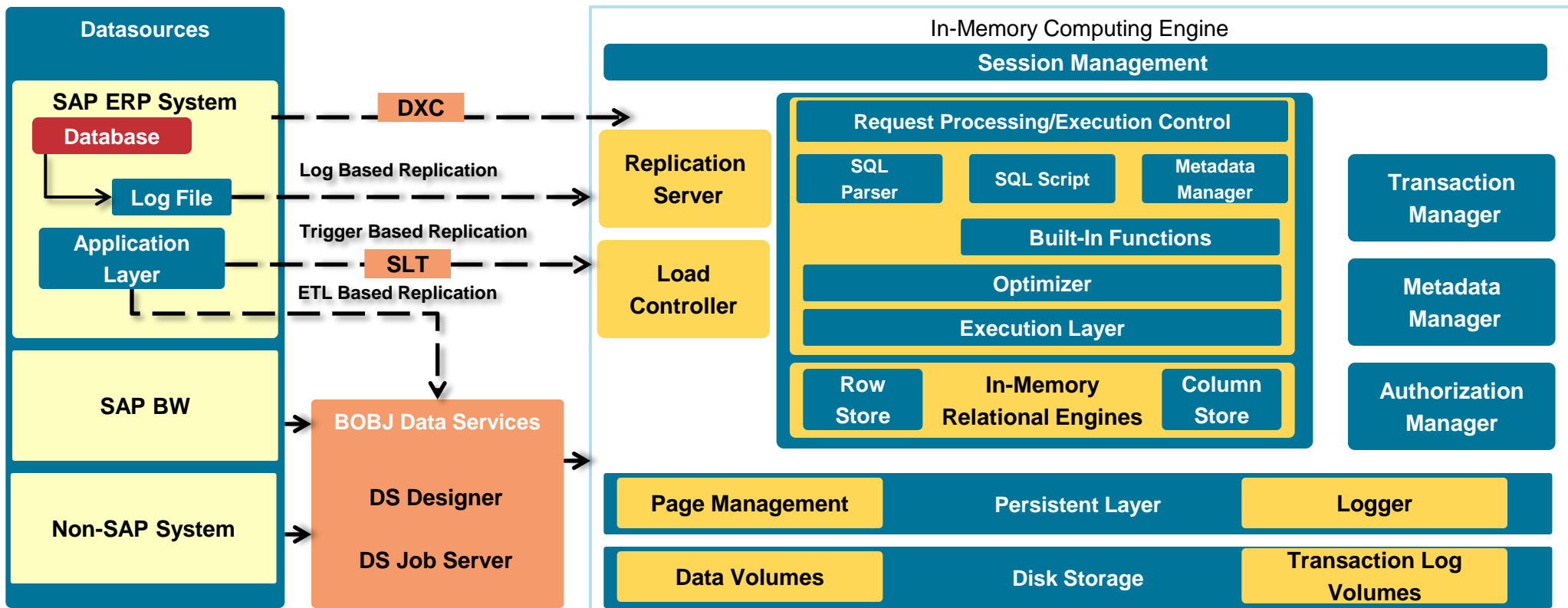
SAP HANA Architecture

In-Memory HANA Studio

Administration	Modeling

Clients

MS Excel		BI 4 Explorer
Dashboard Designer	BI 4 Universes	BI 4 Analysis

Datasources

SAP ERP System
- Database
- Log File
- Application Layer

SAP BW

Non-SAP System

- - - DXC - - - →
Log Based Replication
Trigger Based Replication
- - - SLT - - - →
ETL Based Replication

BOBJ Data Services

DS Designer

DS Job Server

In-Memory Computing Engine

Session Management

Replication Server

Load Controller

Request Processing/Execution Control

SQL Parser	SQL Script	Metadata Manager

Built-In Functions

Optimizer

Execution Layer

Row Store	In-Memory Relational Engines	Column Store

Transaction Manager

Metadata Manager

Authorization Manager

| Page Management	Persistent Layer	Logger
Data Volumes	Disk Storage	Transaction Log Volumes

Modeling with HANA

SAP HANA Information Composer

- This is a non-technical, URL based, multi-language environment for business users to rapidly create new SAP HANA based analytical models blending the user's private data with enterprise data.

SAP HANA Studio

- The SAP HANA Studio is delivered in the SAP HANA Appliance and provides an environment for **administration , modeling and data provisioning.**
- SAP HANA studio is a **Java based application** that runs on the Eclipse platform
- When you start the SAP HANA studio for the first time, you can decide on several perspectives.
- Perspectives are predefined UI-layouts or views for several application uses.
- The Modeler Perspective is used by Data Architects to create Reporting Models.
- The Administration Console is used by SAP HANA administrators to administrate and monitor the engine. The Modeler view is used by BI
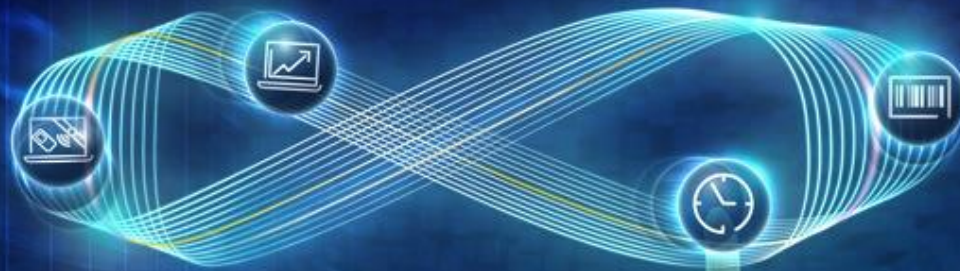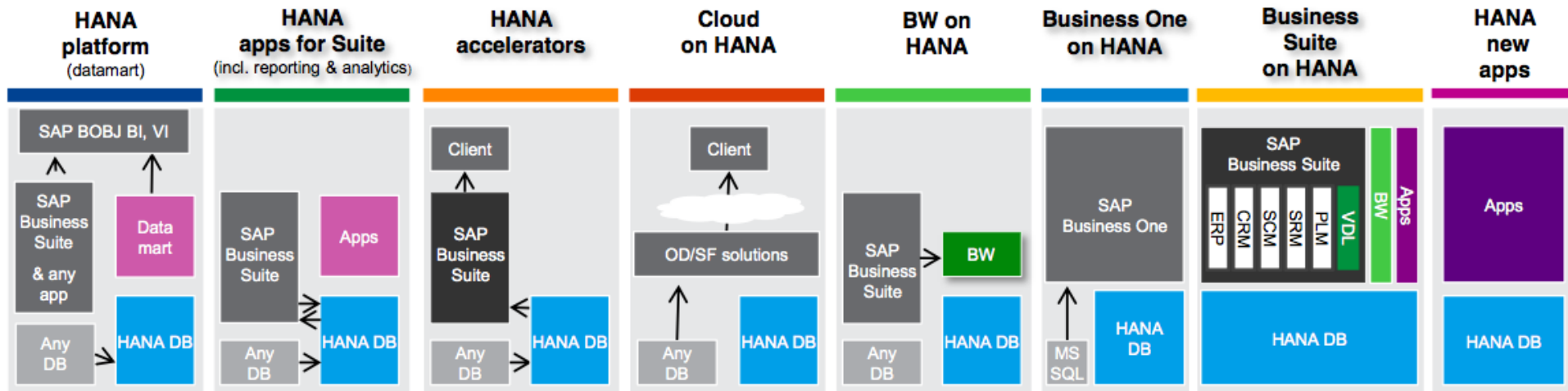
HANA Studio
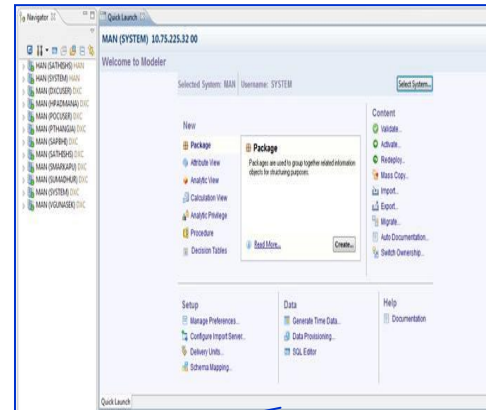
Information Composer

SAP HANA

SAP HANA Implementations options

SAP HANA can be implemented in different flavors

Architectural illustrations

HANA platform (datamart)	HANA apps for Suite (incl. reporting & analytics)	HANA accelerators	Cloud on HANA	BW on HANA	Business One on HANA	Business Suite on HANA	HANA new apps

Side-by-side scenarios ( ) Integrated scenarios | New frontiers

HANA RDS

HANA offerings

|							
• SAP HANA DB • Custom datamart/any app • BOBJ BI • Visual Intelligence • Text & predictive analysis	• Sales analysis for retail • Liquidity risk management • ERP operational reporting • Social sentiment intelligence • Sales pipeline analysis	• CRM customer segmentation • COPA • Finance & controlling	• Business Intelligence on demand • Sales & operations planning • Supplier InfoNet • Developer Access via Amazon Web Services (AWS)	• BW powered by HANA • Business planning & consolidation on HANA	• Business One on HANA • SAP Business One Analytics on HANA • HANA new analytics	• Business Suite on HANA • HANA new analytics	• Smart meter analytics • Precision retailing • Cash forecasting • Standalone app from partners

And much more from SAP, ISVs and start-ups

SAP HANA
In-memory data management strategy

"Analytics"	"Transactions"	"Custom applications"	"Deployment choices"
In-memory analytics	**One store**	**The app platform**	**Flexibility**

Capabilities

• SAP HANA real-time operational analytics • Complete BI Suite with BI 4 runs on SAP HANA • **SAP BW powered by SAP HANA** • SAP industry & line of business apps & accelerators • Third-party BI/ETL certification program and openness	• SAP HANA persistence layer for OLAP and OLTP • **SAP Business Suite optimized for in-memory data management** • SAP HANA primary persistence layer for SAP Business Suite	• Broad investments in in-memory platform for applications and solutions • Extended application services • Developer services and tools • Openness	• Various deployment options (on-premise, public cloud, managed cloud, hosted) • **Develop, test, and deploy in any environment or in a hybrid model** • Fully capable and ready to use software and environments • License, cost, scalability, and support options

Benefits

|			
• Flexible real time analysis of operations on detail level • Primary persistence and optimized for SAP BW	• Landscape simplification • Performance enhancements • Business process innovation	• Lower total cost of ownership and development • Reduced time-to-value • Quicker RTO	• Flexible and tailored options • Reduced cost and barrier to entry • Instant availability • Quicker adoption

SAP Suite on HANA (SOH)
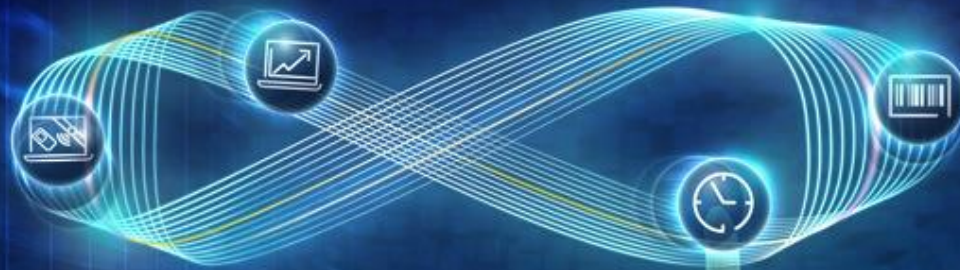
SAP Business Suite on HANA

