Core Systems Transformation Solutions

Leveraging SAP HANA in Financial Services and Insurance Applications

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Agenda

- SAP Today
- Who Is ROI
- SAP PartnerEdge Program
- SAP HANA Technology
- ROI HANA based Insurance Demo Platform (HIDP)
- Use Cases: Fraud Detection, Mobile, BI & Analytics, Reporting

SAP Today

20.3 Billion in 2013 Revenues
2+ Billion in R&D

24.1% Enterprise Market
SAP owns 67% share of Forbes 2000

58,500 Global Employees
Over 1,800+ dedicated to financial services (R&D, marketing, sales and services)
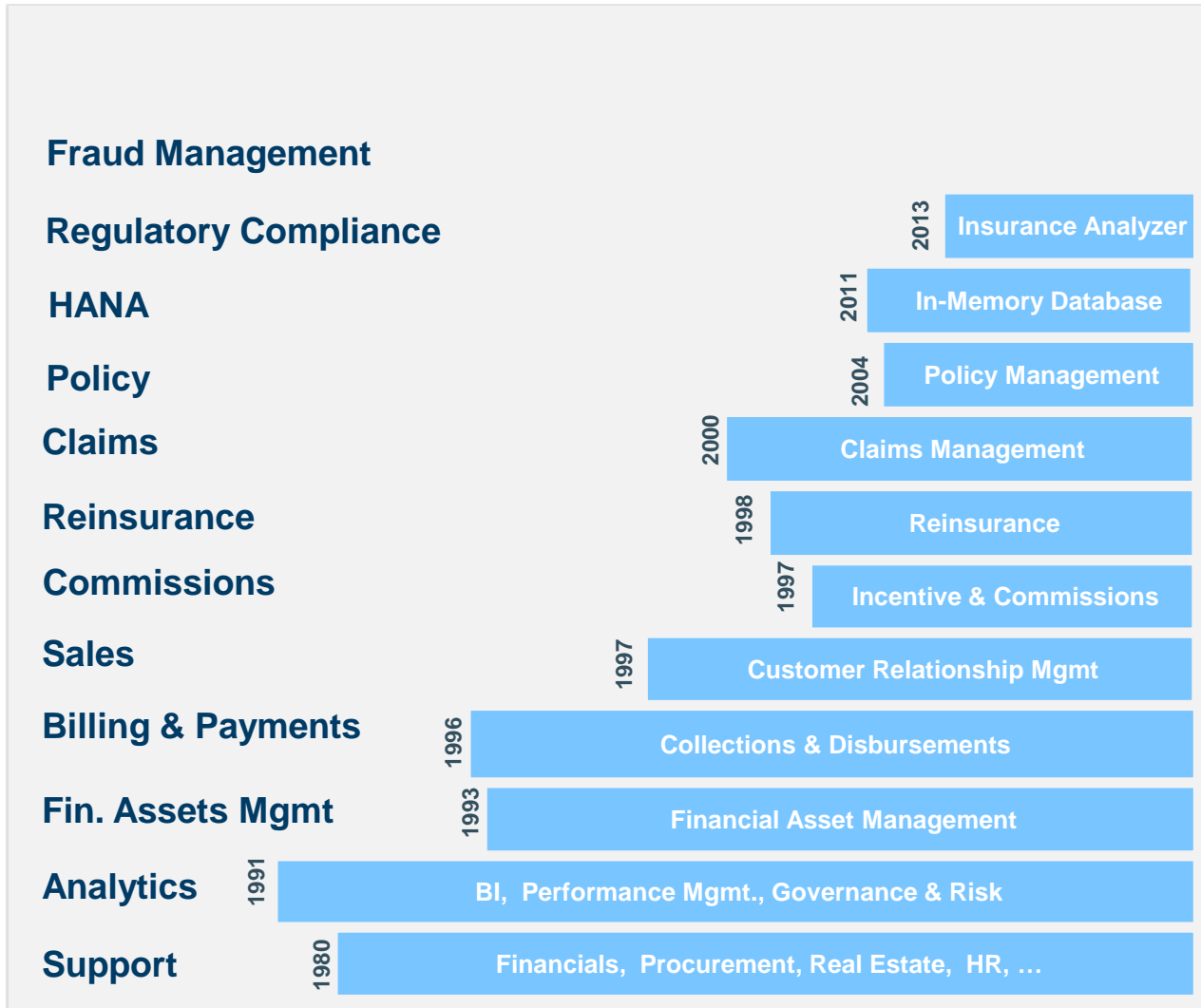
Strategic Acquisitions
BusinessObjects, Sybase, SuccessFactors, Ariba Camilion, Hybris

1,200+
services partners worldwide

SAP for Insurance:
SAP has built out an industry leading Insurance Suite

Fraud Management

Regulatory Compliance — 2013 — Insurance Analyzer

HANA — 2011 — In-Memory Database

Policy — 2004 — Policy Management

Claims — 2000 — Claims Management

Reinsurance — 1998 — Reinsurance

Commissions — 1997 — Incentive & Commissions

Sales — 1997 — Customer Relationship Mgmt

Billing & Payments — 1996 — Collections & Disbursements

Fin. Assets Mgmt — 1993 — Financial Asset Management

Analytics — 1991 — BI, Performance Mgmt., Governance & Risk

Support — 1980 — Financials, Procurement, Real Estate, HR, …

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* source: SAP Billing, Payments and Finance presentation, SAP AG, July 2013

Who is ROI? We Are Core Systems Transformation Provider Helping Clients Leverage Innovative & Disruptive Technologies

Strategy For The Future

The conflux of these technologies will shape the strategy and direction for businesses for the next 20 years and necessitates core system transformation today.

Core Systems

The central foundational systems that provide end to end business operational capability – customer interaction, transaction processing, regulatory and operational controls as well as management information.

Transformation

Advanced business models and innovative improvement of business strategy and overall performance of business processes and systems to achieve business value – Growth, Profit, Market Expansion.

Services

We provide consulting, Systems Integration and Commercial Software Engineering solutions leveraged by our global Centers of Excellence, proprietary Solution Labs, and Research Institute.

I-SMAC

The disruptive technologies that are shaping business today. Internet of Everything, Social, Mobile, Analytics and Cloud. Creating both threats and opportunities for next generation products and services.

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Who is ROI?
We have 800 professionals to Delivery our Global Services

- **Over 800 professionals**
- **Full suite of services**
  - **Consulting**
  - **Systems Integration**
  - **Managed Services**
  - **Commercial Software Engineering**
- **Specialists in driving competitive advantage**

Maximizing the Return on Intelligence for our clients

Who is ROI?
We Are A New Breed - "Core Systems Transformation Provider"

