
SAP HANA Workshop

Kapitola 1: Úvod

Jakub Vajda, konzultant



Obsah

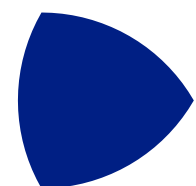


Úvod



Obsah

Úvod



SAP HANA – Obsah

Seznam témat k prezentaci

- Úvod
 - Potřeby moderní platformy
 - Jak do toho zapadá SAP HANA?
 - Základní popis funkcionalit
 - SAP HANA komponenty
- Technologie
 - In-memory koncepty
 - Architektura Systému
 - Edice
 - Nasazení

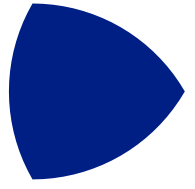


Google Cloud Platform



Obsah

Úvod



SAP HANA – Úvod

(Dnešní svět)



The world is increasingly digital and networked

Last 2 years

90%



Of the **world's data** has been generated¹

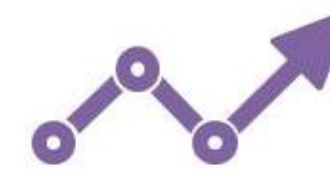
Expectation for next 5 years

85% of **CFO's**

Believe success will depend on **adaption to complexity** and **innovation speed**⁶

Last 2 years

40%



Growth in adoption of **business networks**²

By 2020

9 billion



Mobile users in the world⁴

End of 2020

212 billion



"Things" will be **connected**³

In 2016

38%



Of workloads are processed in the **cloud**⁵

¹ [ScienceDaily](#), May 22, 2013.

² [Technology Adoption Report on Business Networks](#), Ardent Partners, 2014.

³ [Internet of Things \(IoT\) 2013 to 2020 Market Forecast: Billions of Things, Trillions of Dollars](#), IDC, 2013.

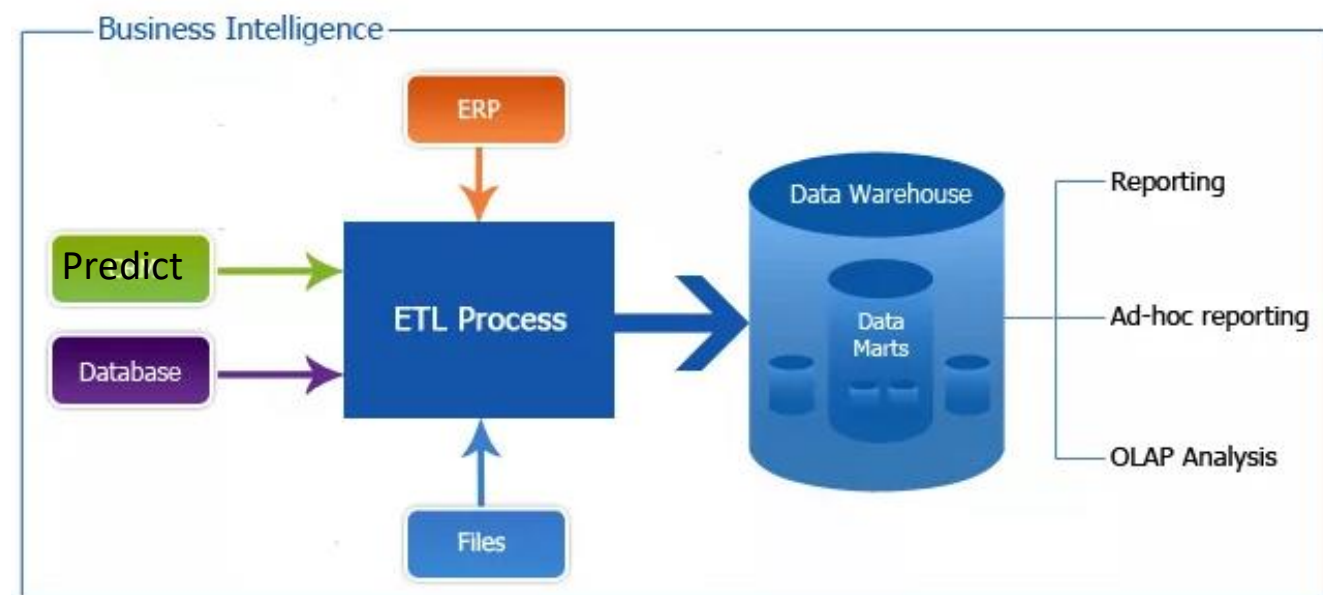
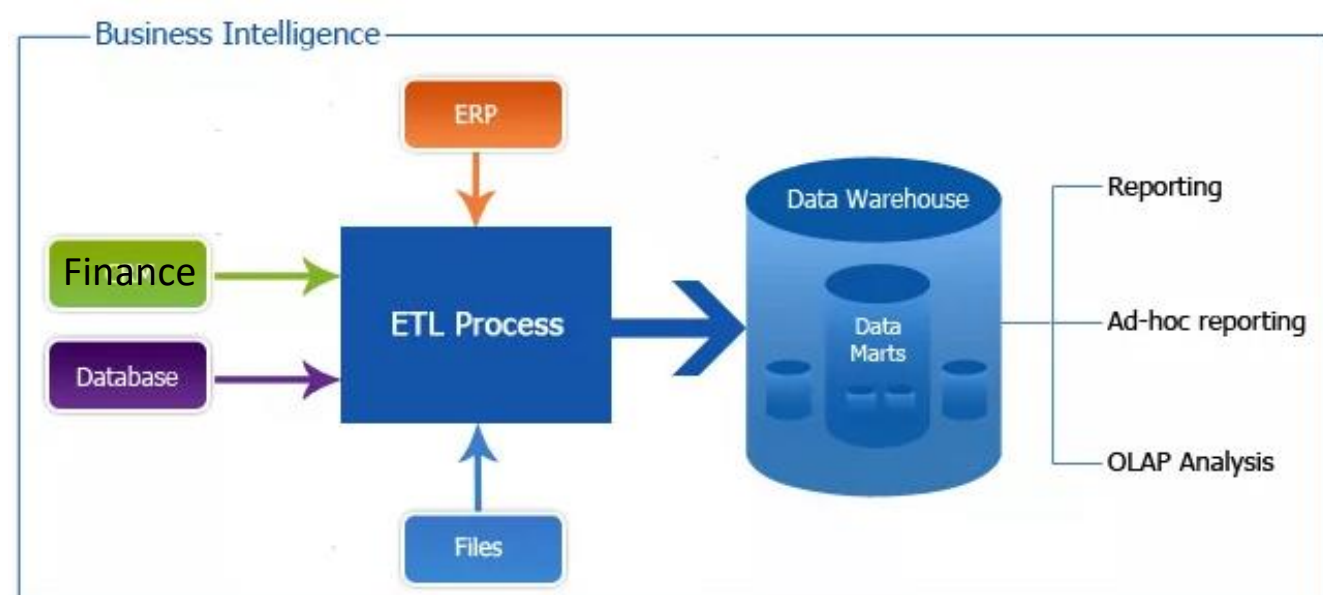
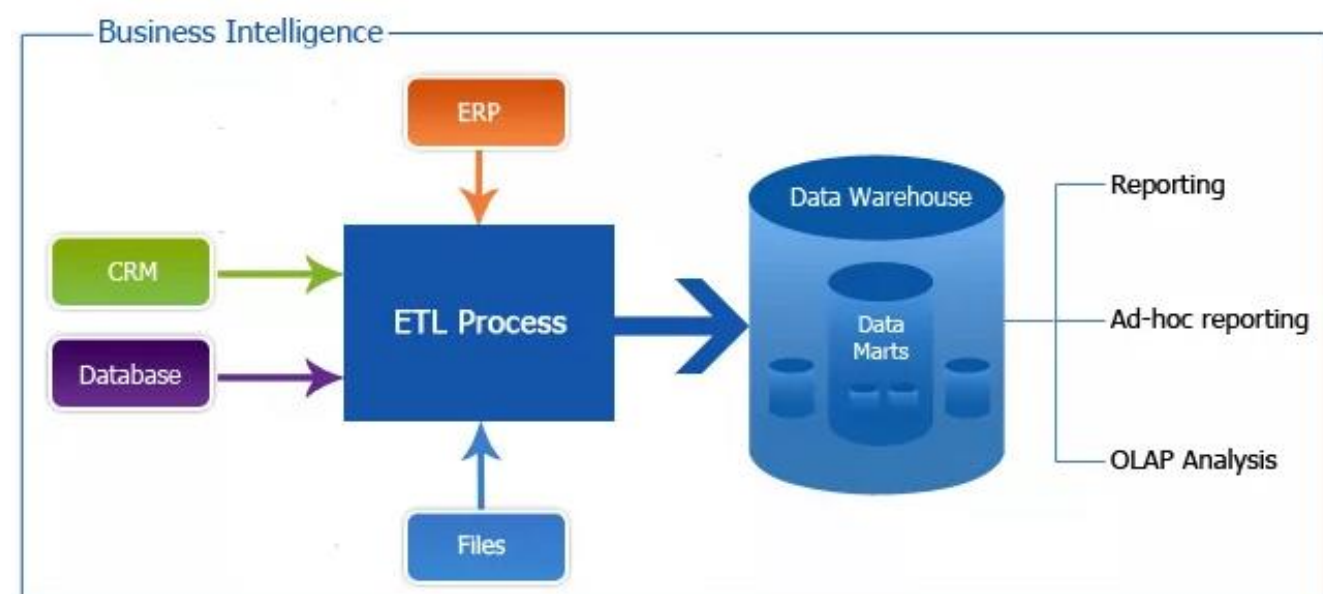
⁴ [Statista](#), 2014.

