



Exploring SAP BTP Reference Architecture To Master Multi-Cloud And Platform Environments

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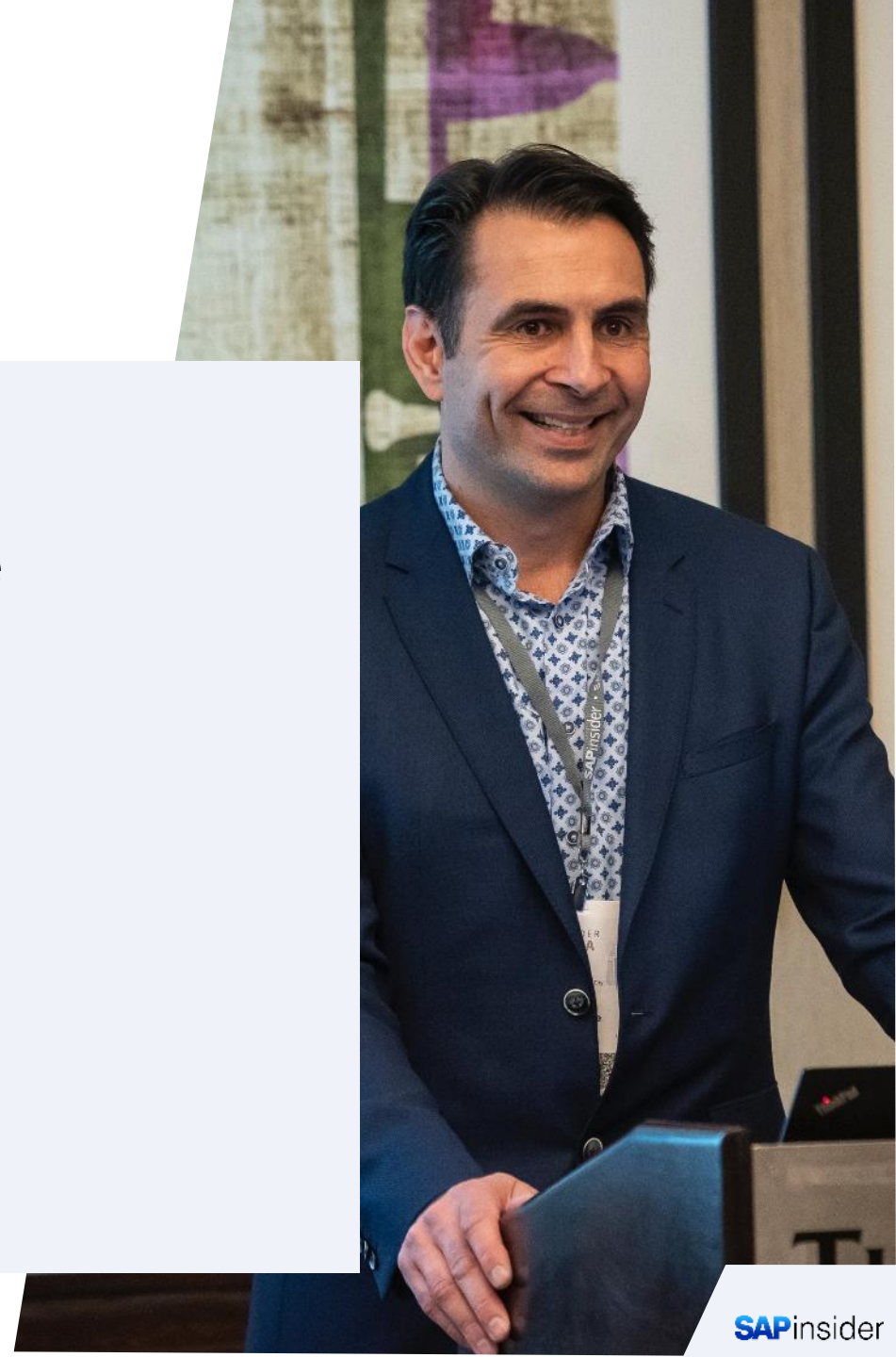


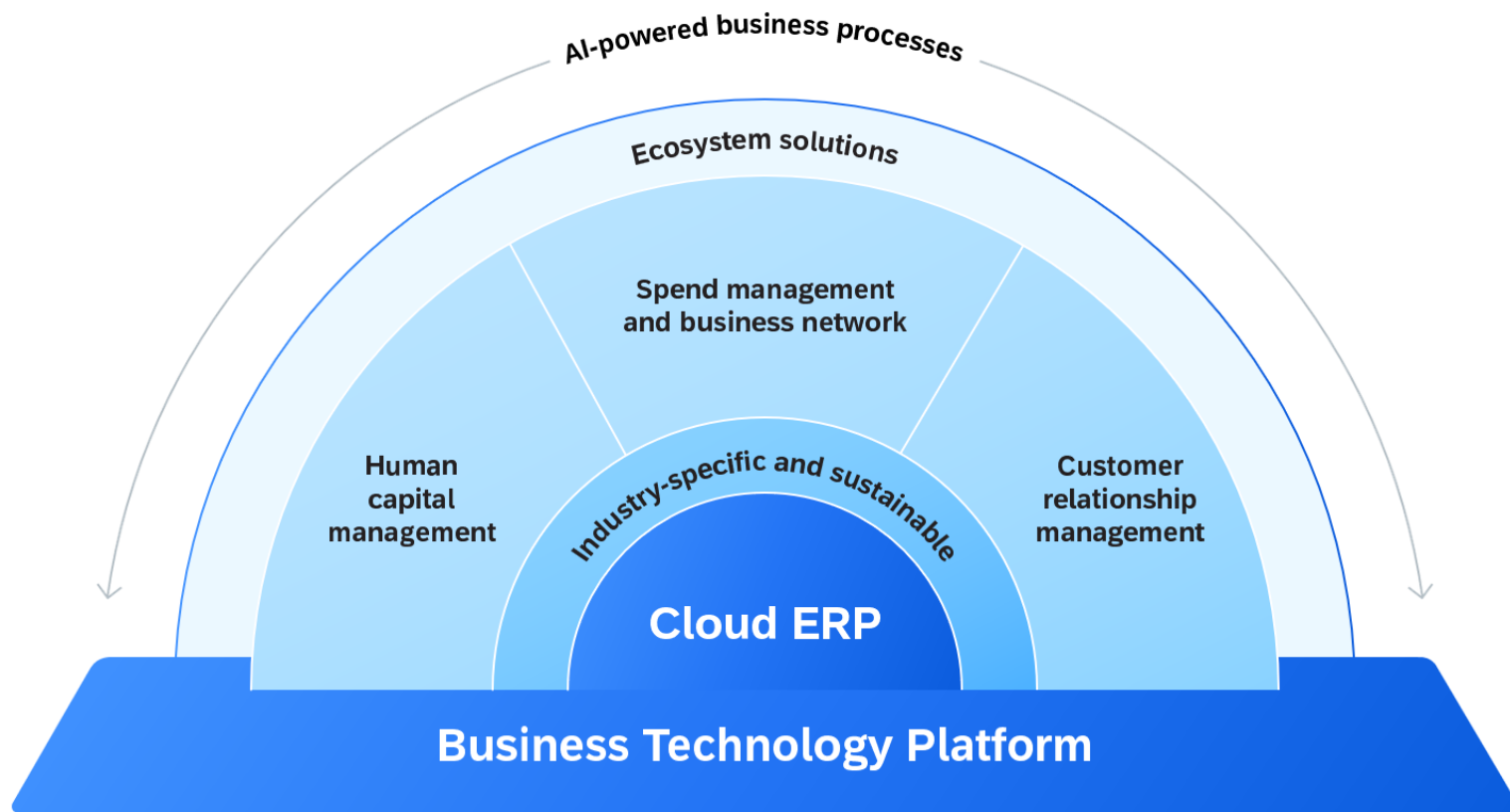
In This Session

- Understand the scope of SAP BTP and how it accelerates innovation
- Get to know SAP's multi-cloud strategy
- Learn why you need reference architectures
- Explore architecture examples

