

# RISE with SAP S/4HANA, private cloud edition – Key benefits and values



#### **Business Benefits**

- Full scope of SAP S/4HANA scope incl. LOB and industry processes, supporting 25 industries
- Wide range of partner add-ons allowed
- 64 Country/Region versions in 39 languages
- SAP concierge service to simplify move to the cloud

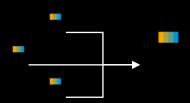


- Simplified system conversions and brownfield migrations into the cloud
- Application and technical operations from one vendor
- Safeguarded prior investments into new SAP systems



#### **Technical Benefits**

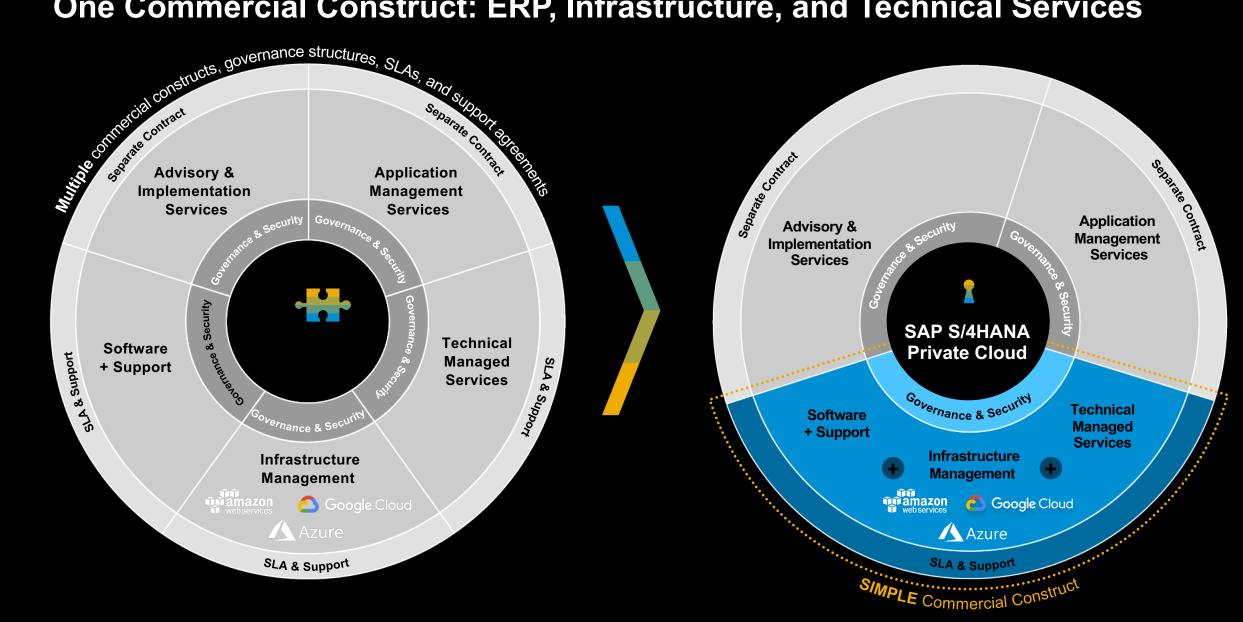
- Access to S/4HANA
   Extensibility Framework
- Side-by-side and In-App extensions
- Code enhancement & code modifications allowed
- Expert configuration (full IMG access)
- Scalable platform



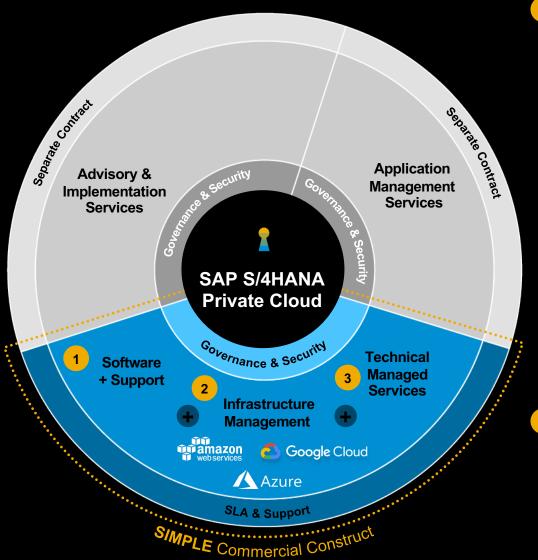
#### **Operational Benefits**

- Resilience and TCO of hyperscaler infrastructure
- Technical operations done by SAP
- Upgrade installation on customer request

