SAP S/4HANA Transformation Journey: The Value of SAP HANA Enterprise Cloud

Jeff Anders, Senior Director of Cloud Architecture & Advisory for SAP HANA Enterprise Cloud
April 16, 2020

PUBLIC

THE BEST RUN **SAP**

Disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP's intentional or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

OUT-OF-THE-BOX INTEGRATION   OPEN INTEGRATION   HOLISTIC INTEGRATION   AI-DRIVEN INTEGRATION

Integration Solution Advisory Methodology (ISA-M)

Process Orchestration	APIs & Pre-Packaged Content	Master Data Management

Integration Styles & Technologies

Process	B2B	Data	UX	IoT	Analytics

API Management | Event Brokering | Stream Analytics | RPA

Setup & Operations

Monitoring	Automation	Extensibility	Security

Flexible Deployment Models

On-Premise	Multi Cloud	Private Cloud	Embedded

Agenda
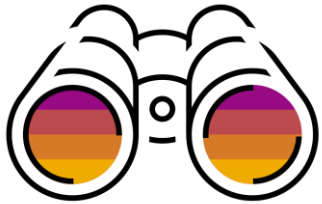
The Core: SAP S/4HANA

Establish a solid foundation

Achieve unprecedented visibility, TCO, and agility

Innovate and scale to infinity

The Destination: The Intelligent Enterprise

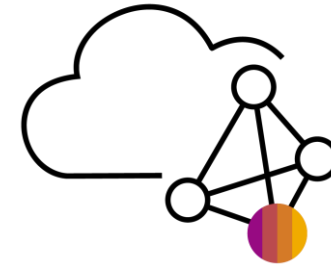## Three Essential Components:

Intelligent Suite

Customer experience, supply chain and manufacturing, digital core, people engagement, network and spend management
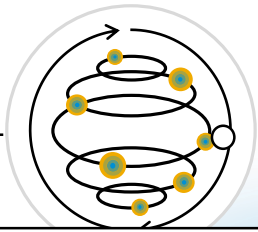
Digital Platform

Tap into new sources of data within your business and across value chains

Intelligent Technologies

AI, IoT, and advanced analytics, to detect patterns in the data, recommend the best course of action, and optimize workflow
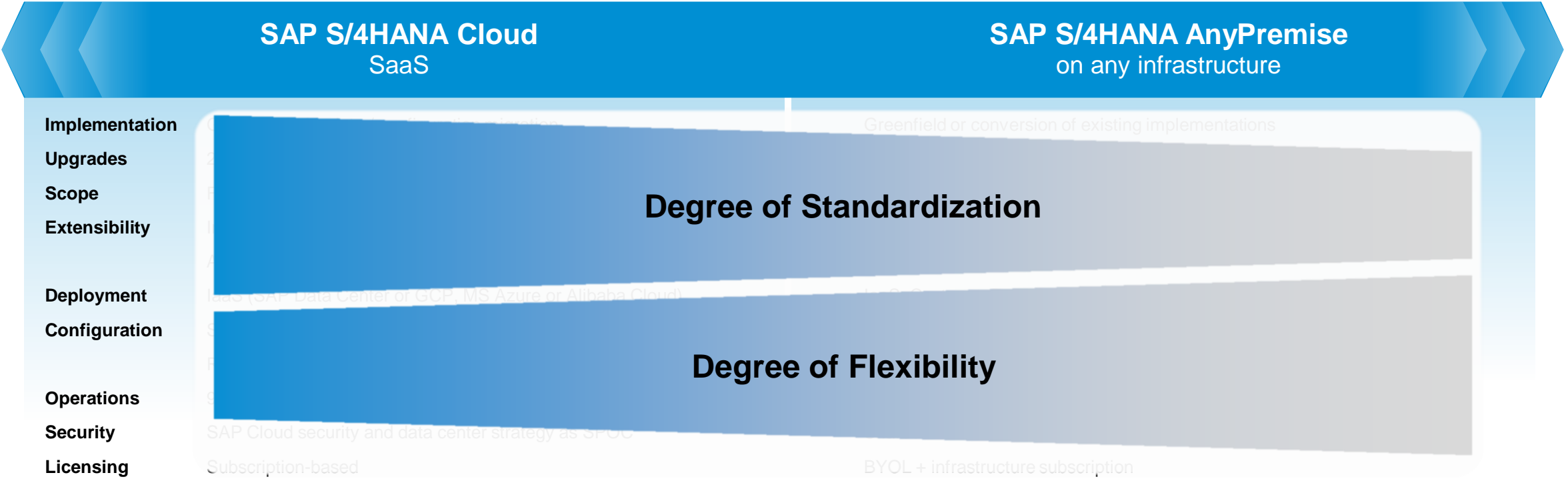
SAP S/4HANA offers flexibility of consumption