⁵ <http://cloudtweaks.com/2013/06/cloud-infographic-the-content-cloud/>

⁶ CFO Research 2015

SAP HANA – Úvod

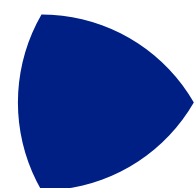
Výzvy



- Aplikační “sila”
- Mnohonásobné rozkopírování dat
- Dávkové zpracování

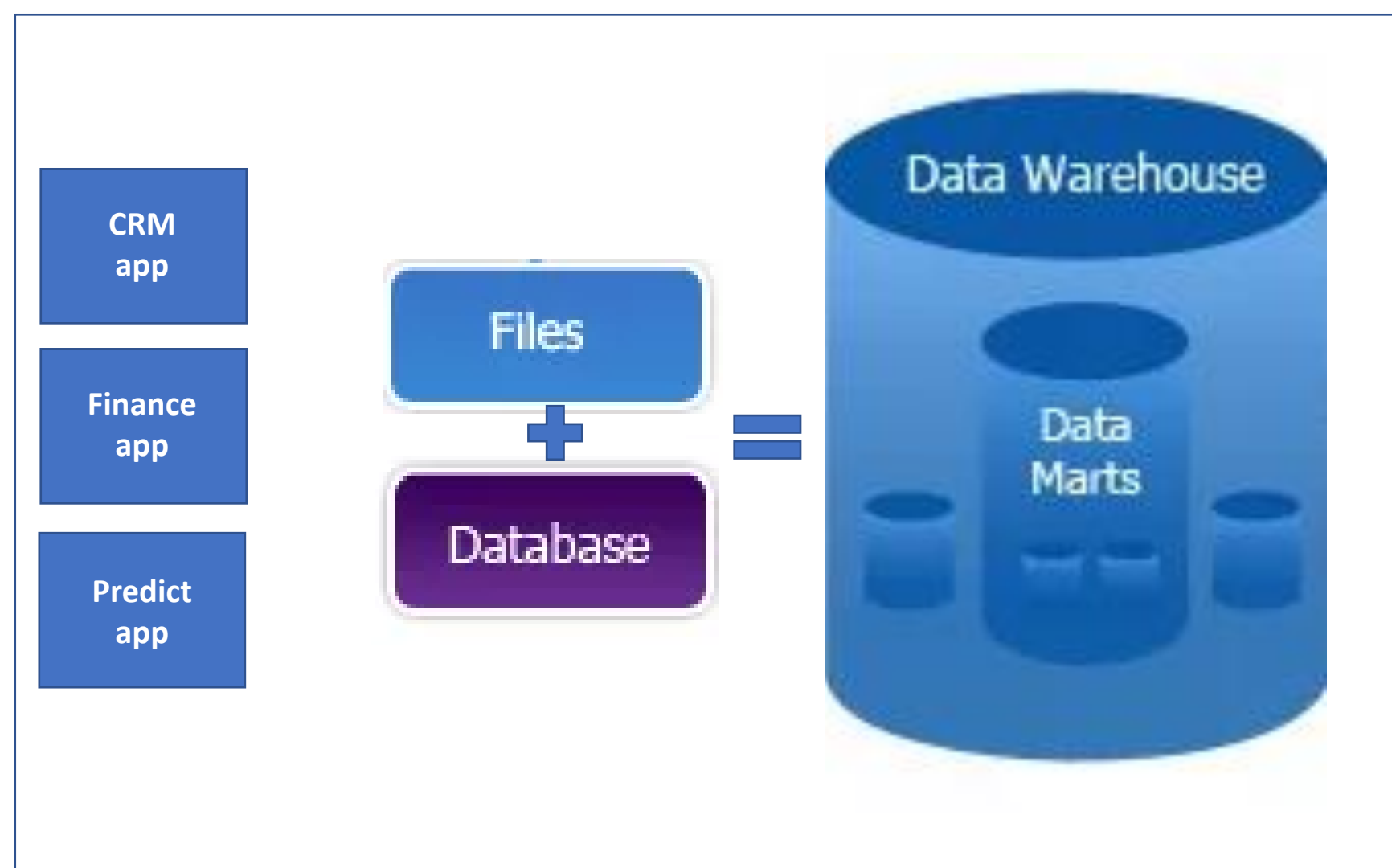


- Částečný náhled na business
- Žádná real-time analýza
- Omezená možnost inovací