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Strong Partnership

ROI is an SAP PartnerEdge Partner, VAR and Consulting Services Partner

ROI is a leading provider of SAP Integration Services across I-SMAC

ROI is a leading Channel Partner of SAP

SAP is an ROI Software Development Client

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SAP PartnerEdge Program

SAP PartnerEdge Program for Application Development

Mobile Applications

Cloud Applications

Integrated Applications

Big Data

Applications for BusinessOne

Business Intelligence

Platform Development Accelerator for SAP HANA

12 months of exploration membership:
- 3 named developer licenses
- Access to SAP developer community
- Access to SAP Partner Enablement Center
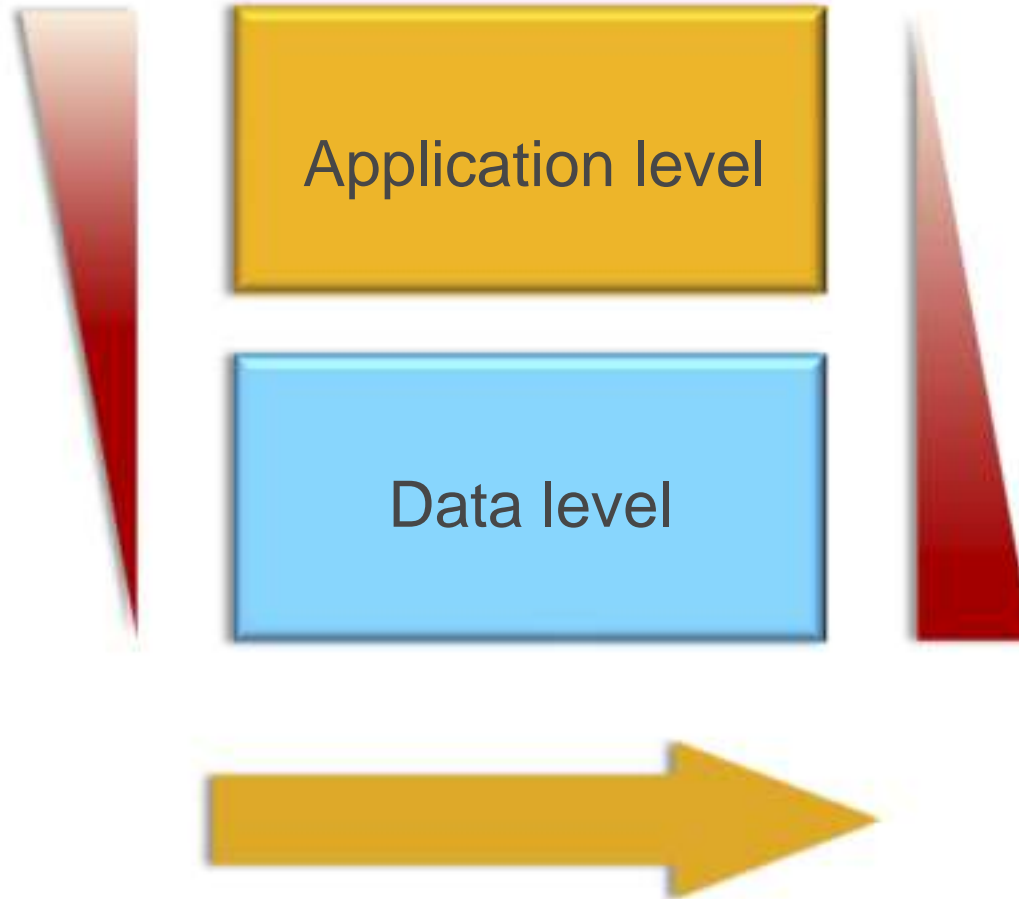- Selective access to remote enablement sessions and consultants

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SAP HANA
Universal platform for business in real-time

Effectiveness = Processing At Data Level
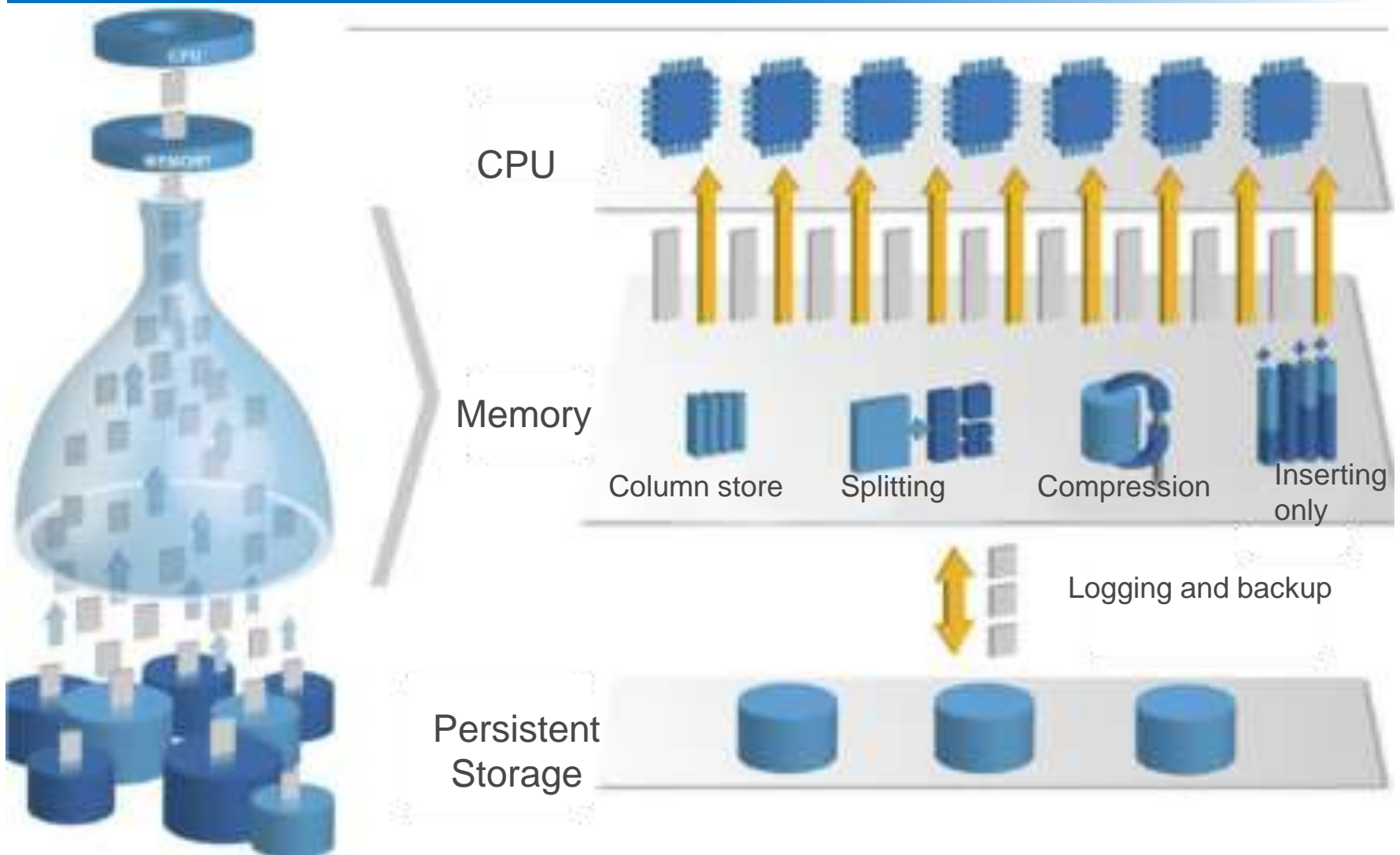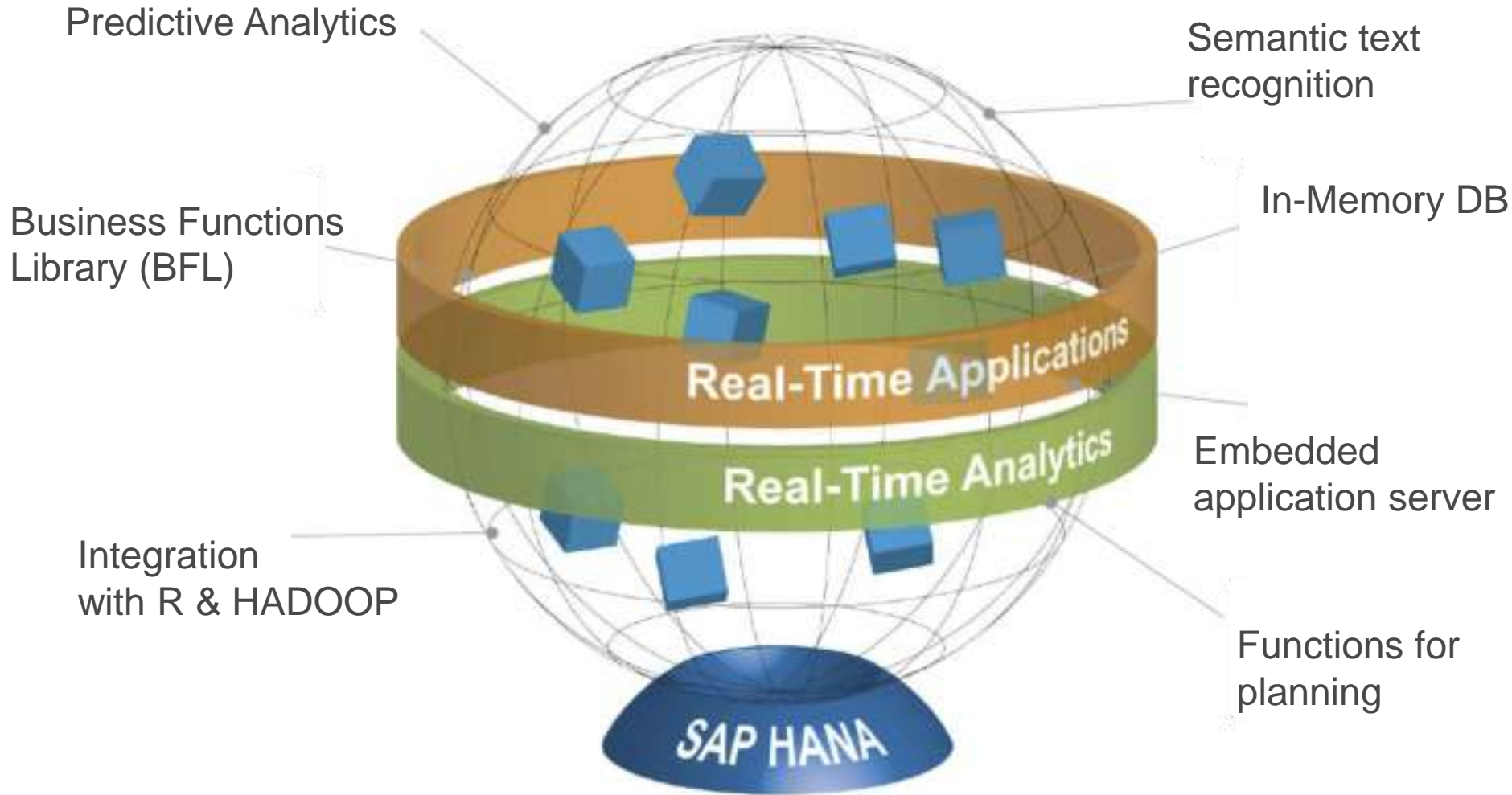