As a Service

SAP S/4HANA®

As a Product

ONE Codeline
ONE Data Model -- ONE Semantic -- ONE UserExperience

	SAP S/4HANA Cloud SaaS	SAP S/4HANA AnyPremise on any infrastructure
Implementation		Greenfield or conversion of existing implementations
Upgrades		
Scope		
Extensibility		
Deployment	IaaS (SAP Data Center or GCP, MS Azure or Alibaba Cloud)	
Configuration		
Operations		
Security	SAP Cloud security and data center strategy as SPOC	
Licensing	Subscription-based	BYOL + infrastructure subscription

Degree of Standardization

Degree of Flexibility

SAP   Google Cloud   Microsoft Azure   aws   Alibaba Cloud

SAP S/4HANA offers flexibility of consumption
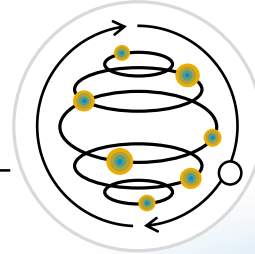
As a Service

SAP S/4HANA®

As a Product

ONE Codeline
ONE Data Model -- ONE Semantic -- ONE UserExperience

	SAP S/4HANA Cloud SaaS	**SAP S/4HANA AnyPremise** on any infrastructure
Implementation	Greenfield with data / configuration migration	Greenfield or conversion of existing implementations
Upgrades	2-4 x year, managed by SAP	Customer driven and managed
Scope	Full S/4HANA scope of core ERP & extended LoB content	Unlimited variety of SAP and Partner Add-ons
Extensibility	In-App & Side by side via SCP / Extensibility Framework	Unlimited customer specific customization, modification and extensibility
	API Hub with >300 APIs	
Deployment	IaaS (SAP Data Center or GCP, MS Azure or Alibaba Cloud)	IaaS, Customer Data Center, Hosting Providers
Configuration	Standardized, Best Practice / Model Company based	Model Company as starting point (recommended)
	Restricted IMG access	Open IMG access
Operations	99.9% Availability and High-Availability	Customer and provider defined
Security	SAP Cloud security and data center strategy as SPOC	Shared customer / IaaS obligation
Licensing	Subscription-based	BYOL + infrastructure subscription

SAP   Google Cloud   Microsoft Azure   aws   Alibaba Cloud

8

SAP HEC Value

End-to-End SLA
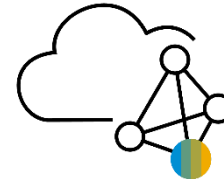*with up to 99.99% SLA offered for the FULL solution stack risk is owned by SAP to the logon*

Scalable Workload
by extending infrastructure scalability to database and applications

Reference Architecture
SAP Reference architecture pre-built in S/4HANA Cloud deployment

Innovation Platform
by keeping the software stack up-to-date

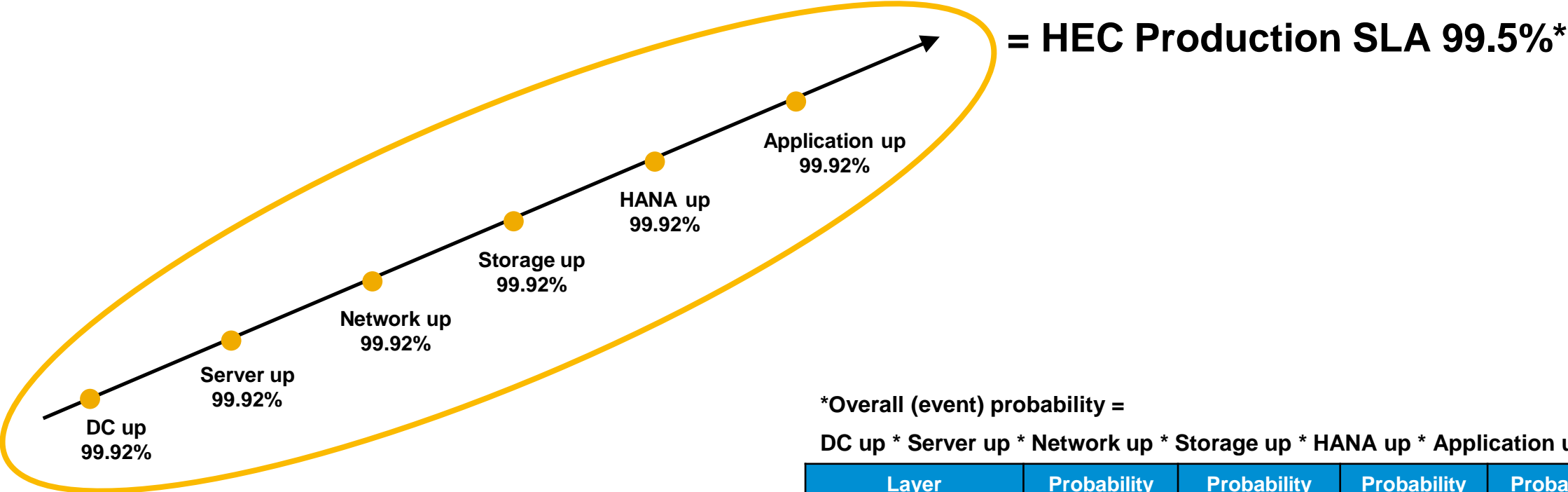**Security, Transparency & Compliance**
for the full solution stack leveraging Hyperscaler's shared responsibility model