SAP HANA – Úvod

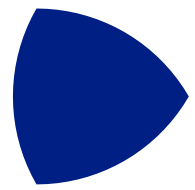
Jedna platforma pro všechny aplikace



- Spojené aplikační vytížení
- Spojená data – jedna kopie
- Zpracování real-time



- Kompletní náhled na business
- Možnost real-time odpovědi
- Možnost inovovat

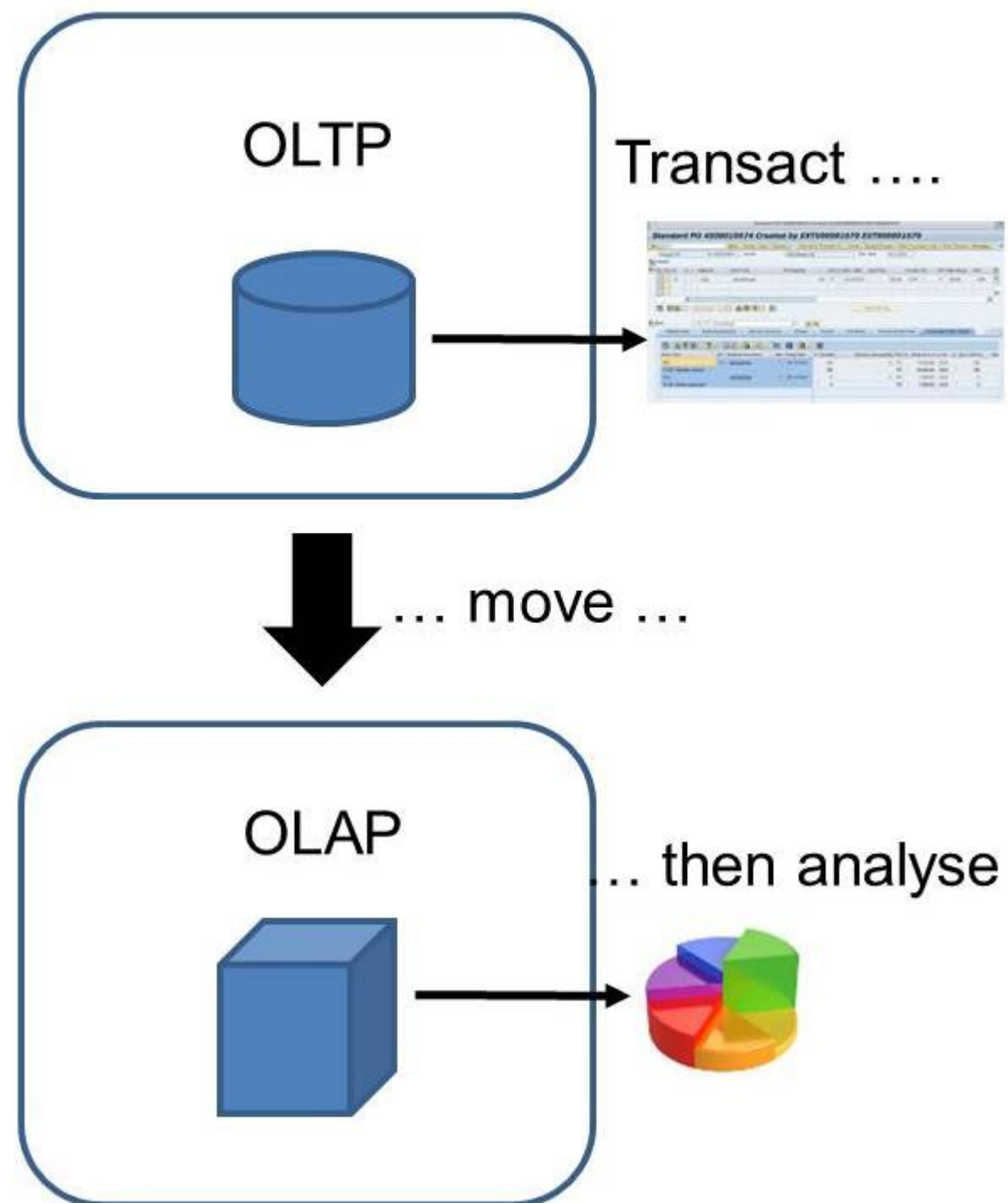


SAP HANA – Úvod

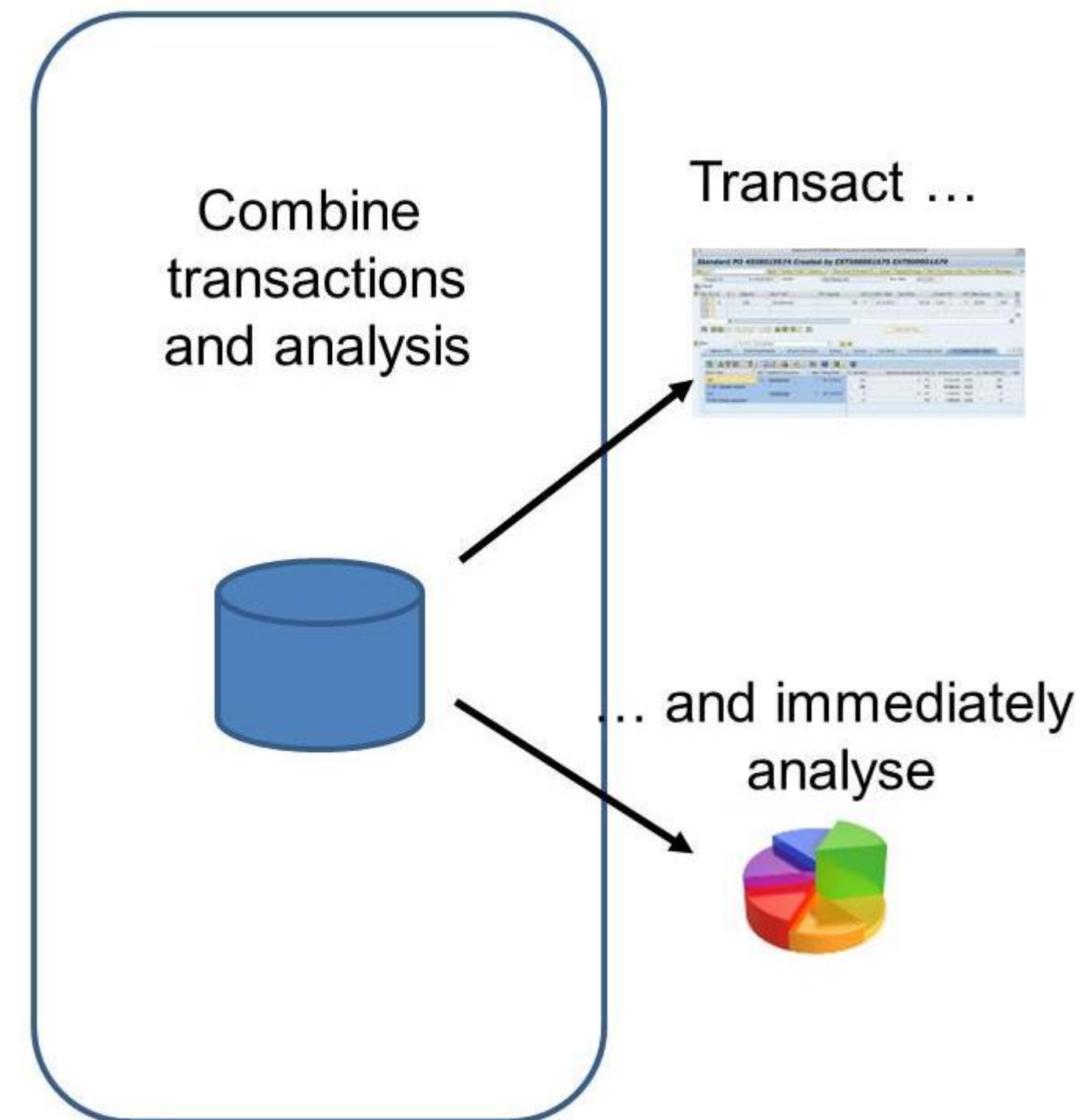
Jedna platforma pro všechny aplikace

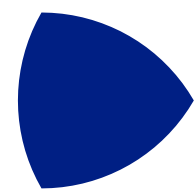


Traditional approach



SAP HANA approach



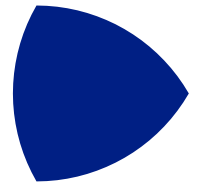


SAP HANA – Úvod

Co je SAP HANA?

SAP HANA ~ modern, in-memory database + platform deployable on-premise or in the cloud





SAP HANA – Úvod

Co je SAP HANA?

SAP HANA ~ modern, in-memory database + platform deployable on-premise or in the cloud

MaxDB (with in-memory liveCache engine) ~ 1997 - 2000

TREX search engine became SAP component in 2000

P*Time (in-memory OLTP) acquired by SAP in 2005

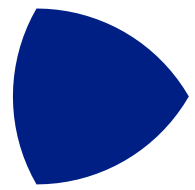
Sybase acquired by SAP in 2010 (Sybase integrated)

1st platform demonstration 2008 (Hasso Platner Institute)

1st product shipped in late November 2010

1st managed private cloud service in May 2013

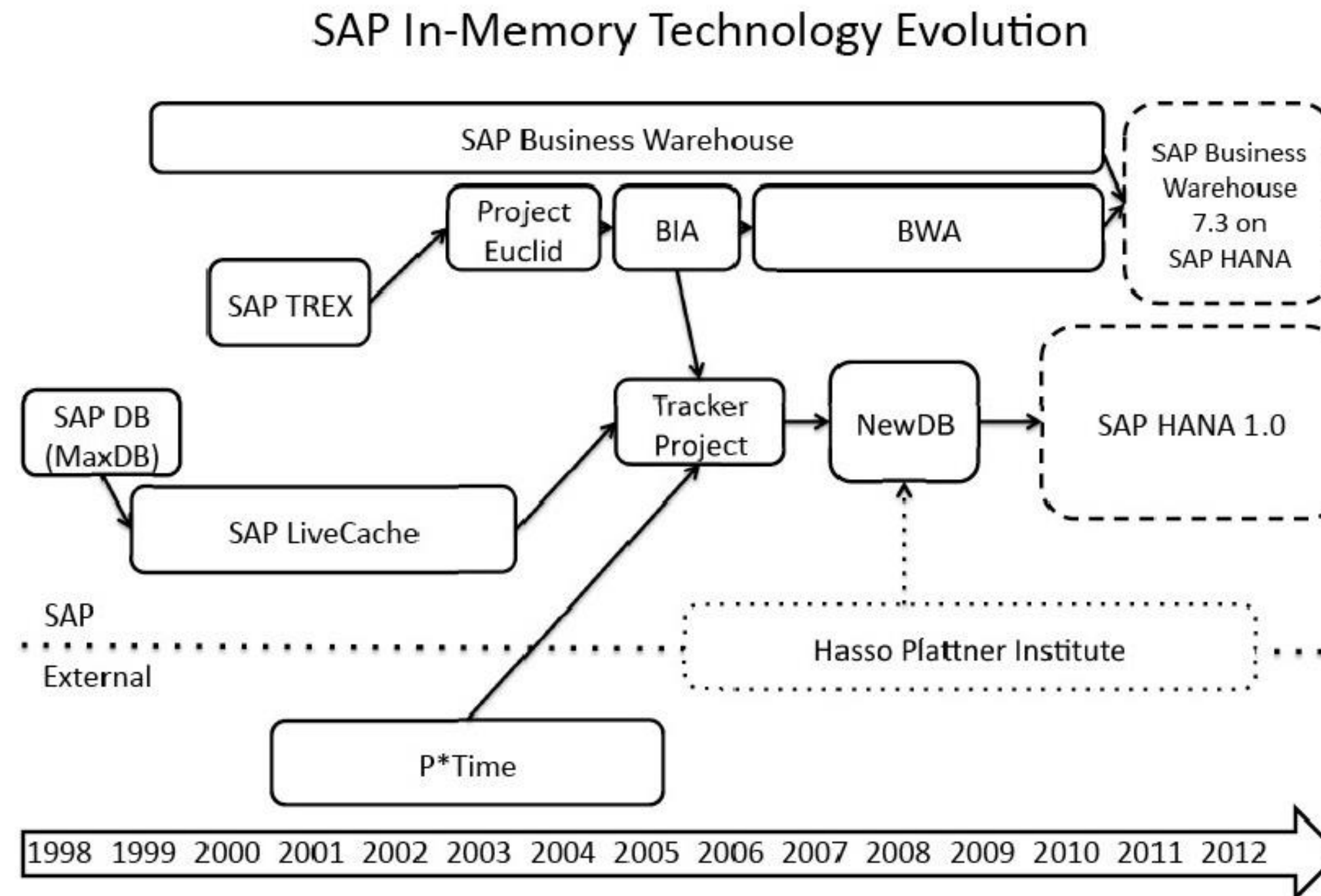
2nd version of HANA announced in November 2016