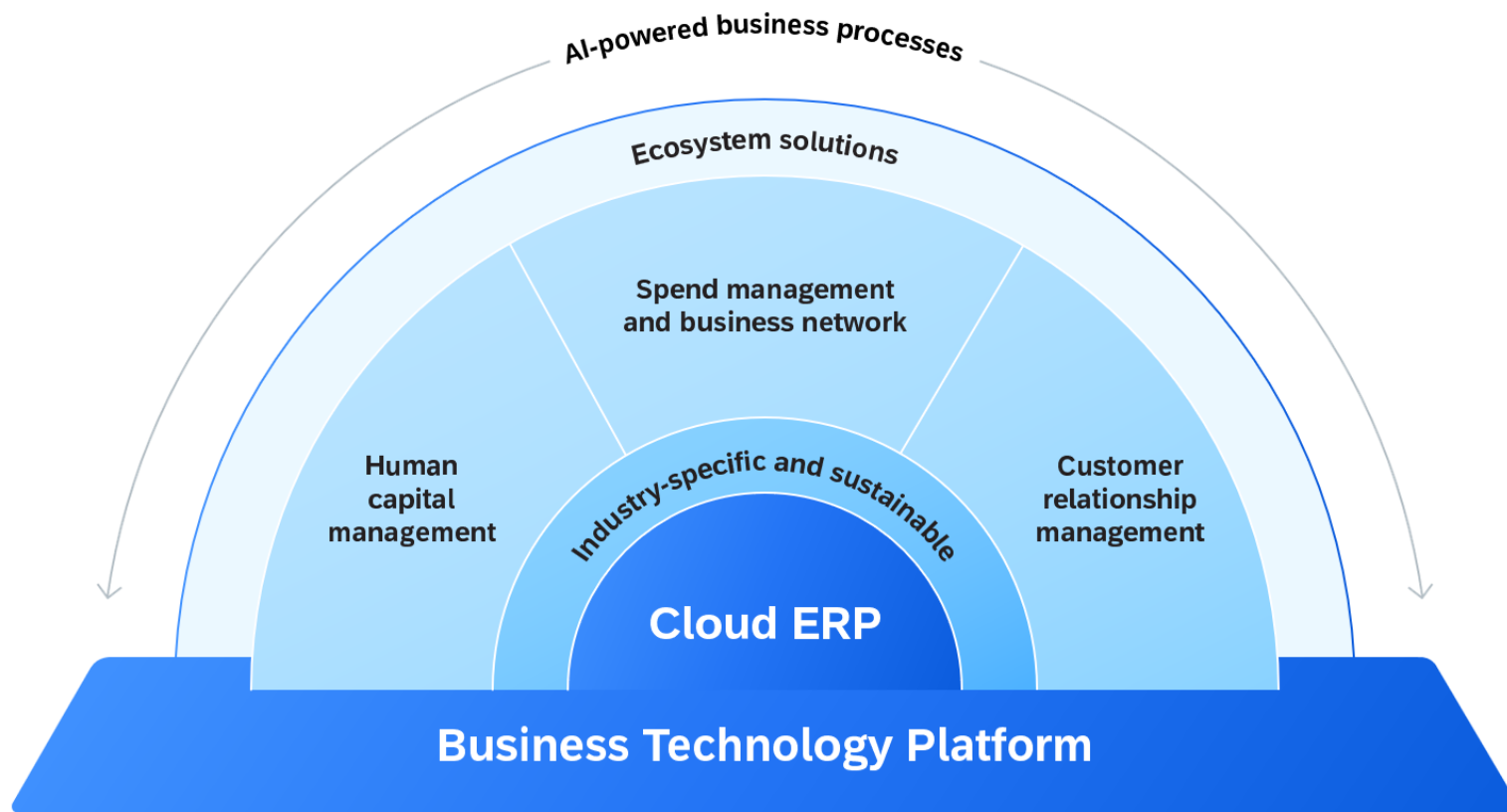
What We'll Cover

- SAP BTP at a Glance
- Explore the SAP BTP Reference Architectures

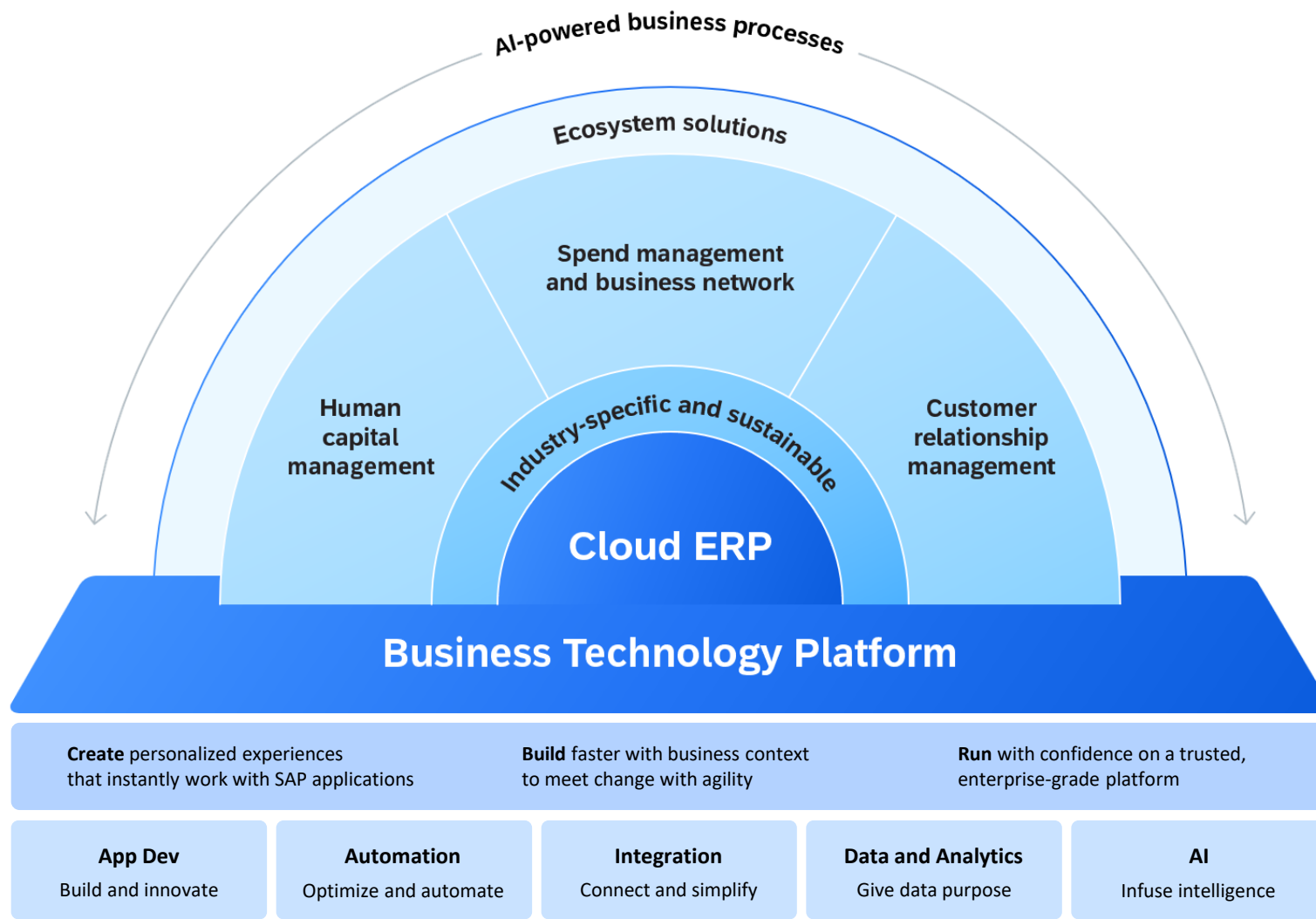




SAP Business Technology Platform (SAP BTP) is the foundation for a smoothly integrated SAP portfolio.