Predictable Cloud Based Cost Model
one cloud subscription from SAP

HANA Enterprise Cloud End-to-End Availability

= HEC Production SLA 99.5%*

Application up
99.92%

HANA up
99.92%

Storage up
99.92%

Network up
99.92%

Server up
99.92%

DC up
99.92%

*Overall (event) probability =

DC up * Server up * Network up * Storage up * HANA up * Application up

Layer	Probability	Probability	Probability	Probability
Application up	99.92%	Not Included	Not Included	Not Included
HANA up	99.92%	99.92%	Not Included	Not Included
Storage up	99.92%	99.92%	99.92%	Not Included
Network up	99.92%	99.92%	99.92%	99.92%
Server up	99.92%	99.92%	99.92%	99.92%
Data Center up	99.92%	99.92%	99.92%	99.92%
Overall Probability	**99.52%**	**99.60%**	**99.68%**	**99.76%**

Numbers are for example purpose only

NOTE: Even with same probability of failure at each layer, the overall SLA can be increased by simply including fewer layers in the calculation.

Reference Architecture: 100% best practice

Developed in conjunction with SAP product development, Engineering and operations. Nobody has more experience.

Designed and built to SAP product roadmap standards. Futureproof as standard.

No compromises architecture principles. Engineered to ensure maximum uptime from hardware to application.

Globally consistent architecture standards enforced and validated into every HEC deal in every delivery model.

New technology release engineered for you: Safely adopt & run new SAP software innovation that has been tested & production ready.
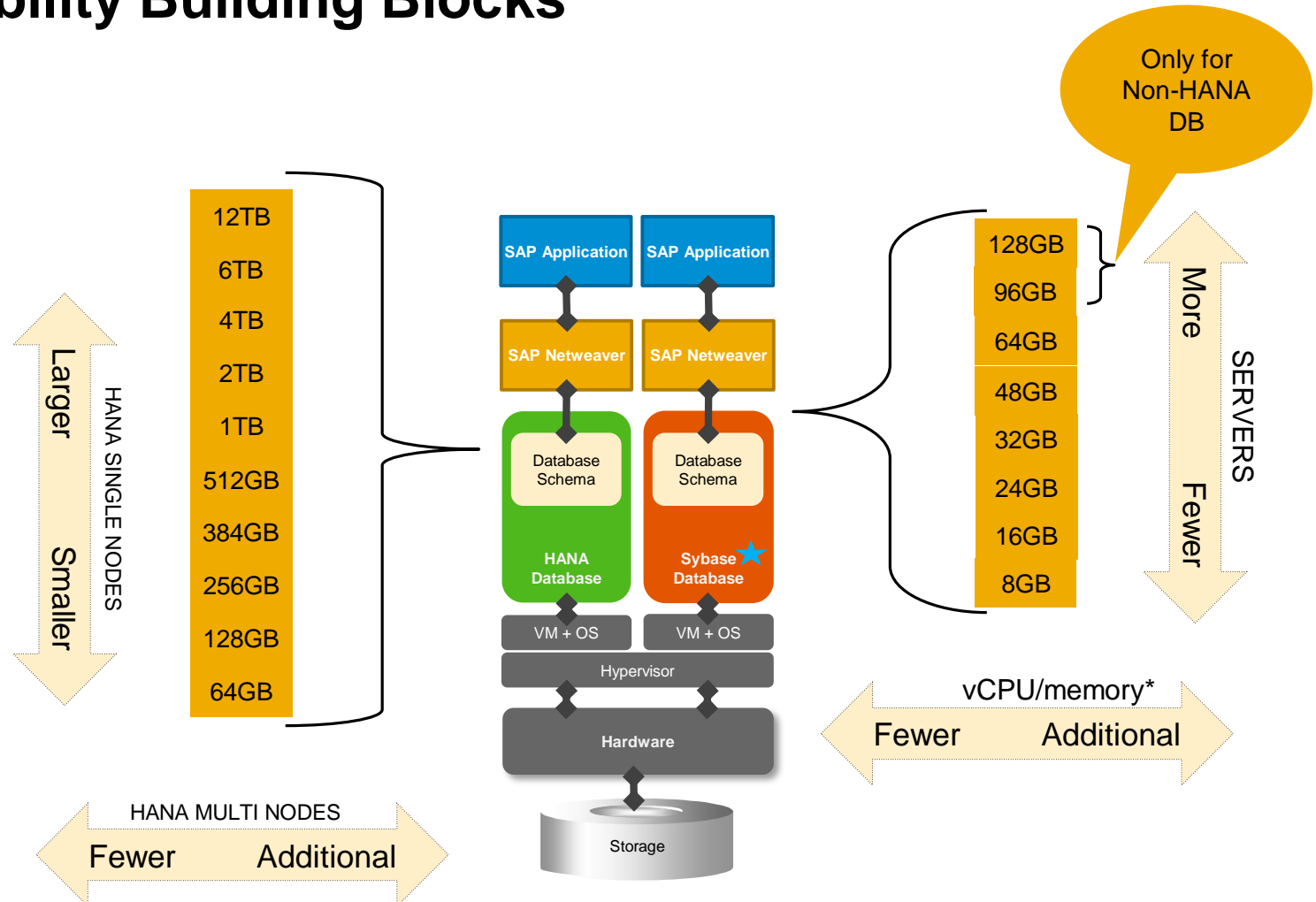
Agile platform – Reference Architecture adopts application best practice across the Multi-Cloud Infrastructure ecosystem