Send entire dataset for calculation

Application level

Data level

Return results only

Basic principal of SAP HANA

SAP NetWeaver BW data storage

- Modeling
- Analytics / Planning
- Data Management

Relative DB

- Data Storage

→

SAP NetWeaver BW data storage

- Modeling

HANA

- Analytics / Planning
- Data Management
- Data Storage

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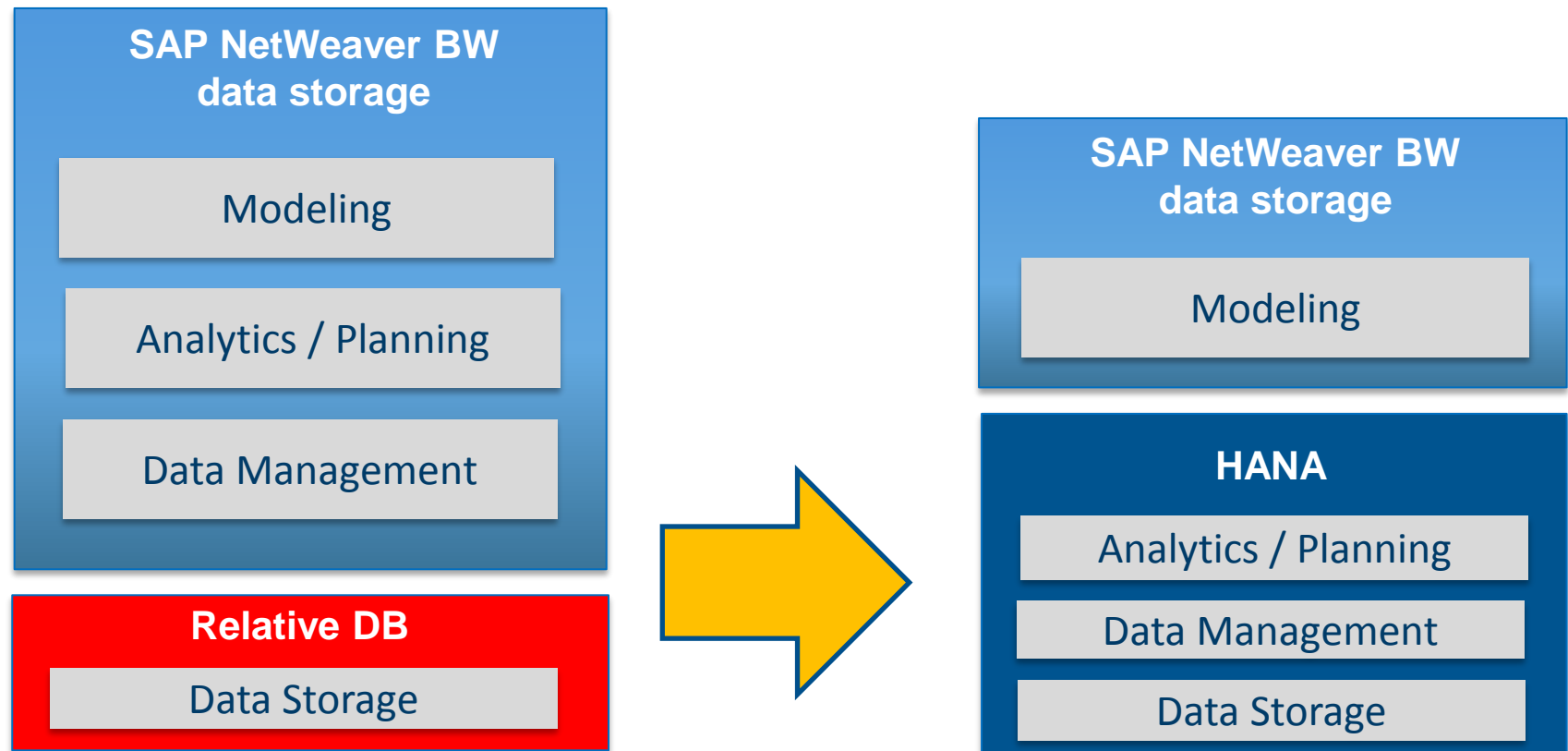
SAP HANA is a pool of innovations

CPU

Memory

Column store   Splitting   Compression   Inserting only

Logging and backup

Persistent Storage

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What's allowed with SAP HANA?