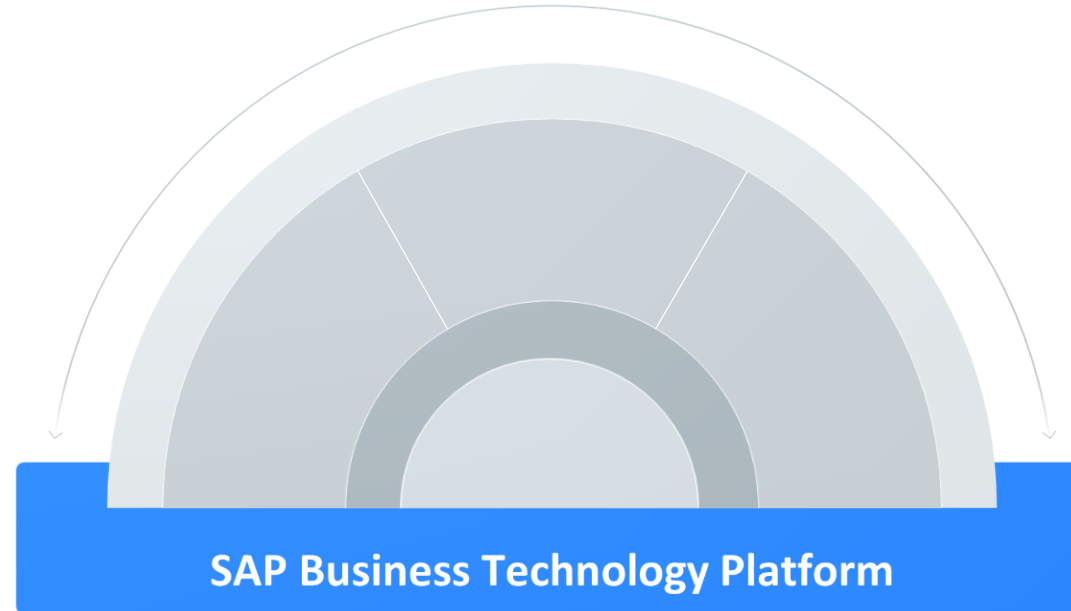


**... but SAP BTP
is not limited
to this...**



**...SAP BTP is
the platform for
customers and
partners to
innovate and
transform.**

Pairing foundational qualities with a clear differentiation: Business Centricity



Foundational qualities

Unified

- Unified platform for innovation along comprehensive business processes
- Smooth integration between SAP BTP services
- Harmonized operations and UI

Enterprise-grade

- Built-in security and compliance
- Reliability, performance, and scalability
- Simple and intuitive user experience
- Lifecycle management

Open

- Embracing open-source technology
- Interoperability with 3rd-party applications and data
- Growing ecosystem of strategic partners

We are not alone.
We are in a multi-cloud world



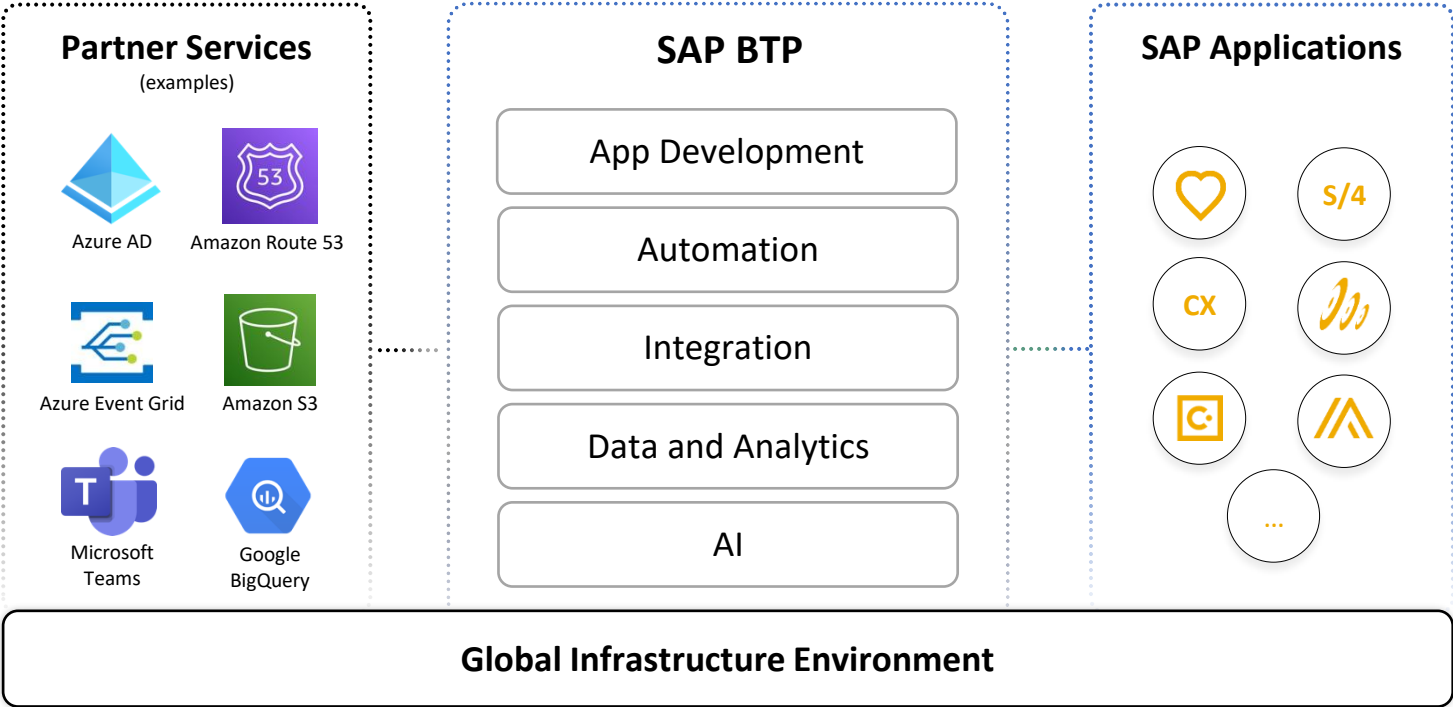
SAP's Multi-Cloud Strategy - Run and Interoperate



Target Infrastructure:

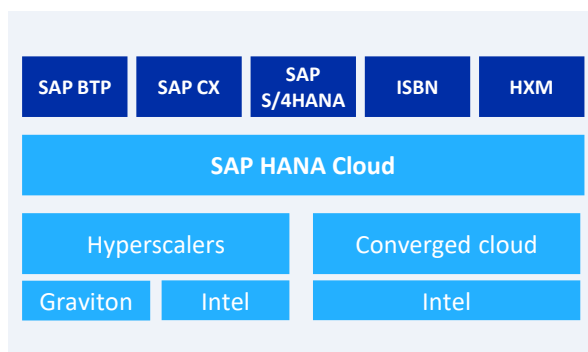
Deploy SAP applications on Microsoft Azure, AWS, GCP, Alibaba Cloud and SAP's own cloud Infrastructure

- SAP BTP offers out-of-the box integration and extensibility for SAP apps
- SAP BTP unifies data and process across SAP and customer landscapes
- SAP BTP is open and portable – write applications once, deploy multi-cloud