SAP HANA replaces the database of the application server

Business Suite on HANA (SoH) is installed on top of ERP 6.0 EP6

For maximum performance calculation intensive processes should be ported to HANA

HANA has a native analytical engine
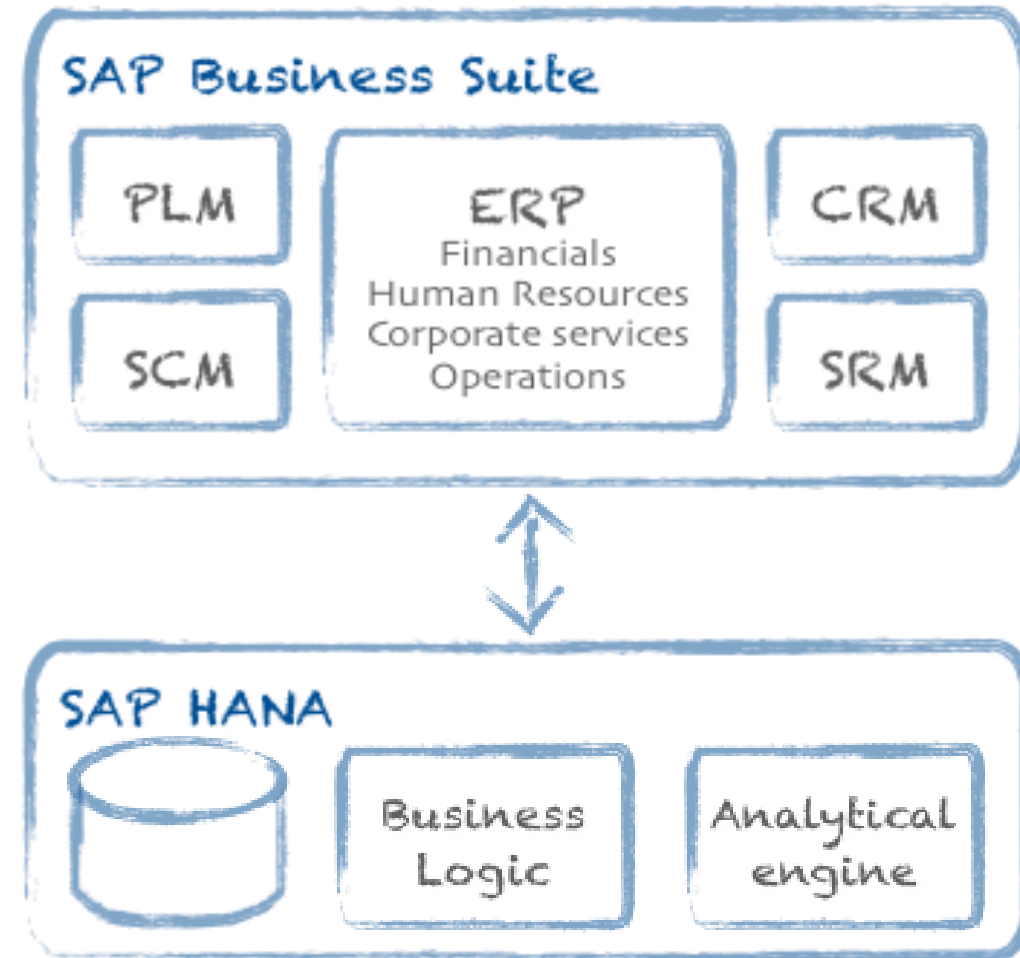
Existing solutions for Suite on HANA

SAP Business Suite powered by SAP HANA
Industry and add-on availability

Industries

- Oil and gas
- Professional services
- Transportation and logistics
- Higher education and research
- Public sector
- Wholesale and distribution
- Life sciences

- Utilities
- Telecommunications
- Engineering, construction, and operations
- Banking
- Insurance

- Media
- Defense and security
- Retail
- Healthcare

Add-Ons

- SAP Portfolio and Project Management application
- SAP Access Control application
- SAP Process Control application
- SAP Risk Management application
- SAP Global Trade Services application
- SAP Electronic Invoicing for Brazil (SAP Nota Fiscal Eletronica) application
- SAP ERP Human Capital Management localizations
- SAP Invoice Management application by OpenText
- SAP Financial Closing cockpit
- SAP Commercial Project Management application
- SAP Retail Promotions application
- SAP Supplier Relationship Management application

- SAP Web Channel Experience Management application
- SAP Transportation Management application
- SAP Global Batch Traceability application
- SAP Dealer Business Management application
- SAP Overall Equipment Effectiveness Management application

Capgemini's SAP-Certified Solutions:

Powered by SAP

- All built on industry leading practices and business processes
- All contain Capgemini industry improvements that are tested, reviewed and certified by SAP
- All include industry reference models, solution templates, layouts, reports, test scenarios and scripts
- All are designed to bring rapid results and ROI
- All are highly scalable and will grow with the customer

CPGPath
for CP Food, Beverage, Durable Goods & Cosmetics Companies

DistributionPath
for Wholesale Distribution Companies

EnergyPath[SM]
for Energy, Oil & Gas and Energy Services Companies

READYUpstream
for Upstream Oil & Gas, Independent Exploration and Production Companies

LifeSciencesPath
for Pharma, Life Sciences and Med Device Companies

RetailPath
for Retail Companies

MFGPath
for Discrete, Repetitive, MTO Manufacturing and Mill Products Companies

AutoPath
for Automotive Suppliers and Aftermarket

UtilityPath
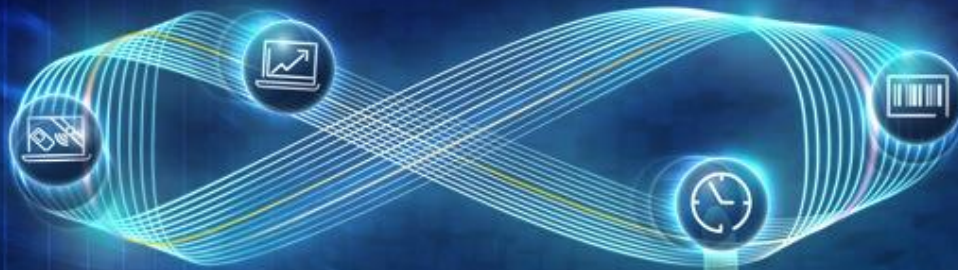for Utility and Energy Services Companies (Certification in-process)

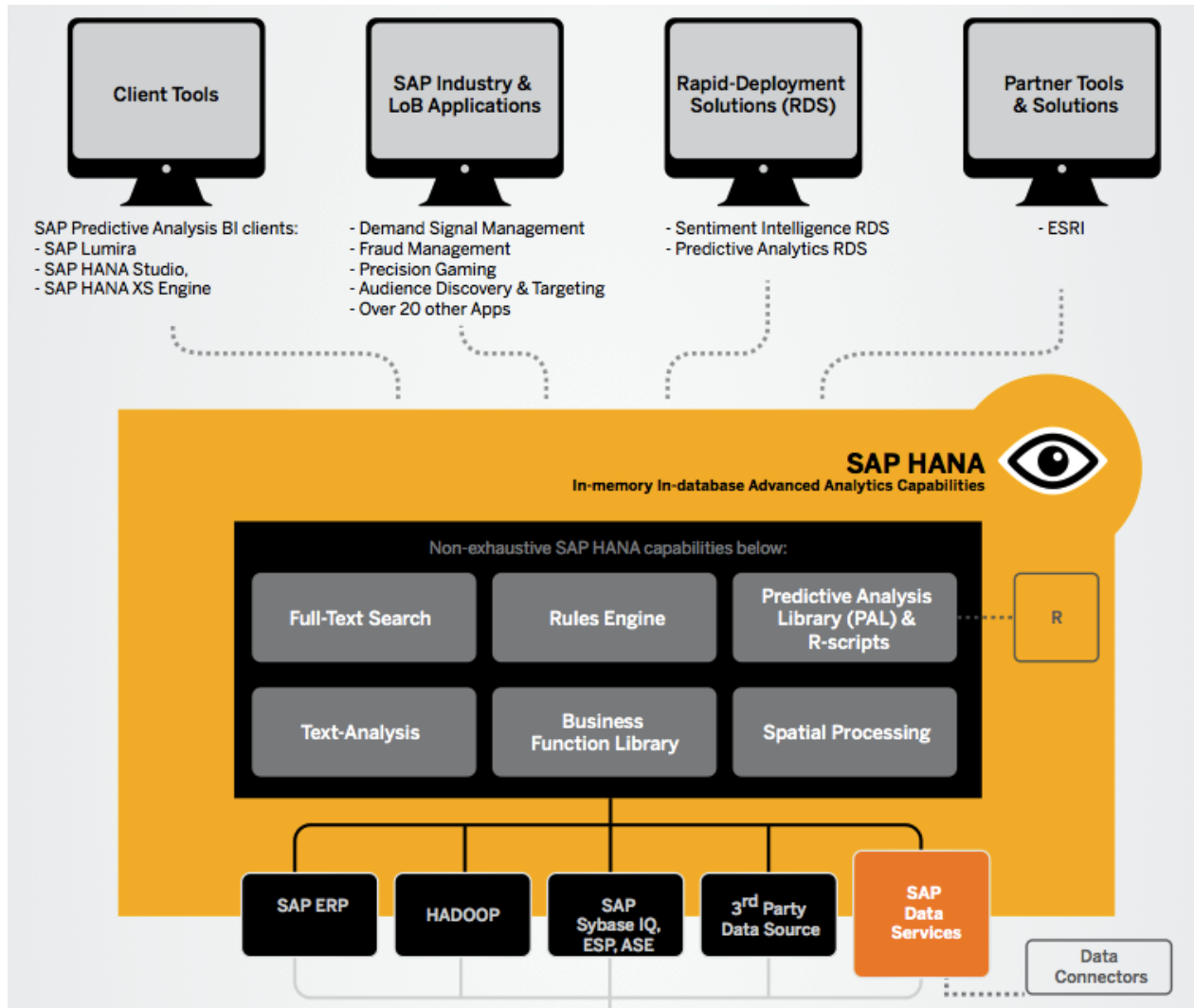**HCM EDGE**
HR Line of Business Solution for all Companies

CRM EDGE
CRM Solution for all Companies

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SAP Global Partner

SAP HANA and BI

SAP HANA as a Fast Analytics Database

- SAP HANA can be used as a Business Intelligence Database (even as a Data Warehouse) to provide any kind of BI needs.

- The **SAP BusinessObjects** Business Intelligence (BI) suite gives all users the power to engage with data in SAP HANA on any device in real time.

