



SAP Premium Engagement Session

Move to Hyperscaler

Virtual
May 20, 2021

PUBLIC

Agenda

- [An Overview of SAP Business Technology Platform and Hyperscaler Reference Architectures](#) – Anirban Majumdar
- [Multi-Cloud Architecture – Transition Roadmap and how Premium Engagement can support to get there](#) – Gunther Schmalzhaf



SAP Business Technology Platform (BTP) and Hyperscaler Reference Architectures

Anirban Majumdar

Head of Platform Adoption & Advisory, T&I COO

May 20, 2021

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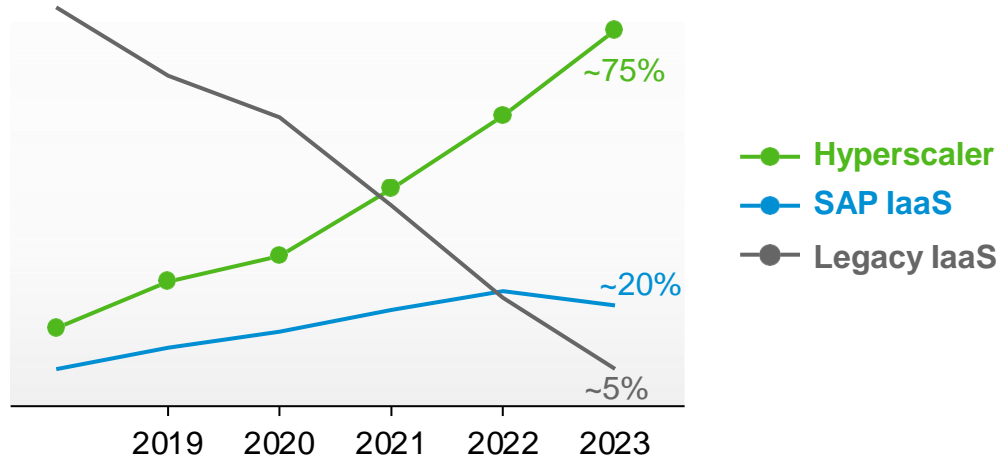
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Agenda

- SAP's Multi-Cloud Strategy
- Deployment Architecture of SAP Business Technology Platform
- SAP Business Technology Platform – Hyperscaler Reference Architectures
 - Platform Foundation
 - Service Integration
 - Data-to-Value
- Demo
- Call to Action

SAP's Multi-Cloud Strategy – The Two Pillars

Run On Hyperscalers



Target Infrastructure:

Deploy SAP applications on Microsoft Azure, AWS, GCP, Alibaba Cloud and SAP Converged Cloud Infrastructure



> 120K

VMs certified on hyperscalers



~ 10K

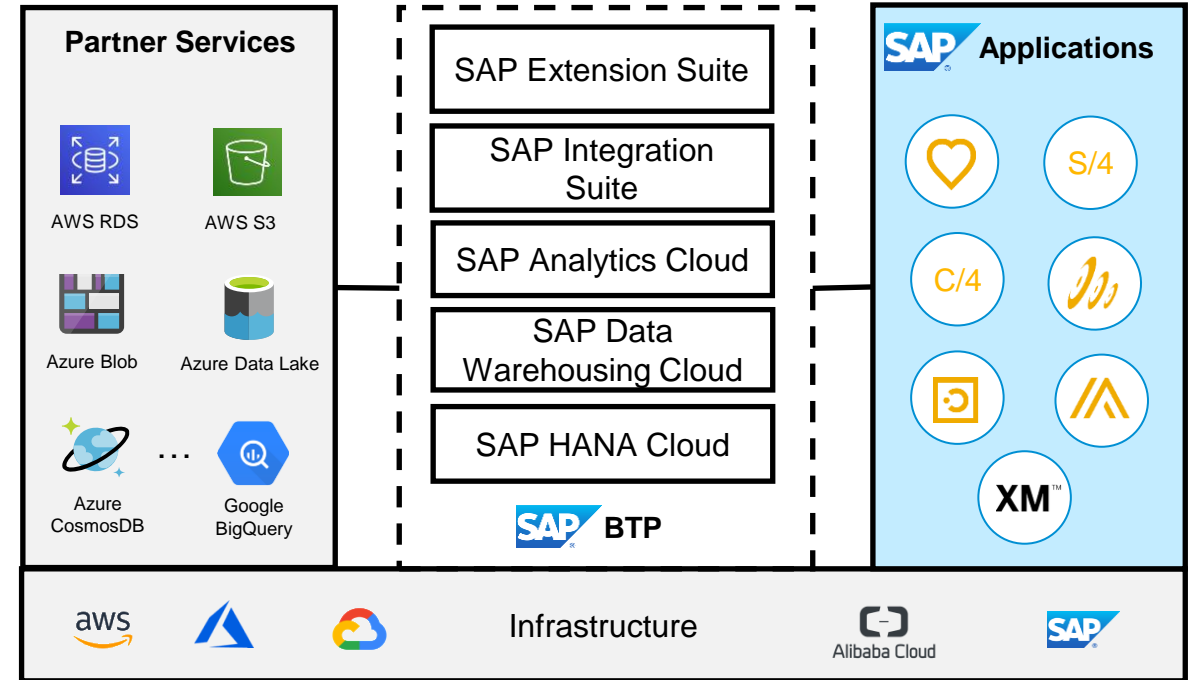
Accounts secured on hyperscalers



80%

SAP Applications run on Hyperscalers

Interoperate with Hyperscalers



BTP offers out-of-the box integration and extensibility for SAP apps

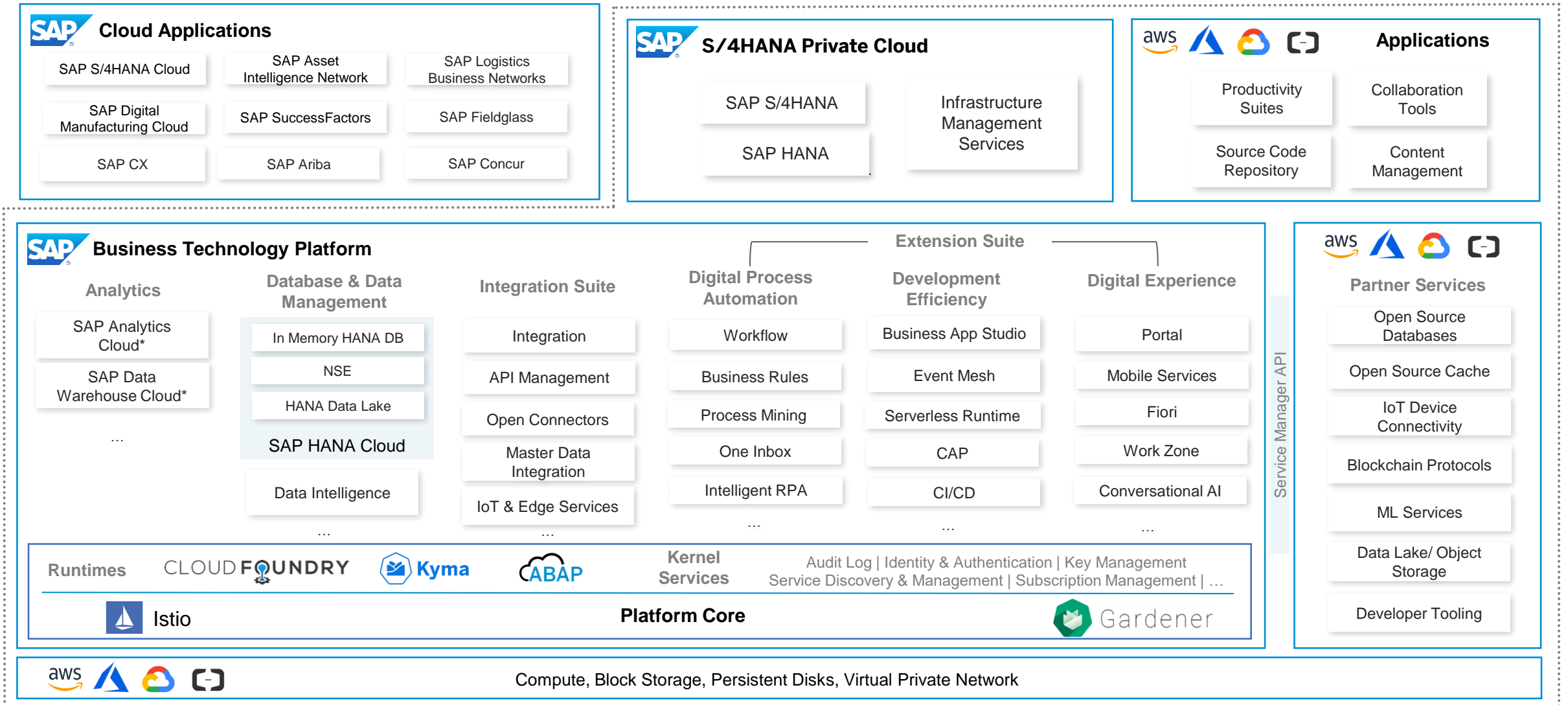


BTP unifies data and process across SAP and customer landscapes



BTP is open and portable – write applications once, deploy multi-cloud

SAP Business Technology Platform **Deployment Architecture** on Hyperscalers



Hyperscaler Reference Architectures

Interoperability Patterns

■ Platform Foundation:

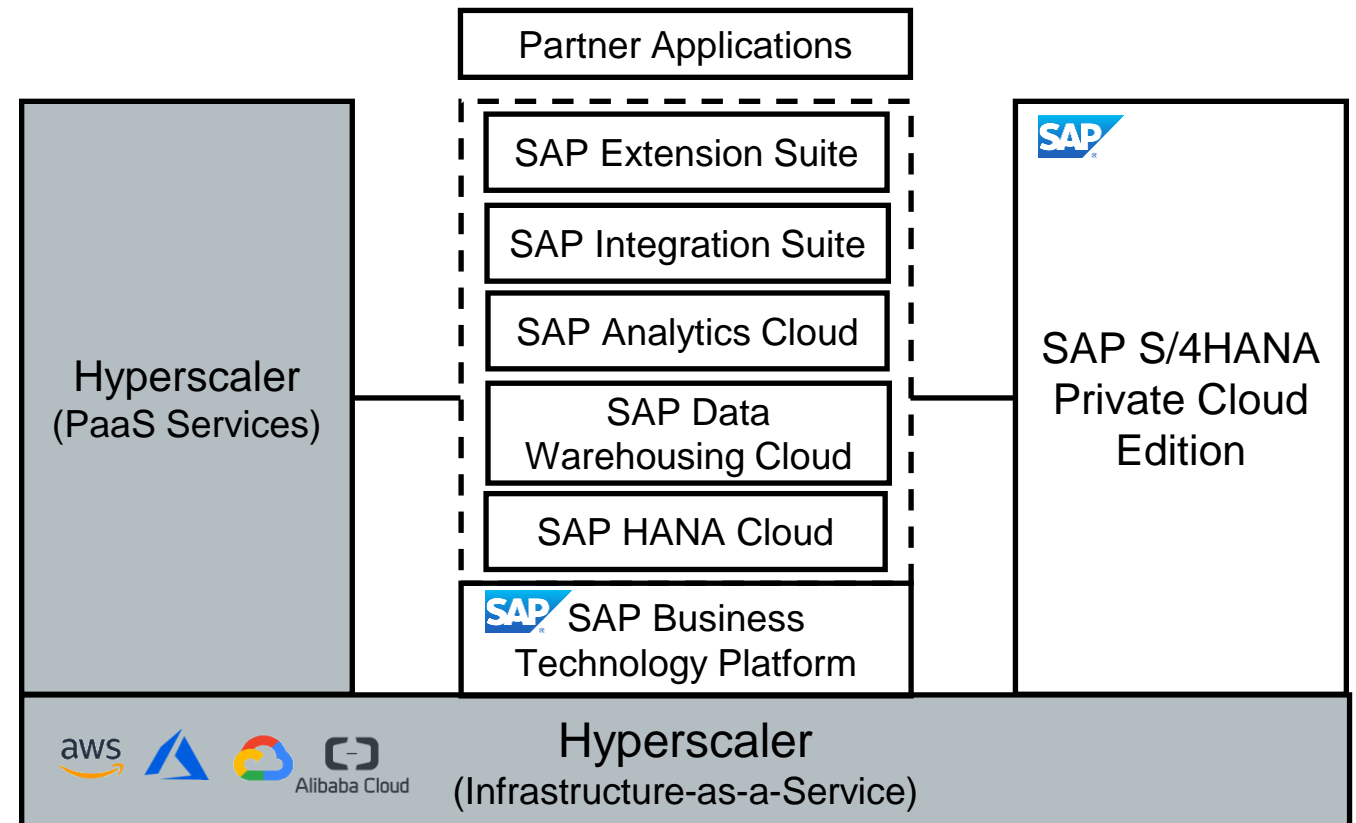
- Integrated authentication and user provisioning between SAP & Hyperscaler domains
- Secure network connectivity using PrivateLink

■ Service Integration:

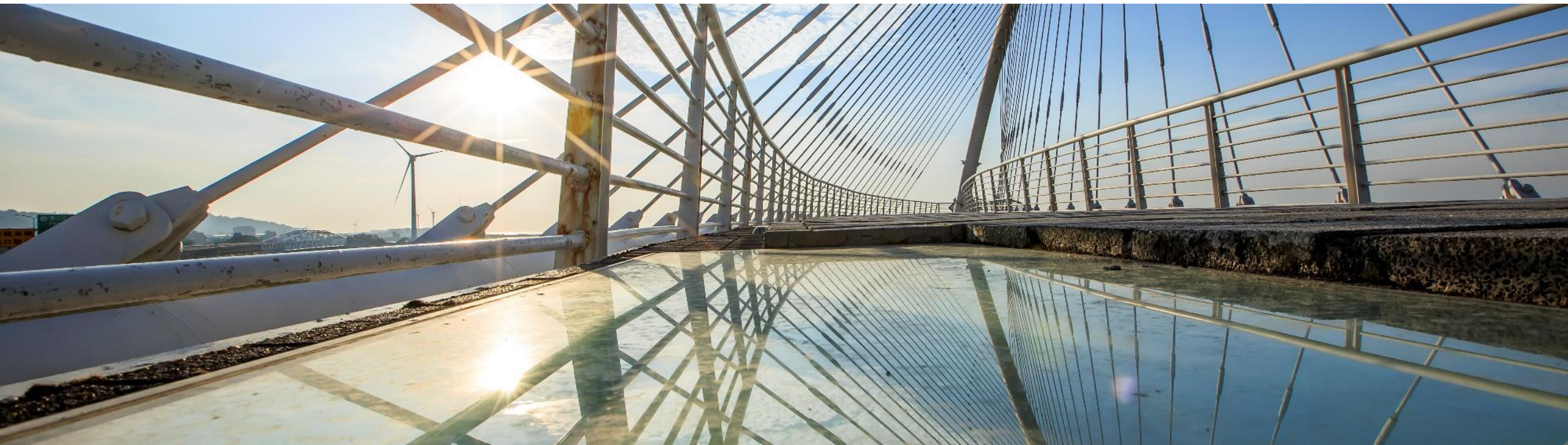
- API and event-based integration between SAP Integration Suite and hyperscaler services
- Workflow & productivity suite integration with SAP Digital Process Automation