SAP HANA Enterprise Cloud

- SAP HANA
- Applications
- Suite of Managed Services
- Infrastructure
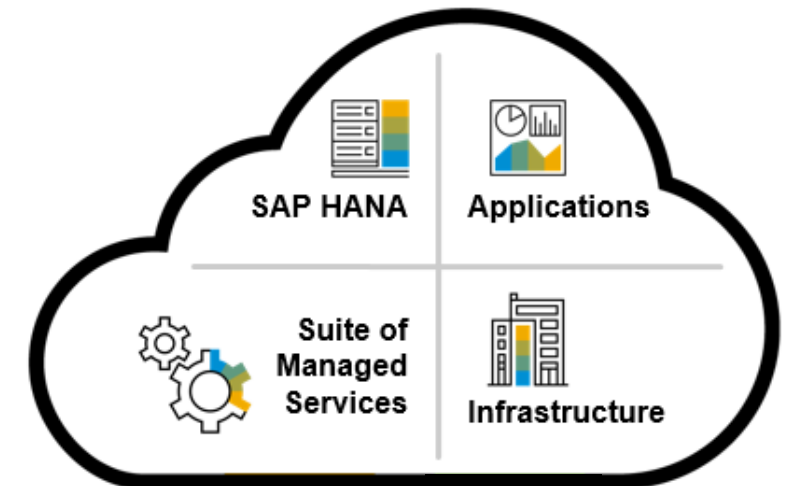
HANA Enterprise Cloud Scalability Building Blocks

- The HANA Cloud Cell is a standardized physical rack structure consisting of compute, network, and storage that ensures predictable/optimized performance and management for single node and multi node HANA deployments.

- General rule to separate DB and AS layer (for HANA this is mandatory)

- Several scaling options possible

- Changes are fully documented through SAP's change request process

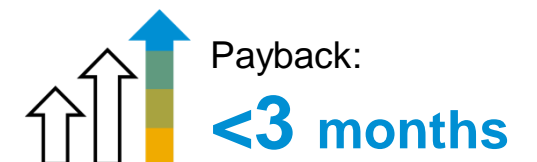- Predefined services to support scaling

- Fast provisioning

Only for Non-HANA DB

Larger / Smaller

HANA SINGLE NODES

| 12TB |
| 6TB |
| 4TB |
| 2TB |
| 1TB |
| 512GB |
| 384GB |
| 256GB |
| 128GB |
| 64GB |

SAP Application · SAP Application

SAP Netweaver · SAP Netweaver

Database Schema · Database Schema

HANA Database · Sybase Database ★

VM + OS · VM + OS

Hypervisor

Hardware

Storage

| 128GB |
| 96GB |
| 64GB |
| 48GB |
| 32GB |
| 24GB |
| 16GB |
| 8GB |

More / Fewer   SERVERS

HANA MULTI NODES
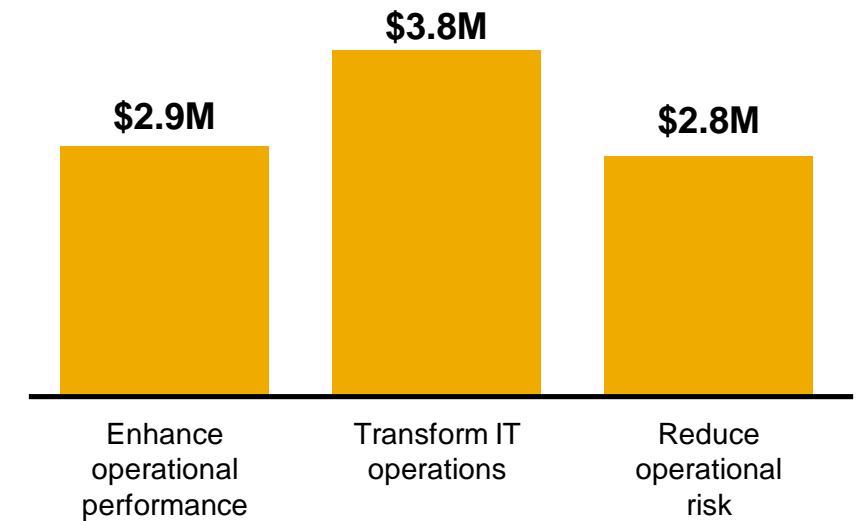Fewer   Additional

vCPU/memory*
Fewer   Additional

★ Minimum size for any ASE database is 32GB.