- **SAP Lumira** delivers agile visualizations for business analysts to uncover more insight from their data – big and small – in SAP HANA and contribute new information.

- **SAP Predictive Analysis** leverages the predictive algorithm library in SAP HANA in order to enable business users to apply advanced analytics to more information and processes across the enterprise.

Client Tools

SAP Predictive Analysis BI clients:
- SAP Lumira
- SAP HANA Studio,
- SAP HANA XS Engine

SAP Industry & LoB Applications

- Demand Signal Management
- Fraud Management
- Precision Gaming
- Audience Discovery & Targeting
- Over 20 other Apps

Rapid-Deployment Solutions (RDS)

- Sentiment Intelligence RDS
- Predictive Analytics RDS

Partner Tools & Solutions

- ESRI

SAP HANA
In-memory In-database Advanced Analytics Capabilities

Non-exhaustive SAP HANA capabilities below:

| Full-Text Search | Rules Engine | Predictive Analysis Library (PAL) & R-scripts |
| Text-Analysis | Business Function Library | Spatial Processing |

R

SAP ERP | HADOOP | SAP Sybase IQ, ESP, ASE | 3rd Party Data Source | SAP Data Services

Data Connectors

SAP HANA as a database for BW

Traditional Stack

SAP NetWeaver BW
- Process Orchestration
- Data Modeling
- Planning
- OLAP
- Data Management

RDBMS

BWA

Data Schema & Data

HANA Stack

SAP BW on HANA
- Process Orchestration
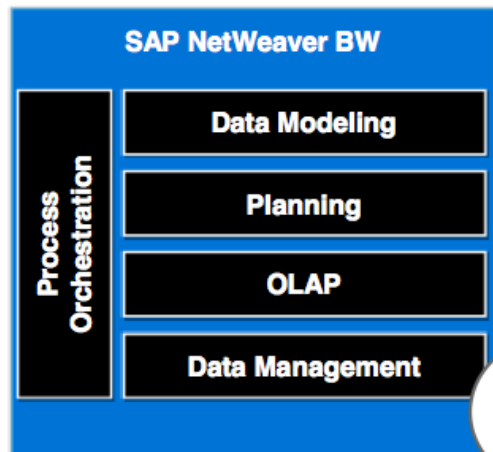- Data Modeling
- Planning
- OLAP
- Data Management

Push Down

Customer value of SAP BW powered by SAP HANA

- Excellent query performance for improved decision making
- Performance boost for Data Load processes for decreased data latency
- Accelerated In-Memory planning capabilities for faster planning scenarios
- Flexible combine EDW with HANA-native data for real-time insights and decision making
- Data persistency layers are cut off and reduced administration efforts
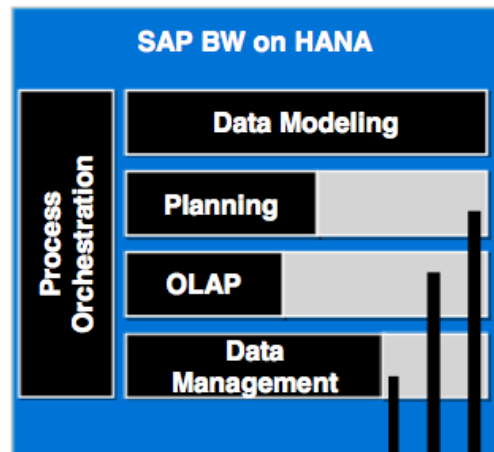- Simplified data modeling and remodeling

Data intensive functions are pushed down from BW to HANA

HANA as the Primary Database for BW and Foundation for new Applications
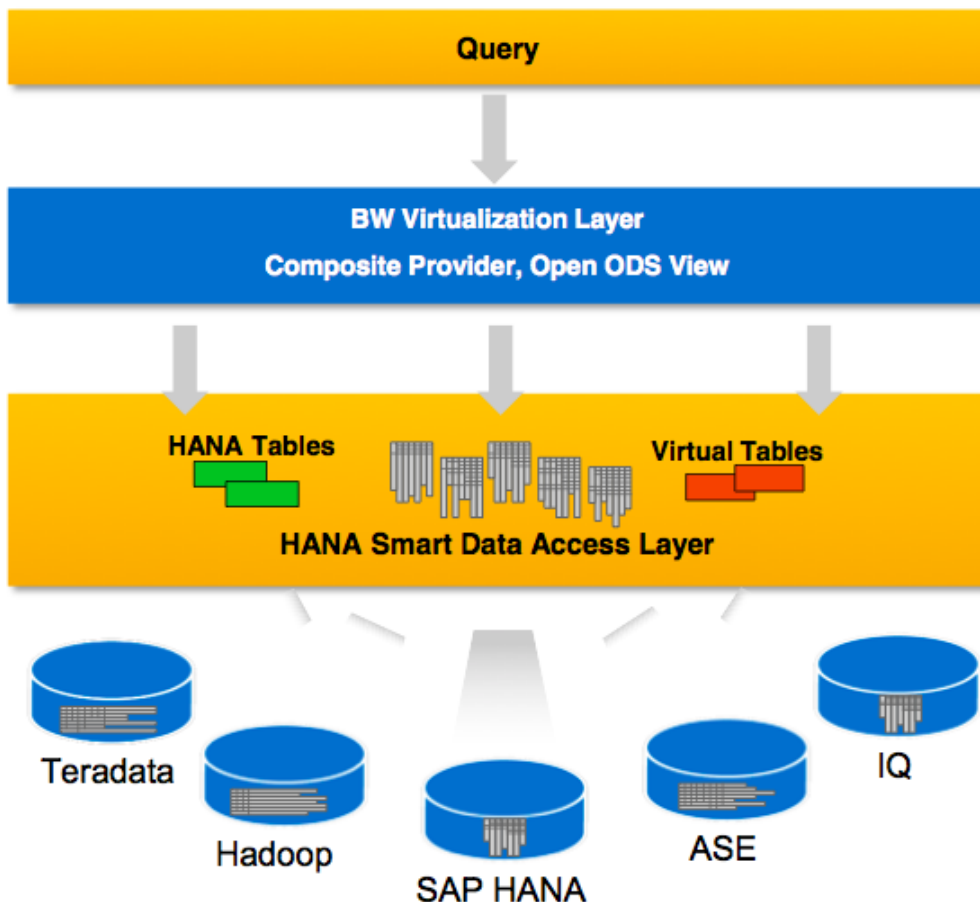
Smart Data Access also for BW

Diagram

Query

↓

BW Virtualization Layer
Composite Provider, Open ODS View

↓ ↓ ↓

HANA Smart Data Access Layer
- HANA Tables
- Virtual Tables

HANA Smart Data Access Layer

Data sources:
- Teradata
- Hadoop
- SAP HANA
- ASE
- IQ

Enhanced Business Flexibility by providing "the logical EDW"

Data Federation in diverse EDW landscapes

- Smart data access – read access to relational and non-relational sources via ODBC
- Enables access to remote data access just like "local" table
- Supports data location agnostic development
- No special syntax to access heterogeneous data sources
- BW based Analytic Services on external data

Scenario

- Make other DWHs transparent to HANA
- Non-disruptive evolution from virtual table to persistent structure by establishing ETL without major effort
- Consolidating / rationalizing the DWH landscape
- Consumption of HANA datamart scenarios from second HANA database

Data Provisioning in SAP HANA

SAP LT Replication for SAP HANA
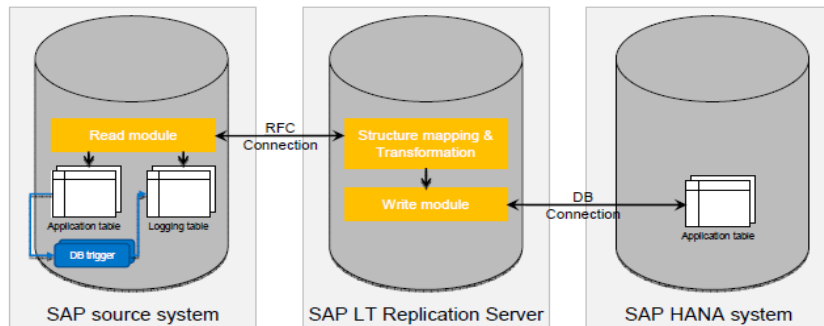
- Allows real-time (and scheduled) data replication from SAP and NON-SAP sources, replicating relevant data into HANA

- Efficient initialization of data replication based on DB trigger and delta logging concept (as with Near Zero downtime approach)

- Flexible and reliable replication process, including data migration (as used for TDMS and SAP LT)

- Simple and Fast set up

- Unlimited" release coverage (SAP R/3 4.6C onwards) sourcing data from SAP ERP (and other ABAP based SAP applications)

SAP BODS
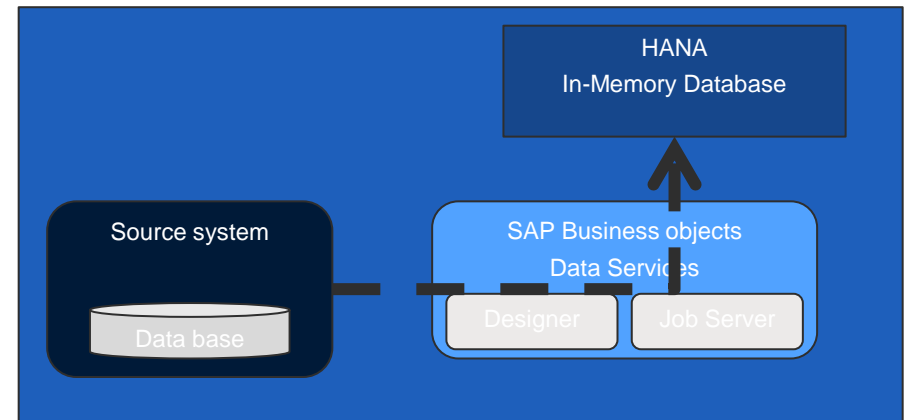
- SAP Data Services is the first and only, all-in-one solution for data integration (ETL), data quality management, information stewardship (data profiling and metadata management), and text analytics
- With Data Services, you have a one-stop shop solution for 5 core critical information management capabilities
  - ETL
  - Data Quality
  - Profiling
  - Metadata Management
  - Text Analytics
- Unlock insights from **structured and unstructured** sources including text data sources using text analytics

SAP HANA as a "sidecar"

- In order to speed up ERP processes with SAP HANA on SAP ECC, using HANA as ERP database is not the only solution, Sidecar is another way to do it.

- SLT or Sybase Replication Server is used to replicate in real-time some data from the ERP database to a dedicated HANA database.

- Some processes (most of the time batches or reporting) are then executed on HANA, but are still launched from the ERP as it was done before, without any impact for users.

- COPA for HANA is the first example of a treatment moved from Application Server and standard Database to a HANA database with COPA data replicated in real time.