■ Data-to-Value:

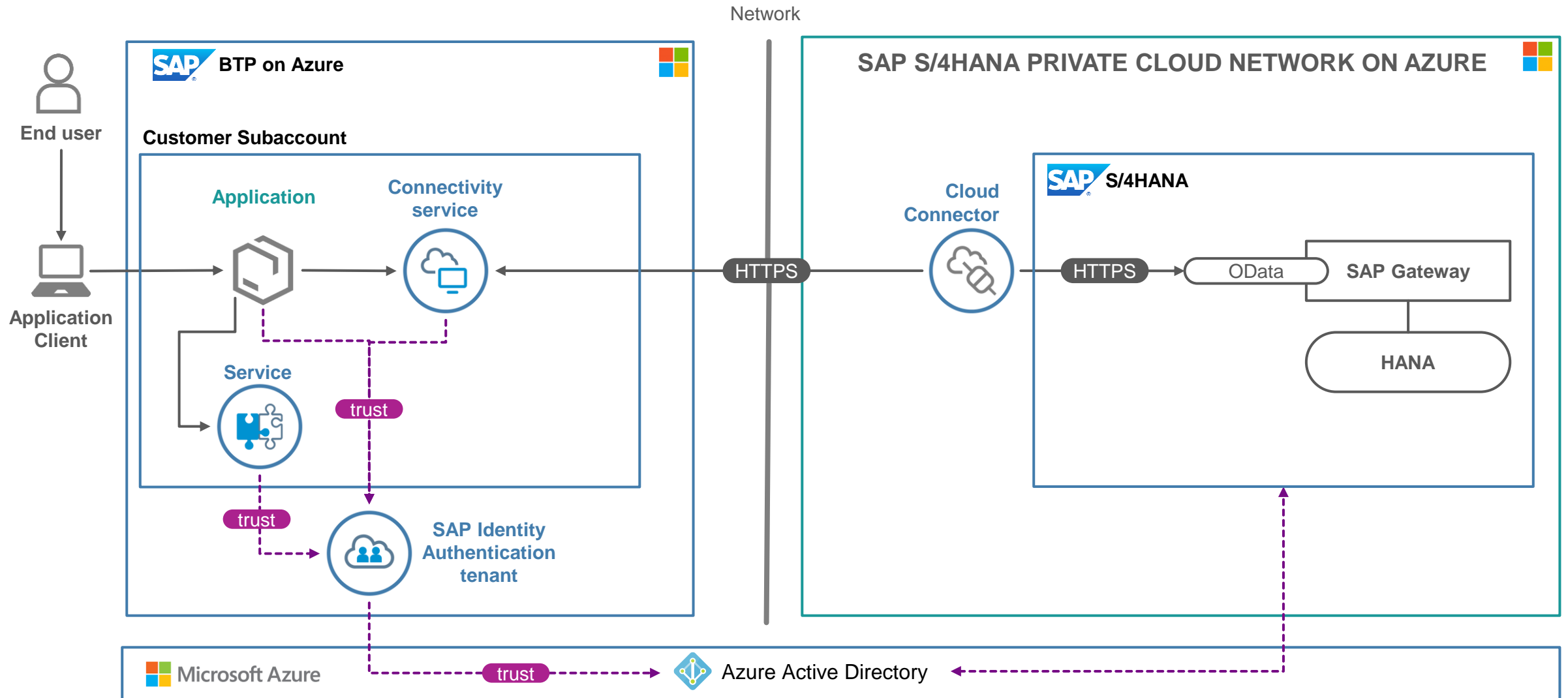
- SAP HANA Cloud as the data fabric between SAP business apps and hyperscaler data sources
- SAP Data Warehouse Cloud as modeling & data governance environment
- SAP Analytics Cloud as serving layer for analytics, dashboards, and reporting



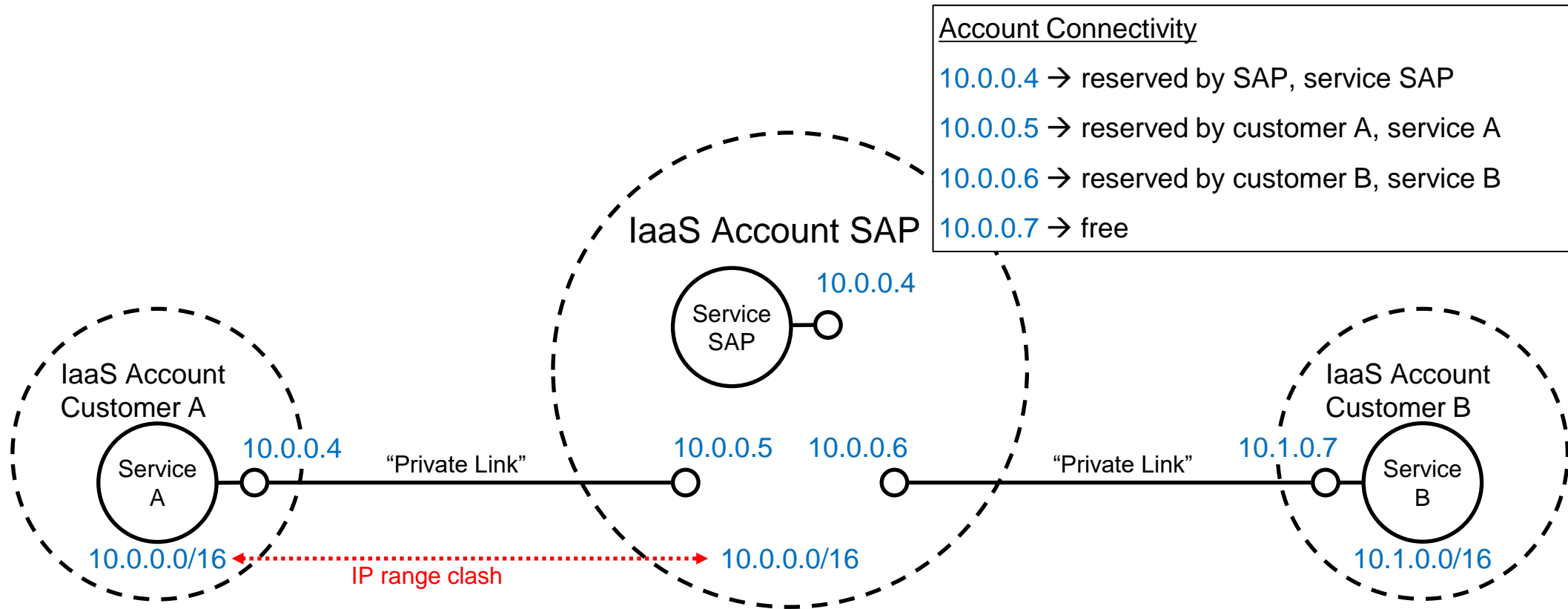
Platform Foundation



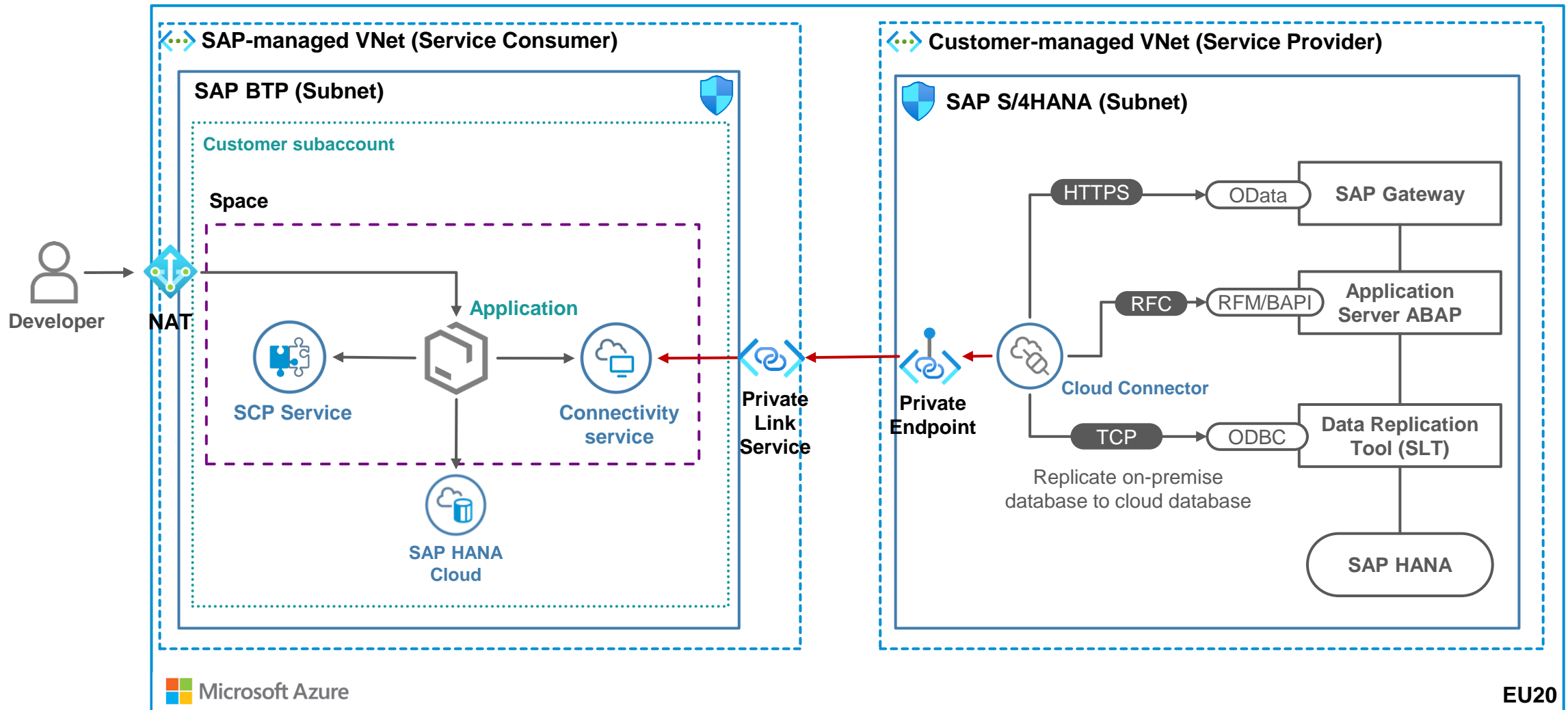
Security Workflow between SAP IAS and Azure Active Directory



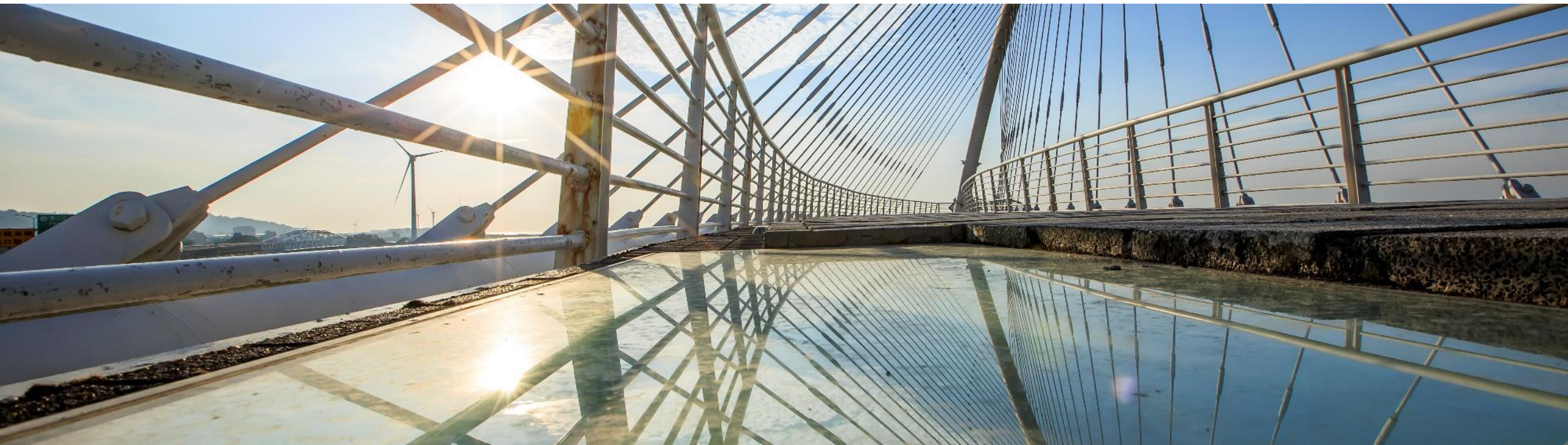
Challenges with network peering between **BTP** & customer subscriptions



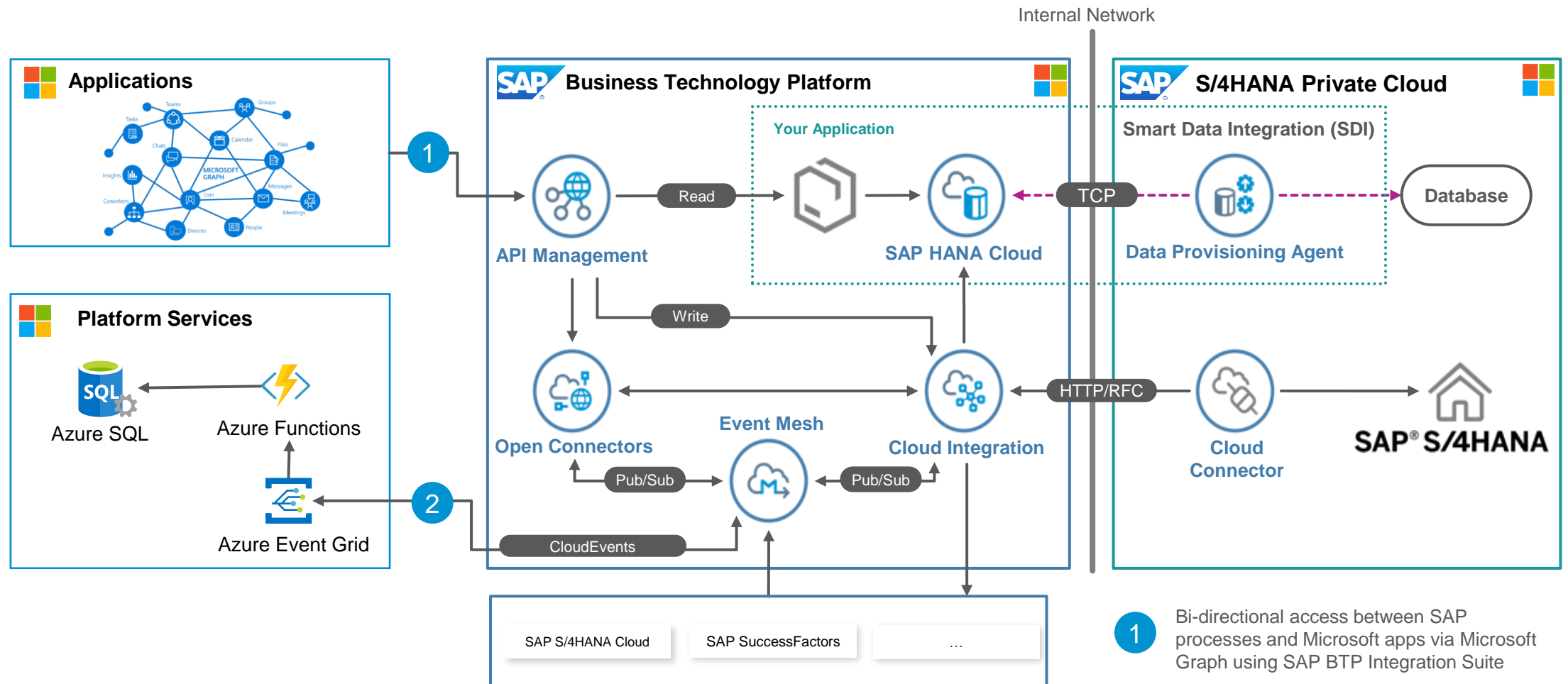
Azure Private Link*: Establishing secure connectivity with SAP S/4HANA