Forrester: The Total Economic Impact™ of SAP HANA Enterprise Cloud

SAP HANA Enterprise Cloud (HEC) Improves IT System Reliability and Scalability

- *SAP commissioned Forrester Consulting to conduct a TEI study and examine potential return on investment*

- *Over three years, SAP HEC improves business system reliability, reduces risk, and enables IT operational transformations*

$2.9M — Enhance operational performance

$3.8M — Transform IT operations

$2.8M — Reduce operational risk

Return on Investment: **91%**

Benefits PV: **$9.5M**

Net Present Value: **$4.5M**

Payback: **<3 months**

Your Fastest Path:
SAP HANA Enterprise Cloud

SAP HEC

SAP

SAP HEC

SAP HEC

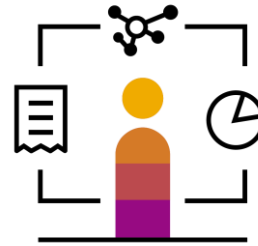**Move** | **Optimize** | **Innovate**

Move

Migration to a cloud-based subscription environment

Flexibility/choice

Choose your infrastructure:

• Hyperscalers (Azure, AWS, Google Cloud)

• SAP run data center

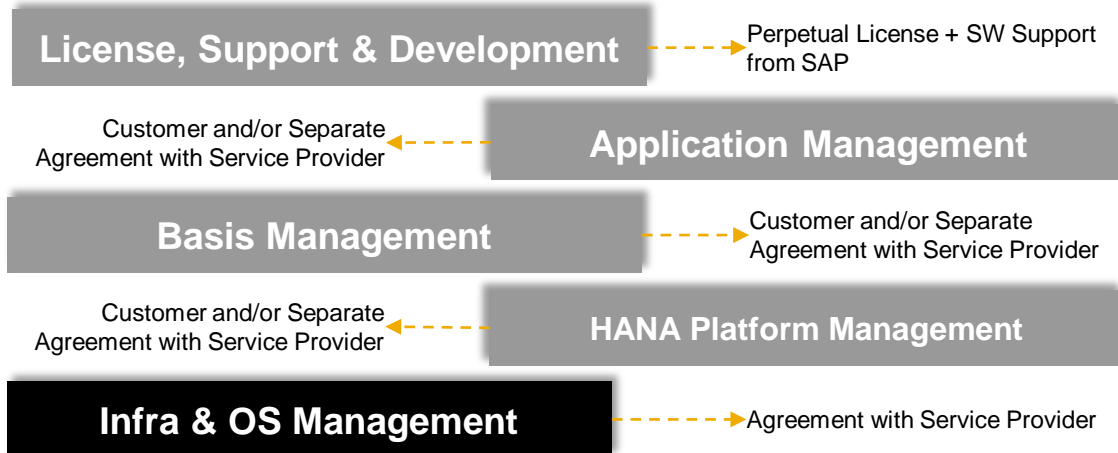Redeploy and reinvest in your business

A proven reference architecture with stability and resilience
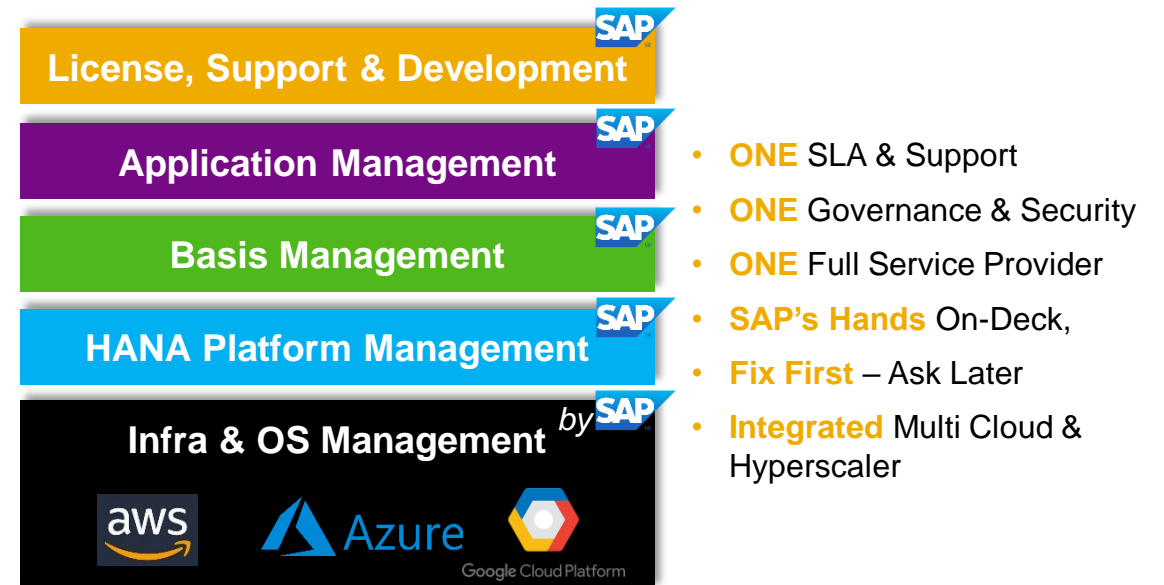
Hosting (SI + Hyperscaler) vs SAP Cloud ERP