# One Commercial Construct: ERP, Infrastructure, and Technical Services



## SAP S/4HANA, private cloud edition: SAP-provided scope



#### 1 Functional Scope:

- SAP Software + Enterprise Support based on SAP S/4HANA Enterprise Management (On-premise)
- Cloud Connectors: SAP Ariba, SAP SuccessFactors, SAP Concur, SAP IBP
- SAP Adobe Document Services for printing
- Available: SAP S/4HANA LoB & Industry Add-Ons (optional), Beyond S/4HANA Solutions
- Wide set of partner add-ons are allowed:
  - SAP SOLEX solutions (SAP supported)
  - SAP S/4HANA partner certified solutions (customer supported)
- ABAP-only add-ons (customer supported)

#### 2 Infrastructure Management:

- Low TCO
- Highest Flexibility
- Best scalability option
- Availability
- Data Center Availability

#### 3 Technical Managed Services:

- High Availability & Business Continuity
- SLA: 99,7% for productive system, 95% for non-productive systems
- Services described by Roles & Responsibilities matrix
- Wide range of foundational technical service delivery
- Technical System Operations
- Technical Landscape Deployment
- Technical Upgrade installation
- Continuous Service planning & review
- 24\*7 service delivery for PRD, 24\*5 for non-PRD
- Setup of RFC connections

Additional Technical "Fixed Scope & Price" Packages available by SAP (CAS) Cloud Application Services (Optional)

- Release Version Upgrade
- Application Operations
- Application Monitoring
- Regression Testing
- Data Volume Optimization
- Data Quality Optimization
- Cloud Integration Testing

# SAP S/4HANA: The right fit for every organization

**ONE** Data Model • **ONE** Semantic • **ONE** User Experience

#### As a Service



#### SAP S/4HANA Public Cloud

Complete, modern, SaaS ERP

Our strategic choice for companies ready to embrace the future of ERP with a new implementation and pre-defined processes



#### **SAP S/4HANA Private Cloud**

Cloud value, traditional flexibility & full scope

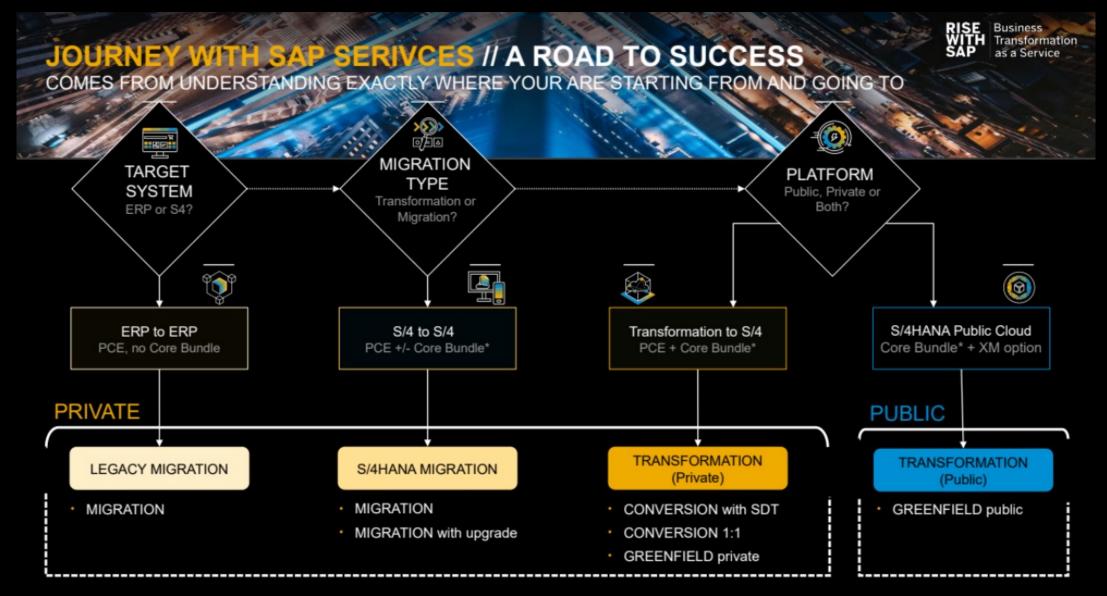
Designed to provide innovation and cloud value while allowing customers to retain their investments by converting their existing system(s)