Predictive Analytics

Semantic text recognition

Business Functions Library (BFL)

In-Memory DB

Real-Time Applications

Real-Time Analytics

Embedded application server

Integration with R & HADOOP

Functions for planning

SAP HANA

13

Analytics And Reporting

QUERY REPORTING ANALYTICS

SAP BOBJ Business Intelligence

SAP HANA
(DRAM)

Deployed as
Datamart

Pricing Accounting

Customers Forecasting Planning

Channel Inventory

Products Suppliers

- OLTP + OLAP Processing
- SAP HANA Live
- SAP smart data access – data virtualization

- Real-time data integration (Replication, Streaming)
- Unified data modeling
- Single-query access to data

- High speed analytical reporting
- High speed data loading
- Simplified processes for data modeling and system administration

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Geographic Data Processing

Rapid development and roll-out GIS applications based of SAP HANA
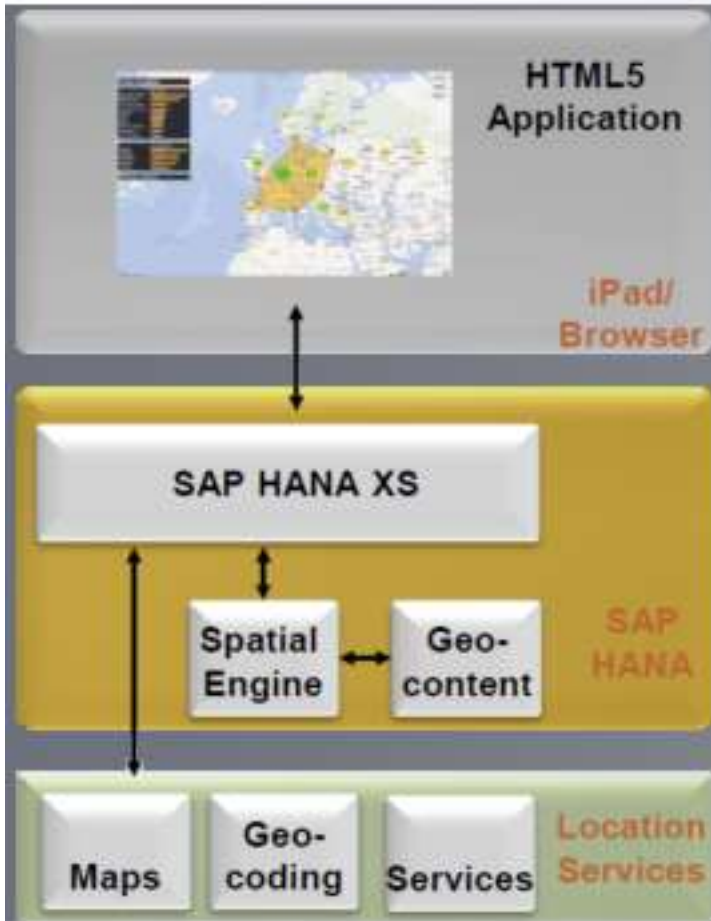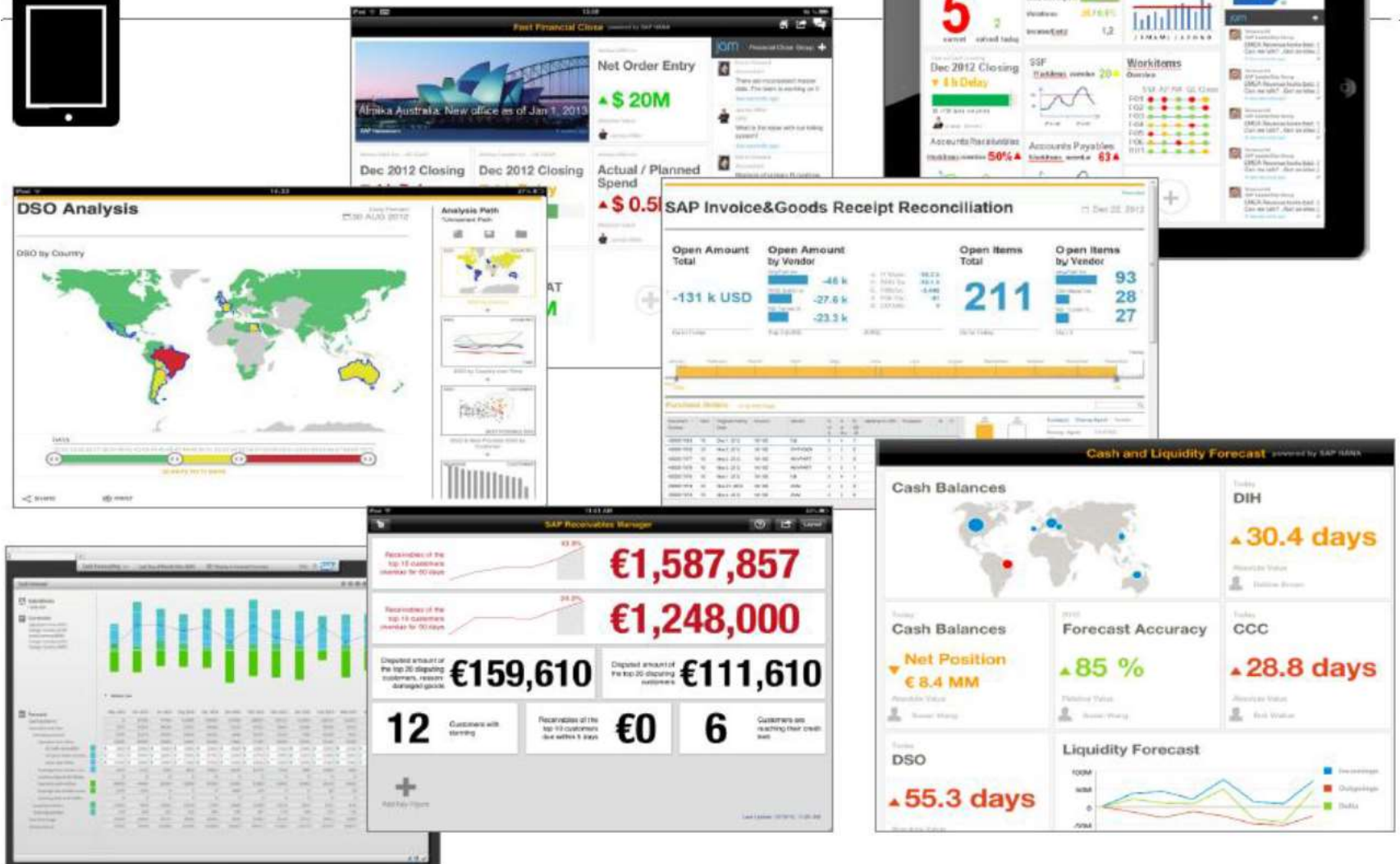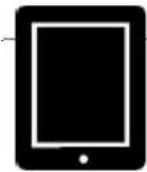

Capabilities:

- Visualization and investigation support, analysis GIS data on maps
- HTML5 interface support
- SAP HANA models support
- ISO/IEC 13249-3 SQL/MM 1999 standards support

Benefits:

- Rapid application development and roll-out GIS applications
- Low TCO
- External map services integration
- Nokia map service included into license

15

New Level of GUI Quality

Productivity Growing

Faster Reporting and Analysis
(queries in 10-100 times faster)
- In-Memory column store
- Process parallelization
- All queries acceleration

Decreasing data delays
(data loading in 5-10 times faster)
- In-Memory transformation (ELT & ETL)
- In-Memory optimized cubes
- In-Memory activation process of
Data Store Object