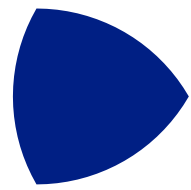


SAP HANA – Úvod

Co je SAP HANA?

SAP HANA ~ modern, in-memory database + platform deployable on-premise or in the cloud





SAP HANA – Úvod

SAP HANA jako moderní platforma



SAP HANA ~ **modern**, in-memory database + platform deployable on-premise or in the cloud



SAP HANA is the first major database optimized for Intel® Optane™ DC persistent memory, enabling it to **process larger volumes of data in real time** with increased memory capacity while reducing TCO.

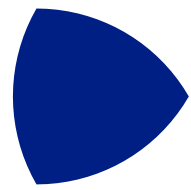


SAP HANA **connects with existing applications using open standards** and offers a choice of ways to build applications that are Web based or based on microservices.



SAP HANA, express edition, can be used for developing real-time applications directly on your PC, Mac, or in your private cloud.

Zdroj <https://www.sap.com/products/hana.html?pdf-asset=9629f881-217c-0010-82c7-eda71af511fa>



SAP HANA – Úvod

SAP HANA jako moderní platforma



SAP HANA ~ **modern**, in-memory database + platform deployable on-premise or in the cloud



You can **minimize downtime and shorten recovery times** using multitier and multitarget secondary systems and one of several high-availability and disaster-recovery solutions delivered with SAP HANA.

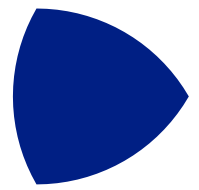


Real-time, embedded data anonymization technology lets you squeeze maximum value from all your data while supporting compliance with increasingly strict data protection regulations.



Features for remote data synchronization help you **synchronize data bidirectionally** between SAP HANA and the SAP SQL Anywhere suite.

Zdroj <https://www.sap.com/products/hana.html?pdf-asset=9629f881-217c-0010-82c7-eda71af511fa>

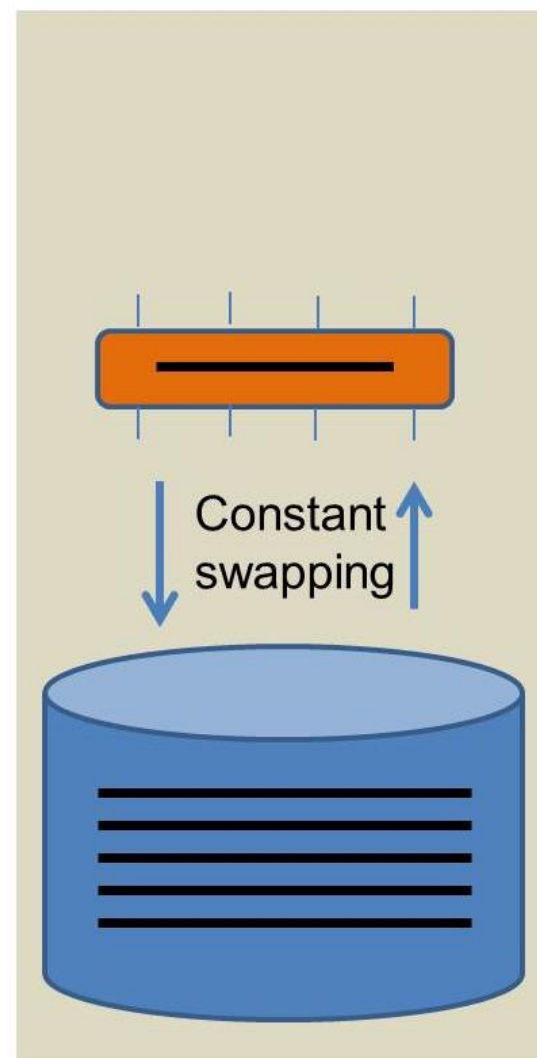


SAP HANA – Úvod

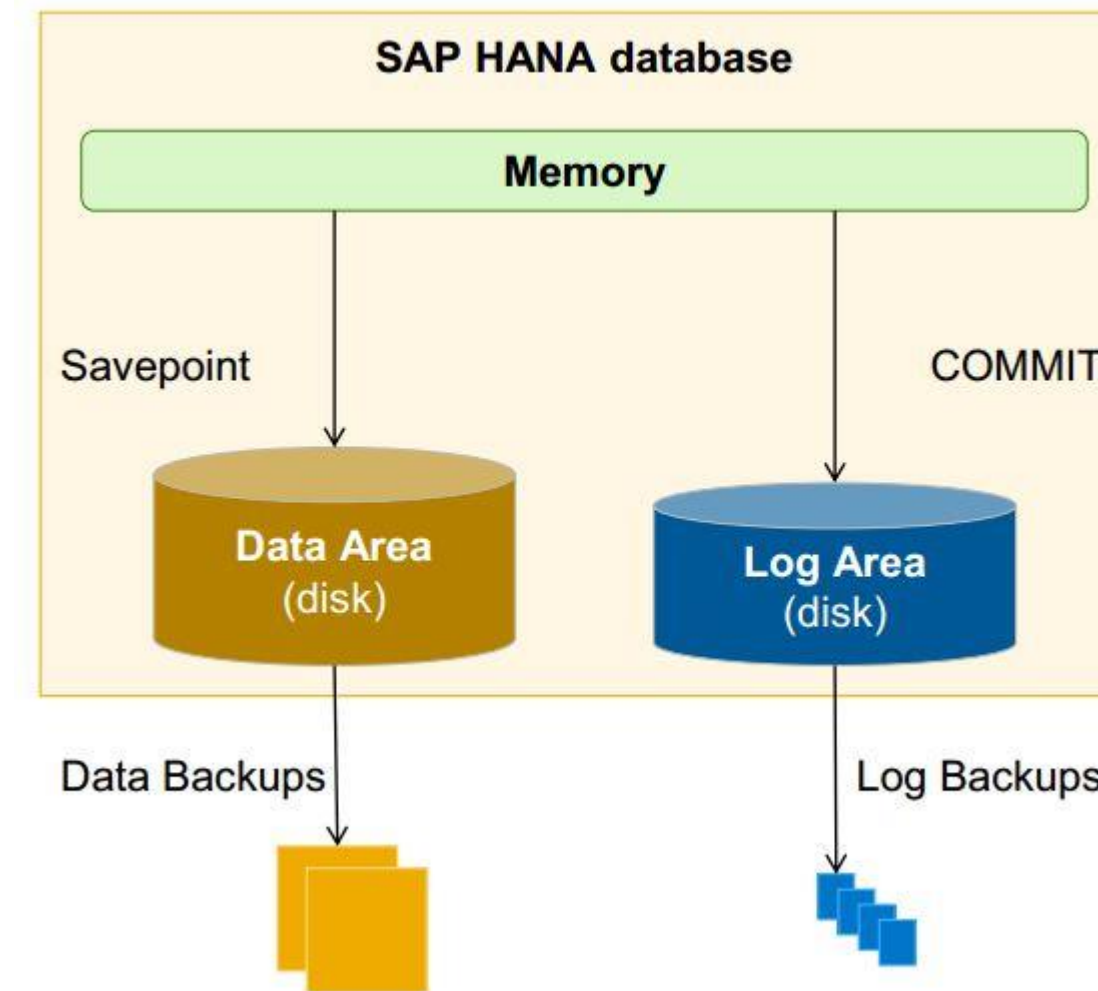
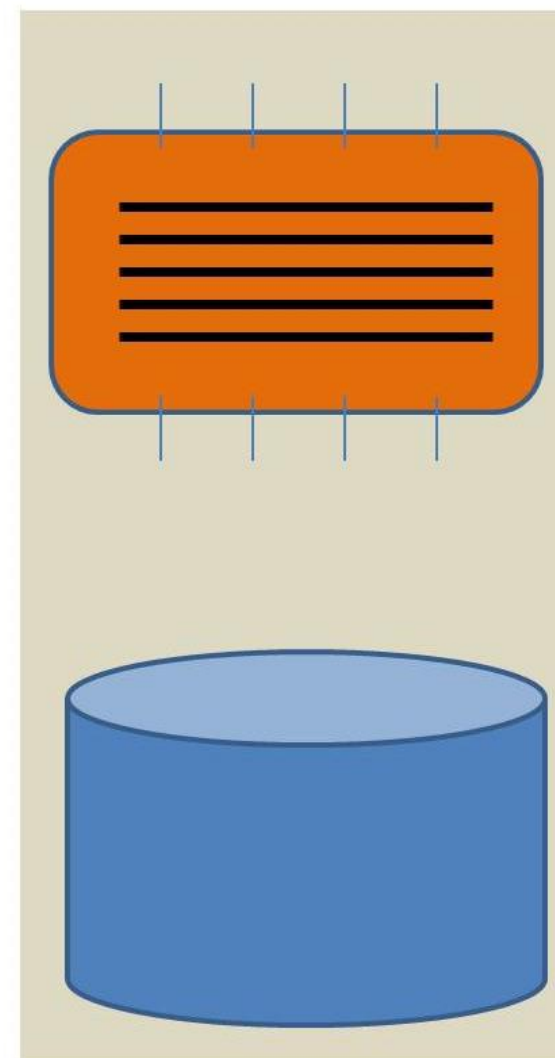
In-memory