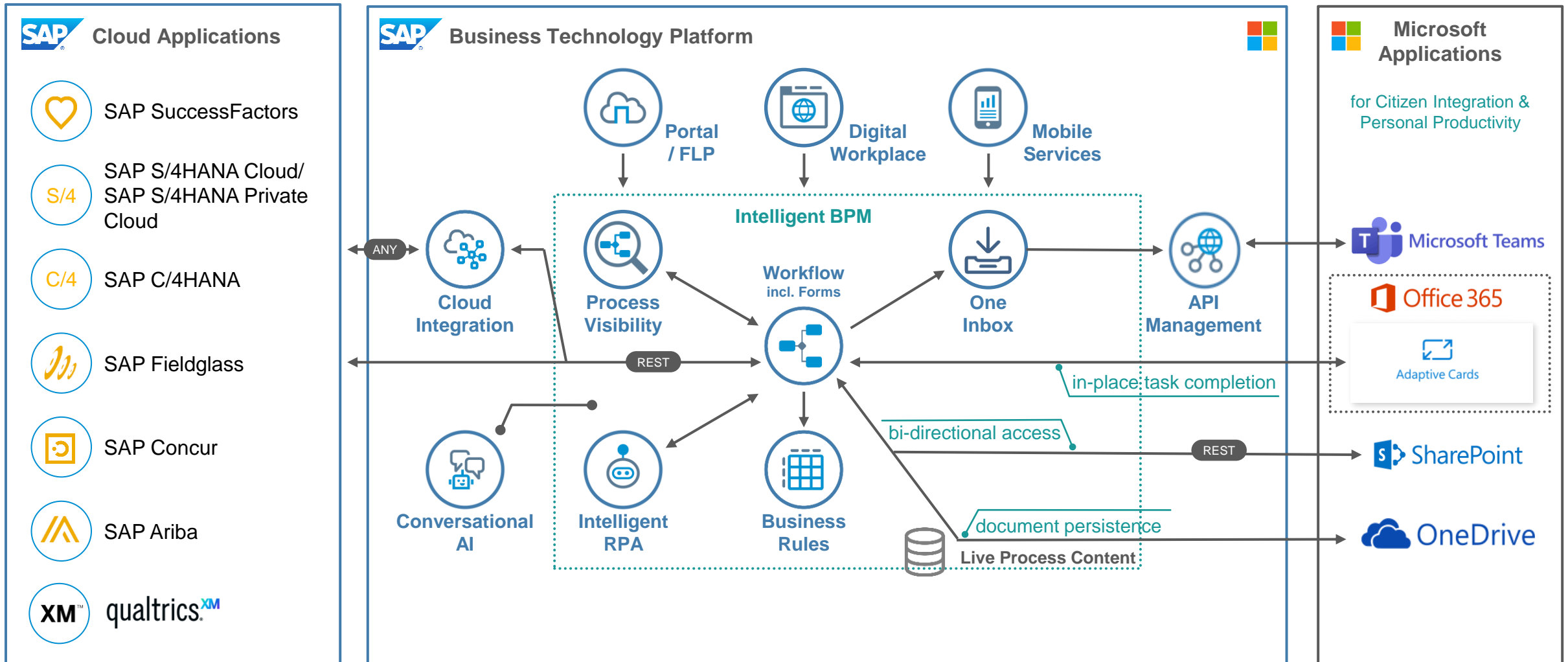
Service **Integration**



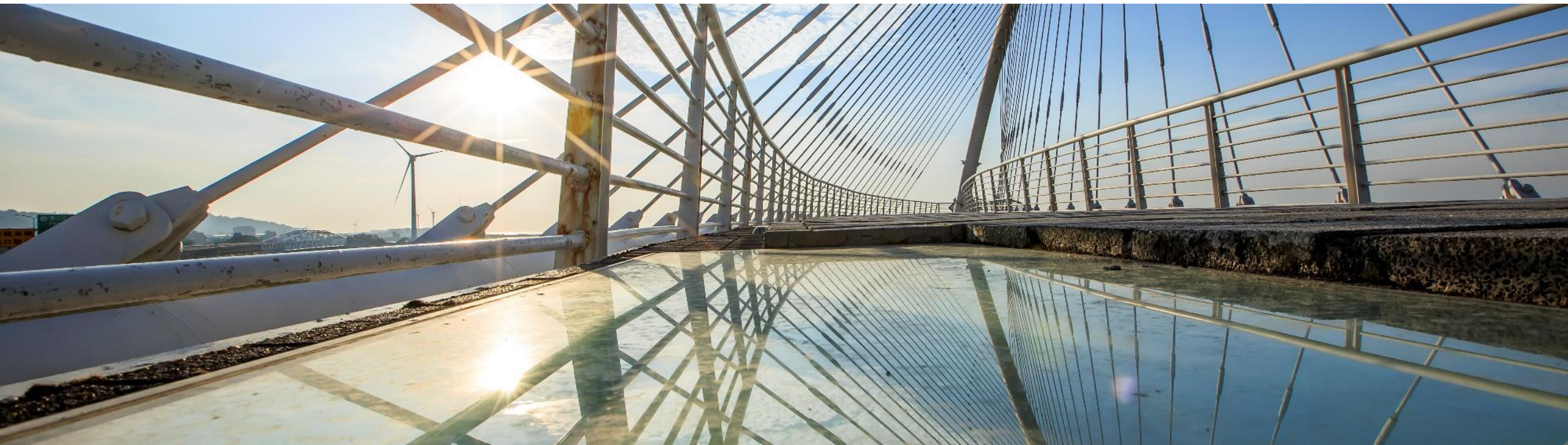
Integration patterns between SAP Integration Suite & Microsoft Azure



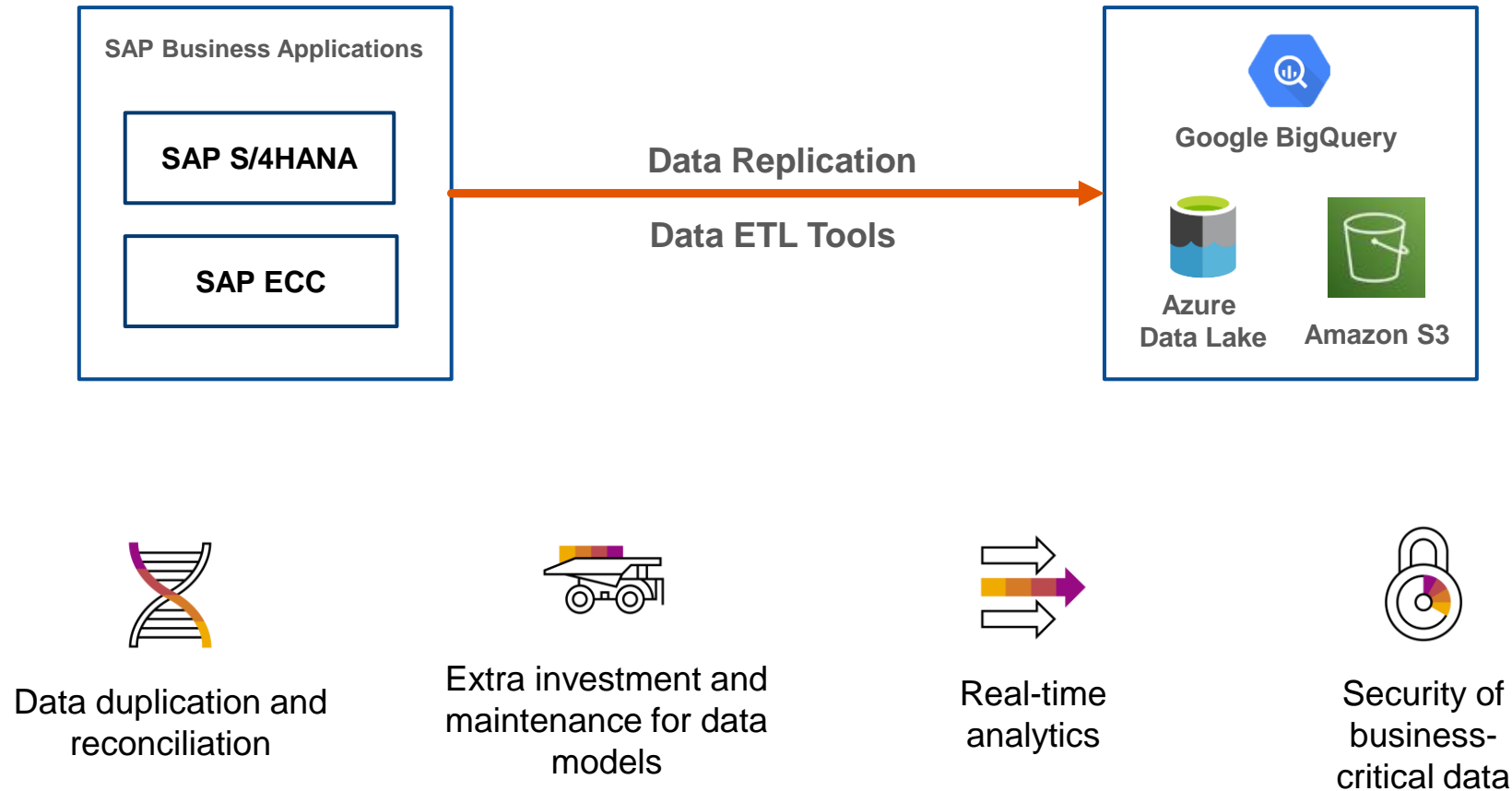
SAP Workflow Management integration with Microsoft productivity suite



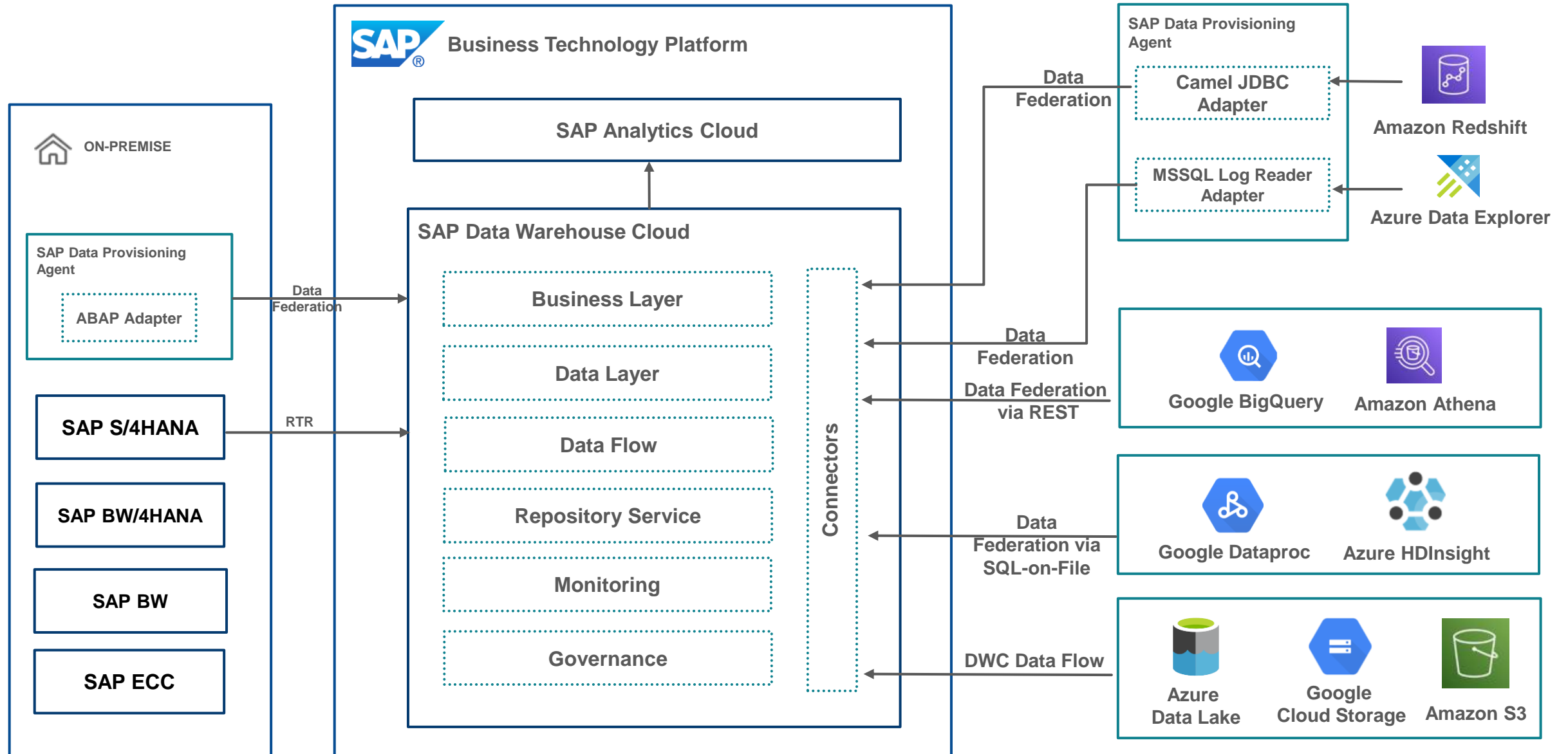
Data-to-Value: **Federation & Analytics**