Examples of joined SAP and hyperscaler co-innovations

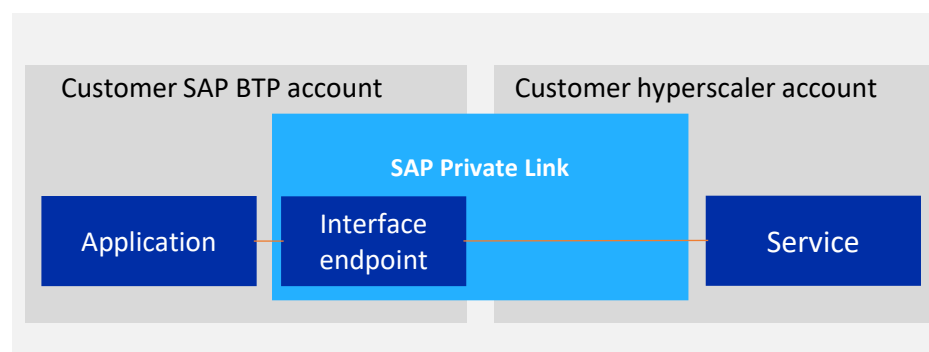
SAP BTP and SAP HANA Cloud on AWS Graviton



Driving **price-performance improvements and sustainability** through energy efficiency

GA Q4 2023 for AWS regions EU10 and US10

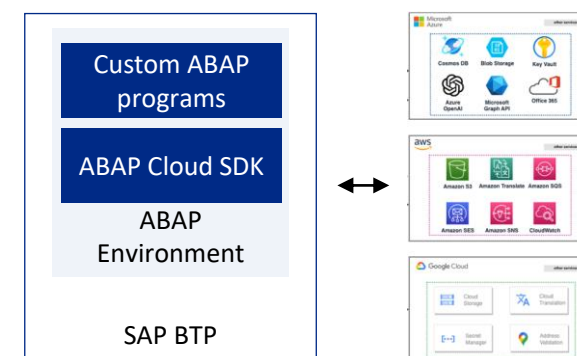
SAP Private Link service: Support for hyperscaler services



Leveraging SAP BTP to establish **private and secure** connections to used hyperscaler services

GA since Q3 2023

SAP BTP and ABAP Cloud: SDK for hyperscaler services



Driving **clean core** and **ease of ABAP developer** use with **complementing hyperscaler services in ABAP** extensions and apps


Preview planned for Q1 and Q2 2024


Why reference architectures?

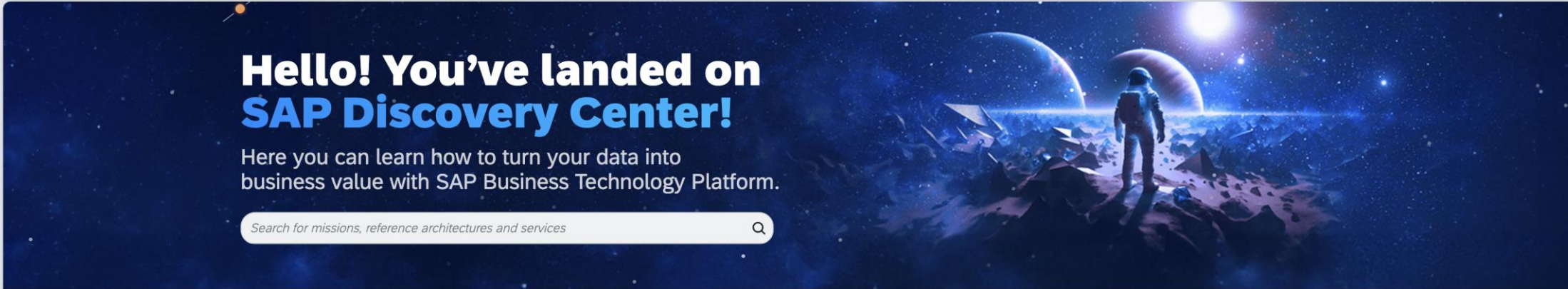
- **Reference architectures** address questions from customers and partners on architectural choices for solving business needs
- **Reference architectures** are derived from joint partnerships between SAP and hyperscalers
- **Result of co-engineering efforts:** Reference architectures are backed by engineering development and are guaranteed to work
- **Backed by guiding principles** by functional capability for customer and partner decision making
- **Customers benefit** from faster time-to-value and lower total-cost-of-ownership in RISE & GROW where SAP solutions such as SAP S/4HANA and SAP BTP run on hyperscaler environments



Reference Architectures on SAP Discovery Center

 **SAP Discovery Center**

 [Log On](#)




Hello! You've landed on **SAP Discovery Center!**

Here you can learn how to turn your data into business value with SAP Business Technology Platform.

Search for missions, reference architectures and services

Offerings


Our Cosmos



Missions

Implement your use cases on SAP Business Technology Platform, with step-by-step guidance and a well-established support from topic experts and SAP Community.


[Mission Catalog](#) [Learn More](#)



Reference Architectures

Explore and understand different architecture patterns which can be implemented using Business Technology Platform services.

[Architecture Catalog](#) [Learn More](#)



Services

Integrate and extend your solutions, optimize your business processes, and create an engaging digital experience using SAP Business Technology Platform services.

[Service Catalog](#) [Learn More](#)

Events

SAP BTP - Missions for multiplatform use cases



Route Multi-Region Traffic to SAP BTP Services Intelligently

Services delivered by SAP or the extensions built by customers on SAP BTP for critical business scenarios need to be highly available...



Integrate Google BigQuery and SAP Datasphere

Data federation allows customers to use data in BigQuery in SAP Datasphere without replicating the data. Once remote table is created in SAP...



Data Federation from Amazon S3 through SAP HANA Cloud

This mission highlights how to create a virtual table in SAP HANA Cloud with access to the data living in S3 via SAP Smart Data Integratio...



Establish security workflow between SAP and Microsoft apps

Simplify extensions to SAP S/4HANA running on a private Microsoft Azure account using SAP BTP. Enhance single sign-on and user...

MICROSOFT



Build Events-to-Business Actions Apps with SAP BTP and MS Azure/AWS

Build Events-to-Business Actions Scenarios with SAP BTP and Microsoft Azure / Amazon Web Services



Integrate SAP S/4HANA with Microsoft Teams via SAP Business Technology...

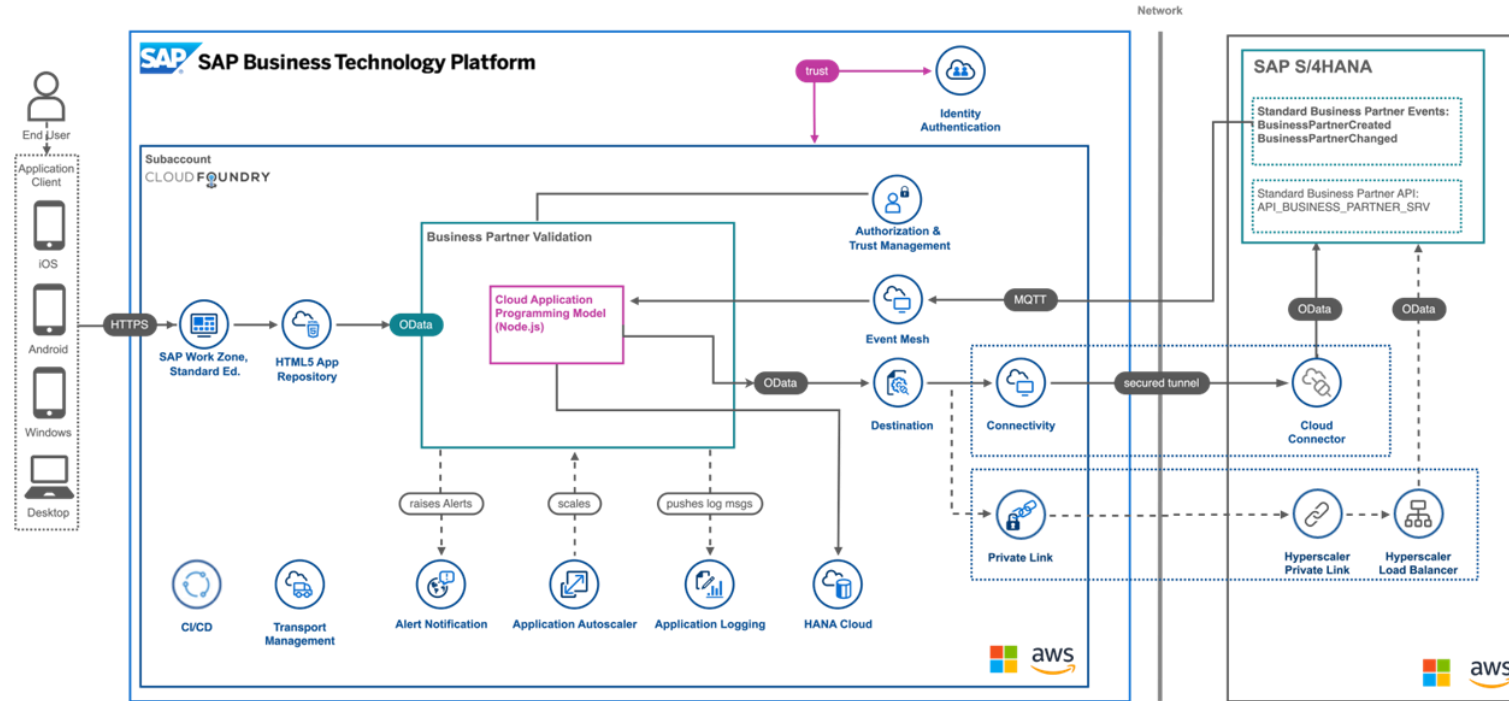
Enterprise customers of SAP have been using standard SAP desktop applications or web-based alternatives to perform their daily...