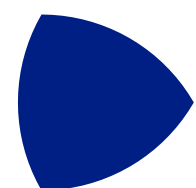
SAP HANA ~ modern, **in-memory** database + platform deployable on-premise or in the cloud

Before : Database on disk



Now : Entire database in memory

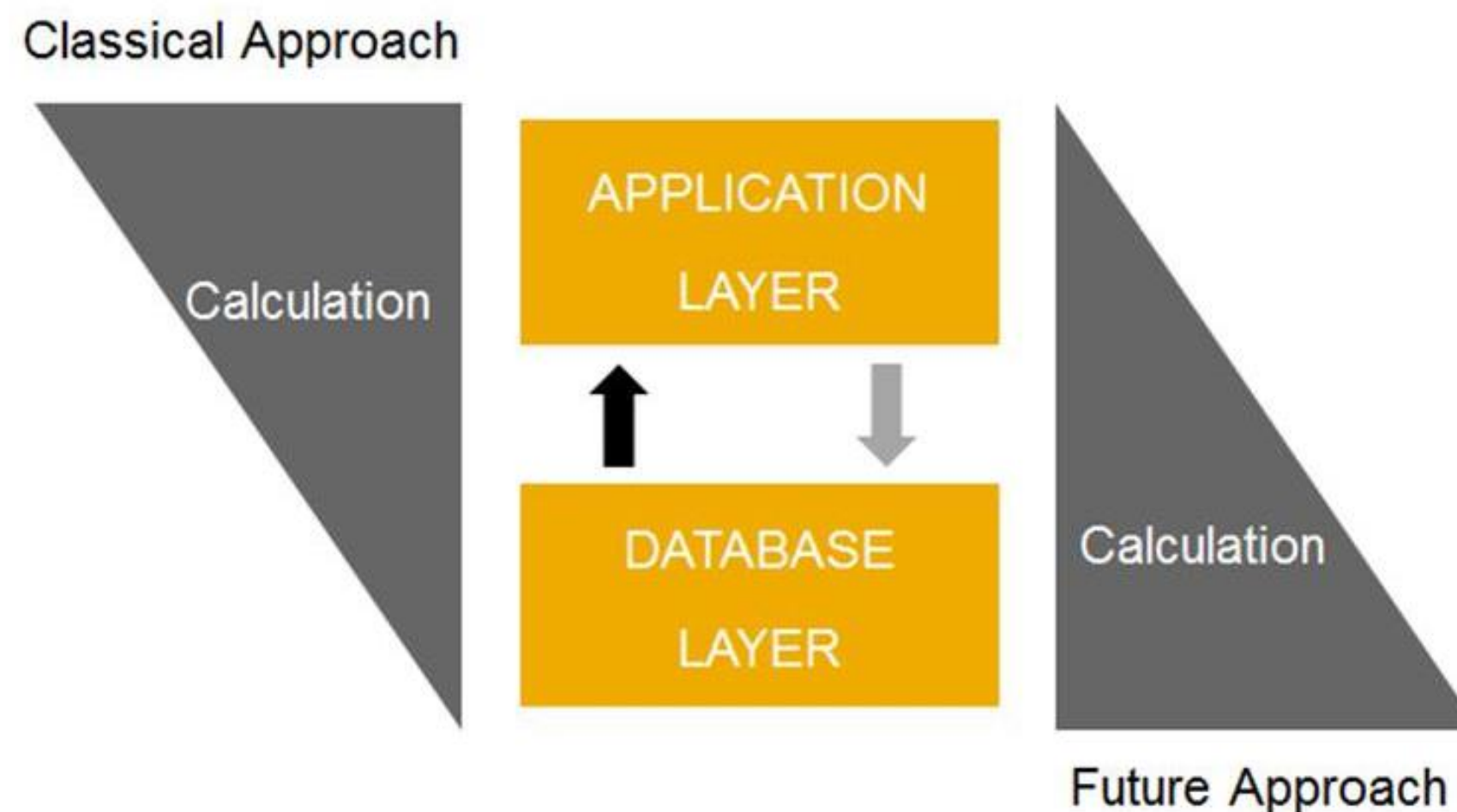




SAP HANA – Úvod

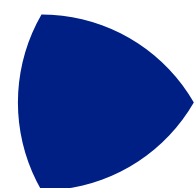
Databáze a platforma

SAP HANA ~ modern, in-memory **database** + **platform** deployable on-premise or in the cloud