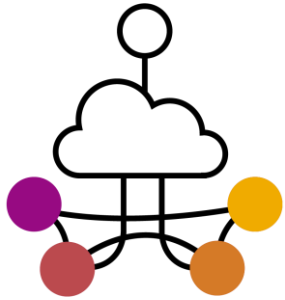**Siloed** Support, SLAs, Governance & Security

ONE Full Service Provider

SI + Hyperscaler
Disjointed Outcomes

SAP Cloud ERP
ONE Outcome

License, Support & Development — — → Perpetual License + SW Support from SAP

Customer and/or Separate Agreement with Service Provider ← — — **Application Management**

Basis Management — — → Customer and/or Separate Agreement with Service Provider

Customer and/or Separate Agreement with Service Provider ← — — **HANA Platform Management**

Infra & OS Management — — → Agreement with Service Provider

License, Support & Development [SAP]

Application Management [SAP]

Basis Management [SAP]

HANA Platform Management [SAP]

Infra & OS Management *by* [SAP]

aws   Azure   Google Cloud Platform

- **ONE** SLA & Support
- **ONE** Governance & Security
- **ONE** Full Service Provider
- **SAP's Hands** On-Deck,
- **Fix First** – Ask Later
- **Integrated** Multi Cloud & Hyperscaler

ONE Governance, Security & SLA

Optimize

Customize your
unique environment

Bring your
SAP software
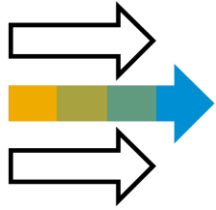landscape closer
to standard code

Define your road
map and approach
with minimal
disruption

Save time,
resources,
and money

Running SAP S/4HANA on HEC with SAP Cloud Application Services

What does it deliver?

- **End-to-end operations** from business improvements to technology and innovation adoption to functional support and operations of S/4HANA and its integration

- **Guaranteed SLA** with ownership and accountability for the customer's S/4HANA environment

- Taking over **cloud application** lifecycle management reducing

- Frequent application administrational activities

- **Dedicated Service Delivery Manager** to ensure continuously update pro-active service planning