Challenges with data extraction from SAP into 3rd party data services



SAP Reference Architecture: Hybrid data extensions through query federation



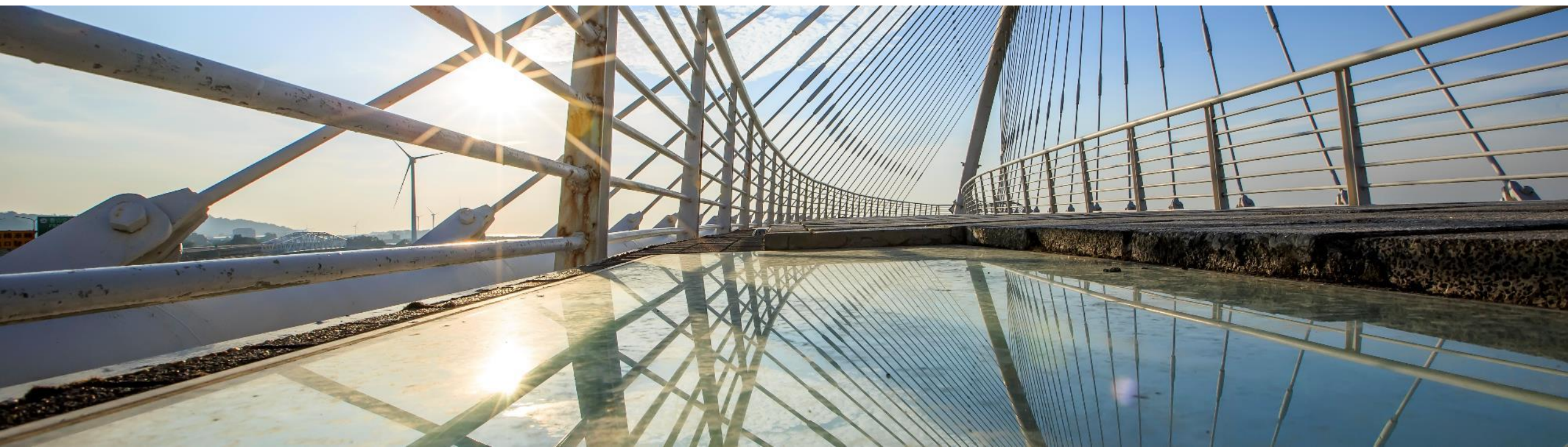
Demo

SAP Data Warehouse Cloud as the multi-cloud logical data warehouse

- Multi-cloud data access from AWS, Azure & GCP from SAC & SAP DWC in real-time
- Combine cross hyperscaler data to bring richer insights
- One true Business Semantic Layer for ALL data
- Row level access control in DWC for Google BigQuery, Amazon Redshift and Azure Data s
- Data Governance & Business Catalog
- Enable data sharing across hyperscaler services

SAP Discovery Center: [Link](#)

Call to Action



Do you have hyperscaler use cases? Work with us!



Thank you.

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Evolving Multi-Cloud Architectures on the Journey to Intelligent Enterprise

Gunther Schmalzhaf, SAP
May 20, 2021

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Agenda

Intelligent Enterprise

- Overview

Hybrid Cloud

- Cloud Types the Intelligent Enterprise is built on

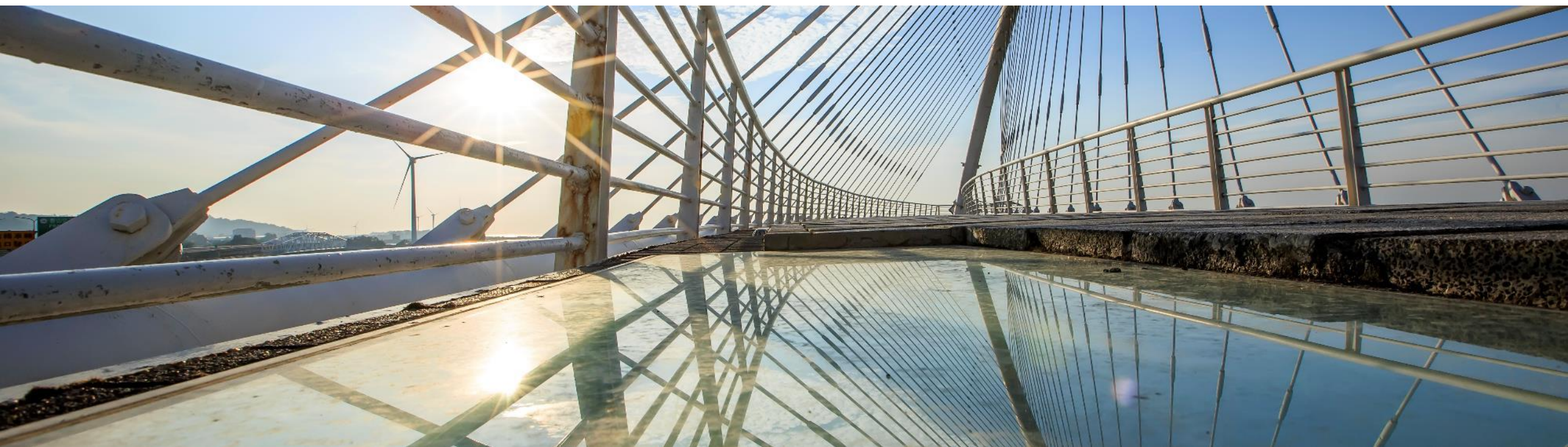
Cloud Transition Roadmap

- Definition of your cloud journey in single step with focus on technical architecture

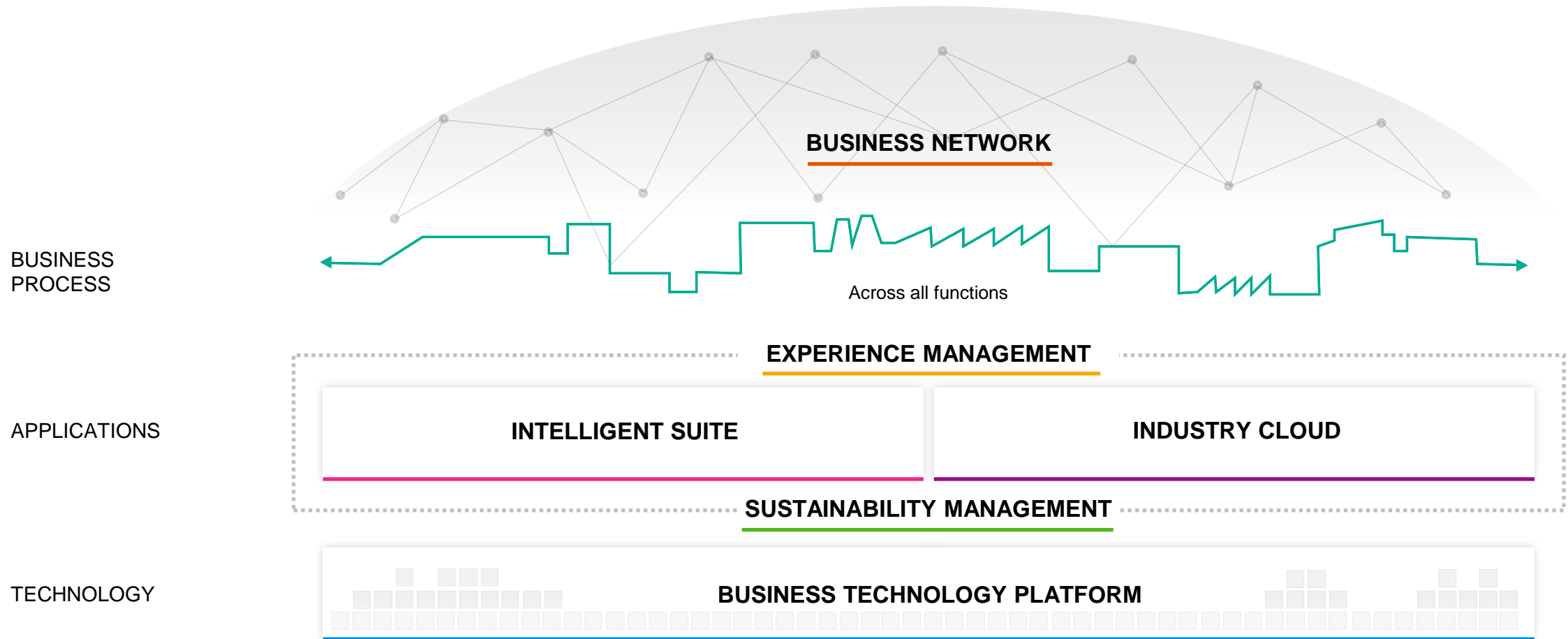
MaxAttention Support for a Cloud Transition