→ **MOVE** calculations to database

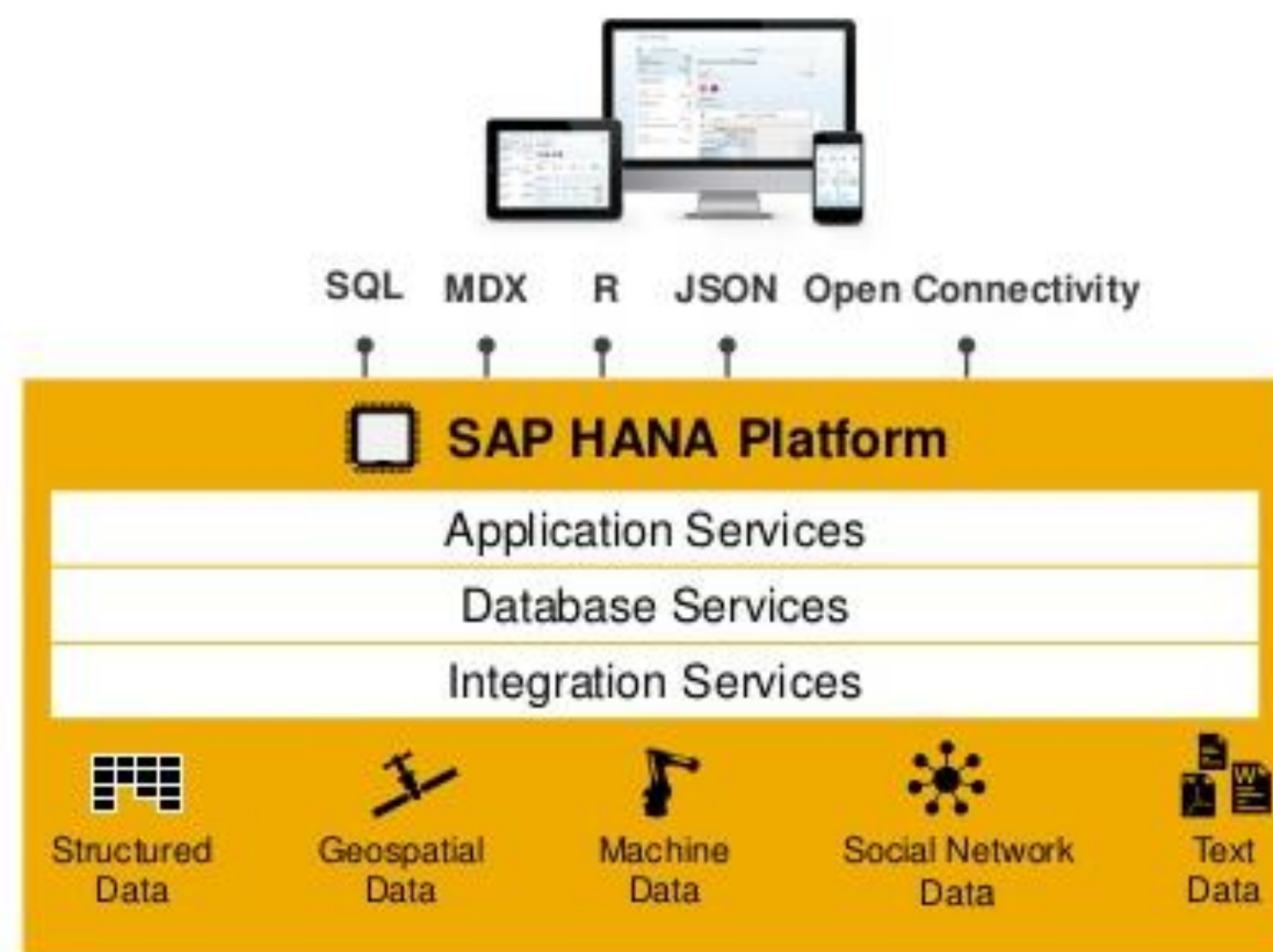
→ Only transfer **RESULTS**



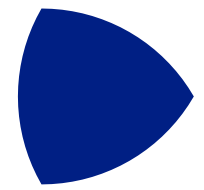
SAP HANA – Úvod

Databáze a platforma

SAP HANA ~ modern, in-memory **database** + **platform** deployable on-premise or in the cloud



- > Consumer-grade experience
- > Open Interfaces
- In-Memory
- > OLTP & OLAP
- All Data – one copy
- Embedded Libraries



SAP HANA – Úvod

Cloud vs On-Premise

SAP HANA ~ modern, in-memory database + platform deployable **on-premise** or **in the cloud**



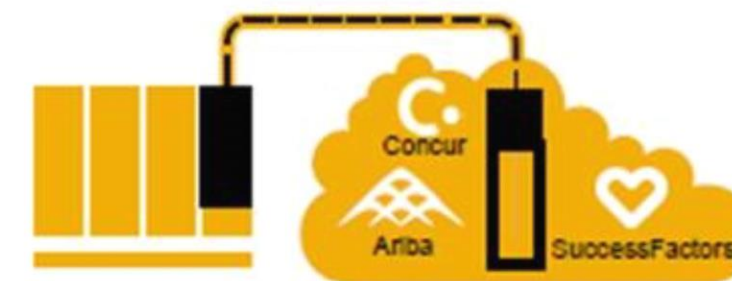
Cloud

Run all applications in the cloud



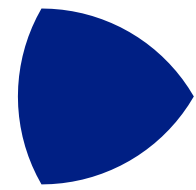
On Premise

Run all applications on premise



Hybrid

Leverage right deployment option that meets business priorities



SAP HANA – Úvod

Powering SAP Enterprise Applications with SAP HANA

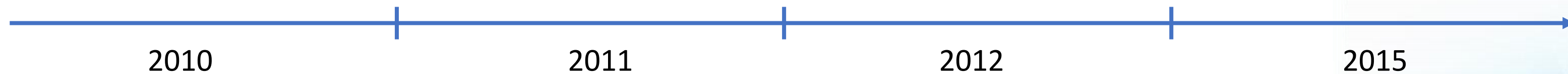


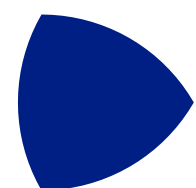
- In-memory platform

- Real-time analysis
- Real-time reporting

- Real-time business
- OLAP + OLTP
- SAP HANA Enterprise Cloud for SAP Business Suite on SAP HANA

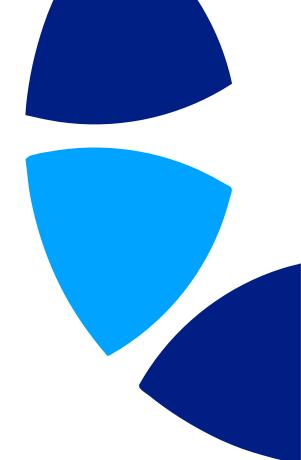
- Simplified data model
- New user experience
- Advanced processing
- Choice of deployment
- Multitenancy





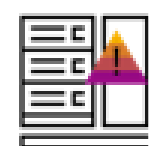
SAP HANA – Úvod

Přehled platformy



SQL JSON ADO.NET J/ODBC OData HTML5 MDX XML/A

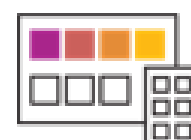
Application Services



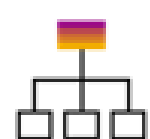
Web Server



JavaScript



Fiori UX



Graphic Modeler



Application Lifecycle Management

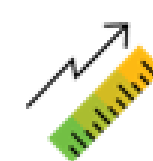
Processing Services



Spatial



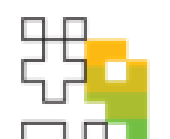
Graph



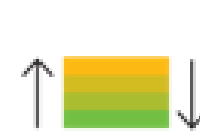
Predictive



Search



Text Analytics



Streaming Analytics



Series Data



Business Functions



Document Store

Integration Services



Data Virtualization



ELT & Replication



Data Quality



Hadoop & Spark Integration

Database Services



Columnar OLTP + OLAP



Multi-Core & Parallelization



Advanced Compression



Multi-tenancy



Multi-Tier Storage



Data Modeling



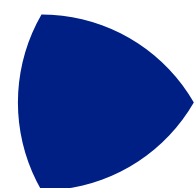
Openness



Admin & Security



High Availability & Disaster Recovery



SAP HANA – Úvod

Typy dat a zdroje

- Enterprise Systems (ERP)
 - Data Warehouses
 - Archives
 - Big Data
 - File Stores
 - Databases
- Social Networks
 - Sensors