# What to think about when moving to RISE

#### Parties involved:

- Company
  - Internal resources from Business, IT, Management, Security, Legal
- SAP
- Hyperscaler
- Current hosting partner
- Preferred service partner or SAP reseller
  - Has the preferred partner the required certifications for RISE?
- Others?

#### RISE Roadmap – What is the mot likely RISE Roadmap path?



# What to think about when moving to RISE - II

#### Timeline

- What is the most likely timeline for a RISE migration?
  - (This estimate will provide guidelines for the complete Roadmap)

Prepare current installation to minimize Risk and Effort in a transition

- Readiness reports and following actions
- Data Management
  - Archiving, Decommission, Master Data Management
- Identify and decide what should happen with custom code

# What to think about when moving to RISE - III

#### Current contract, Bill of Material, Use rights

- Are there any special clauses and user rights in the current contract?
- Will the current Bill of Material (BoM) cover the needs going forward
  - Map the current BoM to the RISE BoM
  - Are there SAP functionality/products that is not supported by RISE?
    - Will the functionality/products be needed going forward?
      - If yes, can the run on native Hyperscaler?
- Is there embedded functionality from 3<sup>rd</sup> party SAP vendors in the ERP system(s)?
  - If yes, is the licenses purchased via SAP or direct from the vendor
- As early as possible going through a drafted contract to identify unclear topics

# Move to Rise

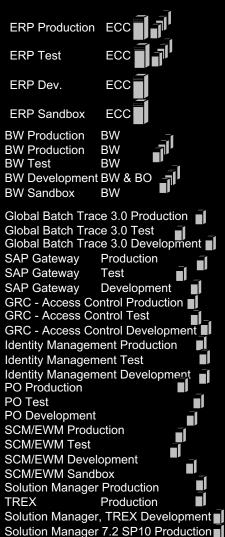
ERP Production ECC

ERP Test ECC

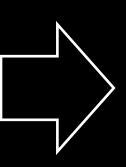
ERP Dev. ECC

ERP Sandbox ECC

# Move to Rise - Reality



SRM Production SRM MDM Productio■ SRM Test SRM MDM Test ■ SRM Development SRM MDM Development BO BI Production BO BI Test Data Services Production Data Services Test Data Services Development Content Server Production Content Server Development ■ 3<sup>rd</sup> pary scanning Production 3<sup>rd</sup> pary scanning Development EHS Production EHS Development ■ WWI Production WWI Development ■ SAP Router Production Print Server Production Cloud Connector Production Cloud Connector Development Workforce Performance Builder