More missions for multiplatform use cases can be found on the [SAP Discovery Center site](#).



Scan this code to learn more

Secure Connectivity with SAP Private Link



Challenge

- Increased complexity and network latency in setting up reverse proxy mechanisms
- Compliance requirements to route traffic between platform and SAP S/4HANA via internal network of hyperscalers

Solution

- Use SAP Private Link and connect over hyperscaler internal networks
- Remove IP address conflicts in private networks
- Access private endpoints via SAP Destination Service

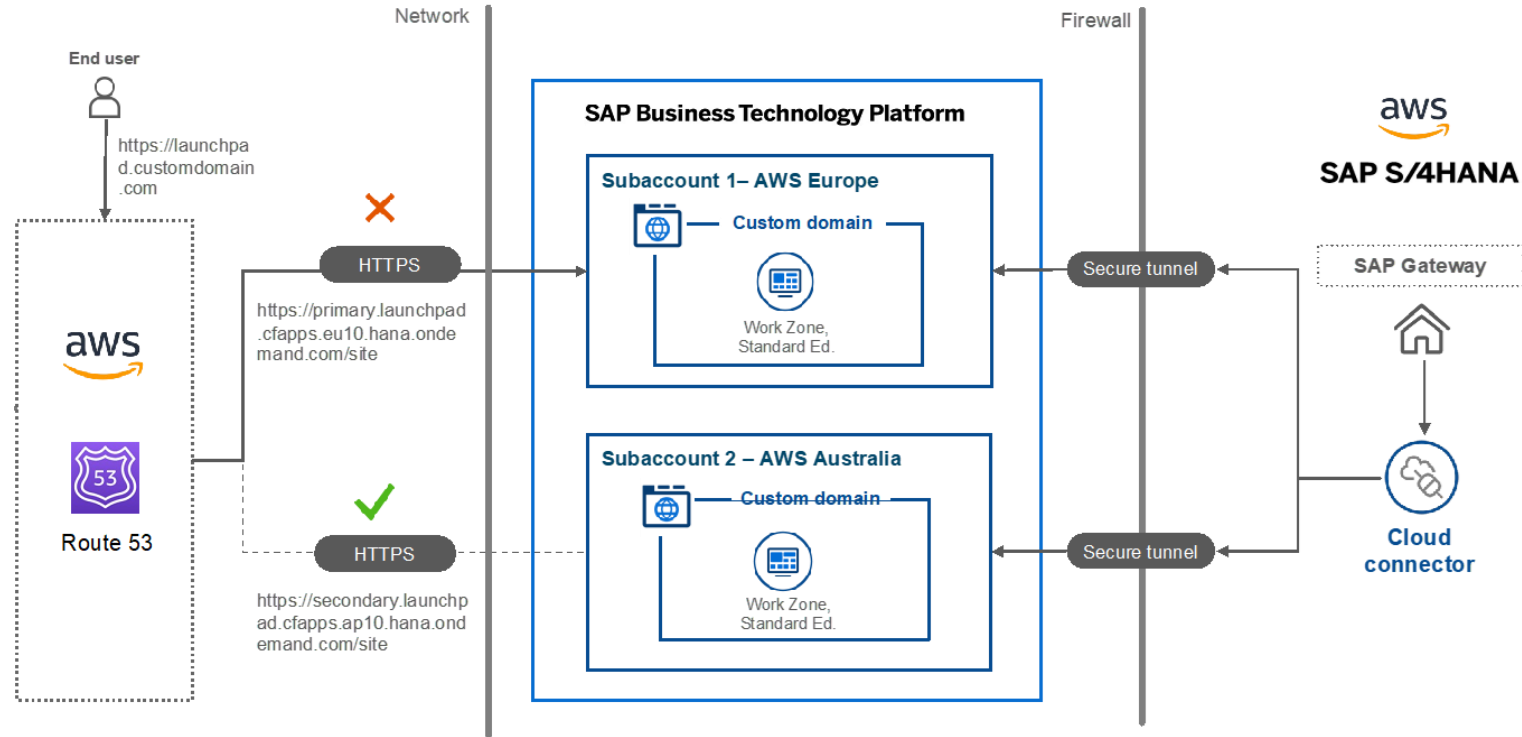
Benefit and Value

- Network security compliance for regulated industries
- Usage of hyperscaler's high-performance WAN that manages scalability and resiliency of private endpoints



Scan this code to learn more

Route Multi-Region Traffic to SAP BTP Services Intelligently



Challenge

- High latency dependent on location when accessing SAP Build Work Zone, standard edition
- No access during planned downtime / crash of service

Solution

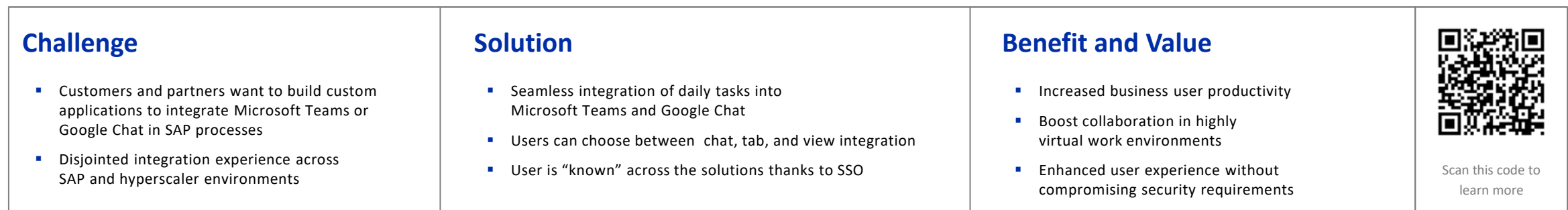
- Setup of SAP Build Work Zone in different BTP regions
- Check of service availability using Amazon Route 53
- Route user traffic based on geographic location and service availability using Amazon Route 53

Benefit and Value

- Higher availability of SAP Build Work Zone, standard edition
- Faster network access to SAP Build Work Zone, standard edition with lower latency
- Improved user experience