Data
Types

SAP
HANA
Platform

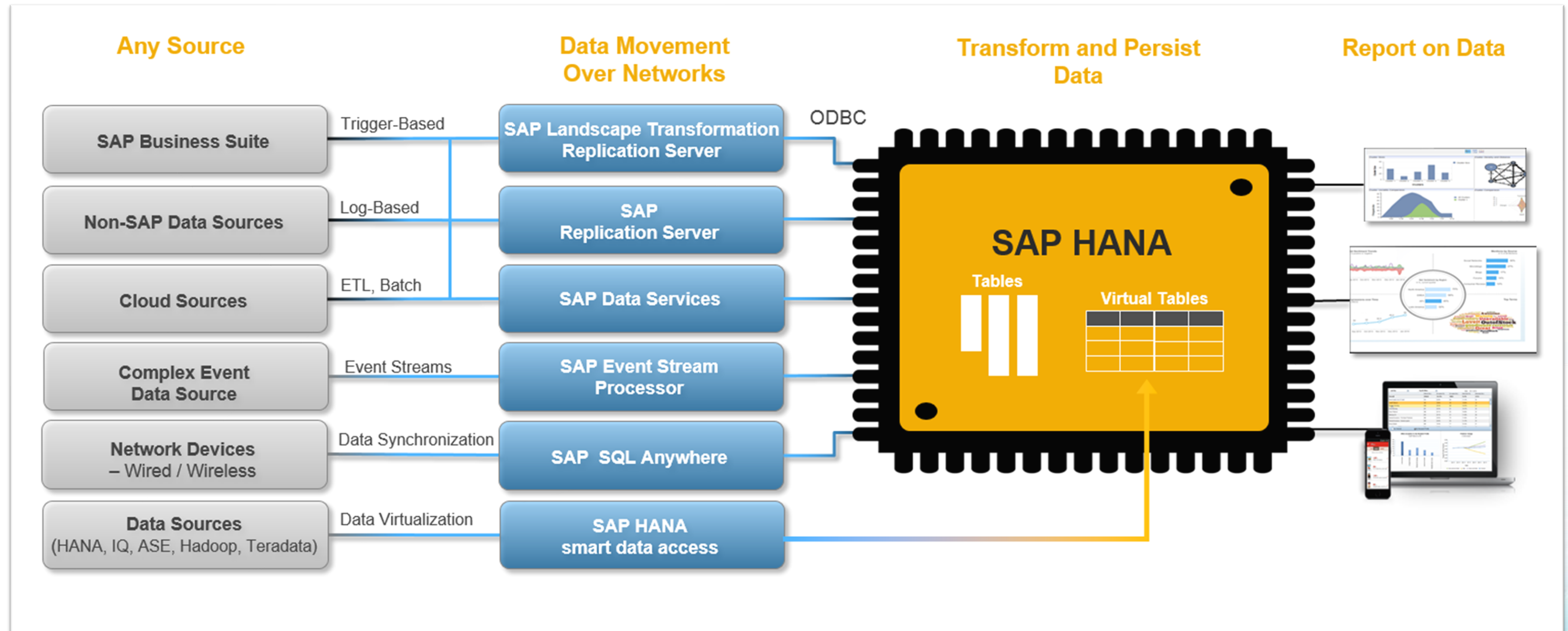
Data
Sources

- Structured data
- Text Data
- Spatial Data
- Graph Data



SAP HANA – Úvod

Typy zdrojů, přenosů a výstupů

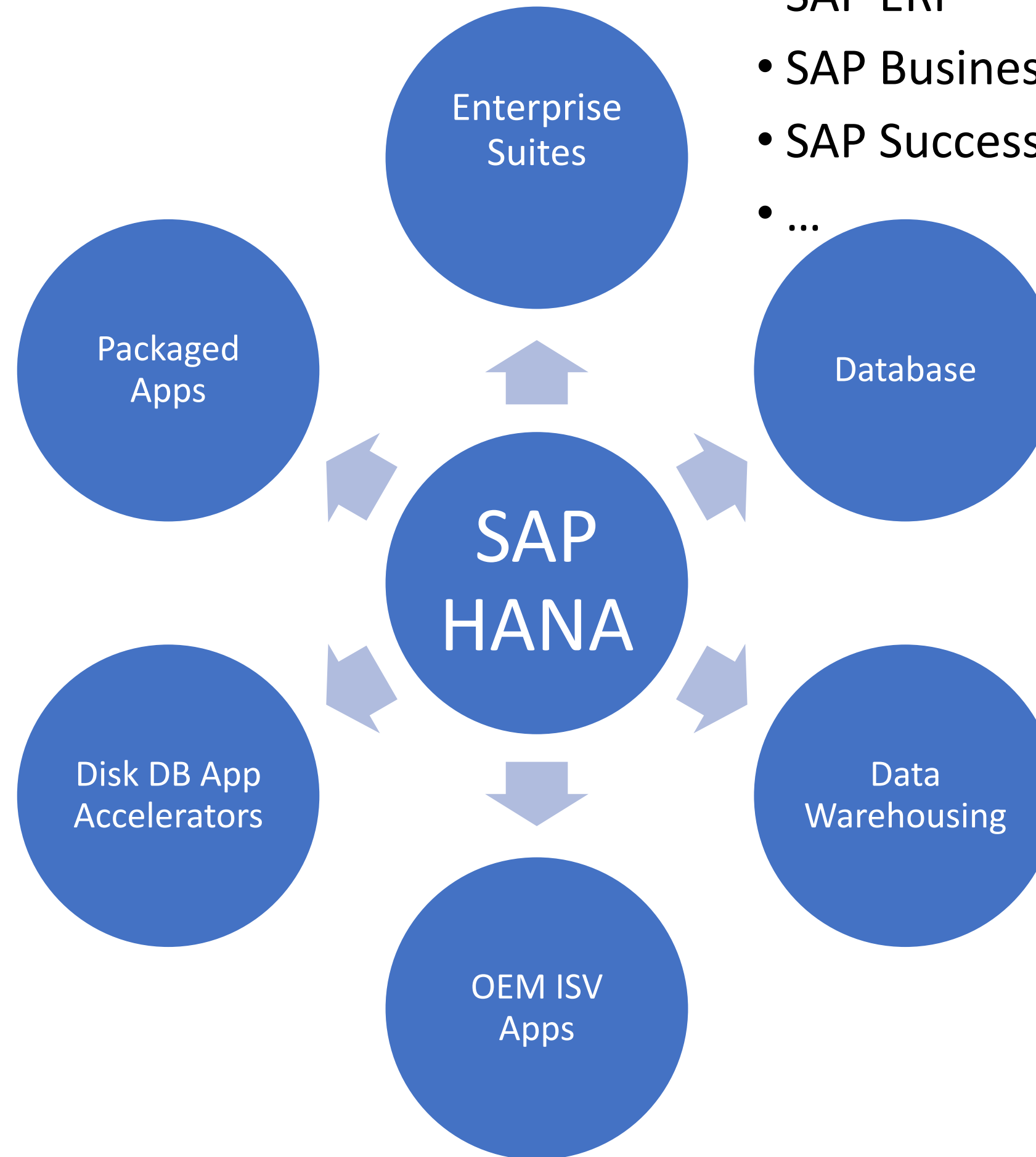


SAP HANA – Úvod

Scénáře nasazení

- SAP Smart Meter Analytics
- Cash and Liquidity Mgmt

- SAP CO-PA Accelerator
- Customer Segmentation
- SAP ERP Operational Reporting Acc

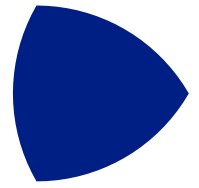


- SAP ERP
- SAP Business One
- SAP Success Factors
- ...

- General Purpose Database
- SAP BI on Demand
- 2 & 2.5 tier applications

- SAP NetWeaver Business Warehouse
- Real-time Data Marts

- Medidata, MKI, Taulia, Opera, ...



Stability

SAP HANA SPS12

- ❑ Digital foundation to run applications without maintenance upgrade disruptions
- ❑ No new support package stacks (SPS)
- ❑ Maintenance revisions for SAP HANA SPS12 is provided until May 2019