- How can MaxAttention support you in you cloud transition project

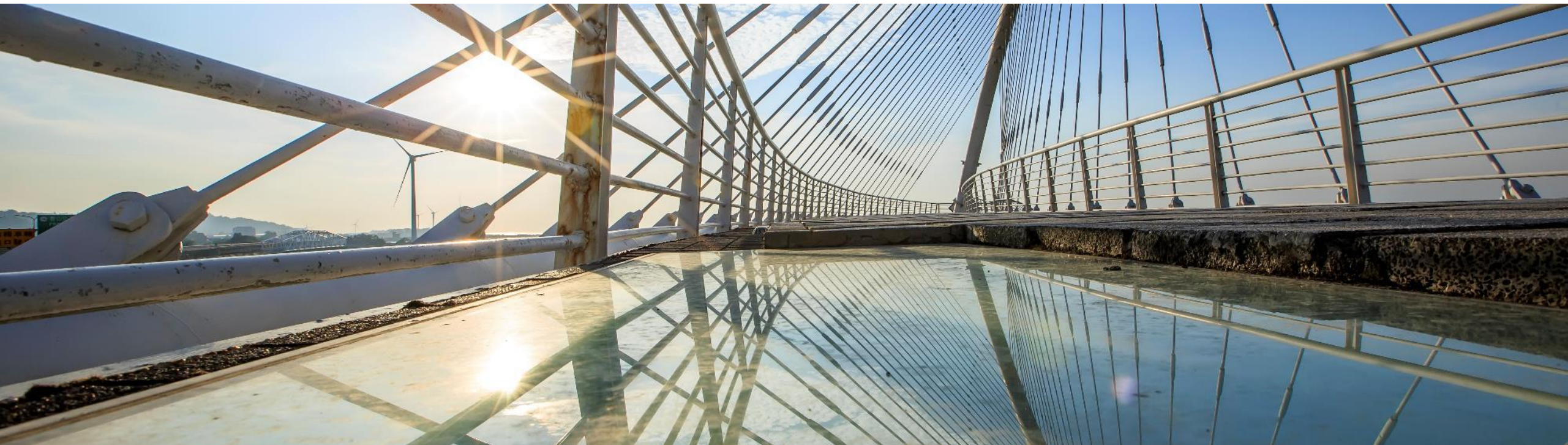
Intelligent Enterprise



Intelligent Enterprise

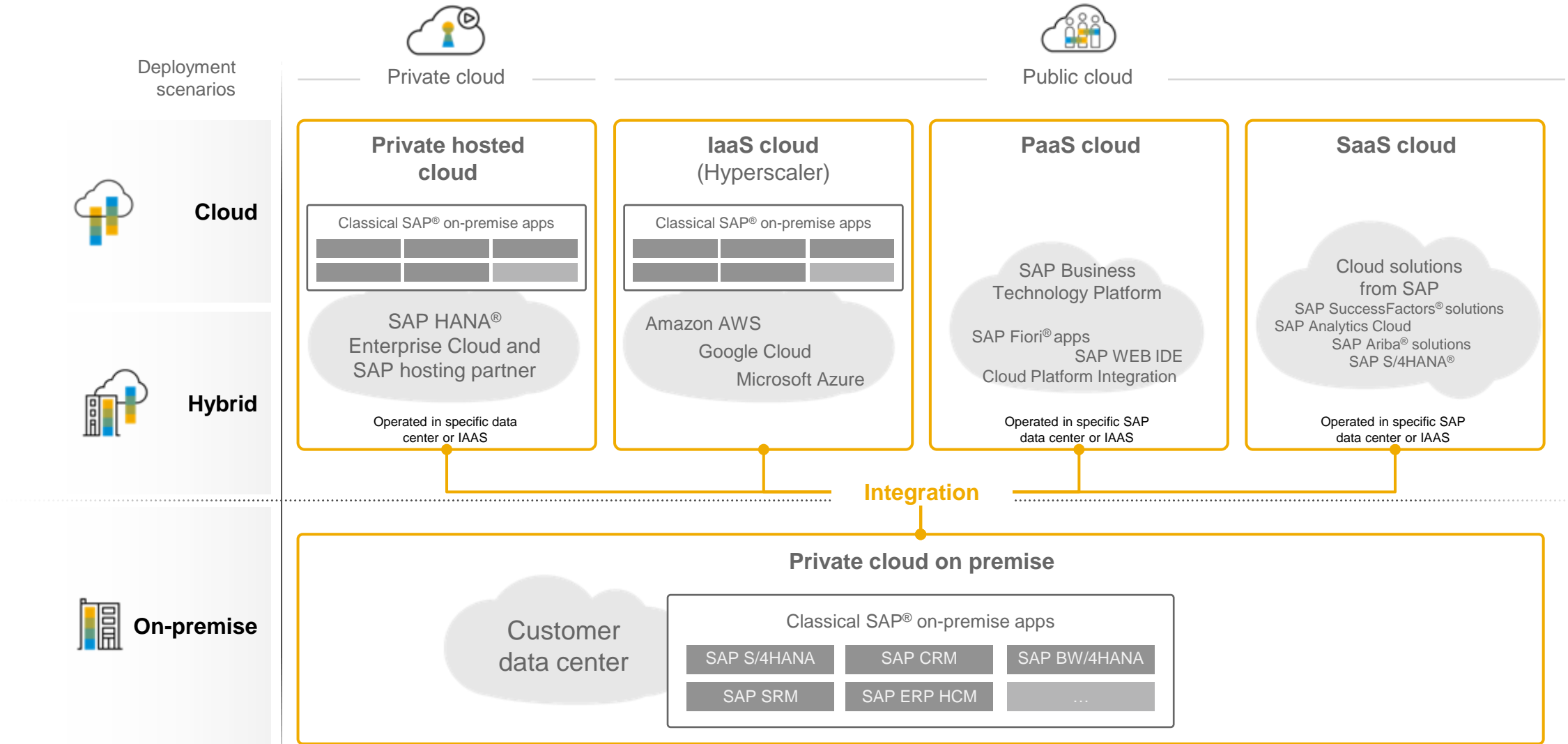


Hybrid Cloud



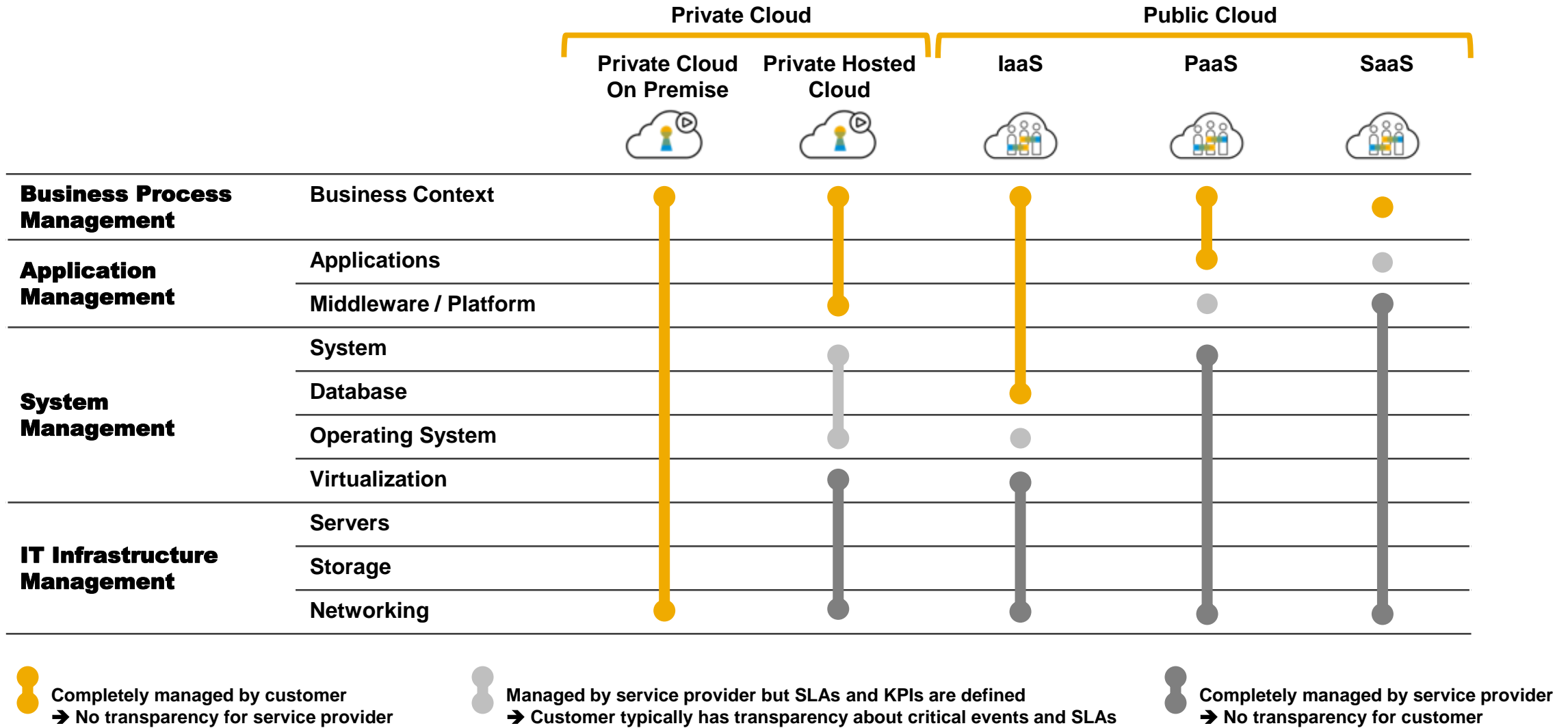
Drive the Transformation

Across Cloud, On-premise, or Hybrid Landscapes

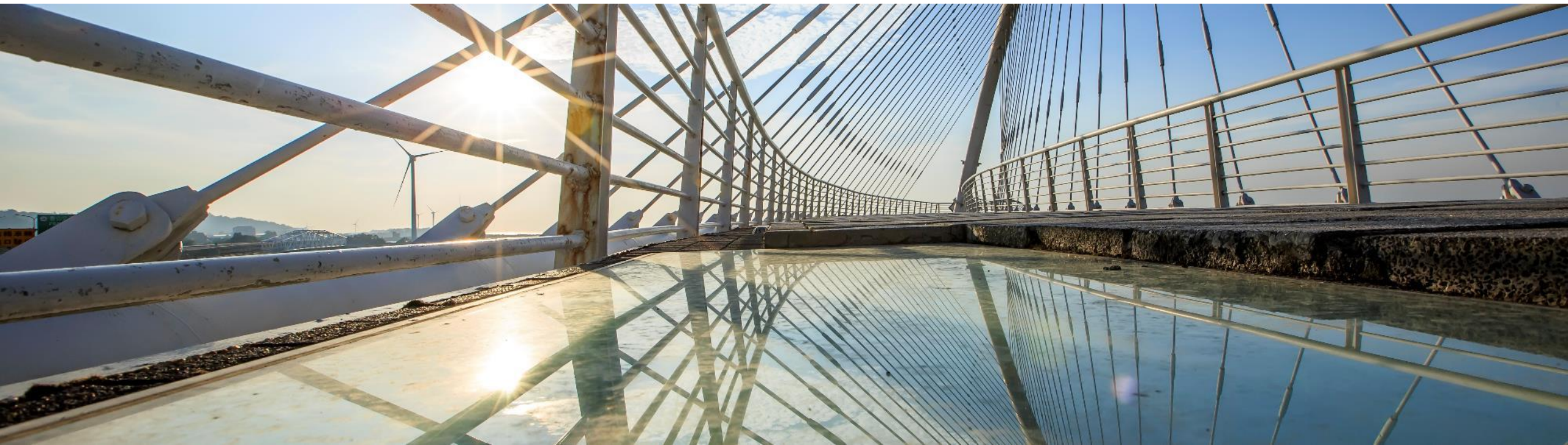


Drive the Transformation

Responsibilities by layer

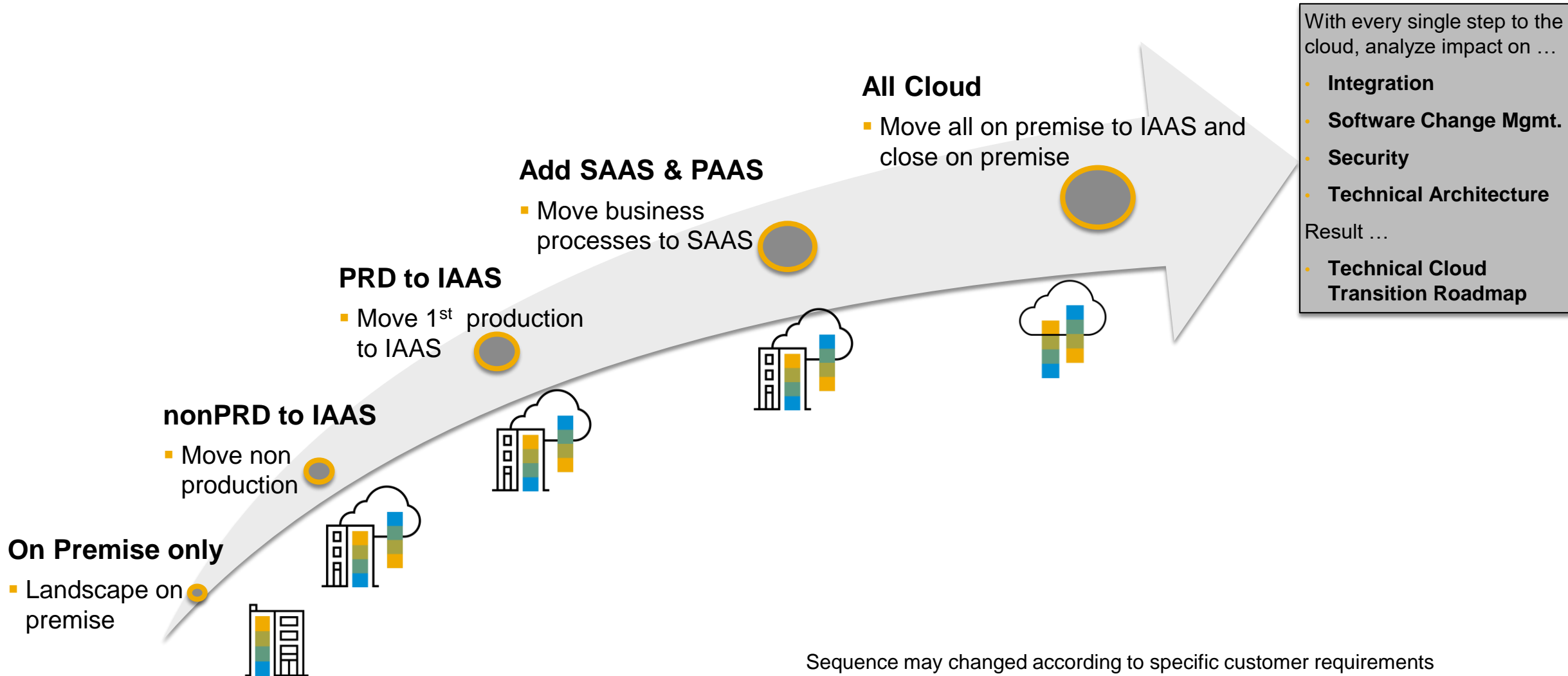


Cloud Transition Roadmap



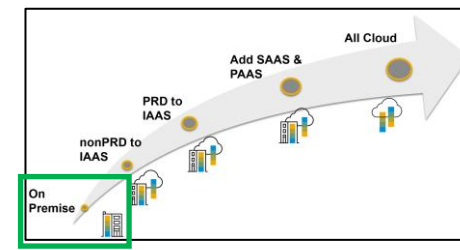
Cloud Transition Roadmap

Cloud transition as a step by step approach



Cloud Transition Roadmap

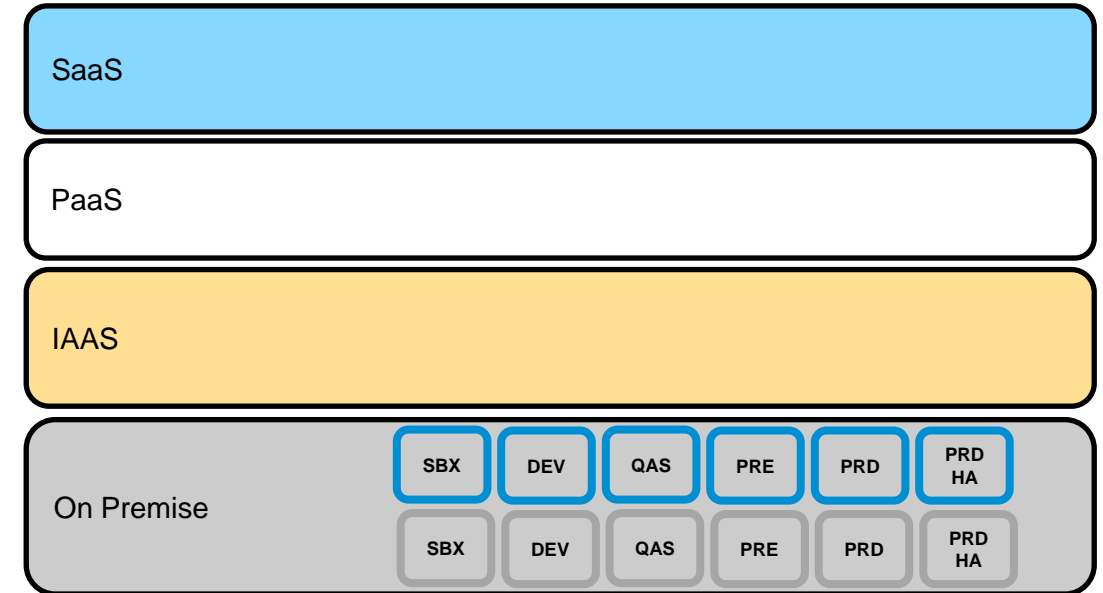
Step 1 – On Premise - Assess



Analyze existing landscape

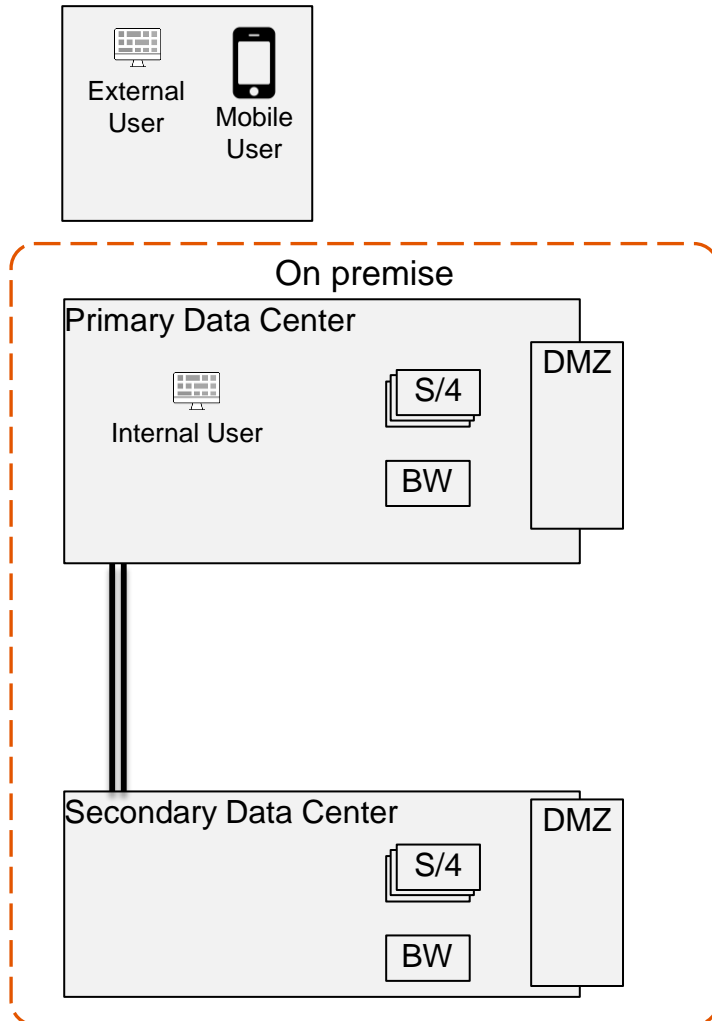
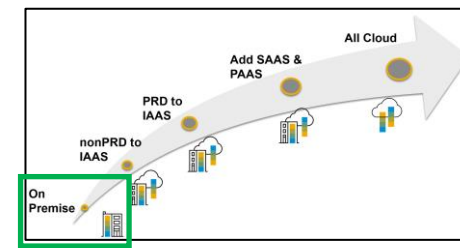
- Existing platforms (IT infrastructure, Integration and security platforms, ...)
- Performance Baseline
- Availability SLA
- Operations
- Software Change Management
- Current SWCM landscape/processes
- Integration and Security assessment

Analyze gaps in existing landscape and decide to address them before or after the cloud transition