Scan this code to
learn more

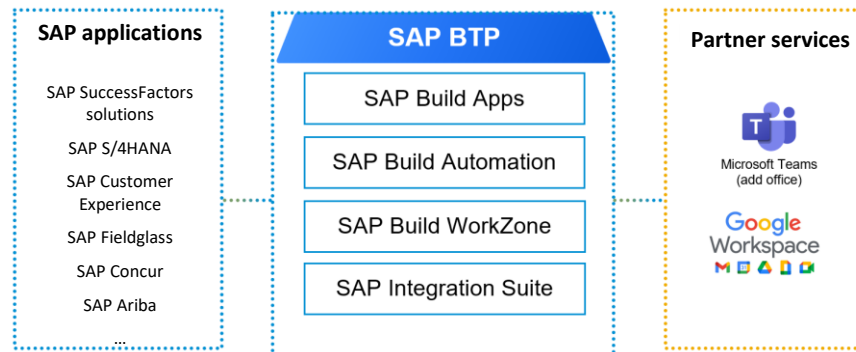


Demo: Supplier Collaboration with Microsoft Teams

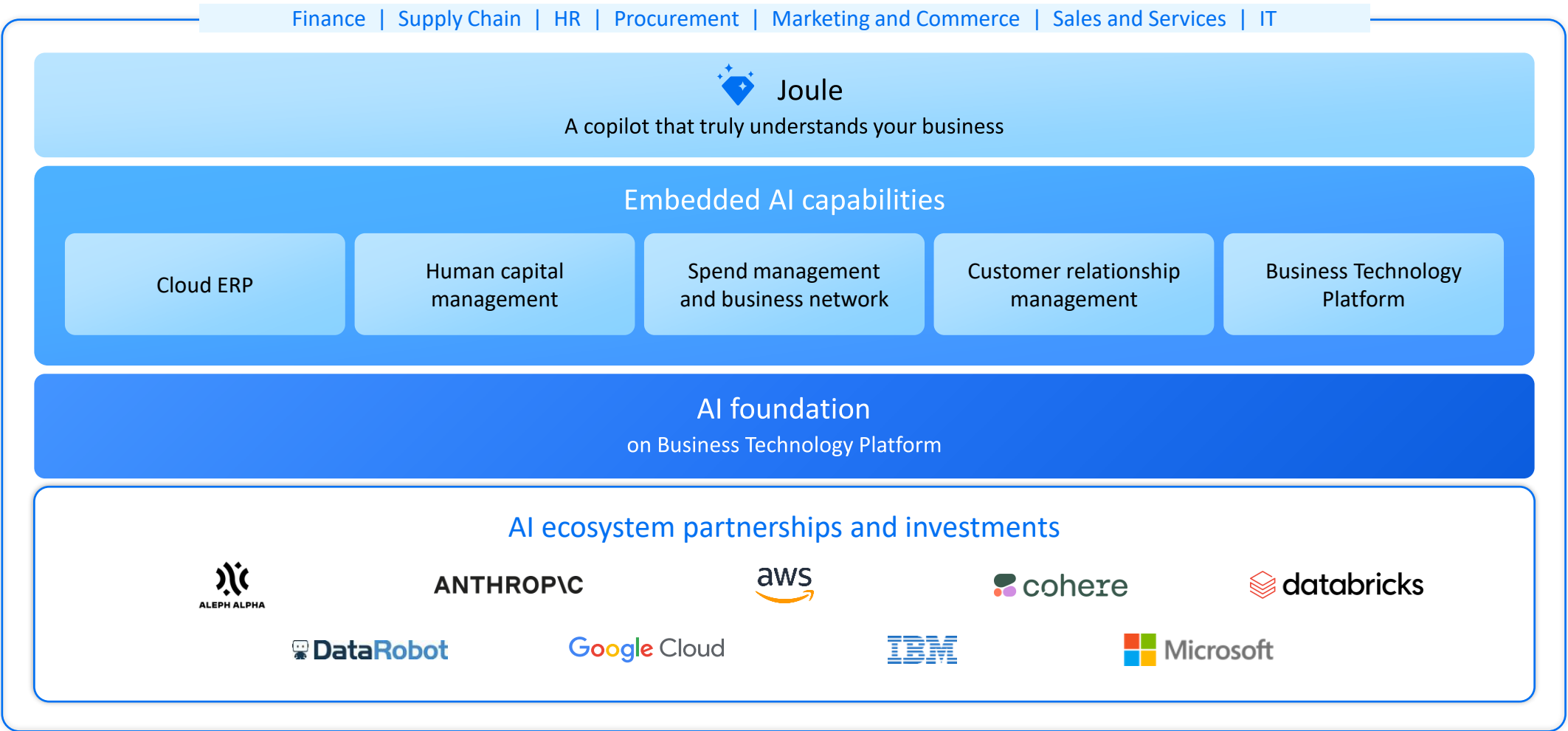


Event-driven integration with
SAP S/4HANA with SAP Event Mesh
as a central hub

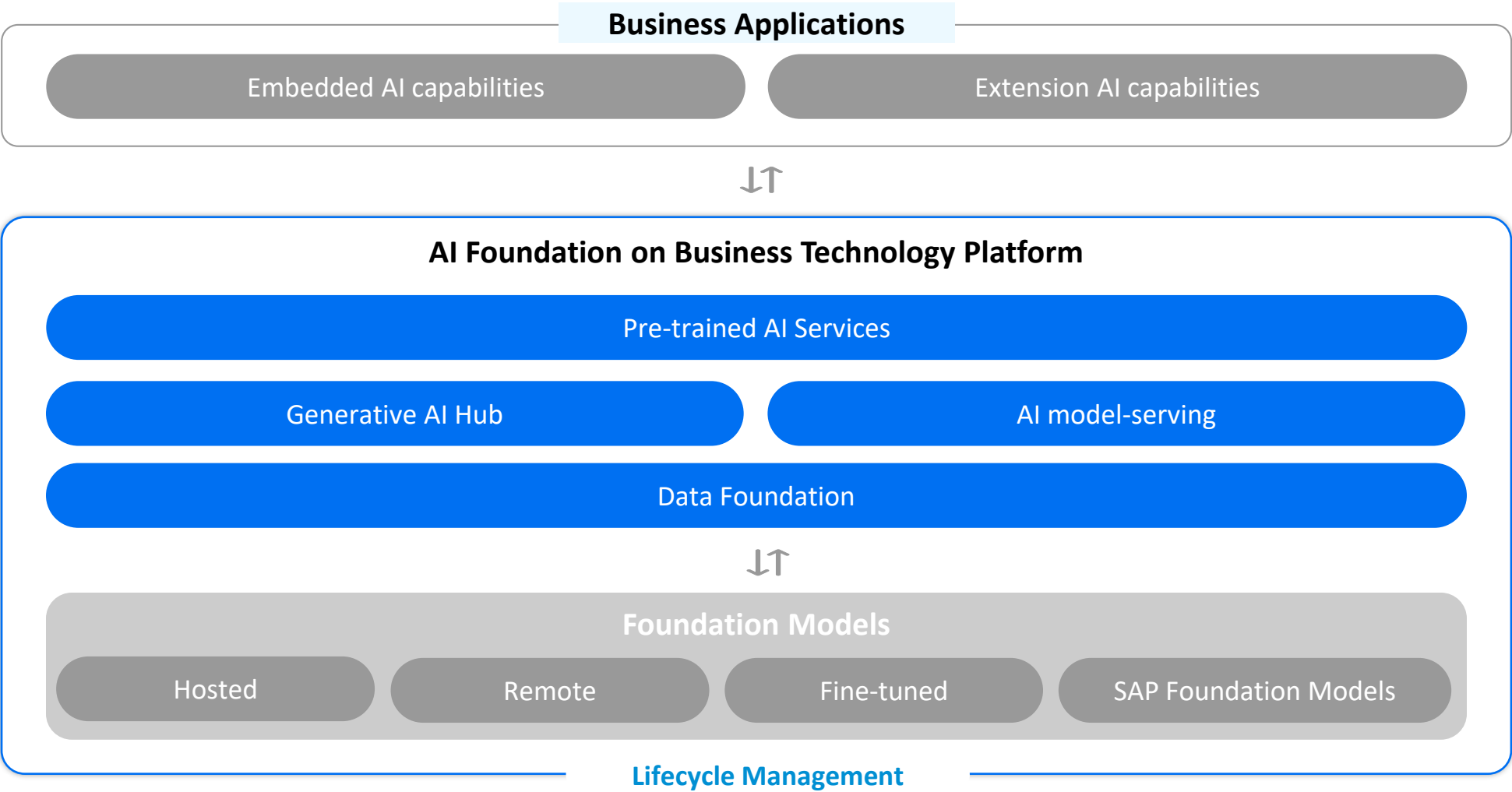
Network security-focused design
with SAP Private Link for
RISE with SAP customers



SAP Business AI approach – Relevant. Reliable. Responsible.