SAP Application Server
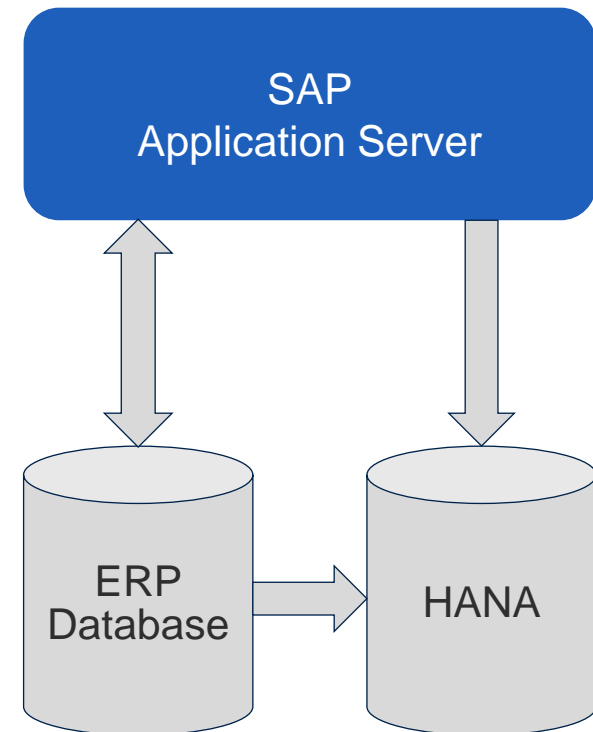
ERP Database

HANA

SAP HANA Live Value Proposition

Description :

- Provides virtual data models (database views) in SAP HANA for easy analysis and consumption of Business Suite data

- Creates a foundation for a new class of Analytical Applications

Features :

- Standard content providing Calculation Views in SAP HANA built over hundreds of SAP tables

- Aware of business logic and customizing dependencies

- Powered by SAP HANA Analytics Foundation

- Modern HTML5 and/or mobile user interfaces

- Virtual Data Model (VDM) consists of Private Views, Reuse Views
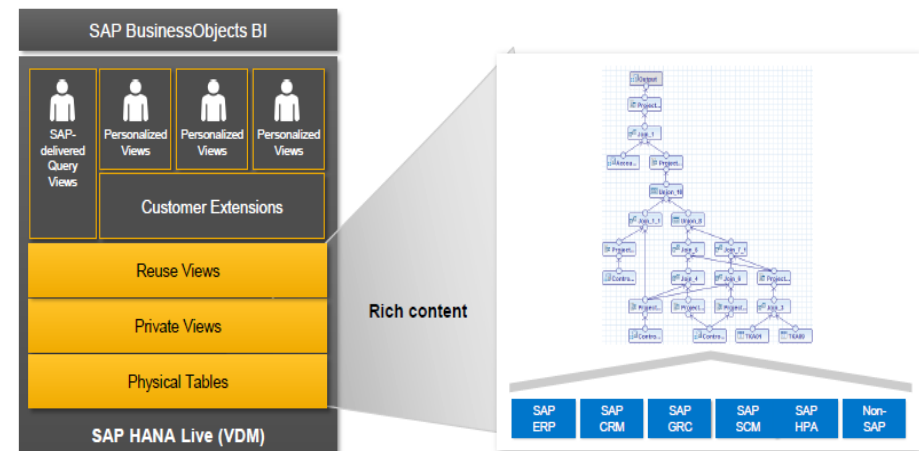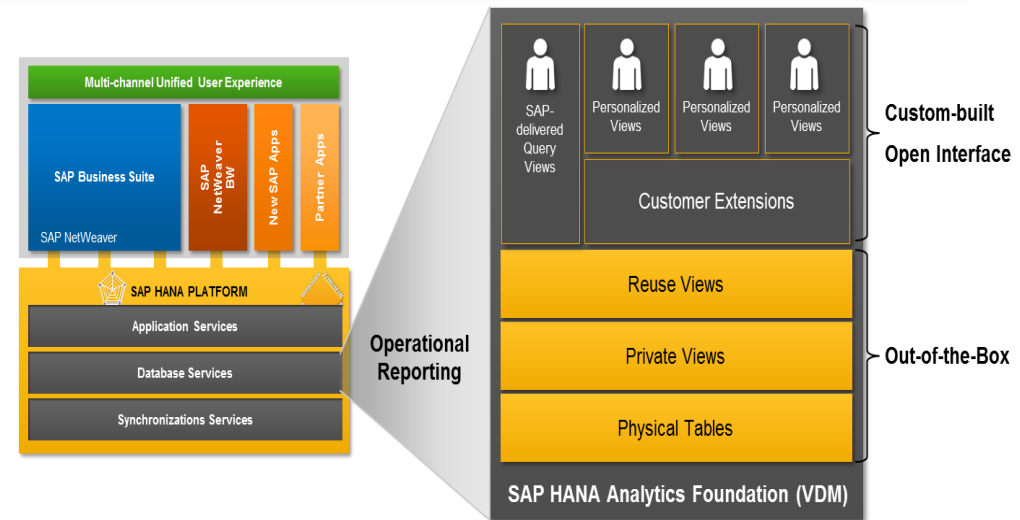
- **Atomic data set for detailed drill-down information**
- **Operational data available instantaneously**
- **Pre-defined models across entire suite**
- **Delivered via RDS**

SAP HANA Live deployment options

Customers can add new analytics capabilities immediately without disruption to their existing landscape. Any investment today will be valid for SAP Business Suite powered by SAP HANA