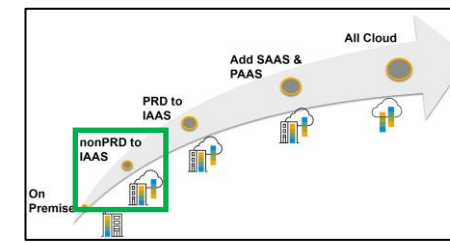
Cloud Transition Roadmap

Step 1 – On Premise – Data Center Situation



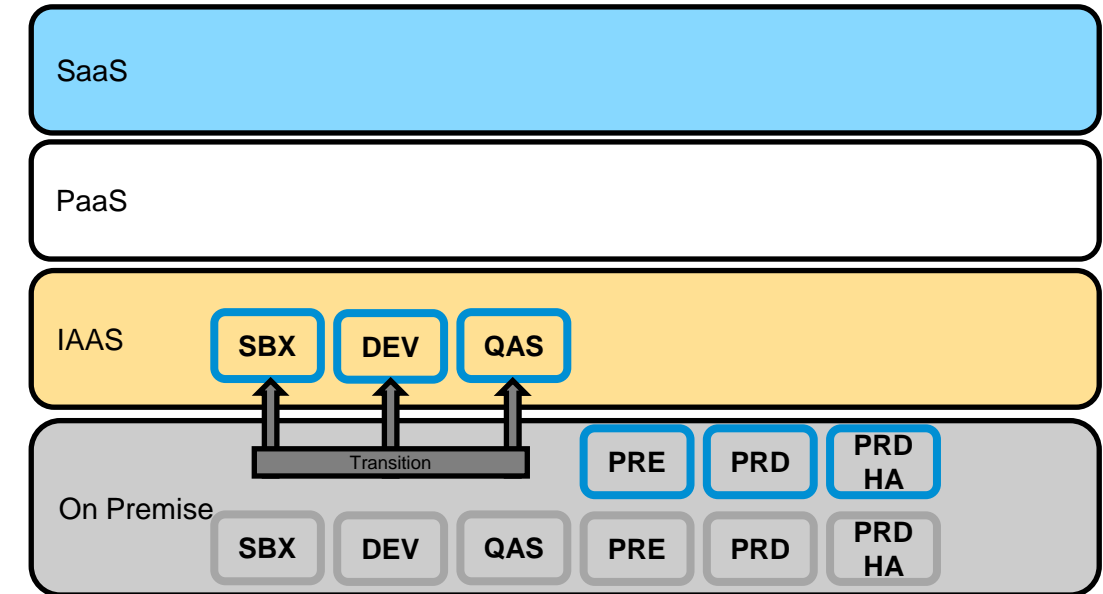
Cloud Transition Roadmap

Step 2 – nonPRD to IAAS - Plan



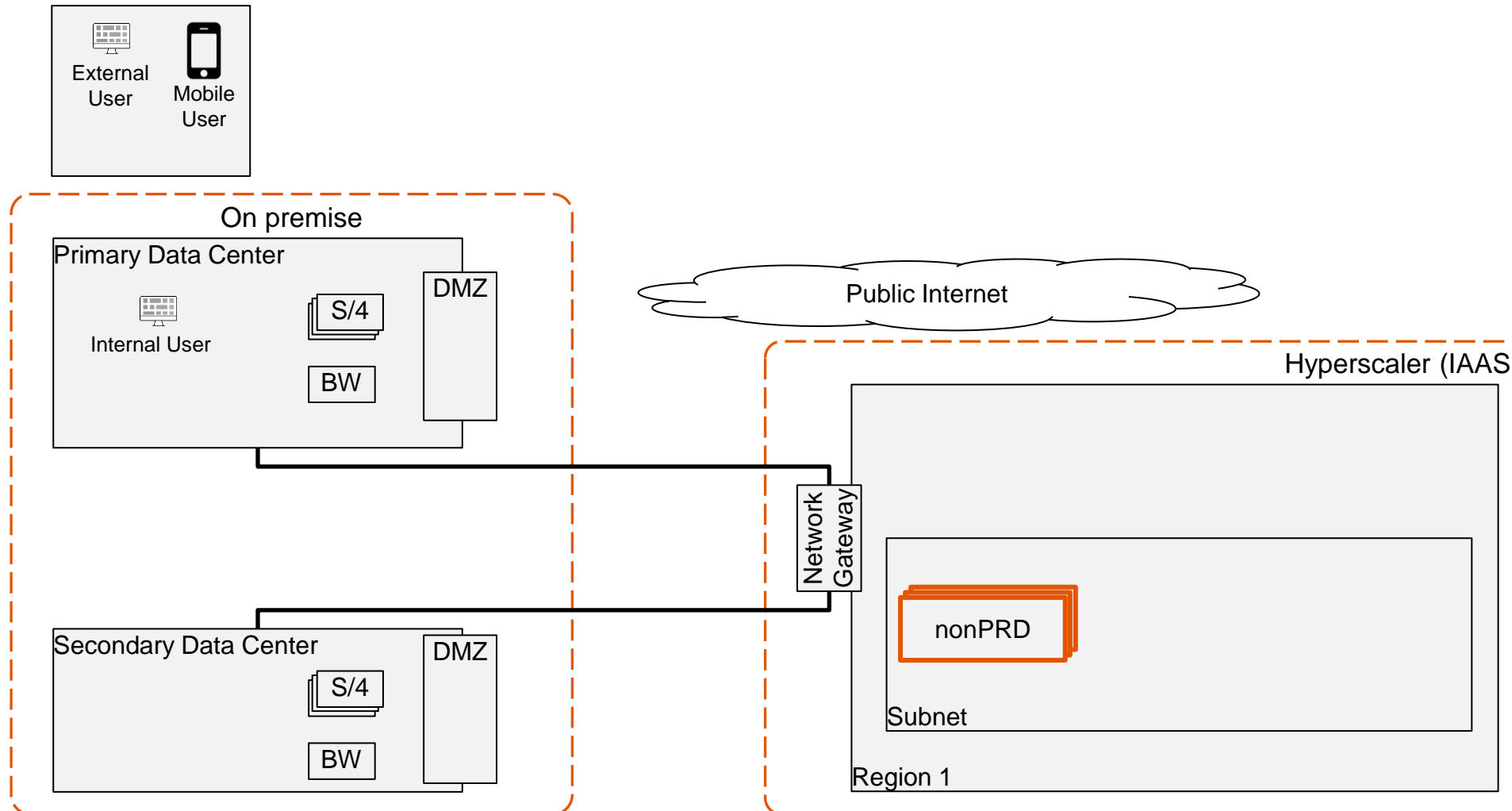
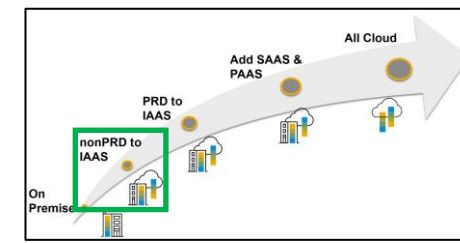
Move nonPRD to hyperscaler (IAAS)

- Transport landscape requires two /usr/sap/trans filesystems
- An additional IaaS based backup solution is required
- No availability setup required at this stage
- IaaS based operational procedures have to be developed
- Usually only internal users access non production; no end-users
- No separate network transit zone (DMZ) on IAAS required usually
- Security to be extended for hyperscaler platform



Cloud Transition Roadmap

Step 2 – nonPRD to IAAS – Data Center Situation



Cloud Transition Roadmap

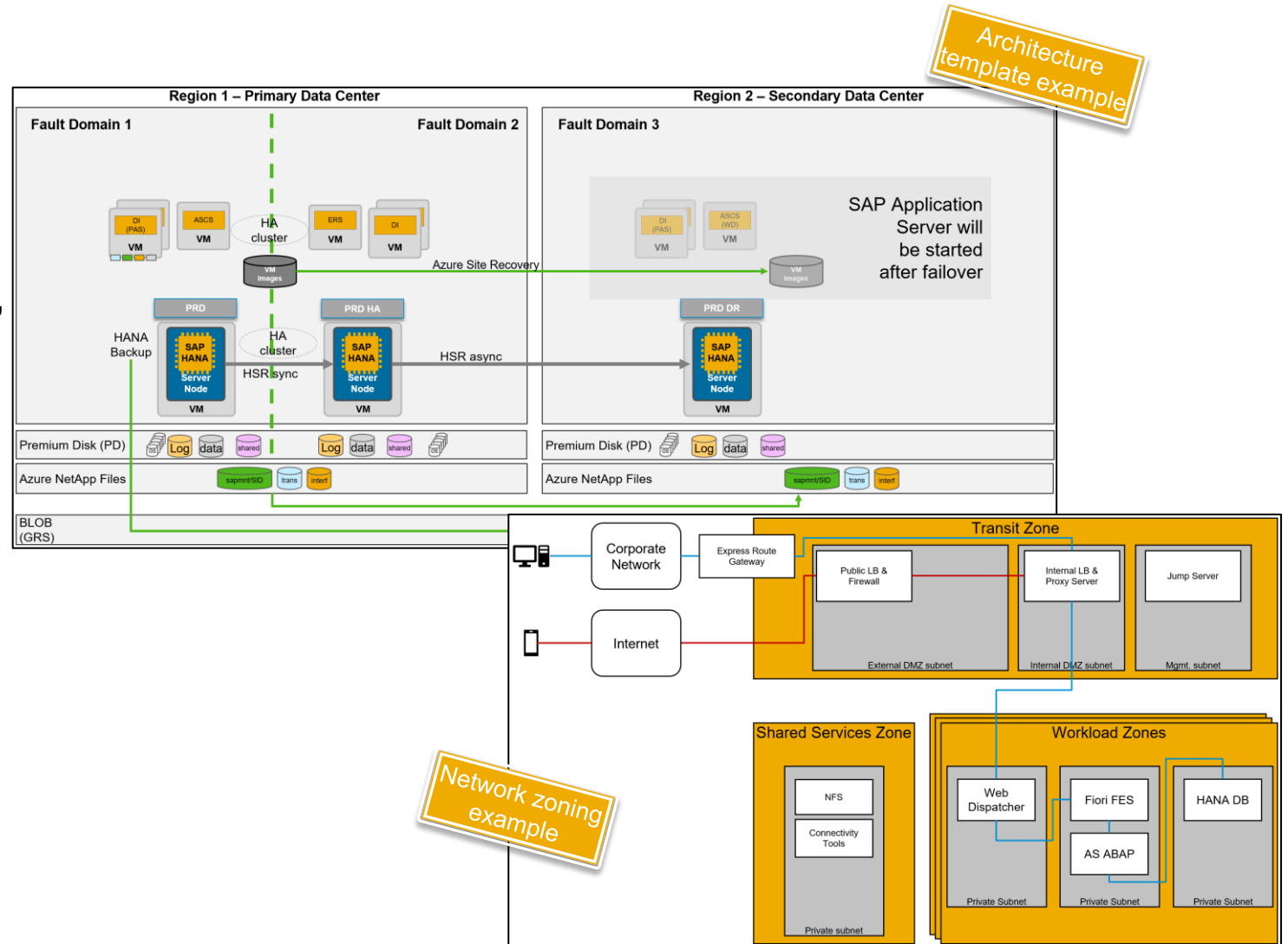
Step 2 – nonPRD to IAAS – Architecture

Technical architecture definition

- Define PRD and nonPRD landscape architecture
- Deployment decision (storage, network, VM, replication)
- HA/DR setup on hyperscaler

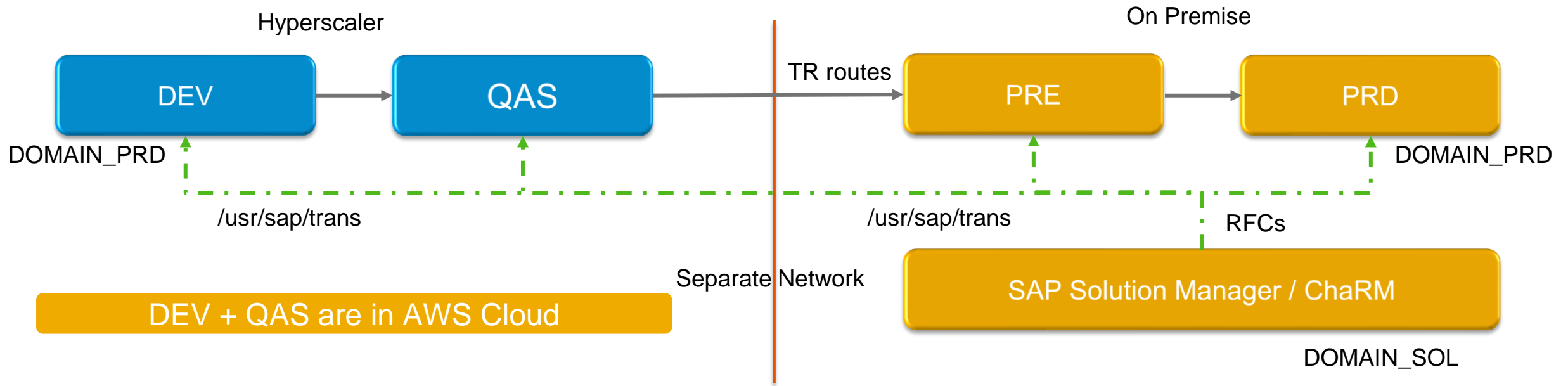
Security across hybrid clouds

- Build Secure SAP Systems
- Identity Management and Access Control
- Data Security
- Network and Communication Security
- Cyber security



Cloud Transition Roadmap

Step 2 – nonPRD to IAAS – Transport Directory Solution Across Cloud



Background

- Non prod systems would be hosted in AWS
- Other systems on transport landscape will be on Premise for sometime before entire landscape moves to AWS cloud

Challenge

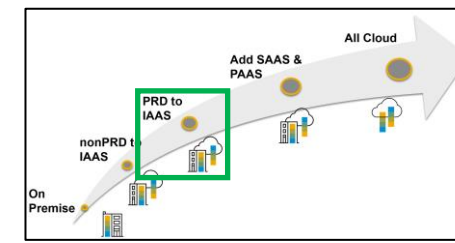
- Transports across transport landscape requires shared directory and network between Cloud and Premise Solution to be connected (high latency)
- Need to identify ports which may be open for connectivity (TMS requires RFC communication → open GW port)

Approach

- All System in transport same domain, but two transport groups with individual /usr/sap/trans.
- Both trans directories on FS level are synced via STMS (RFC communication → GW port to be open)
- Charm requires RFC communication with all 4 systems via RFCs (READ / TMW / TRUSTED / BACK)