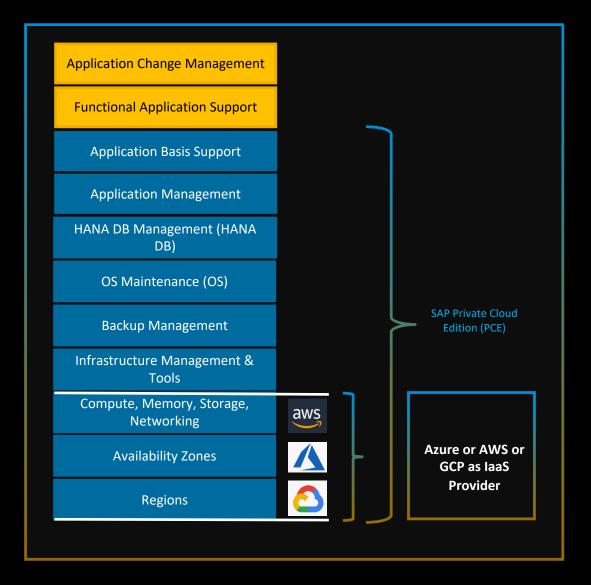




# Move to Rise – To consider

· Geographical availability Instance types & sizes laaS platform · Storage & disks Certifications Backup laaS services Clustering · Operating systems · Security & Monitoring Communications · WAN connectivity ssment · SaaS connectivity Infrastructure · Hostnames, DNS, IP ranges Network load balancers and proxies · Storage sizing 0 Sizing DB sizing S · Application sizing guidance  $\triangleleft$ त्त SSO Encryption Security echnic Firewalls • IPS/IDS · High Availability Application Disaster Recovery Platform • Application resilience & fault tolerance Load balancing Application · Release and version interoperability · Add-on requirements Dependencies • Deployment option - Embedded, standalone or distributed · Product deployment recommendations · Onboarding and migration Best practise · Operations & Monitoring • Service Level Agreements (SLA)

## **SAP S/4HANA PCE Infrastructure Characteristics**



#### **Private Cloud Edition Characteristics**

- Dedicated Account/Subscription/Projects for each customer
- Logically isolated Virtual Private Network (VNET)/VPC, Dedicated S/4HANA application landscape for customer assigned Private IP Address space
- 24x7 Security Monitoring, Personal Data Breach Notifications
- Auto-Restart High Availability and Regional Disaster Recovery
- Enhanced Compliance and Audits with SAP managing SOC & C5. Infrastructure SOC2 available on demand with IaaS providers
- Vulnerability Management and Penetration Testing
- Access to S/4HANA Extensibility Framework
- Side-by-side and In-App extensions
- Code enhancement & code modifications allowed
- Expert configuration (full IMG access)
- Scalable platform
- Resilience and TCO of hyperscaler infrastructure
- Technical operations done by SAP
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# What to think about when moving to RISE - IV

#### Landscape

- Evaluate current Landscape (sandbox/dev/test/prod/education...)
  - What can be consolidated, what is necessary...
- What other non-SAP systems in the current landscape is needed (e.g. print servers, Scanning/OCR, ....)?
- Sizing
  - Document current sizing (Early watch reports)
  - Estimate potential growth

# SAP S4H PCE Security

Who is responsible for what?



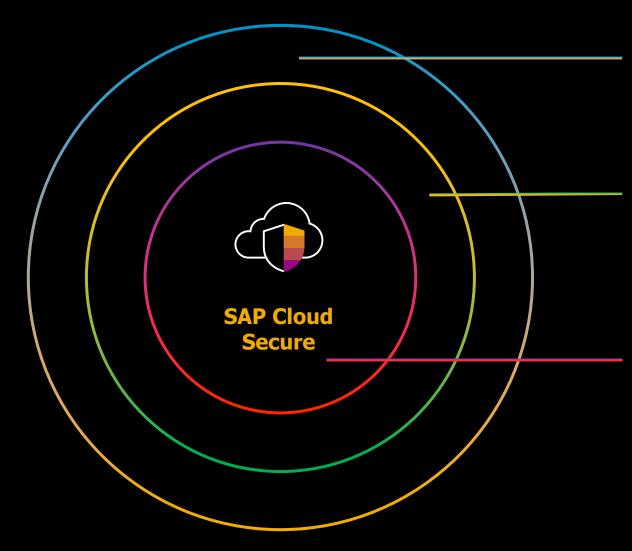
# **SAP Security Assurance - Responsibilities**