Side-by-Side Approach

Integrated Approach
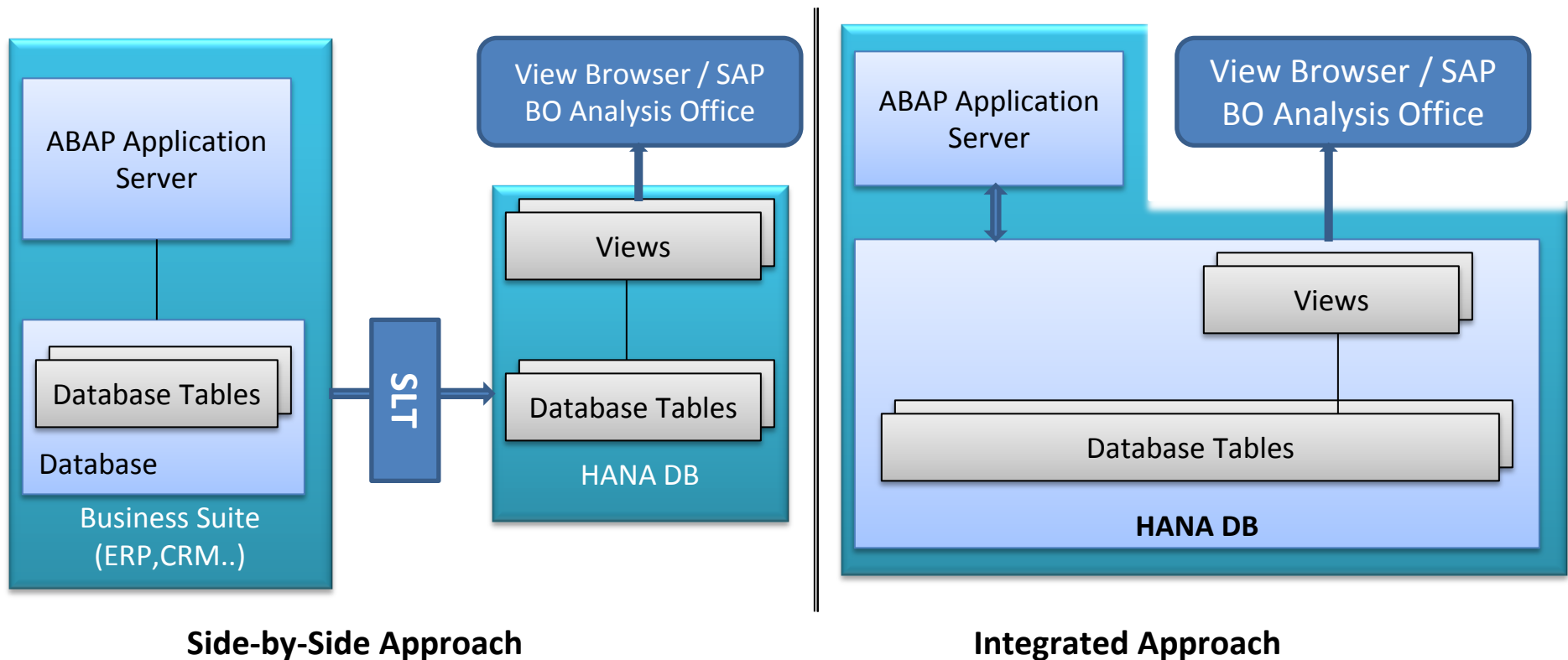
SAP HANA and Big Data
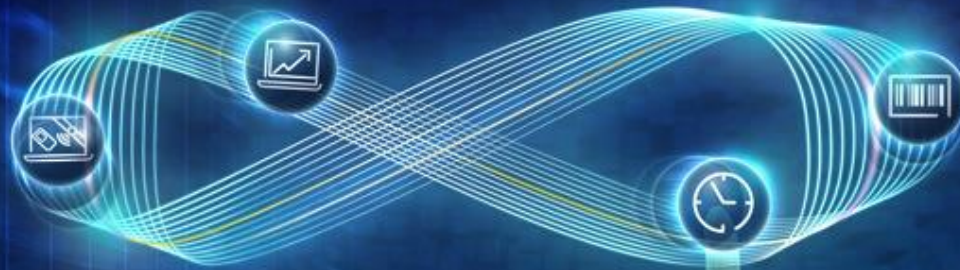
The Power of SAP HANA and Hadoop
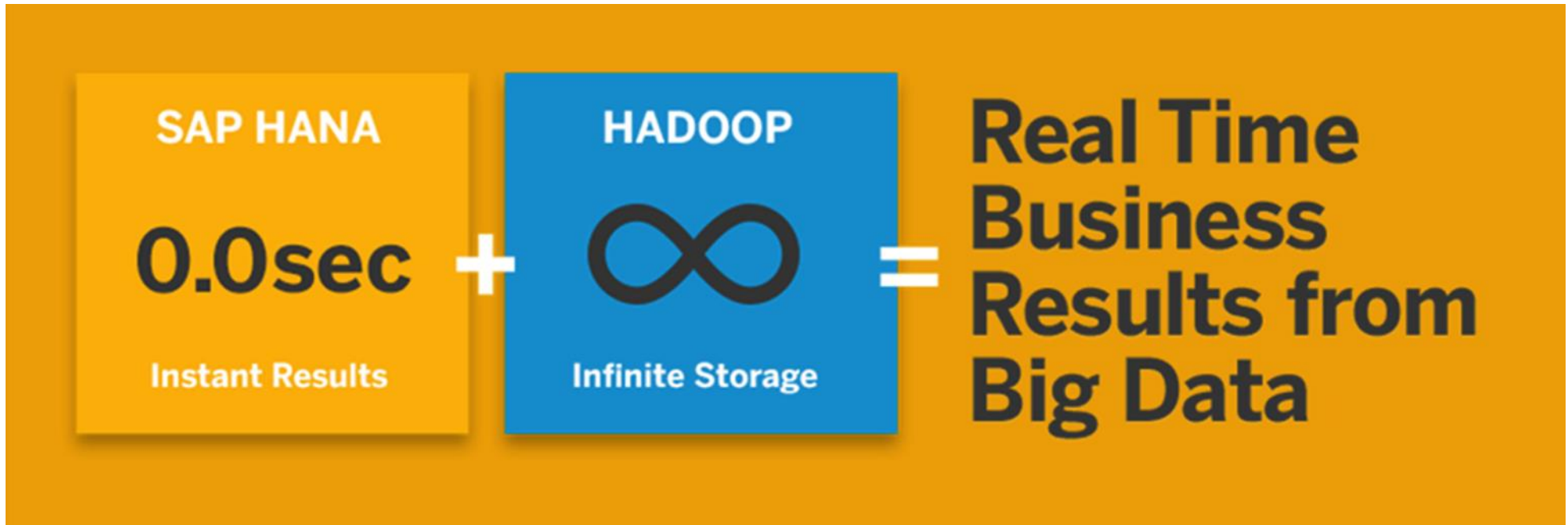
SAP partners with all Big Data independant distros
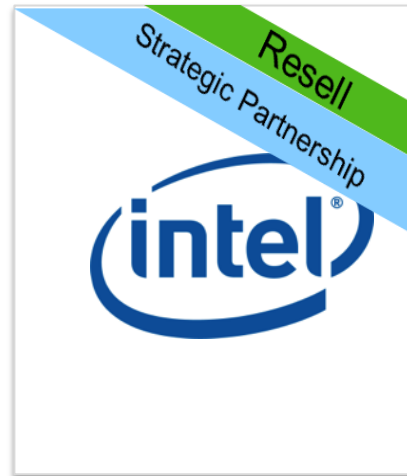
SAP Big Data for Fast Analytics
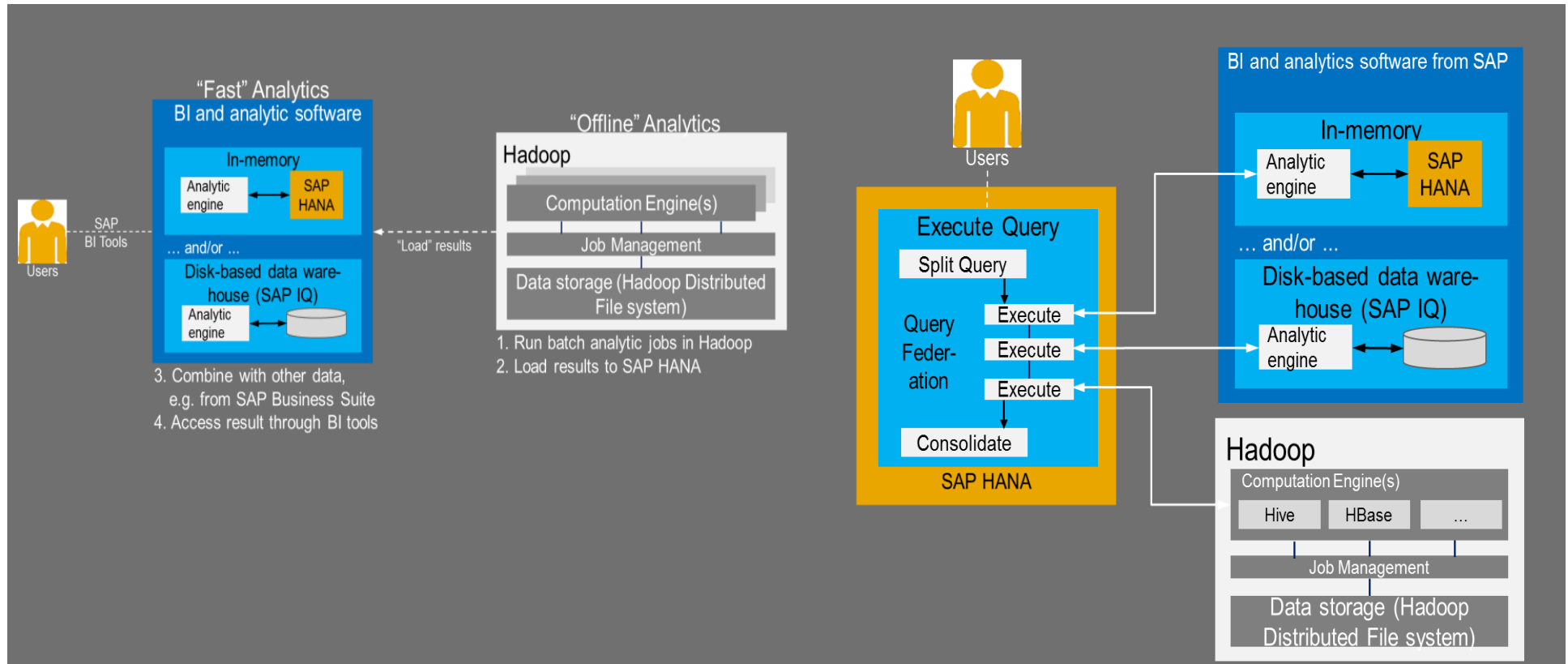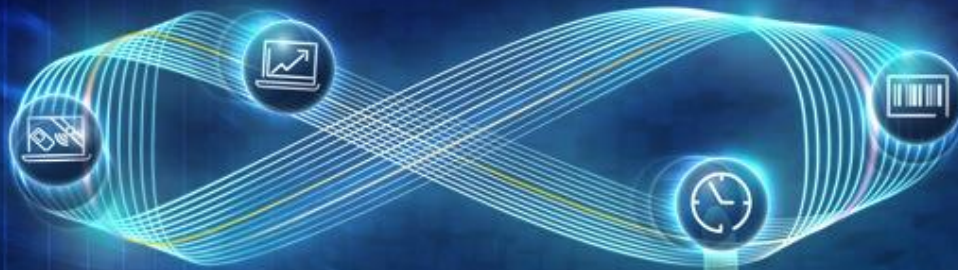
Big Data provisioning with SAP

SAP HANA smart data access Data Virtualization

Data Sources

Source		
SAP Business Suite		
BW		
SAP Sybase IQ /ASE		
Non SAP Data Sources		
Trading & Order Management Systems		
Network Devices-Wired/Wireless		

Trigger Based, Real Time

ETL, Batch

Log Based

Event Streams

Data Synchronization

SAP LT Replication Server — **DB Connection**

SAP Data Services — **ODBC**

SAP Sybase Replication Server — **ECH**

SAP Sybase Event Stream Processor — **ODBC**

SAP Sybase SQL Anywhere — **ODBC**

Your Own Applications — **ODBC/ JDBC/ OData**

SAP HANA

SAP IQ

SAP HANA Apps

New HTML-5 based applications provide highly interactive user experience

User-Driven Experience

SAP Business Suite

Powered by SAP HANA

Real-Time Applications

- Invoice and Goods Receipt Reconciliation
- Working Capital Analytics (DSO Focus)
- Supply Chain Info Center
- Access Control Role Analytics

GR / IR Clearing Monitor
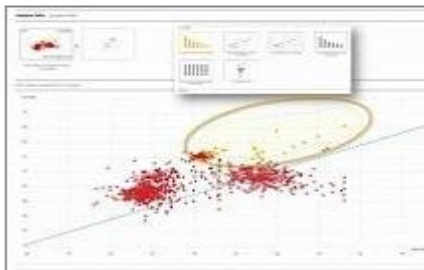
And +30 solutions powered by SAP HANA

No unnecessary data movement

Simplified architecture

Analytics on top of transactions

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Capgemini & SAP Co-innovation on SAP HANA for the Retail industry

Growth

Market Basket Analysis

- Grow basket size and overall profitability by identifying products that drive drag-along sales
- Get insights in customers shopping behavior

Loyalty

Next Best Action Engine

- Increase customers loyalty so that they continue to buy in retailers your stores rather than at competitors?
- Make sure promotions are offered that customers are really waiting for

The Extreme Applications for Retail combine in-memory analyses speed, retail algorithms and a state of the art frontend to find up-sell and cross-sell opportunities to maximize the profit potential of each sale and deliver it personalized to each customer
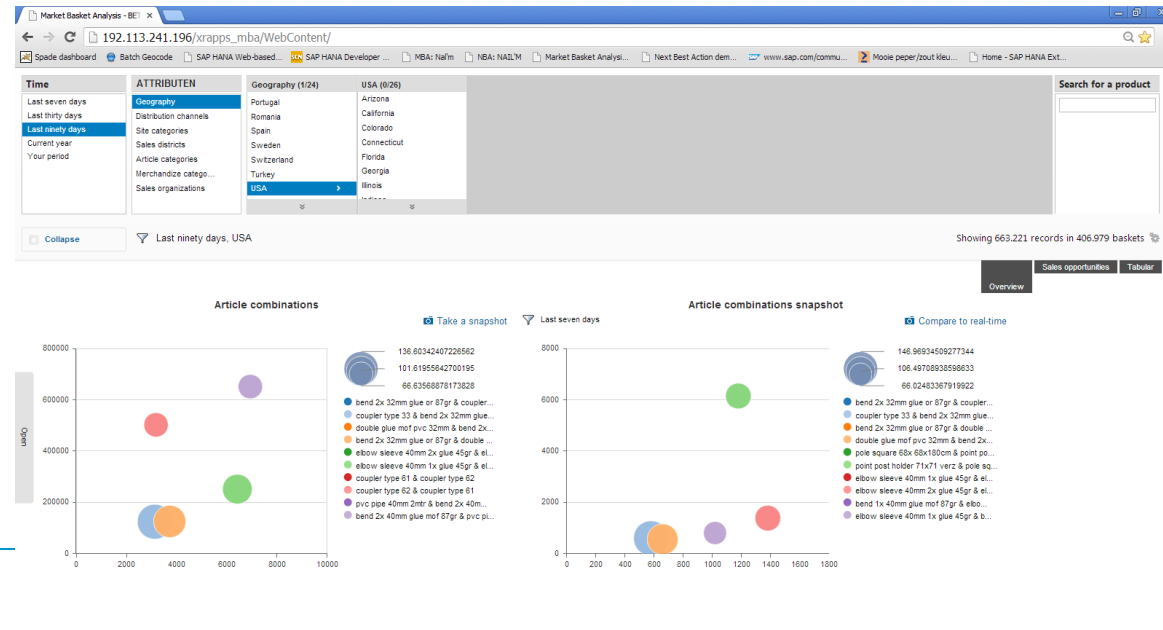
We assisted Maxeda DIY to identify 75% inefficient promotions, increasing margins & reduce costs which enabled a potential savings of ~ € 5.5 million

Shoppers / Historical Purchase data

Data

Data

Data

Trade & Promotion Management

Business Process
- Represent 20% of a 556M€ turnover (addressable baseline is excluding VAT)
- Average lost margin on this promoted items ~20% of turnover