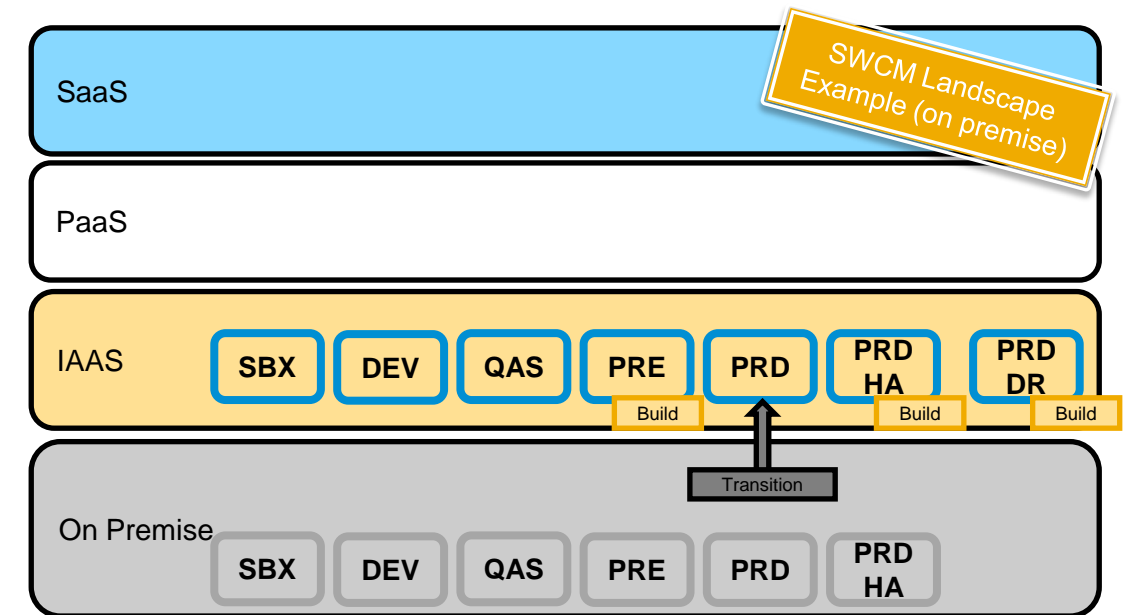
Cloud Transition Roadmap

Step 3 – PRD to IAAS



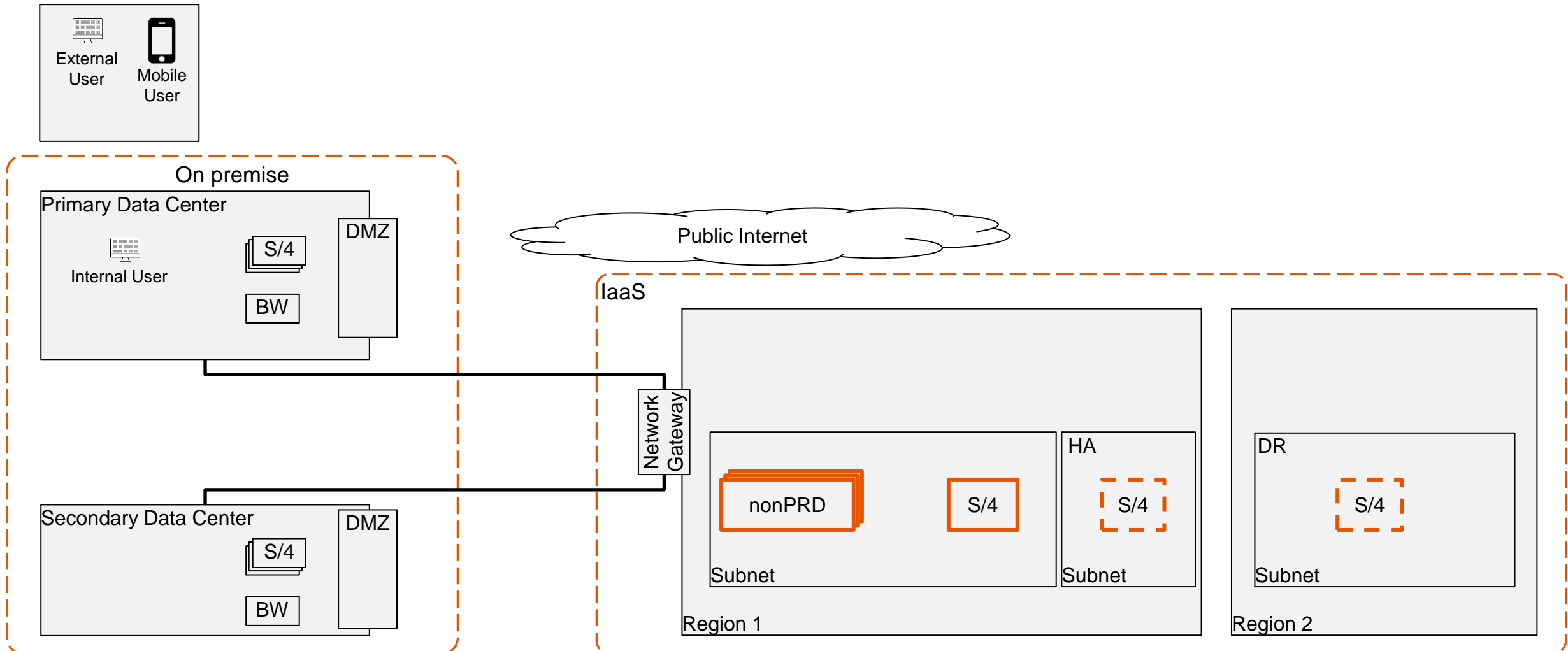
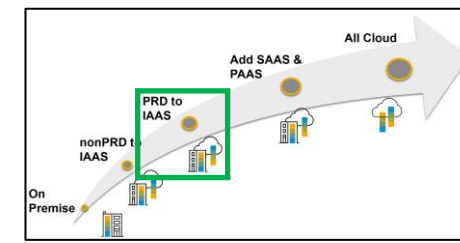
Move PRD and PRE to hyperscaler (IAAS)

- Move PRD and PRE to hyperscaler
- Technical Platform and deployment options on hyperscaler
- Build HA across availability zone
- Build DR across region
- Run a sizing to provide sufficient capacity
- Plan a scalability strategy
- Still no separate network transit zone (DMZ) on IAAS required usually



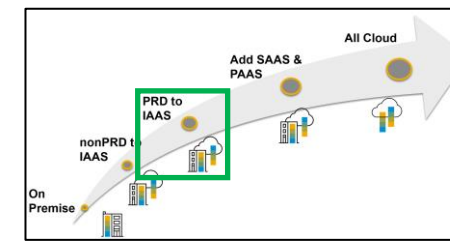
Cloud Transition Roadmap

Step 3 – PRD to IAAS – Data Center Situation



Cloud Transition Roadmap

Step 3 – PRD to IAAS



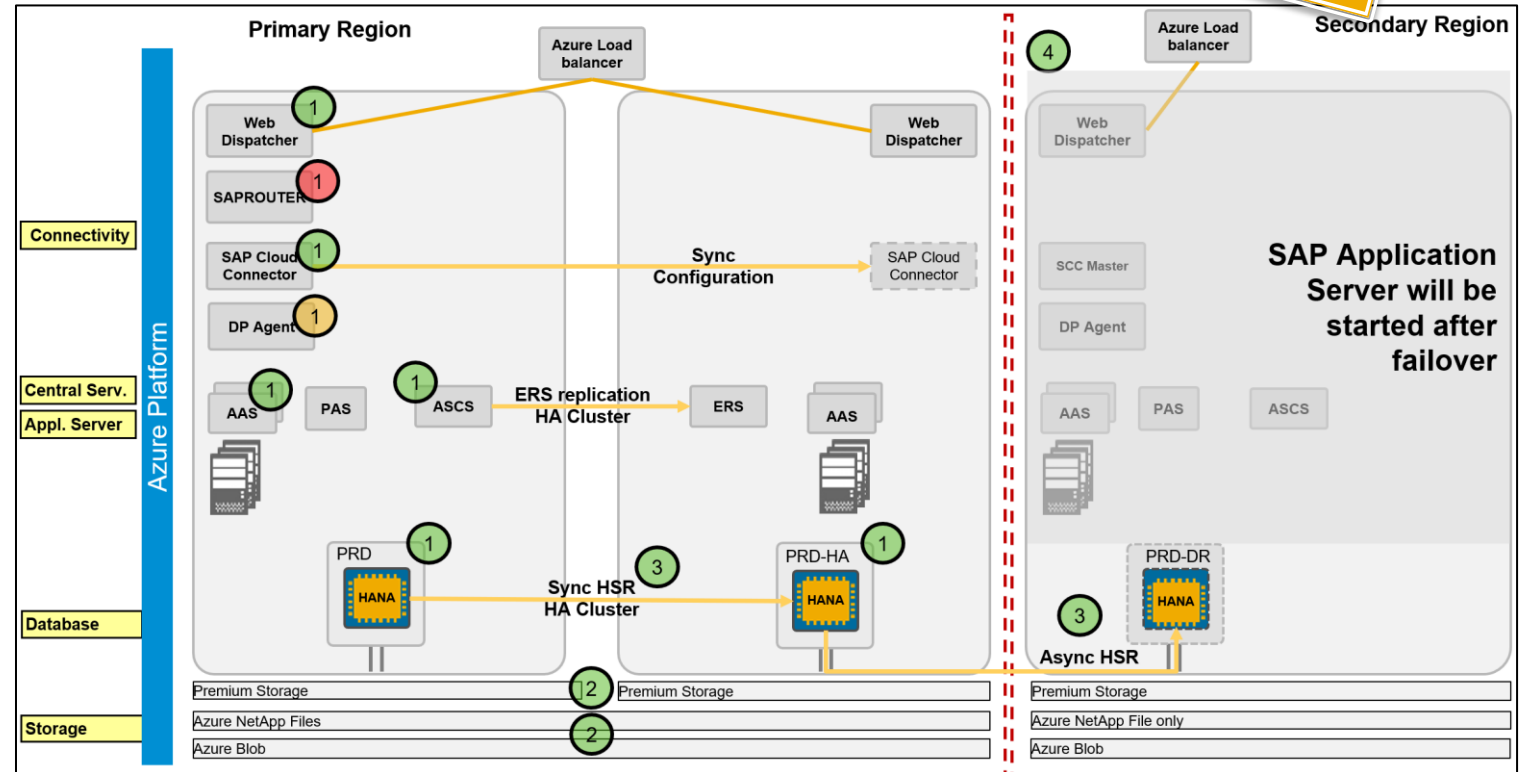
Availability Analysis

- Verify if High Availability and Disaster Recovery requirements are met in each layer
- Avoid potential Single Point of Failure (SPOF)

Testing Support

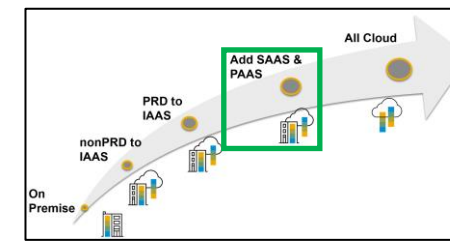
- Define test cases
- Run tests, identify gaps and defined follow up
- Document procedures

Availability analysis
Example



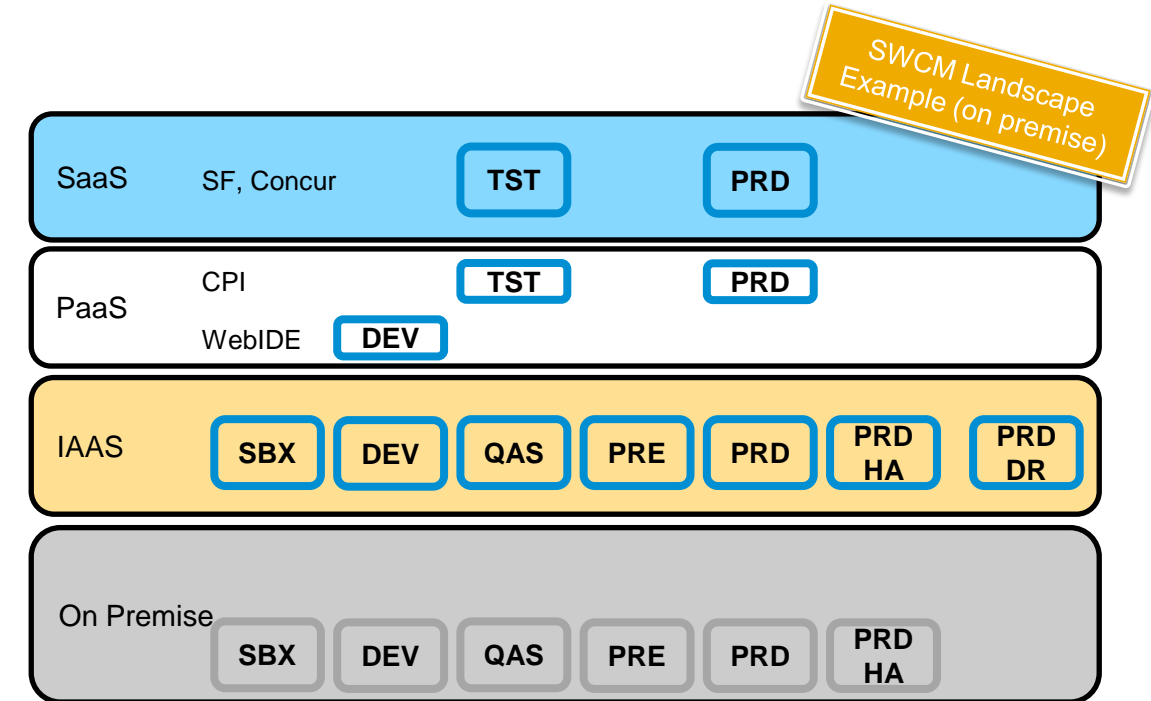
Cloud Transition Roadmap

Step 4 – Add PAAS and SAAS



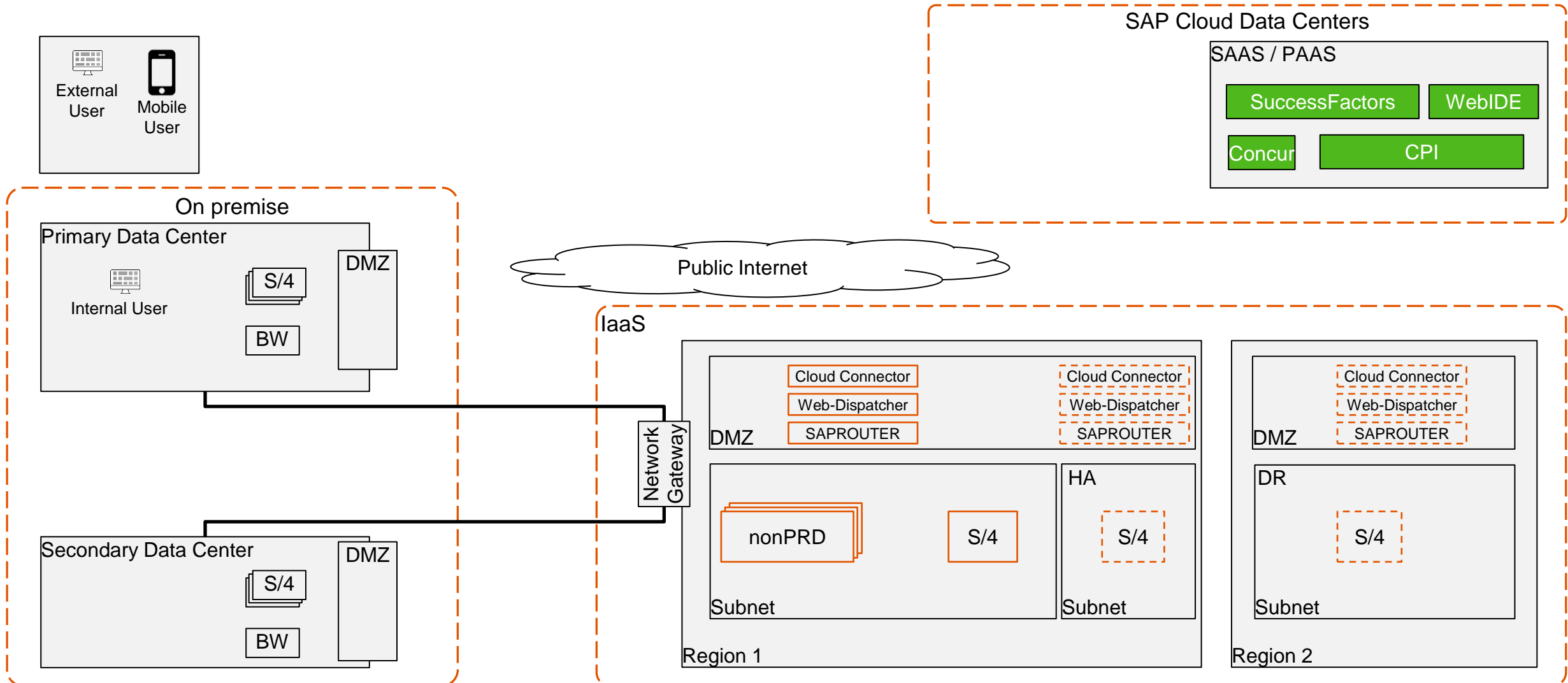
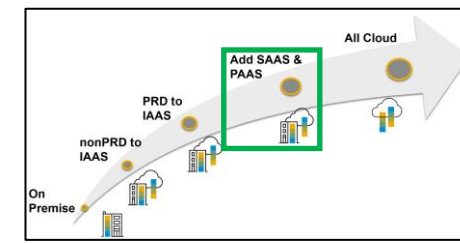
Add SAAS and PAAS to systems deployed on hyperscaler