Solution-as-a-Service

End-to-End Managed Services

Cloud Application Services

HANA Enterprise Cloud

Customer Benefits

- Provide **robust and resilient** operations ensuring business continuity

- **Accelerate innovation** adoption considering SAP roadmaps

- Provides expert resources

- Free up customer own resources that can focus on **strategic initiatives**

- Most efficient governance for a **one-stop-shop** with SAP

- Drive efficiency of IT operations

- **Lower TCO** greater financial predictability

Cloud Application Services (CAS) Key Benefits
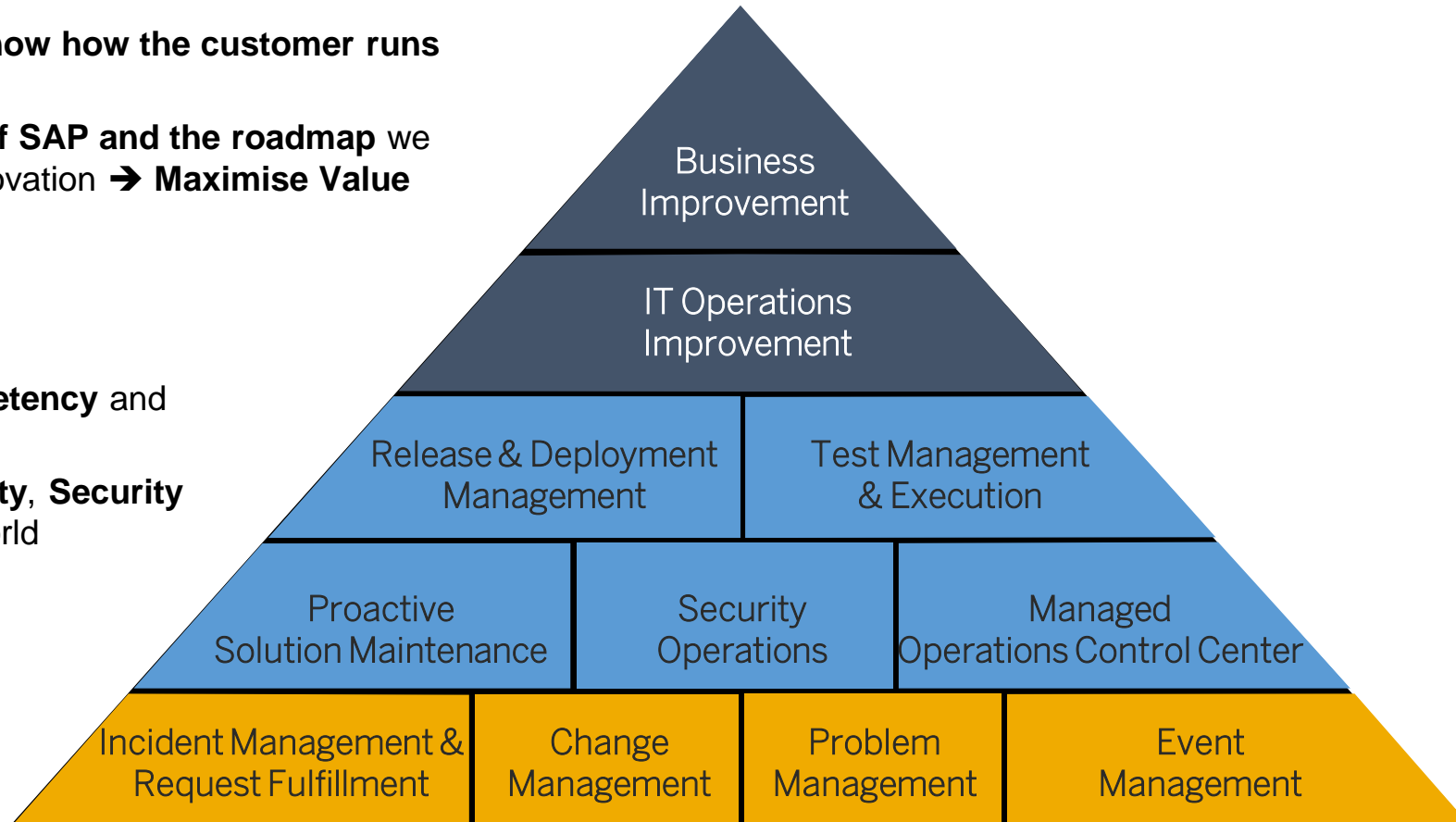
Innovation and Continuous Improvement

✓ With insights gained from the layers below **we know how the customer runs his Business**

✓ With that knowledge and our **deep knowledge of SAP and the roadmap** we can advise the customer on IT and Business innovation ➜ **Maximise Value from SAP**
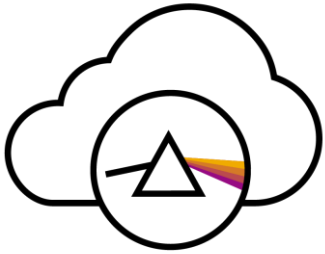
Extended Pro-Active Services

✓ Here **deep solution insight**, **knowledge**, **competency** and **trust** is needed to deliver successfully

✓ Executes the Business Demand for **Speed**, **Agility**, **Security** and **Business Continuity** in a **24/7 real-time** world

Core Operational Services

✓ SLA based Application Operation and Support

Pyramid layers:
- Business Improvement
- IT Operations Improvement
- Release & Deployment Management | Test Management & Execution
- Proactive Solution Maintenance | Security Operations | Managed Operations Control Center
- Incident Management & Request Fulfillment | Change Management | Problem Management | Event Management
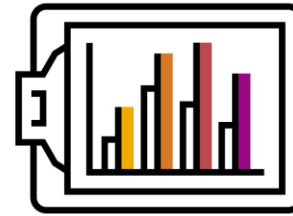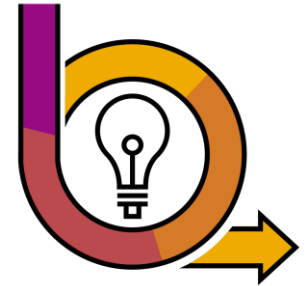
Innovate