Pain Points
- Inefficient promotions with no impact on sales
- Reduced margins due to inefficient promotions
- Increase logistics cost
- Reduced Day In inventory
- Customer shopping experience impacted

Retail Extreme Application Powered by SAP HANA

Real Time Analysis

~ € 5 Million
Increase margin achieved by reducing inefficient promotions

~ € 0.84 Million
Increase margin by suppressing coupon related sales at cashier

~ € 0.48 Million
Reduce logistic cost related inefficient store promotions

Business Process
- 1/3 of transaction are realized with loyalty card-holders (40% of turnover)
- Market share today estimated at 25% of total spend from these customers
- 50% can be influenced to buy more

Pain Points
- Lack of visibility on card-holders consumption patterns
- Lack of ability to addressing these customer to increase their spend and their loyalty, leveraging intimacy and satisfaction

Customer Analysis

Capgemini Extreme Applications for Retail on SAP HANA are the first of its kind to be certified by SAP

Powered by SAP HANA®

Capgemini Xtreme Apps Advancement Over Traditional Applications

Tight Integration with Enterprise Data: It integrates data across sources e.g. SAP, non-SAP, Social Media, etc to bring in structured and unstructured data for insight generation

Provide Real-time Actionnable Insights: Processing high volume of data at a lightening fast speed leveraging on the power of SAP HANA in-memory capability
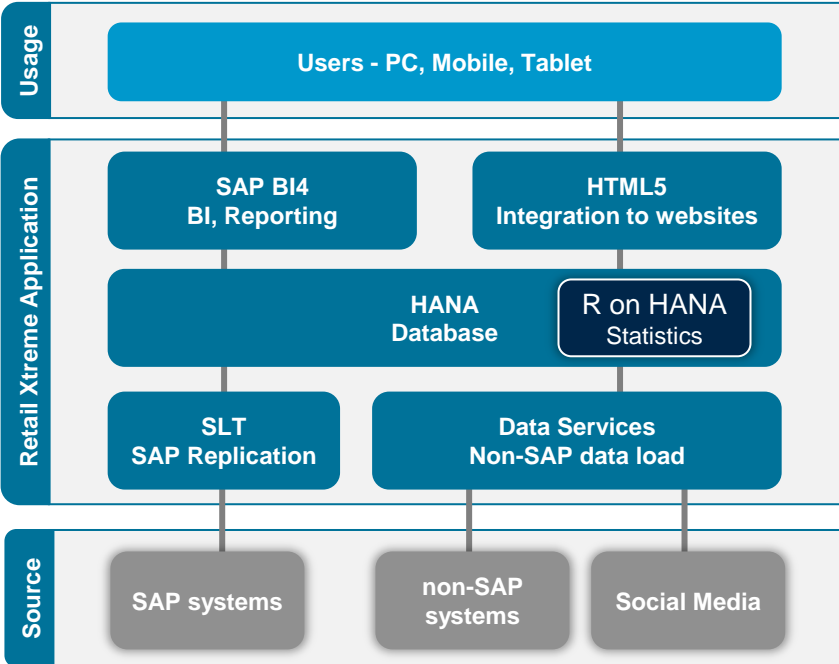
Incorporate internal & external data: It integrates enterprise data from varied sources e.g. SAP, non-SAP, Social Media, etc to bring in structured and unstructured data for useful insight

Integrate with Mobile Devices: Provide pervasive access to analytical information for both the business and its customers

Capgemini Xtreme Apps Solution Components

Usage

Users - PC, Mobile, Tablet

Retail Xtreme Application

| SAP BI4 BI, Reporting | HTML5 Integration to websites |

HANA Database | R on HANA Statistics

| SLT SAP Replication | Data Services Non-SAP data load |

Source

| SAP systems | non-SAP systems | Social Media |

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SAP HANA Infrastructure options

SAP HANA in the Cloud

- **HANA is available on Amazon Web Services**
  - Often used for Dev/test/QA and PoCs
  - Available for production usage
    - 244 GB of available RAM nodes
    - Up to 5 nodes (so up to 1.2 TB)
    - Best pricing by booking it for 3 years
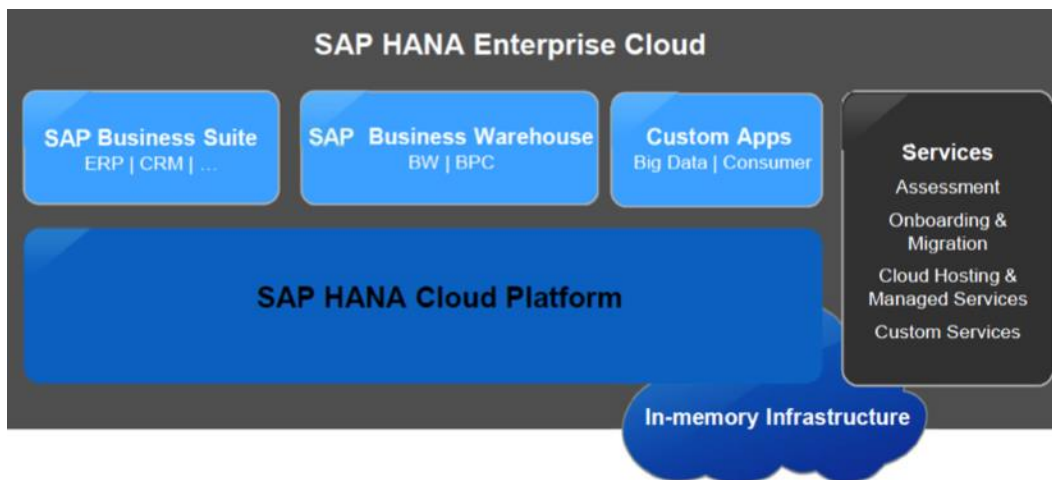
- **SAP HANA Enterprise Cloud (HEC)**
  - Recent initiative
  - Hosted by SAP
    - 100% SAP ecosystem
  - Hosted by partners
    - non 100% SAP ecosystem

SAP HANA On Premise

- **Use of appliances for Production (and Disaster Recovery)**
  - Only appliances are certified for production
  - Quantity of HANA instances per HANA box on production
  - Choice of solution for Back-up and Disaster Recovery

- **Use of appliances for non-Production**
  - These appliances can be partitionned
    - Eg. Hosting, Dev/Test/Training/QA on same HW box
    - Only limit is available memory

- **Commodity Hardware can be used**
  - HANA works on any recent Intel / Linux server
  - May be used for Dev/Test/Training/QA…

Capgemini & SAP HANA Capabilities

SAP HANA and Capgemini

GLOBAL SAP HANA PRACTICE

- 26 countries involved in an experts network to deliver SAP HANA
- 1,300+ SAP BI consultants
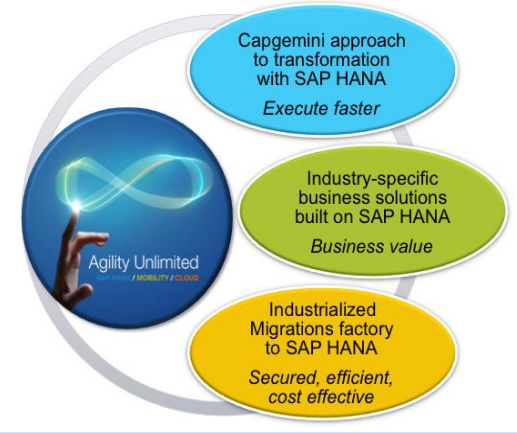- **801 SAP HANA consultants (144 Certified)**
- 7,500+ consultants in BIM practice
- 50+ HANA projects

provimi
shaping tomorrow's nutrition

Pacific Drilling

Love's Travel Stops & Country Stores

adidas

CORE OFFERINGS
– to get the business value from SAP HANA, fast

Capgemini approach to transformation with SAP HANA
Execute faster

Agility Unlimited
MOBILITY / CLOUD

Industry-specific business solutions built on SAP HANA
Business value

Industrialized Migrations factory to SAP HANA
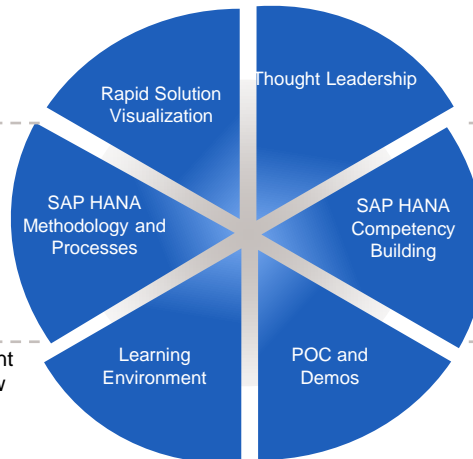*Secured, efficient, cost effective*

HANA Innovation
Solution Scenarios Built for:

- **Retail –** Xtreme POS Analytics
- **Utility –** Smart Meter Analytics
- **Social Media –** Geographic-based real-time feeds
- **Cloud –** Pre-configured HANA-powered by AWS
- **Automotive –** CFO Cockpit RDS
- **Public Sector –** Anti-Terrorism Squad Solution

THREE SAP HANA COEs – Leveraging our expert capabilities for delivery

Hardware Partners

hp

IBM

amazon webservices™

- POCs in our customer's environment, or in ours
- Determine the ROI before investing

- Use our SAP HANA:
  - Best Practices
  - Coding Standards
  - Development Methodology

- Join the learning environment
- We're willing to invest in new technologies

Pie chart segments:
- Rapid Solution Visualization
- Thought Leadership
- SAP HANA Competency Building
- POC and Demos
- Learning Environment
- SAP HANA Methodology and Processes

- Let us show you new trends and features
- Consulting expertise and assessment service

- Training sessions to meet market demands
- Solid foundation for associates to become skilled specialists

- Real-time environment for our in-house consultants
- Check ROI ease thoroughly in advance

SAP HANA and Capgemini
Did you know?