Faster planning functions
(handling in 5-10 times faster)
- No indexing and aggregation tables
- In-Memory calculation engine
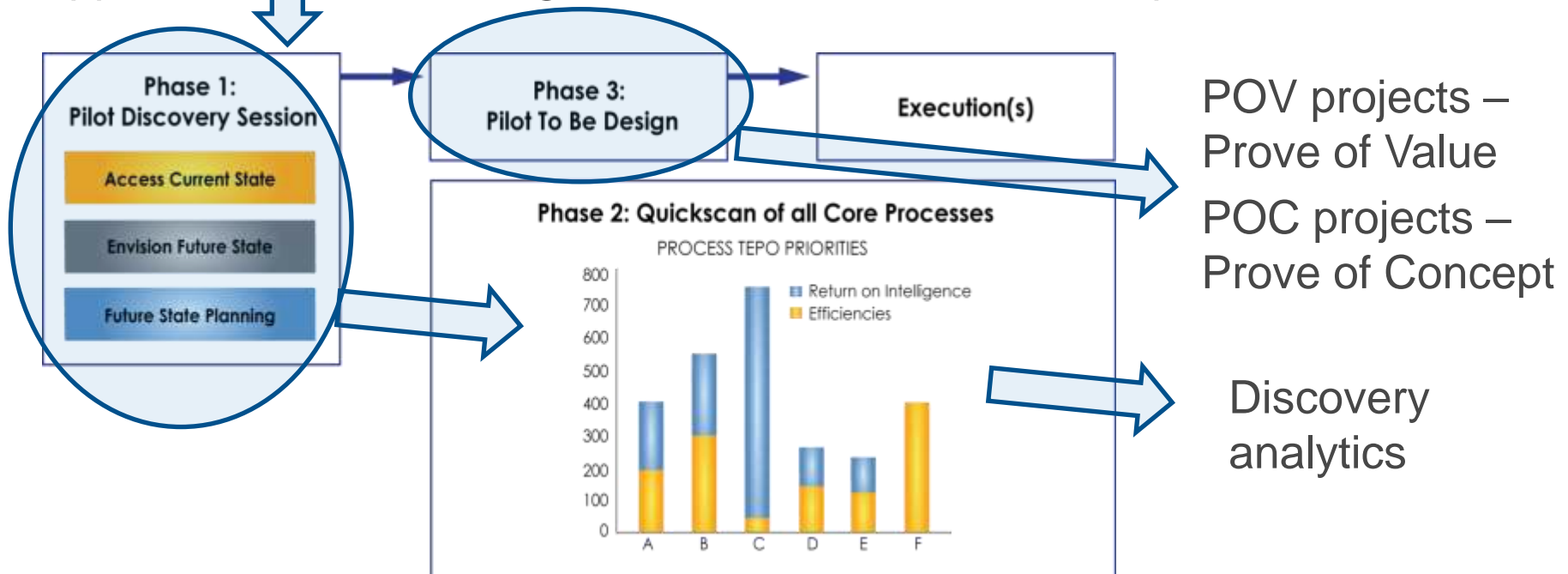
Data compression (in 4-10 times)

HANA Based Insurance Demo Platform (HIDP)

TEPO – Technology Enabled Process Optimization

Business processes fall into three basic categories:
- **Transactional** (e.g. Accounts Payable)
- **Knowledge Intensive** (e.g. Complex Claim Adjudication)
- **Collaborative** (e.g. New Product Launch)

Our TEPO solution is a wholly new way to identify and extract value opportunities in knowledge-intensive and collaborative processes.

Phase 1: Pilot Discovery Session
- Access Current State
- Envision Future State
- Future State Planning

Phase 3: Pilot To Be Design

Execution(s)

Phase 2: Quickscan of all Core Processes

PROCESS TEPO PRIORITIES

- Return on Intelligence
- Efficiencies

POV projects – Prove of Value

POC projects – Prove of Concept

Discovery analytics

HIDP On A Glance

- **Core SAP Insurance modules**
- **Makes entire information system**
- **Extension points for connecting other SAP modules**
- **Capability of quick integration for customer's systems**

ROI promote the disruptive technologies with the best SAP solutions:

- **HANA** as core storage
- **Camilion** as product configurator
- **Afaria and SMP 3.0** for mobile services
- **Fraud Management** – fraud detection & risks mitigation
- **SAP UI5, Fiori, Personas** – for modern GUI
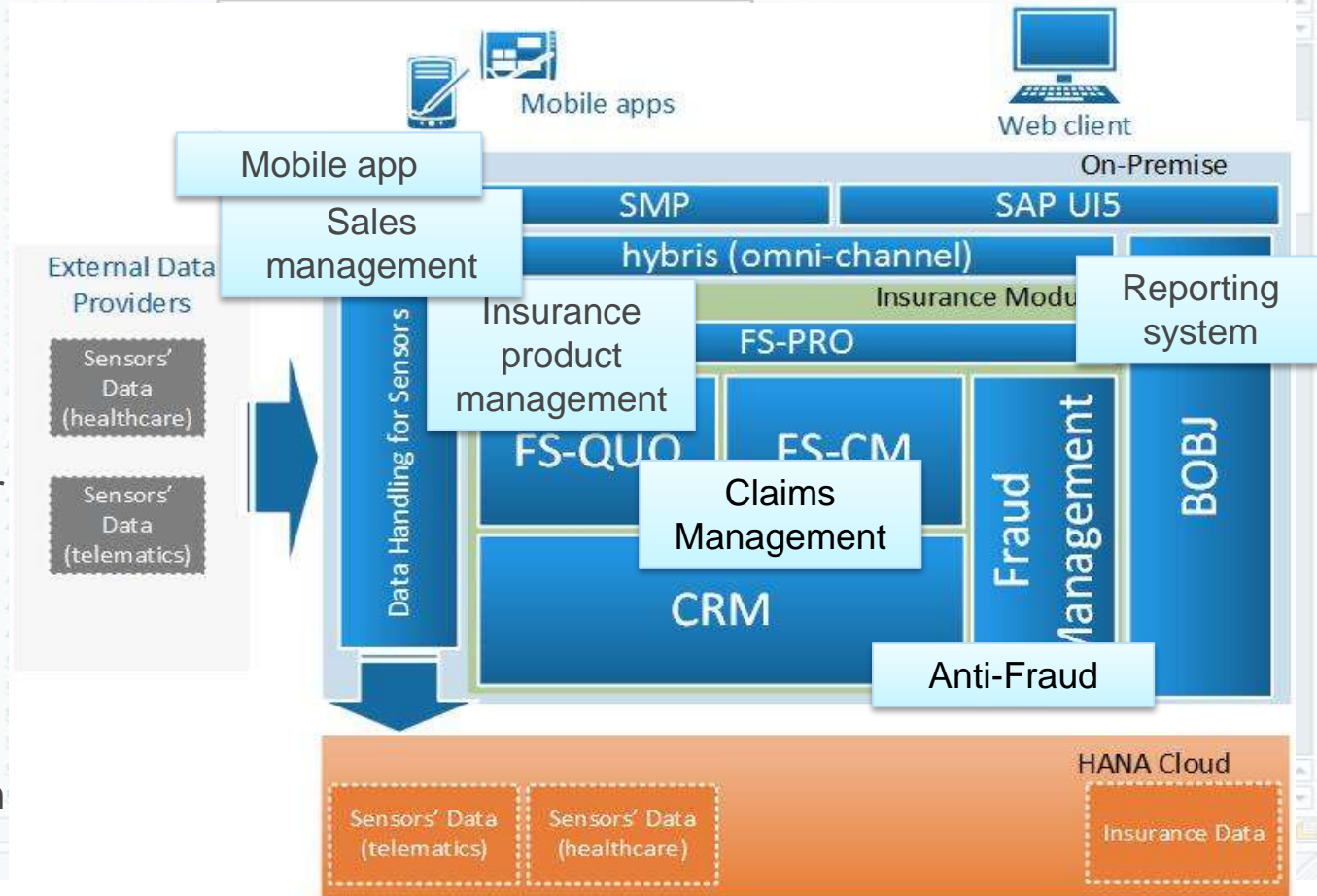
ROI Platform Development Accelerator for SAP HANA