Empowered to embrace possibilities

Customer services, competitive differentiation, and global management of resources
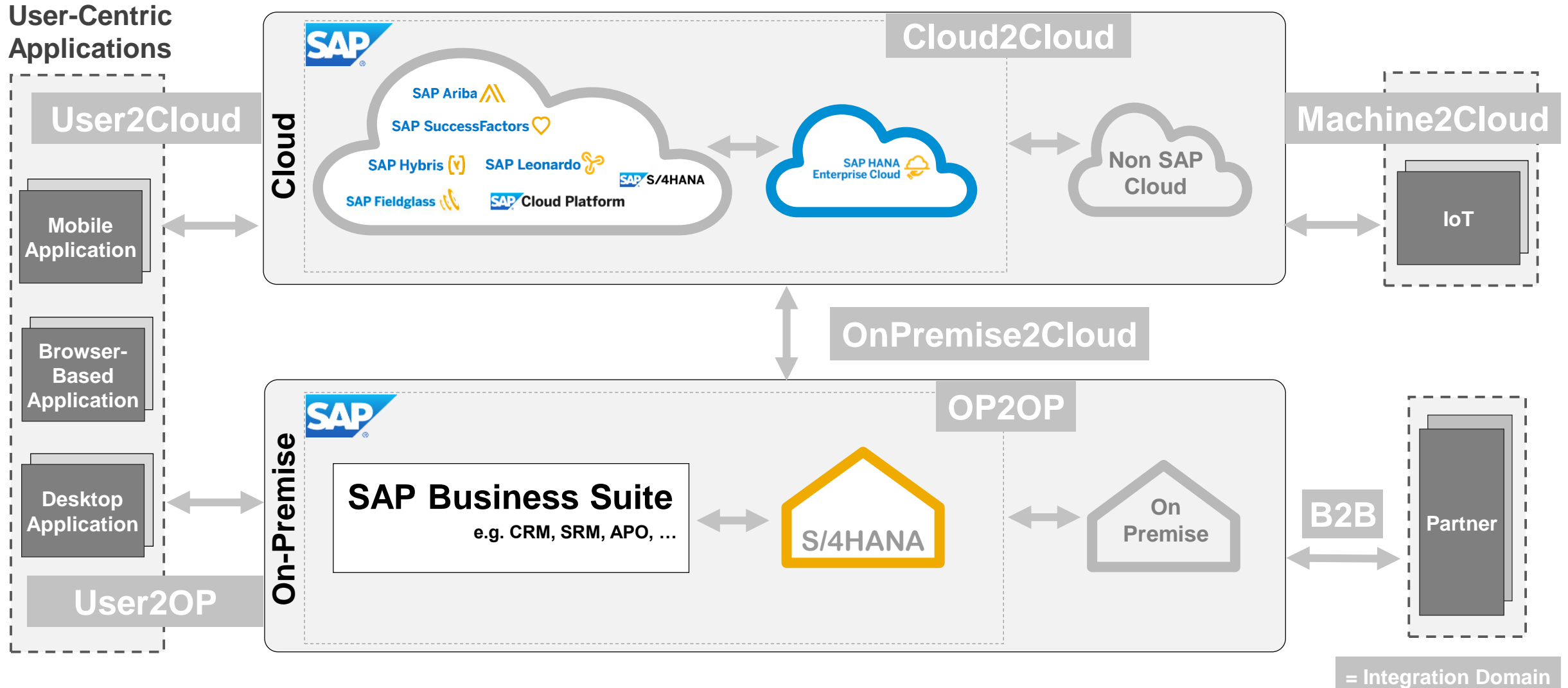
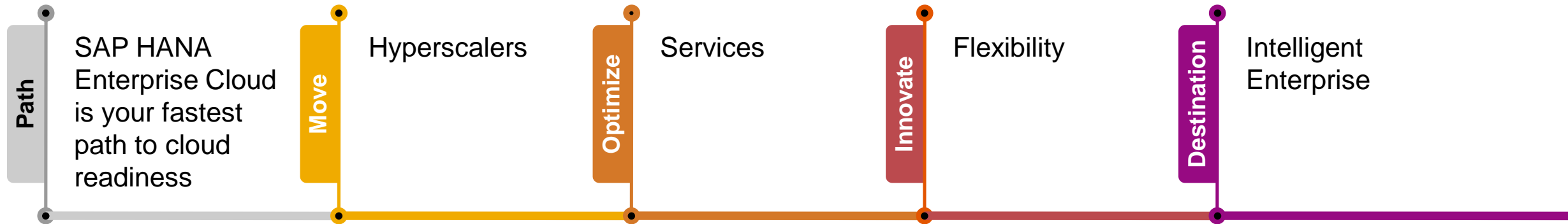Improved analytics, database and data management with SAP Leonardo

Integration between SAP and non-SAP cloud solutions for a hybrid cloud environment

Hybrid Cloud Approaches - Integration

User-Centric Applications

User2Cloud

Cloud2Cloud

Machine2Cloud

Cloud

SAP

- SAP Ariba
- SAP SuccessFactors
- SAP Hybris
- SAP Leonardo
- SAP S/4HANA
- SAP Fieldglass
- SAP Cloud Platform

SAP HANA Enterprise Cloud

Non SAP Cloud

Mobile Application

IoT

Browser-Based Application

OnPremise2Cloud

OP2OP

Desktop Application

On-Premise

SAP

SAP Business Suite

e.g. CRM, SRM, APO, …

S/4HANA

On Premise

B2B

Partner

User2OP

= Integration Domain

Recap: Your Fastest Path - SAP HANA Enterprise Cloud

Path

SAP HANA Enterprise Cloud is your fastest path to cloud readiness

Move

Hyperscalers

Optimize

Services

Innovate

Flexibility

Destination

Intelligent Enterprise

Thank you.

Contact information:

Jeff Anders
Senior Director of Cloud Architecture & Advisory for SAP
HANA Enterprise Cloud
jeff.anders@sap.com