Governance	▪ Launched our Capgemini SAP HANA global community, and grew from 14 country leaders to 26 including NA, EMEA, LATAM and APAC
Capabilities	▪ Grew our SAP HANA capabilities from 70 trained resources in EOY 2011 to over 801 trained and 144 certified resources in May 2016
Awards and Successes	▪ Won the 2016 SAP Pinnacle Award for HANA, and have completed more successful Suite on HANA projects in North America than any other consulting company
References	▪ Demonstrated our excellence in delivery on 30 SAP HANA engagements ▪ Provimi / Major global luxury brand / NHS24 / Powercor / Major global luxury liquor brand / SALM Adidas / Pacific Drilling / Love's Travel Stops / Maxeda / Ferrovial / Gas Natural / Centrica / Levi's / A global beverage company / A transportation major and a major Indian electric utility company
COE	▪ Successfully launched and grew our SAP HANA COEs in India, NA and EMEA with 3 HANA platforms: HP, IBM and AWS Cloud, and built 12 industry specific demos integrating SAP HANA for Smart Metering Analysis, Geo-based Twitter feeds analysis, Extreme POS analytics for Retail and much more
Offerings	▪ Launched 5 core offerings and extended it with 3 more with BW on HANA Industrialized Migration Solution, HANA 24 and HANA Test Drive on AWS Cloud ▪ Focusing in 2014 on industry specific solutions and factory approach for migrations to SAP HANA
Co-Innovation	▪ Engaged at the highest level with SAP to build Extreme Applications and bring them to market on top of SAP HANA (Retail, FS and more to come)

Our Award Winning SAP HANA Demo Use Cases

- Demo n°1 – Xtreme POS analytics for Retail
- Demo n°2 – SMARTHANA for Utilities Demo
- Demo n°3 – Geo based Twitter feeds real time analysis
- Demo n°4 – HANA Squad - Public Security with HANA
- Demo n°5 – Automotive CFO Cockpit RDS for HANA
- Demo n°6 – COPA Predictive Simulation on Mobile
- Demo n°7 – Stock Exchange Powered with HANA

And more…

- BW on HANA scenarios: 5+ Scenarios
- BPC on HANA scenario: 2 Scenarios
- Predictive Analysis Scenarios: 4 Scenarios
- Visual Intelligence / Lumira Scenarios : 2 Scenarios
- Design Studio Scenarios: 2 Scenarios
- Native HANA scenarios: 2 Scenarios

Accelerator

- HANA as an Analytical Data Mart
- ECC Real-time Replication

Database

- BW & BPC Powered with HANA

Platform

- Extreme Apps built on SAP HANA
- HANA 2.0

SAP Global Partner — SAP Gold Partner

Congratulations

SAP hereby confirms that

CAP

has successfully undergone the qualification process for the SAP-qualified rapid-deployment solution

SAP RDS CO/PA on HANA

and is now allowed to go to market with the related offering.

Date Issued: November 15th, 2012
Qualification Expiration Date: November 15th, 2013

SAP Partner

SAP-qualified partner rapid-deployment solution 2012

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

SAP Global Partner

# Global SAP HANA COE supporting our regions with assets, trainings, POCs environment

Live Test / Demos environments :

- POS analytics for Retail
- SMARTHANA Utility Demo
- Geo based Twitter feeds real time analysis
- SAP HANA Squad - Public Security with SAP HANA
- Automotive CFO Cockpit RDS for SAP HANA
- Mobile COPA Predictive Simulation
- Stock Exchange Powered by SAP HANA

And more … : BW on HANA scenarios, BPC on HANA, Predictive Analysis, Visual Intelligence
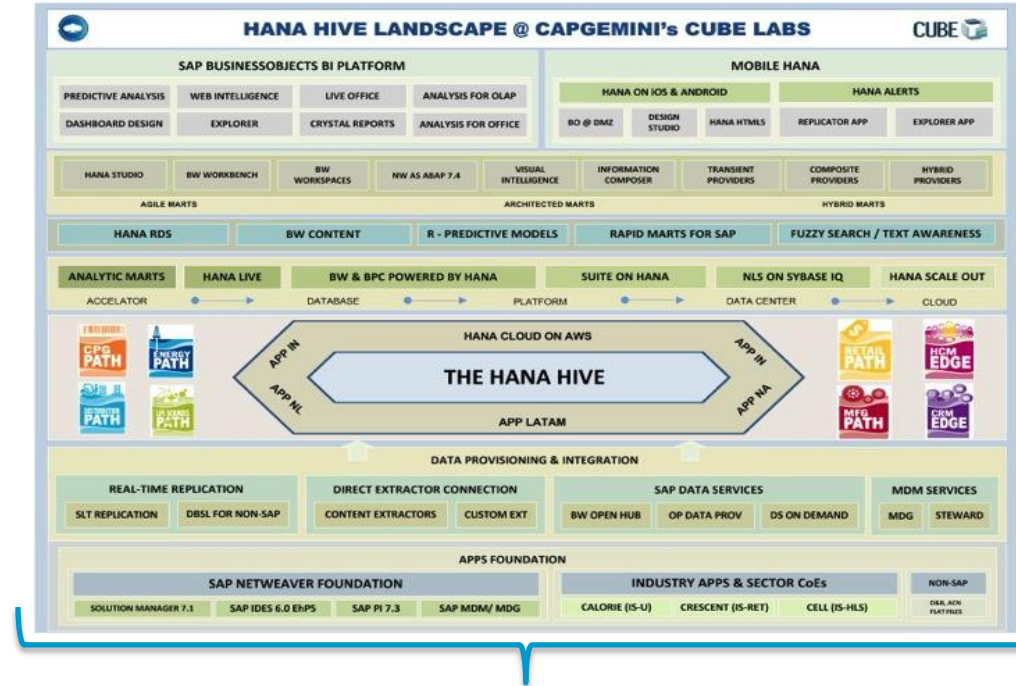
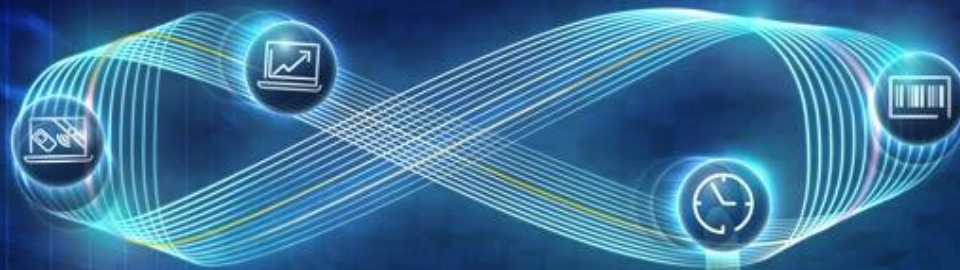**Rapid Business Scenarios Prototyping :**
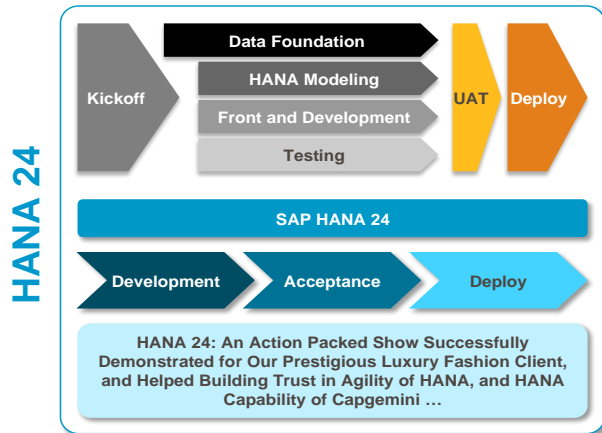
Integrated in our Capgemini's CUBE™ Lab hosting 50+ BI technologies and 100+ VMs = SAP HANA integration with non-SAP tools like Microstrategy, SAS, Tableau, Qlikview …

Capgemini Labs Infrastructure

Capgemini SAP HANA servers in EMEA, NA, India, Brazil

The Digital Transformation Journey

Our offerings portfolio on SAP HANA addresses multiple maturity stages and contexts

SAP HANA Transformation Services
The technology at work for business transformation

Strategic Value Assessment
[Business & IT Transformation Roadmap]

SAP HANA Adoption Scenarios
[Agility & Architecture]

HANA 24
[Rapid business scenarios prototyping]

SAP HANA on Demand
[Rapid test & provisioning on AWS / Elastic Analytics]

SAP HANA Managed Services
[SAP HANA Service Center & Testing Services]

SAP HANA Business Solutions
Industry-specific assets to accelerate transformation

Capgemini Extreme Applications for Retail
[Retail Apps built by Capgemini - IP]

Capgemini "PATH/EDGE" industry solutions
[Pre-packaged SAP implementations by industry/LoB]

CPG PATH · DISTRIBUTION PATH · ENERGY PATH · LIFE SCIENCES PATH · HCM EDGE · CRM EDGE · RETAIL PATH · MFG PATH

Industry use cases & reference architecture
[Complex Event Processing & Smart Grid
Predictive Churn & Next Best Action FS]

SAP HANA Migration Services
Migrate the existing landscape efficiently and get rapid value

BW on HANA IMS
[BW Industrialized Migration Solution to SAP HANA]

Suite on HANA Migration Services
[End to end secure migration process]

Optimization for customized solutions
[Specific ABAP customization for SAP HANA]

SAP HANA Live
[Agile & Real Time Analytics on transactional data]

The Digital Maturity Model

We identified categories to describe their levels of digital and leadership maturity

Digital Capabilities (vertical axis)

Leadership Capabilities (horizontal axis)

Fashionistas
- Many advanced digital features (such as social, mobile) in silos
- No overarching vision
- Underdeveloped coordination
- Digital culture may exist in silos

Digital Masters
- Strong overarching digital vision
- Good governance
- Many digital initiatives generating business value in measurable ways
- Strong digital culture

Beginners
- Management skeptical of the business value of advanced digital technologies
- May be carrying out some experiments
- Immature digital culture

Conservatives
- Overarching digital vision exists, but may be underdeveloped
- Few advanced digital features
- Strong governance across silos
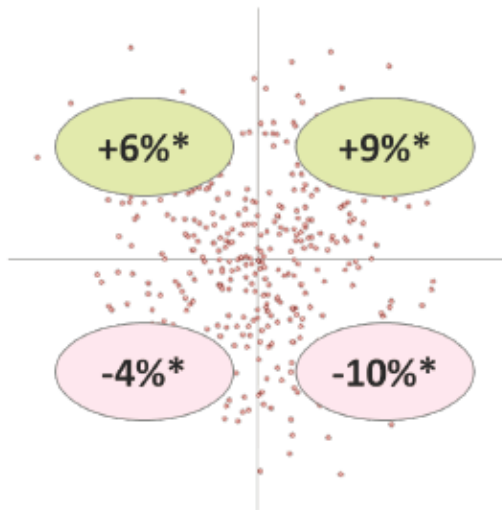- Taking active steps to build digital skills and culture

Digital mature companies significantly outperform their peers

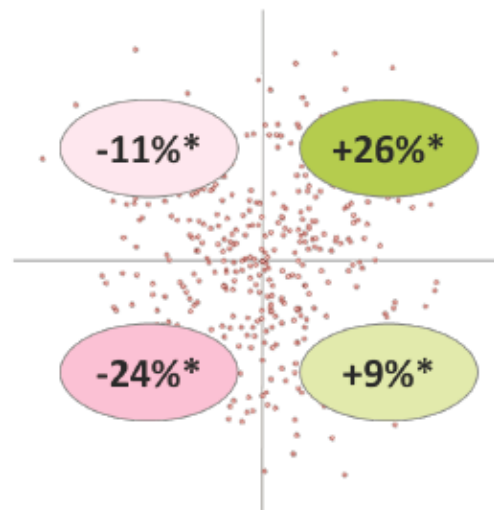**Revenue Generation**

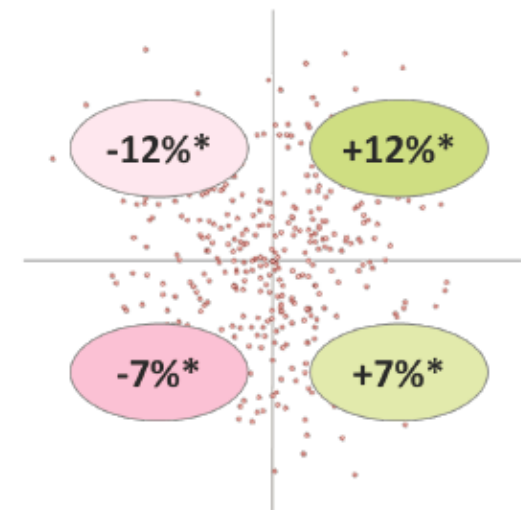Companies with stronger digital intensity (WHAT) derive more revenue from their physical assets*