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Customer Data	1	SAP Audit Certification		
Identity and Access Management	Managed by Customer		ISO	Certification for Information
Connectivity to Cloud Services			27001	Security Management Systems
Integration (Process, Data, User)			ISO	Certification for Business
Secure Cloud Ops – Access Control	<b>1</b>		22301	Continuity Management Systems
Patching			606.1	
Penetration Testing (Platform)	Managed by SAP		SOC 1 SSAE 18	Statement on Standards for Attestation Engagements No. 18
Disaster Recovery Testing		COC .	505.1	
Network Security			SOC 1 Type 2	Statement of effectiveness of Type 1 examination
SIEM and Security Logging			500.0	
OS Management			SOC 2 Type 1	Service Organization Controls Report (Attestation report)
Storage			SOC 2	Service Organization Controls
Hardware			Type 2	Report (Attestation report)



# Elements concerning GDPR and Schrems II

# **Layers of Assurance**



#### **Contract**

 Data processing agreement to meet applicable local data privacy regulations globally

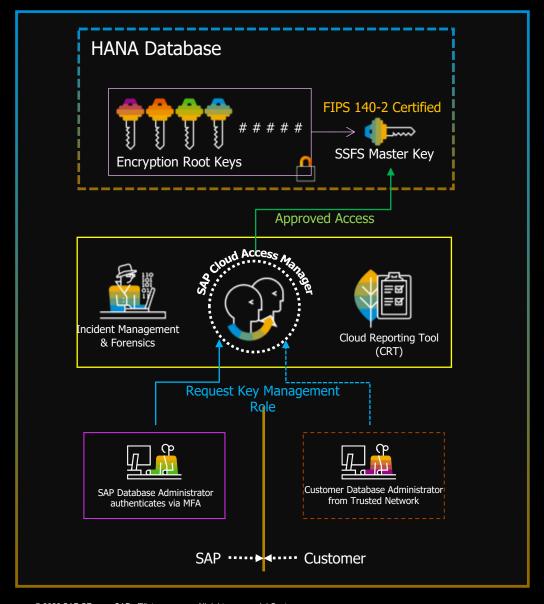
#### **Audit and Certification**

 Service Organization Control (SOC) reports and certifications to provide independent evidence for security, availability, confidentiality, data protection, and quality

#### Policies, directives, and standards

- Integrated management system for information security, data protection, and service delivery
- Comprehensive security architecture covering applications, processing systems, and data center

### **Key Management Approach**



- HANA Data Encryption uses AES-256-CBC (256-bit key length) algorithm. Various encryption root keys (data volume, log volume, backup, application) are stored in the Instance Secure Store File System (SSFS) within the HANA database instance. SAP Crypto libraries used are FIPS 140-2 certified. Contents of SSFS is protected by SSFS Master Key.
- Unique encryption root keys and master key are generated during installation and during HANA version updates. Master keys can also be changed in regular intervals upon request. Segregation of duties (SoD) principle is applied to key management.
- SAP uses Identity and Access Management system called Cloud Access Manager (CAM) to control all access to customer managed environment. Only Database administrators who has specific key management role requested and granted can manage the key lifecycle.
- No one have access to read HANA Encryption keys. Database administrators with approved CAM access uses HANA Cockpit to update the keys (or execute SQL commands) triggering FIPS 140-2 compliant SAP Crypto libraries. A unique key is then generated.
- Customer can optionally have HANA administrator roles and can request key management roles via CAM approval process. Once approved, customer administrator will be able to update the keys.
- The Cloud Reporting tool (CRT) used for regular cryptography and key management reporting. An automatic report, generated on weekly basis, is used to identify encryption status of database servers. Security Incident management and Forensics are applied on key management processes
- Keys are backed up along with database backup in a secure way. The root key backup is secured using a single password, which is set before a backup is created. The password is securely stored and all subsequent root key backups taken are protected by this password. Upon termination of the system drop database procedures will delete SSFS and there by destructing the all the keys. File system then securely deleted as per secure decommissioning procedures.