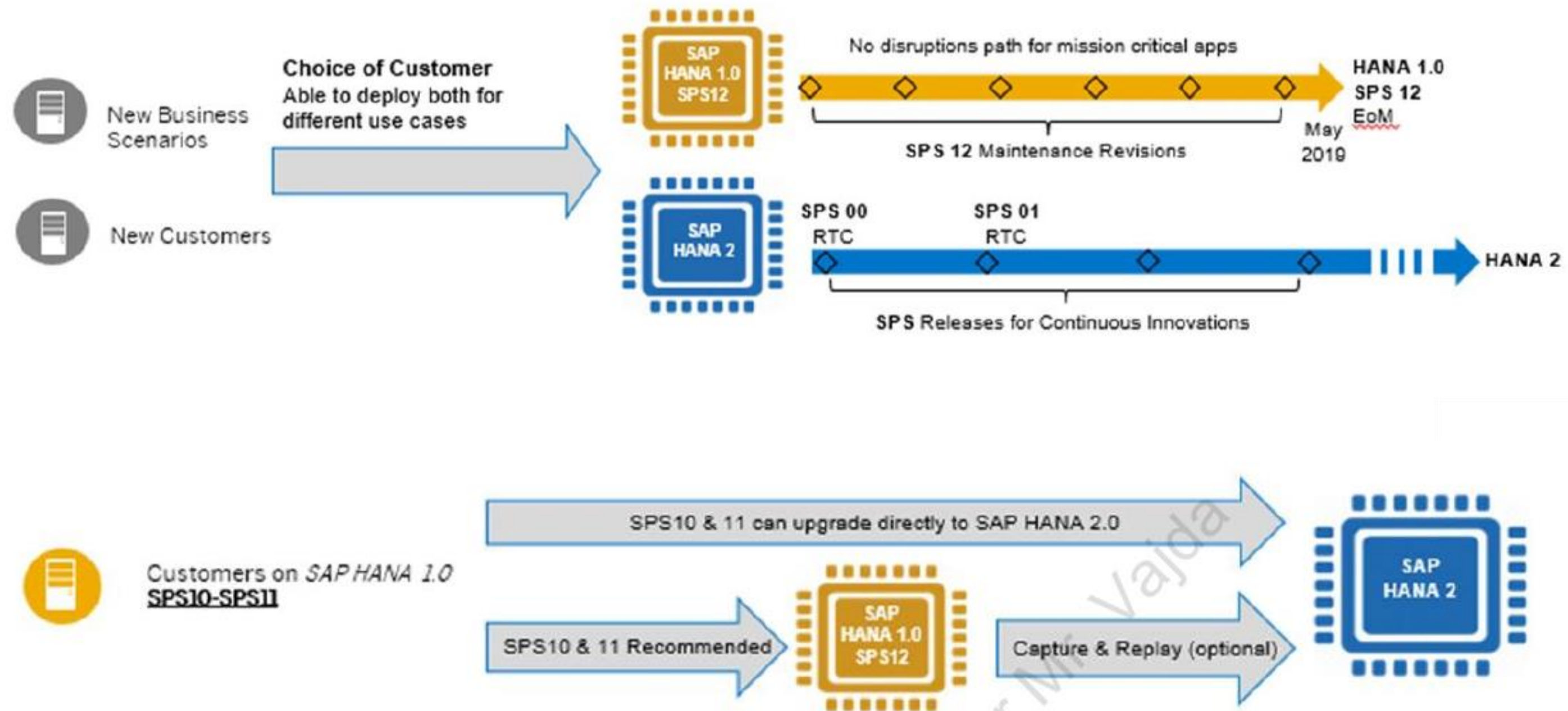
Innovation

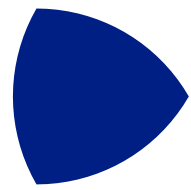
SAP HANA® 2

- ❑ Digital foundation to build next-generation applications using the latest technology innovations
- ❑ Twice-a-year support package stacks (SPS)
- ❑ Maintenance for SPS provided until next 2 SPSs are released (Example: SPS00 supported until SPS02 is released)

SAP HANA – Úvod

Maintenance schedules / Upgrade paths



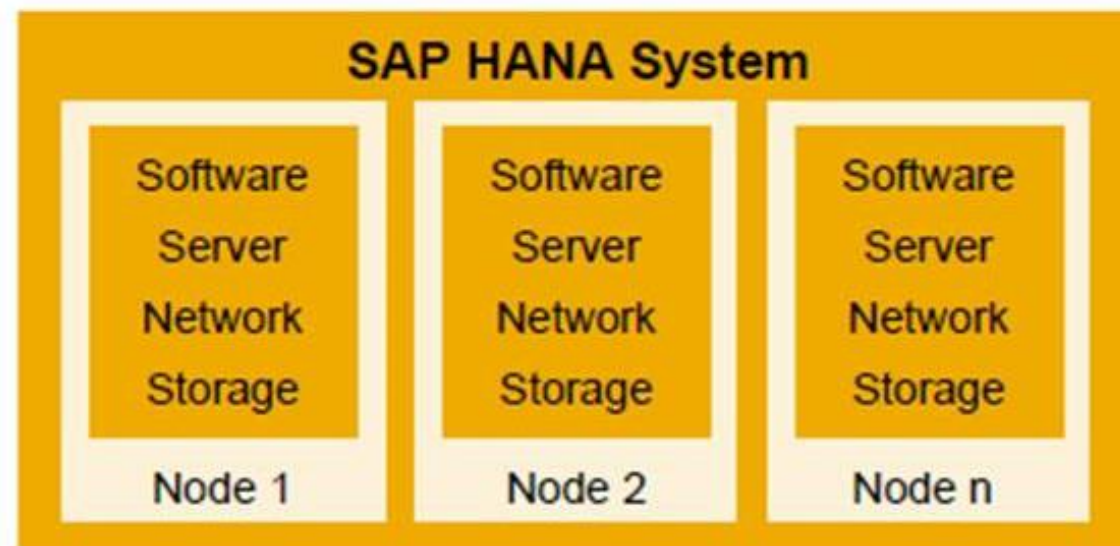


SAP HANA – Úvod

Výběr konfigurace

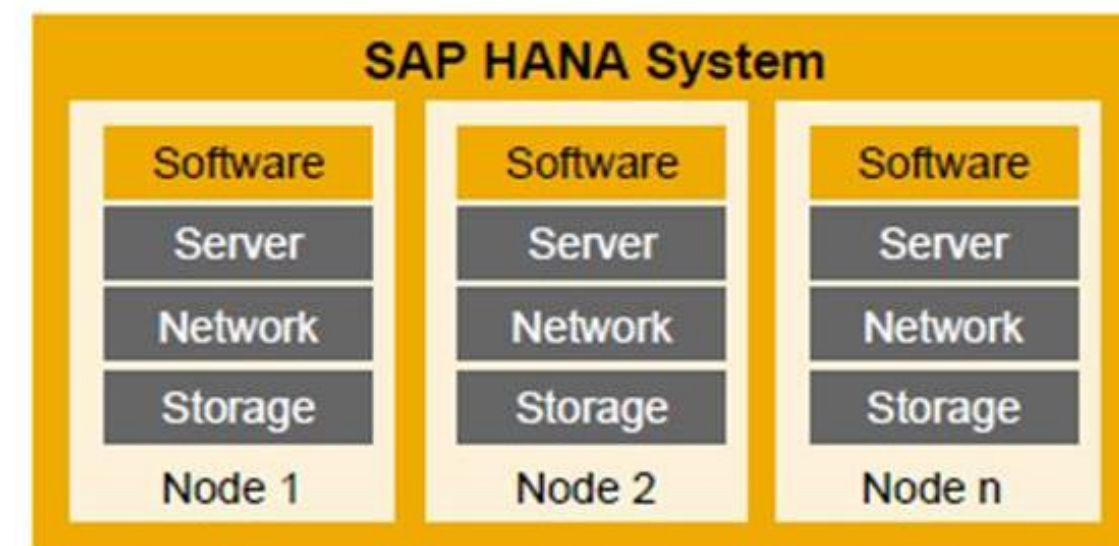


Appliance



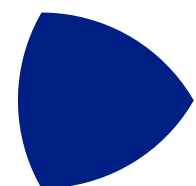
All in one box by certified partners
(850+ configurations – 128 GB to 12 TB)

Tailored Data Center Integration



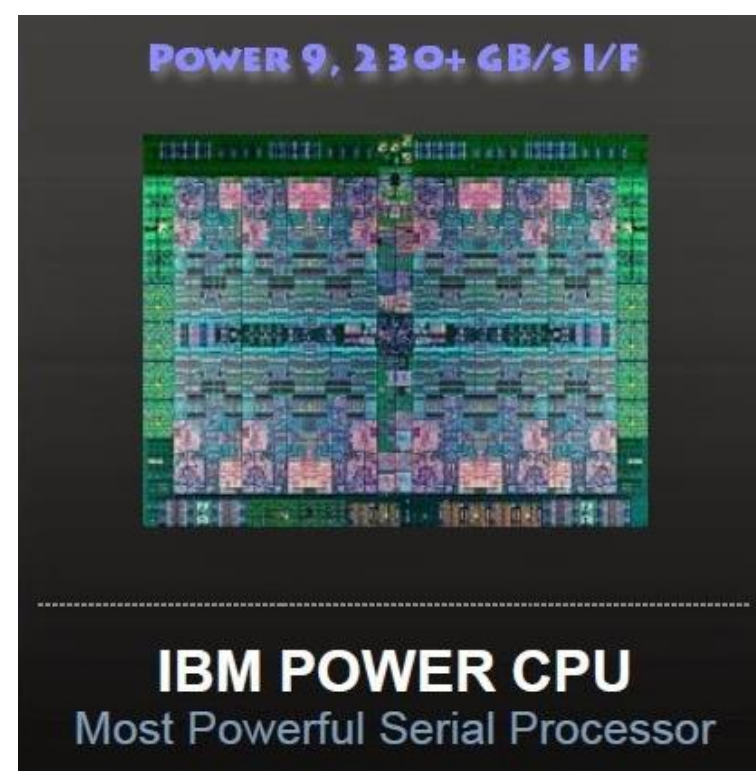
Choice of components that meet SAP
requirements from different vendors





SAP HANA – Úvod

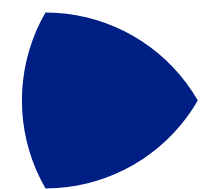
Podporované operační systémy a chipsety



redhat®



SUSE®



Děkuji za pozornost



Part of the Midis Group

Jakub Vajda

konzultant

Jakub.vajda@mdsaptech.cz



linkedin.com/company/mdsap



[@MDSapTech](https://twitter.com/MDSapTech)



slideshare.net/MDSapTech



www.mdsaptech.com