+6%* +9%*
-4%* -10%*

Profitability

Companies with stronger transformation management intensity (HOW) are more profitable

-11%* +26%*
-24%* +9%*

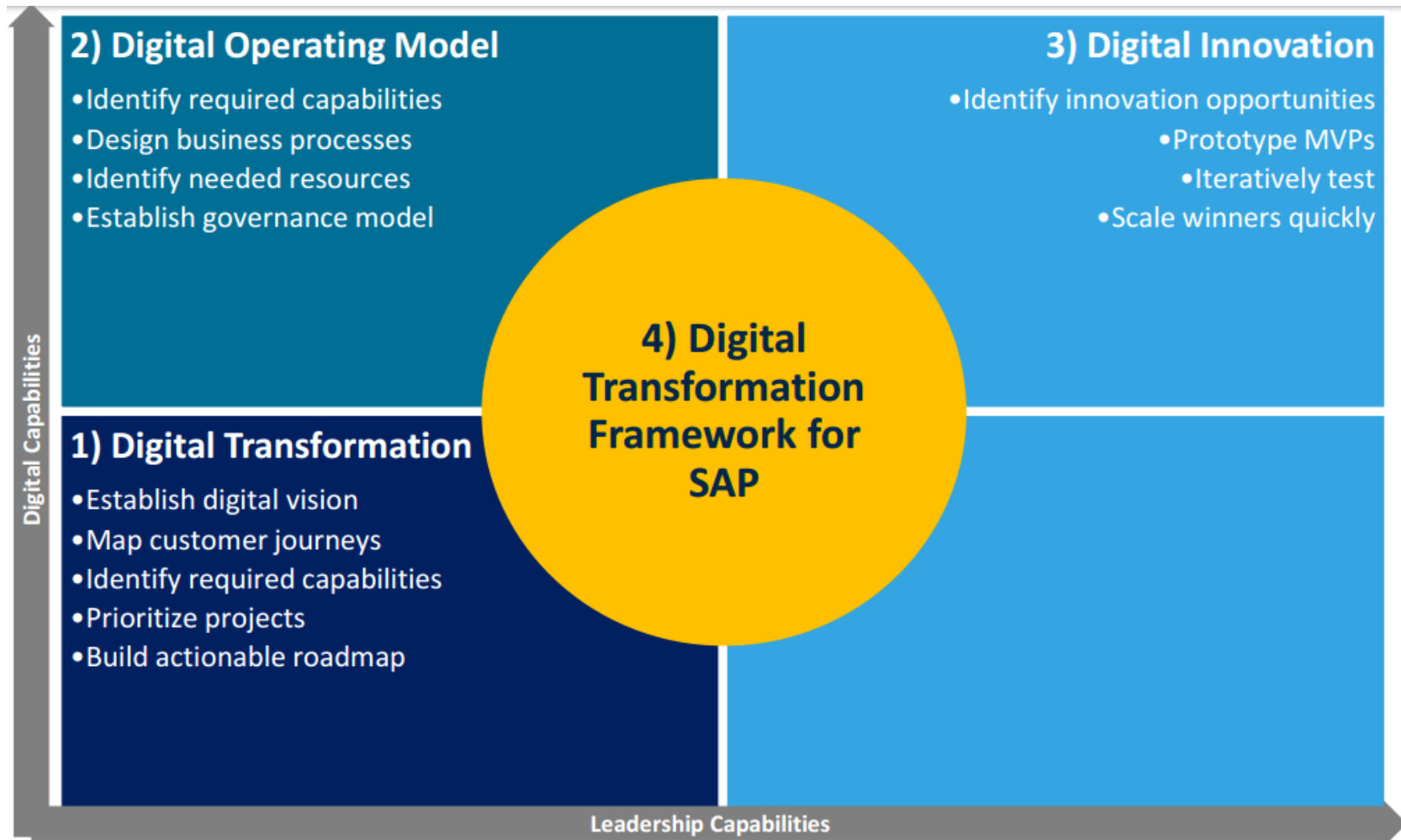**Market Valuation**

Companies with stronger transformation management intensity (HOW) achieve higher market valuations

-12%* +12%*
-7%* +7%*

Capgemini enables SAP Digital

2) Digital Operating Model
- Identify required capabilities
- Design business processes
- Identify needed resources
- Establish governance model

3) Digital Innovation
- Identify innovation opportunities
- Prototype MVPs
- Iteratively test
- Scale winners quickly

4) Digital Transformation Framework for SAP

1) Digital Transformation
- Establish digital vision
- Map customer journeys
- Identify required capabilities
- Prioritize projects
- Build actionable roadmap

Digital Capabilities

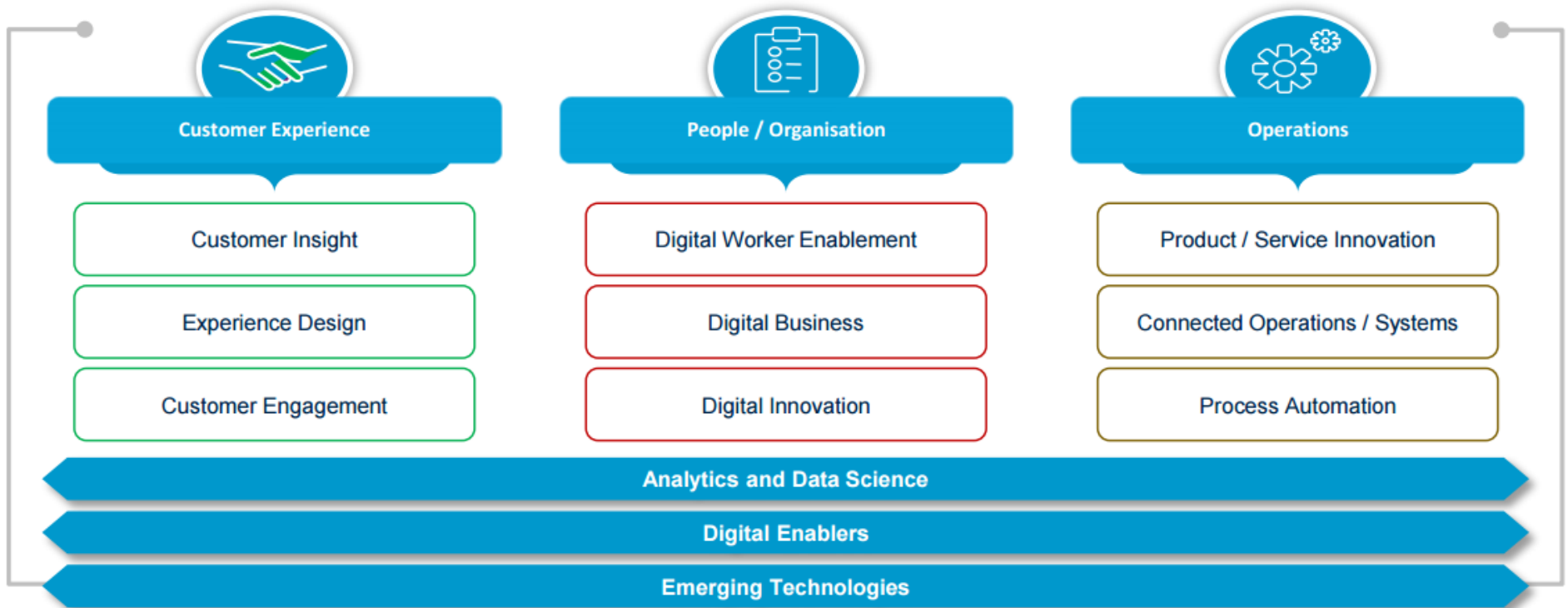Leadership Capabilities

Digital transformation framework for SAP

Digital Core – An enterprise-wide S4HANA digital foundation is the cornerstone of every transformation

Digital Insights – A real-time, in-memory, HANA based platform capable of enabling accurate, timely, predictive and prescriptive analysis.

Digital Cloud Platform – SAP HANA Cloud Platform is a PaaS as a Service platform connects the core and extends business processes through cloud, partner and IoT networks

Digital Networks – Inter-enterprise collaboration and commerce with your business partner ecosystem - Ariba, Concur

Digital Workforce - Human Capital Management: HCM in the Cloud with SuccessFactors and Fieldglass

Digital Commerce - hybris Integrated marketing, sales and service capabilities for B2B and B2C maximizing omni-channel commerce

Digital Supply Chain – Integrated SCM planning and execution spanning finance and operations planning

Digital Manufacturing – Factory of the Future integrated operations to improve reliability, quality and yield/throughput.

The Digital Business model

The specific capabilities required for Digital Mastery

Business Model

Customer Experience	People / Organisation	Operations
Customer Insight	Digital Worker Enablement	Product / Service Innovation
Experience Design	Digital Business	Connected Operations / Systems
Customer Engagement	Digital Innovation	Process Automation

Analytics and Data Science

Digital Enablers

Emerging Technologies

Capgemini Consulting: Digital Advisory Services

2
4

Some publications to know more

Provimi Success Story
YouTube Video

http://www.youtube.com/watch?feature=player_detailpage&v=Bvdc0d9gwck

Corporate Capgemini website

17 publications

http://www.capgemini.com/search/site/hana
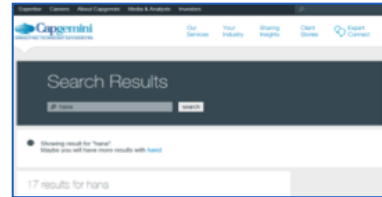
Explaining the value of RDS

Marcel de Bruin
Capgemini

http://www.youtube.com/watch?v=RHg7YtuiFIU

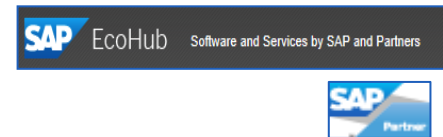**Discover the right Path to SAP HANA**
Strategic Value Assessment

http://www.capgemini.com/insights-and-resources/by-publication/discover-the-right-path-to-sap-hana-with-capgeminis-strategic-value-assessment/

SAP EcoHub
Solutions for SAP HANA

http://ecohub.sap.com/catalog/#!solution:HANA-solutions-capgemini

Forbes magazine published our SAP HANA use case for Defense & Public Security:
http://www.forbes.com/sites/sap/2012/12/27/situational-awareness-technology-uses-big-data-to-fight-terrorism/
SAP published our Demo use-case under Implementation resource for Defense sector :
http://www.saphana.com/docs/DOC-2343

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