- Define technical integration architecture (e.g. protocols, connectivity tools)
- DMZ implemented on hyperscaler
- Security extended for secure operations across clouds
- Analyze technical integration scenarios, access and data flows
- Sizing impact on source systems and network
- Analyze user access to on premise, SaaS and PaaS systems



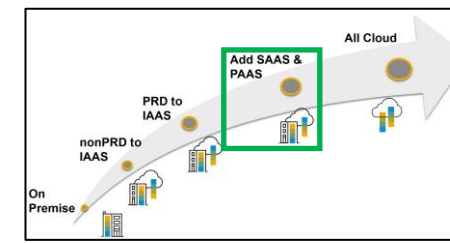
Cloud Transition Roadmap

Step 4 – Add PAAS and SAAS – Data Center Situation



Cloud Transition Roadmap

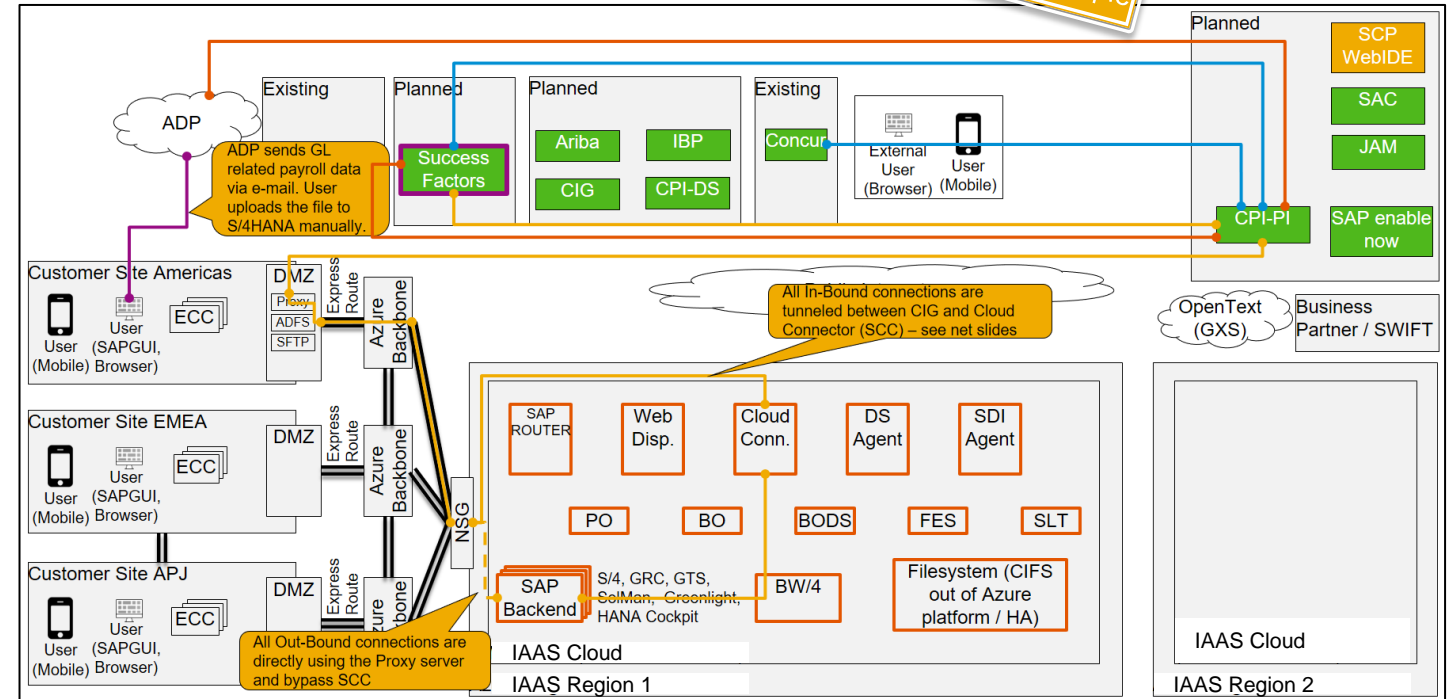
Step 4 – Add PAAS and SAAS



Technical integration analysis

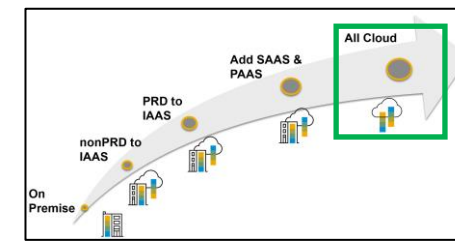
- Analyze technical integration scenarios, access and data flows Sizing impact on source systems and network
- Analyze user access to on premise, SaaS and PaaS systems
- Define deployment of required connectivity tools in HA and DR
- Verify redundancy of nonSAP components

UX and system integration Example



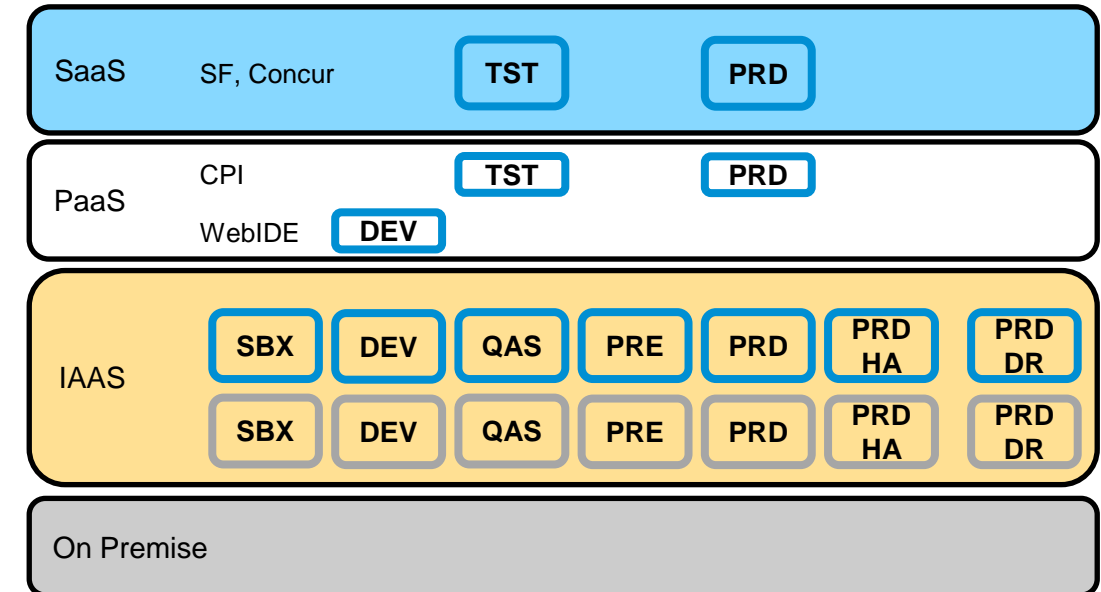
Cloud Transition Roadmap

Step 5 – All Cloud

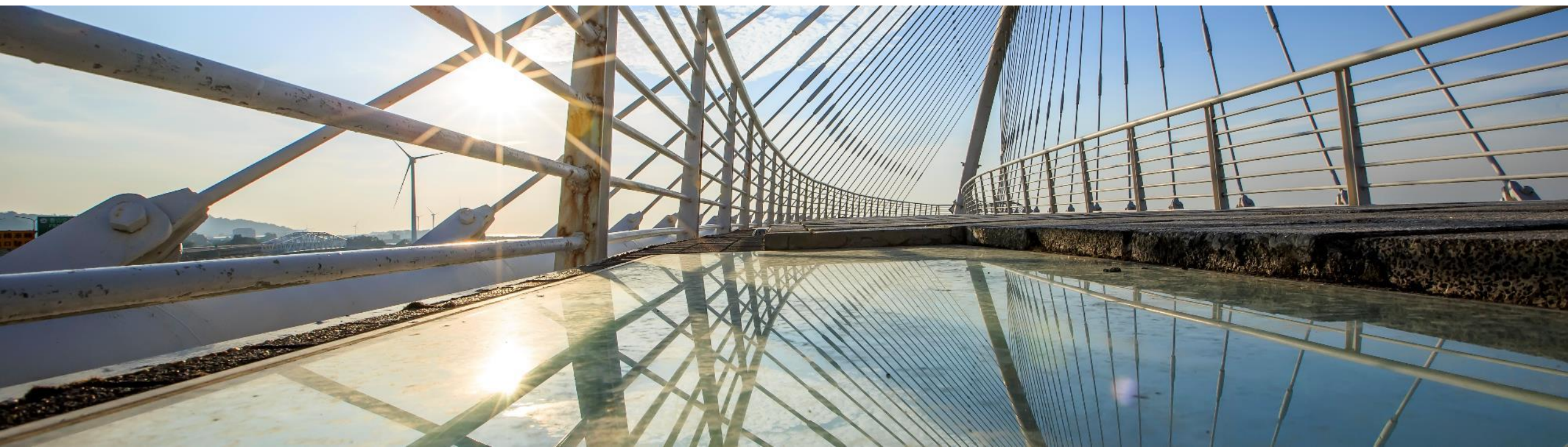


Move the complete on premise landscape to hyperscaler

- Use learnings of first project to build a customer specific hyperscaler deployment template
- Use template for a hyperscaler move for the rest of the on premise systems
- With this step one platform less is to be maintained

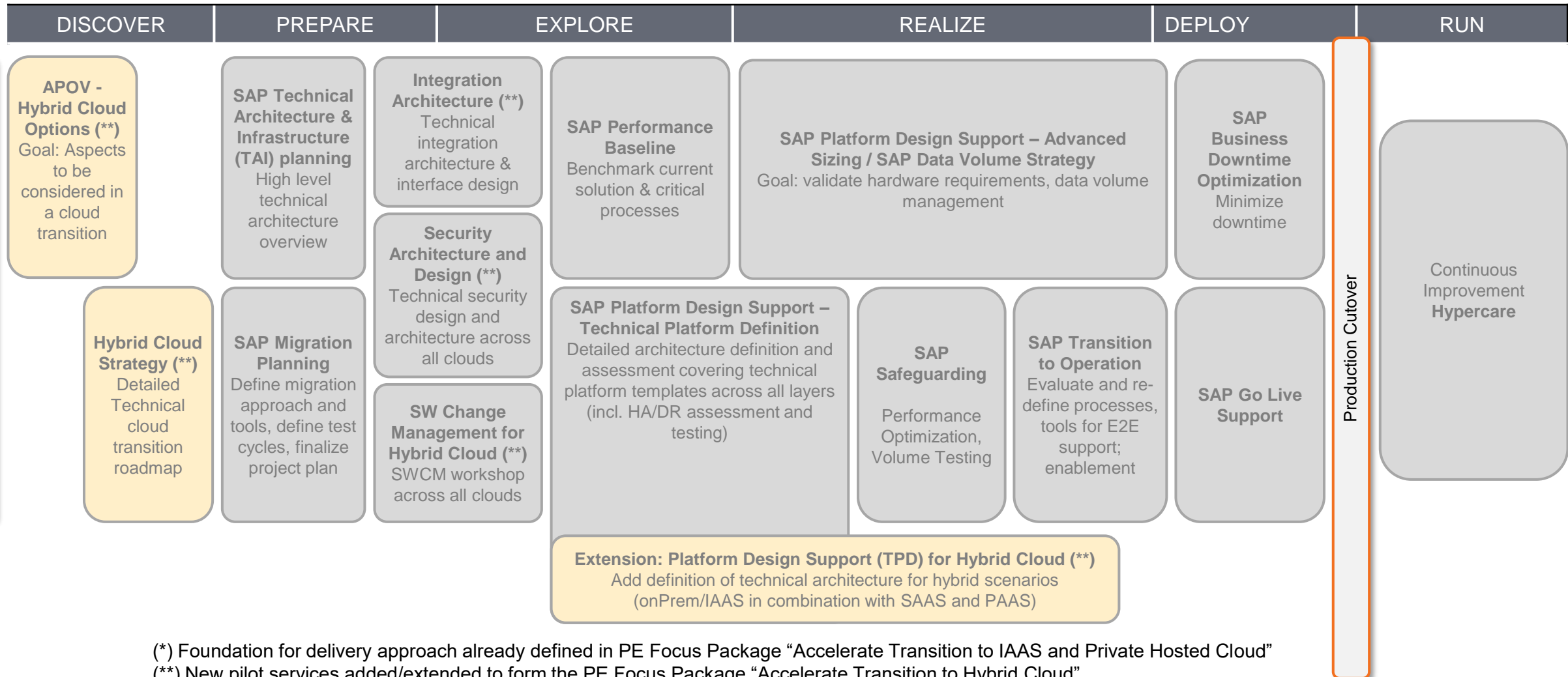


MaxAttention Support for a Cloud Transition



Transition to Hybrid Cloud – Package Proposals

Service Proposal



(*) Foundation for delivery approach already defined in PE Focus Package “Accelerate Transition to IAAS and Private Hosted Cloud”

(**) New pilot services added/extended to form the PE Focus Package “Accelerate Transition to Hybrid Cloud”

Thank you.

Contact information:

F name L name

Title

Address

Phone number

Partner logo

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