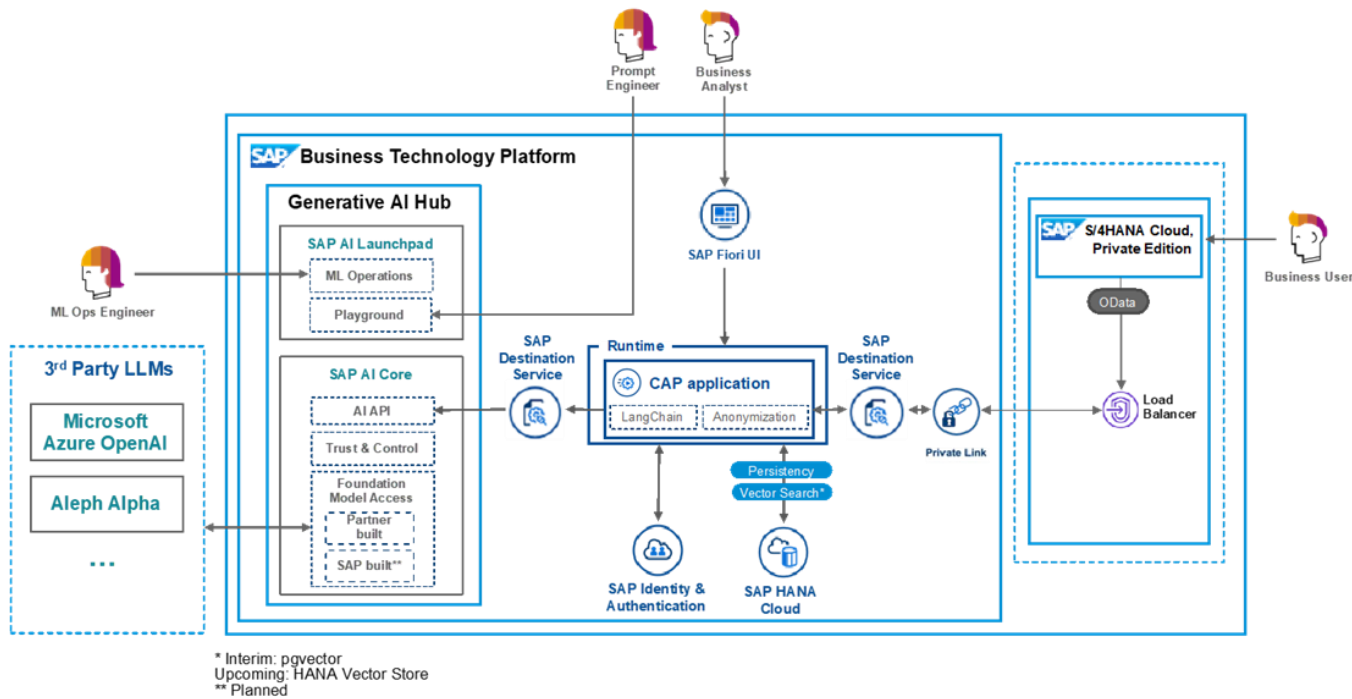


SAP Business AI stack



Architecture Example:

Retrieval Augmented Generation (RAG) architecture using CAP on SAP BTP



Challenge

- Challenging to blend SAP data in prompts with Large Language Models (LLMs)
- Lifecycle management of GenAI applications with multiple LLM vendors and changing versions

Solution

- Use SAP AI Core as an abstraction layer to consume LLMs from multiple vendors
- Use CAP with libraries such as LangChain to develop GenAI chains with SAP data
- Use SAP HANA Cloud data anonymization methods to avoid passing sensitive data to 3rd party LLMs

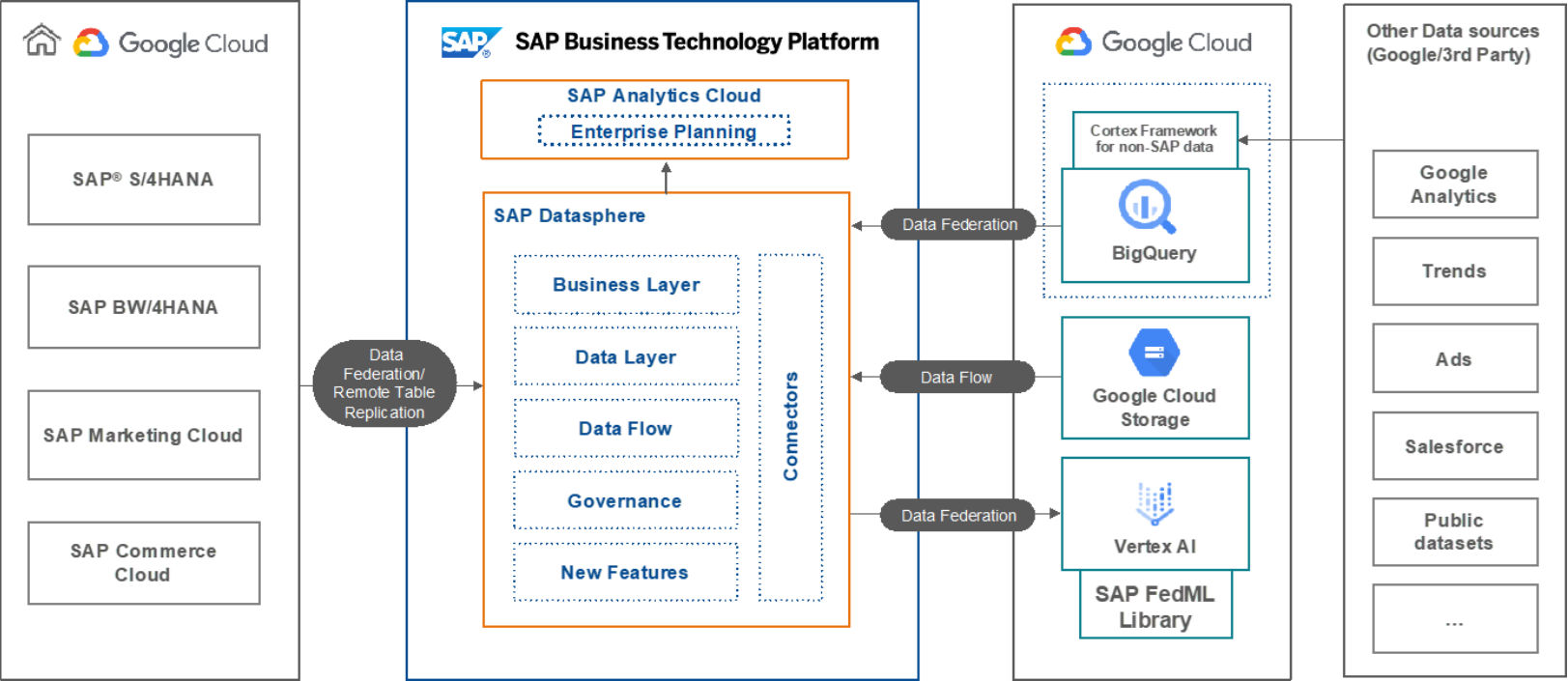
Benefit and Value

- Same application dev and lifecycle management experience on BTP with CAP
- Abstract LLM APIs and avoid sending personal data to LLMs