Initial discussion – Feb 2014

Start – Mar 2014

SAP Boot Camps in Moscow – Mar-May 2014

Core team completion – Apr 2014

Major goals & requirements – Apr 2014

SAP license installing – Apr 2014

HIDP landscape creation **– Apr-May 2014**

Initial Fraud prototype **– May 2014**

1st Insurance POV project completed **– Aug 2014**

Scenarios of Insurance company

Insurance product management

- Creating and launch
- Business process tune

Sales management

- Omni-channel interaction and sales

Reporting systems

- Creating and managing reports
- Portals and mobile reporting systems

Fraud management

- SUI management
- Ultrafast methods of fraud detection

Claims management

- Mobile applications for clients, agents, field adjusters and brokers managed by SAP FS-CM

Benefits:

- ❑ Each part would be demonstrated both inside complicated scenario and as isolated system
- ❑ Quick customization for new customers
- ❑ Technological and cross-module integration
- ❑ Regional specification

CASE 1: Fraud detection automation

Customer

– Insurer with 60+ years experience in specialty insurance

– Over 2 billion in premiums annually

– Workers compensation insurance

Background

– No use of automated analytic based fraud detection system

– No use of fraud alert management and processing application

– About 100 fraud suspects identified per year

– With recent exception of 1,000 suspected fraud claims for one provider

– Some geographies experience heavier fraud
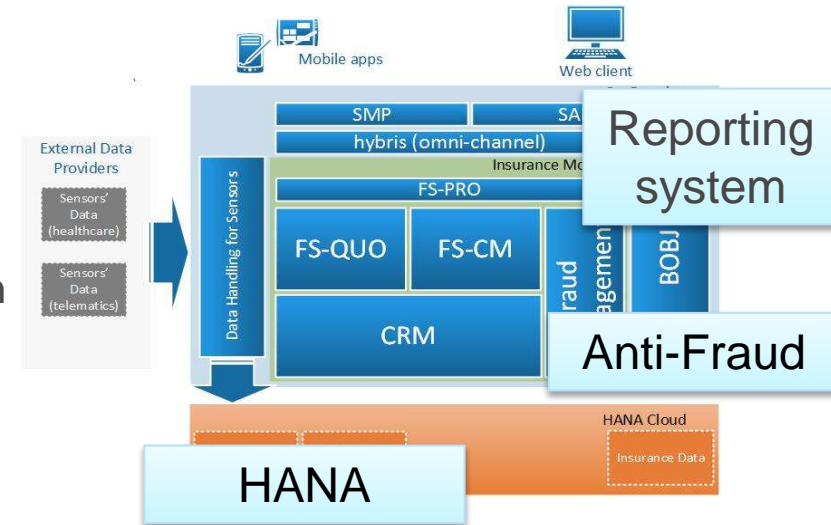
HANA benefits on POV

- The dictionary based compression reduces the data

- Data preview: HANA has a flexible visually instrument which help to analyze data quality

- The combination of OLTP and OLAP in one single database

- HANA incorporates text and geospatial capabilities

- The columnar store architecture allows for the use of massive parallelism

- Predictive analytics library

Data Quality Challenges: Data Cleansing and Profiling

ROI has performed the following main activities:

- Initial scrubbing of the text fields and descriptions – some text data was sent in tab delimited format
- Validity verification – verified and converted data types, analyzed unique and mandatory constraints
- Data integrity including foreign key analysis and orphan cleansing
- Data profiling including counts, volume, distinct values range and average analysis
- Value distribution and analysis of structured data
- Pattern analysis of non-structured data

ROI analyst performed several data cleansing activities based on their best understanding and assumptions and time constraint

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Data Quality Challenges

ROI has identified the following data quality challenges:

- Claims with policy effective date later than the claim accident date

- 65 duplicate claimant ID's – e.g. the only difference is ZIP code

- 182,821 policies with initial term were unavailable

- Apparent default values for some important data – e.g., claims open on the first day of month and first month of year

- Party names provided in different formats prevented such parties display in Network Analysis (e.g., First_Last; First,Last, etc.)

- Unstructured data in the notes section (e.g., treating physician)

Improving data quality is an important component of an SAP Fraud implementation project

Results

Was identify 12,583 suspected fraud alerts with 556 quality alerts

Average cost of single claim was $7,081

Annual savings $1,033,086 per year

Predictive Analytics algorithm generated 249 correct alerts (based on an assumption regarding historical fraud data set)

Prove of Value as approach ROI and SAP have developed a comprehensive of SAP Fraud Management Solution for the Insurance industry

Case 2: Fraud Detection As A Service

Fraud Detection as a Service

- ROI Cloud Web Services
- Security model
- Claims data
- Flexible service modei
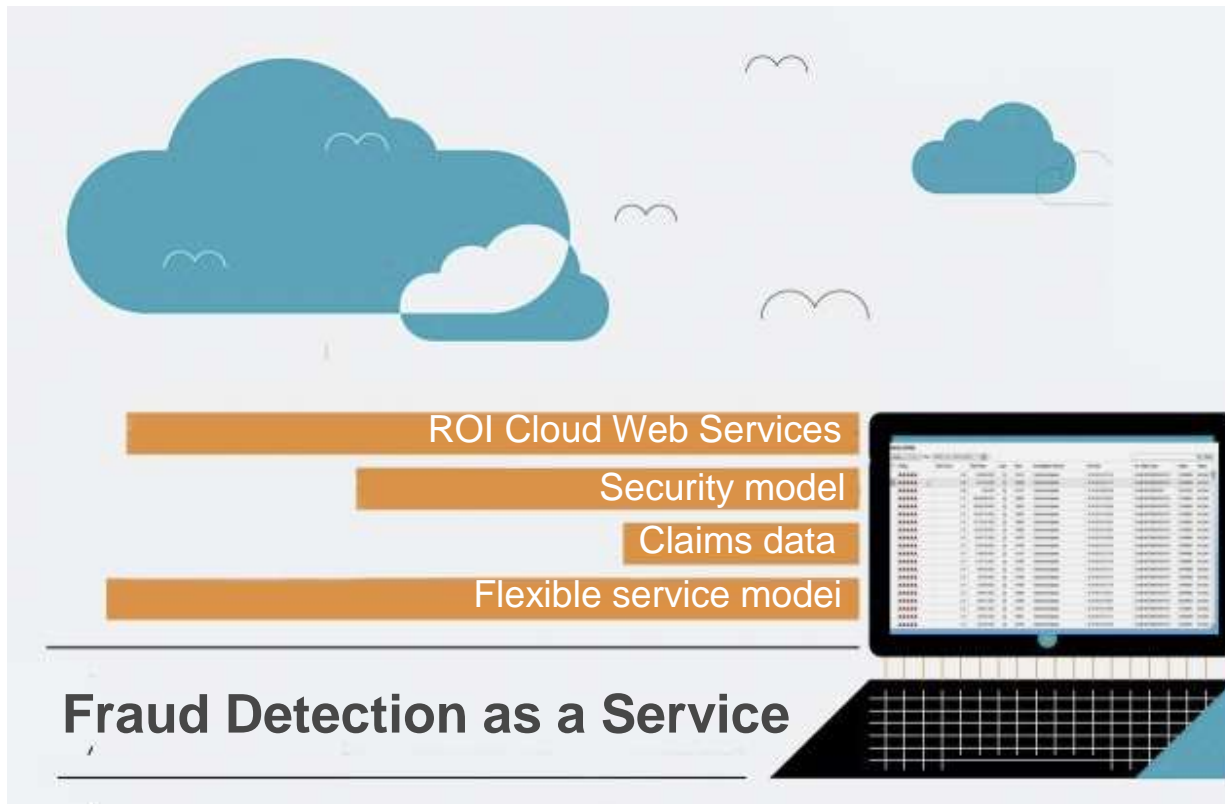
One contract for license and support services

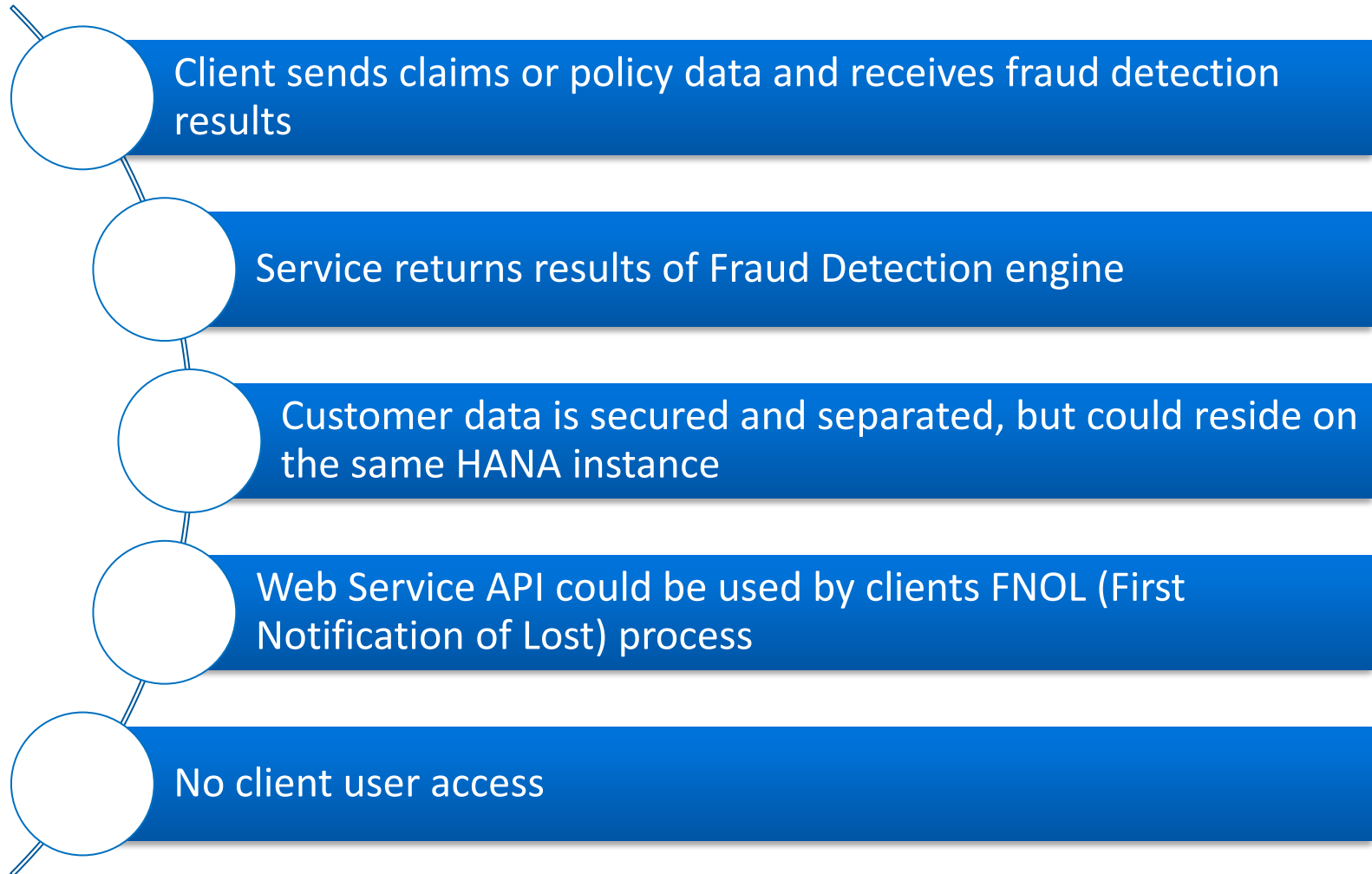Flexible service level offerings based on detection strategy

Quick ramp-up

No hardware and infrastructure related expenses

Minimal internal IT resources needed

ROI and SAP simplify usage SAAS- and cloud- based solutions as from service provider as from customers side

Case 2: Fraud Detection As A Service

Client sends claims or policy data and receives fraud detection results

Service returns results of Fraud Detection engine

Customer data is secured and separated, but could reside on the same HANA instance

Web Service API could be used by clients FNOL (First Notification of Lost) process

No client user access

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CASE 3:
Customer Reporting System Upgrade With SAP BOBJ BI

Customer:

- Big traded construction company which provides a range of services to private and public sector clients across its three core segments of infrastructure, energy and mining
- $70 millions/year net income
- 100+ years on a market

Background:

- Fragmented IT resources over the company
- No Master Data
- Various of financial reporting, analytical and DW solutions at place
- 600+ reports
- Low reports performance
- Number of legacy systems
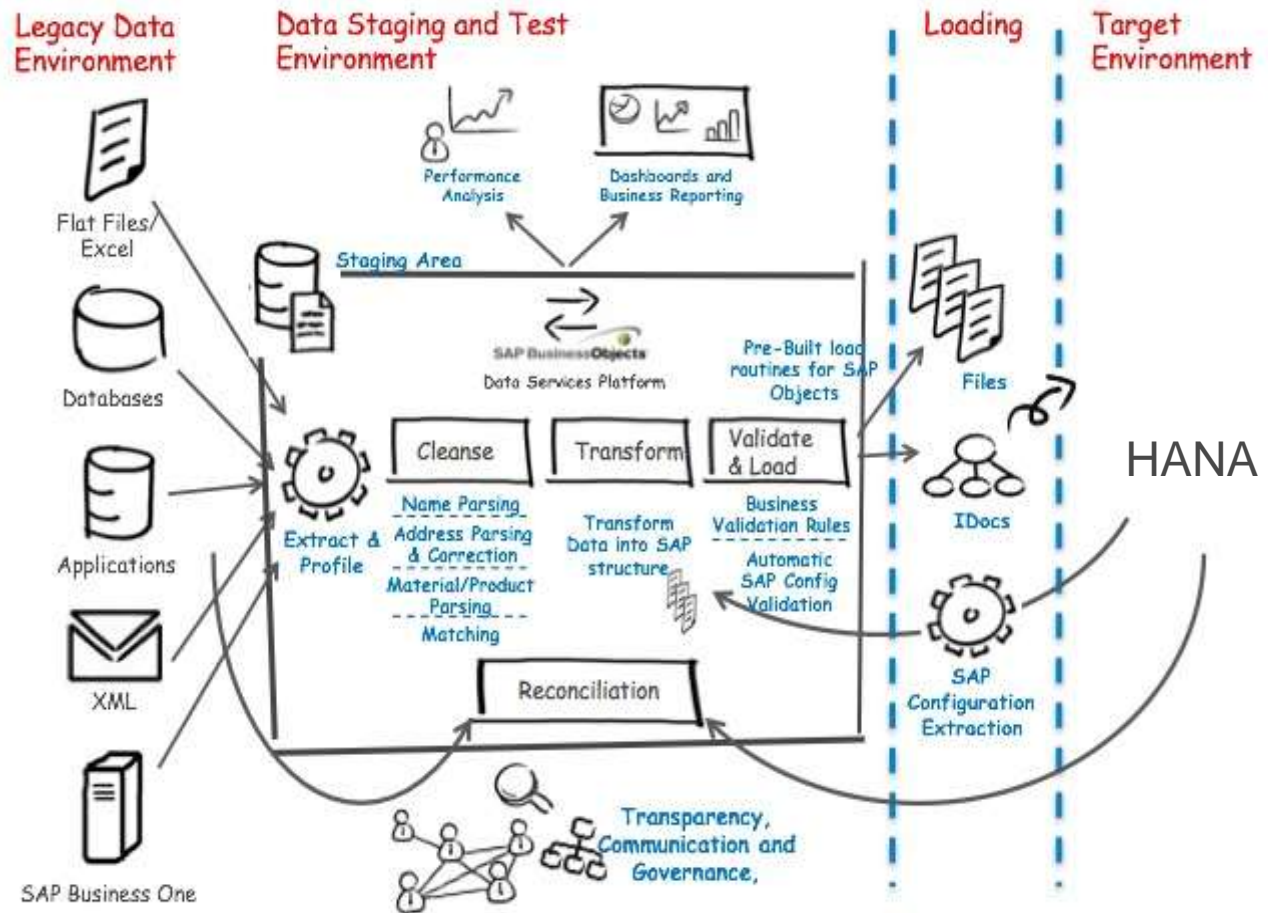
Proposed Solution: SAP BI. Tools

Install and configure environment for enterprise BI solution:

- SAP HANA
- SAP BObj Data Services
- SAP BObj Rapid Marts
- SAP BObj BI 4.1
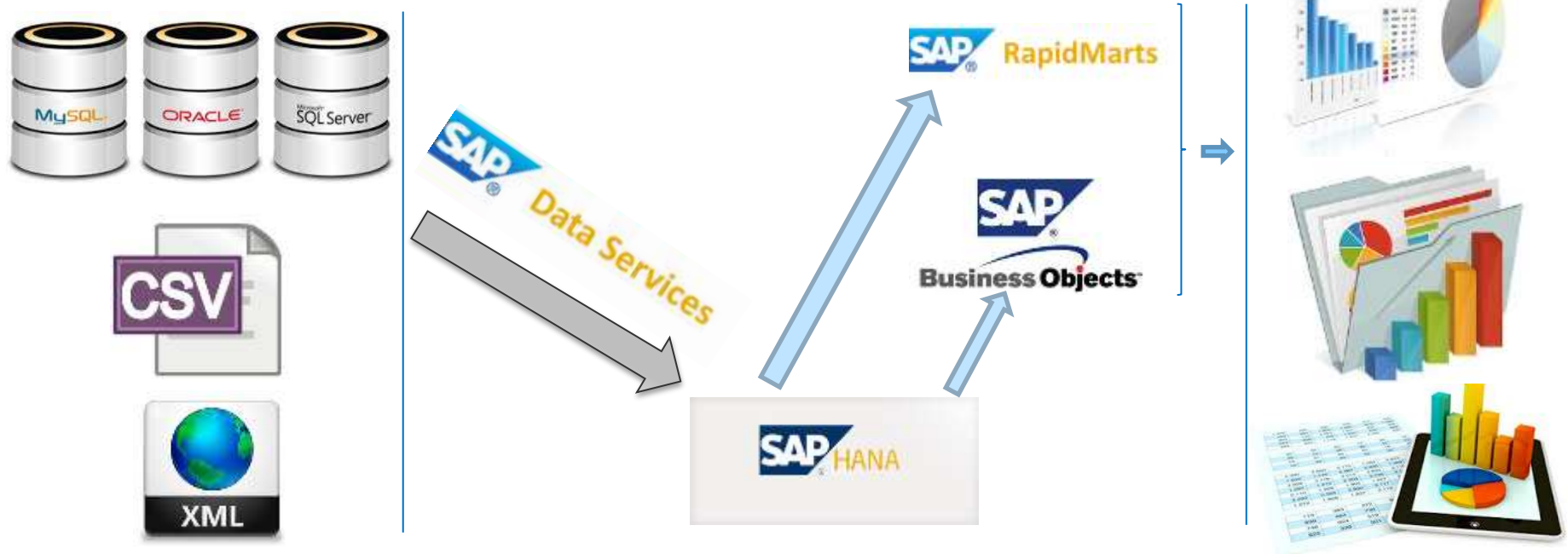
SAP BI. ETL

- SAP DataServices as ETL (Extract-Transform-Load) and DataQuality tool

- Gather data from different sources

- Data Quality Governance and Reconciliation

- Push data to reporting schema on HANA

SAP BI. Reporting.

- **Rapid Mart universes** for standard Financial, Marketing, Sales, Purchasing reports on top of data in HANA.
  - o Most of cases covered automatically
  - o HANA based reports **11 times faster** than on initial data sources.
- Custom universes for non-standard business reports based on On-a-fly (online/without latency) logical **Dimensional Data Storage service** - HANA analytic views
  - o No need to create physical DDS separately
  - o Less storage utilization
  - o Less ETL work
  - o Low Latency
  - o Analytic View based universe can't be customised
- Separate universes based on data from calculated views for heavy reports with complex calculations.
  - o 8 times faster than BObj based calculations.
  - o Takes more development time.

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SAP BI. Business results

Consolidated downstream Master Data

4 methods of delivery

Low data latency

EOL of legacy systems

Mobile reports

Self-service solution (for ad-hoc reports)

- Over 400 reports and dashboards cover all enterprise areas and business needs
- High performance reports (dramatically 20 sec)

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Summary

- PartnerEdge program allowed us building the HIDP demo platform just a few months

- HANA technology fully corresponds our expectations

- A new Fraud Detection product created

- A new opportunity for Fraud Detection as a Service evaluated

- Focus on modern SAP technologies allows us to be sure in near future success

Questions?

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Сертифицированное оборудование HANA
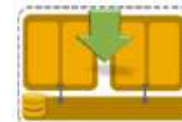
	IBM	HP	HITACHI Inspire the Next	CISCO	DELL	FUJITSU	NEC	VCE	HUAWEI	lenovo (только Китай)
XS: 128 ГБ	X	X		X	X	X	X		X	
S: 256 ГБ	X	X	X		X	X	X			
S+: 256 ГБ	X	X	X	X	X	X			X	
M: 512 ГБ	X	X	X	X	X	X			X	X
M+: 512 ГБ	X	X	X			X				
L: 1,0 ТБ	X	X	X			X	X		X	
Горизонт. масшт. (BW)	S–L	M	M, L	M	M	S–L	M	M	В плане	
SoH: 1/2/4 ТБ	1/2/4	1/2/4	2/4	1	1	1/2/4	1/2		1/2/4	
Высокая доступность	X	X	X	X	X	X	X		В плане	
DR: асинхр. тираж. памяти										
DR: синхр. тираж. памяти	X	X	X	X		X		В плане		

Thank you

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