Scan this code to learn more

Integrate Google BigQuery with SAP Datasphere



Challenge

- Customers face challenges with duplication and reconciliation with data extracted from SAP S/4HANA and SAP BW/4HANA
- Customers need to invest in rebuilding data models
- Lack of live analytics on third- party analytics tools

Solution

- SAP Datasphere provides real-time access to SAP and non-SAP data by federating queries across source systems
- SAP Analytics Cloud offers live analytics and visualization of SAP data

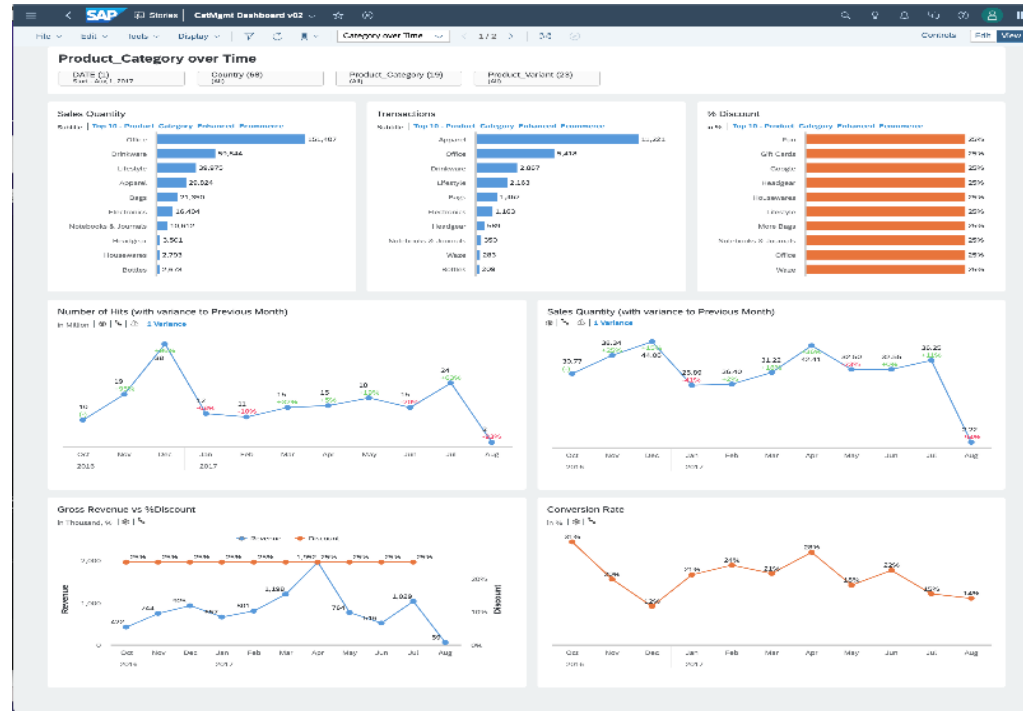
Benefit and Value

- Combined real-time view of SAP and non-SAP data
- Best of both worlds: SAP and hyperscaler services
- Prevent unnecessary replication and data maintenance



Scan this code to learn more

Drive Profitable Growth with Google BigQuery and SAP Datasphere



Analyze online sales by combining external data from Google Analytics and sales, discounts, and stock data from SAP

With data federation, customers can leave data in source systems and access it in one location without replication

SAP applications

SAP SuccessFactors solutions
SAP S/4HANA
SAP Customer Experience
SAP Fieldglass
SAP Concur
SAP Ariba

SAP BTP

SAP Analytics Cloud
SAP Datasphere



Partner services

Microsoft
Azure
Synapse
aws
Redshift/Athena/
S3
Google
BigQuery

Resources



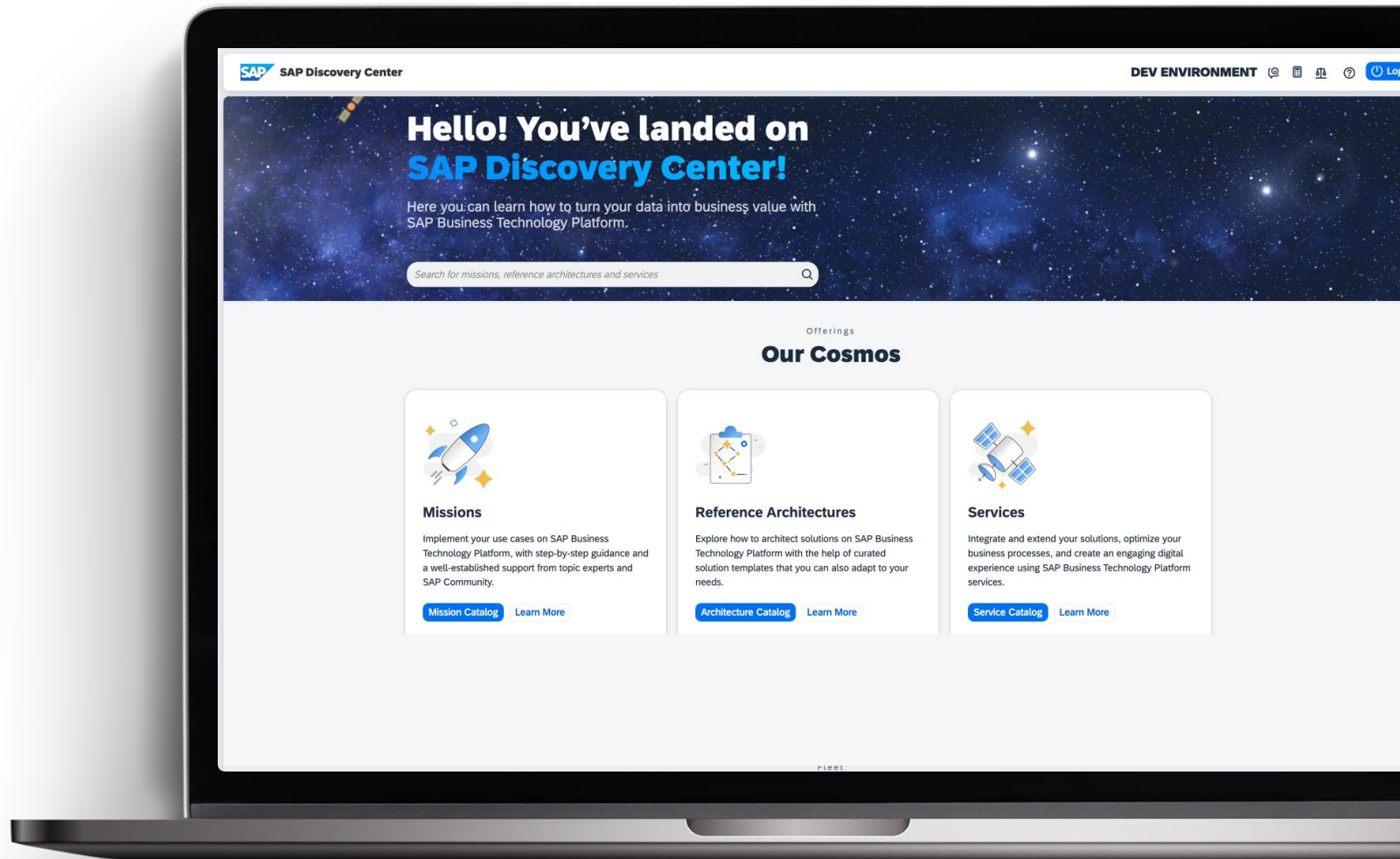
SAP Discovery Center

SAP Discovery Center

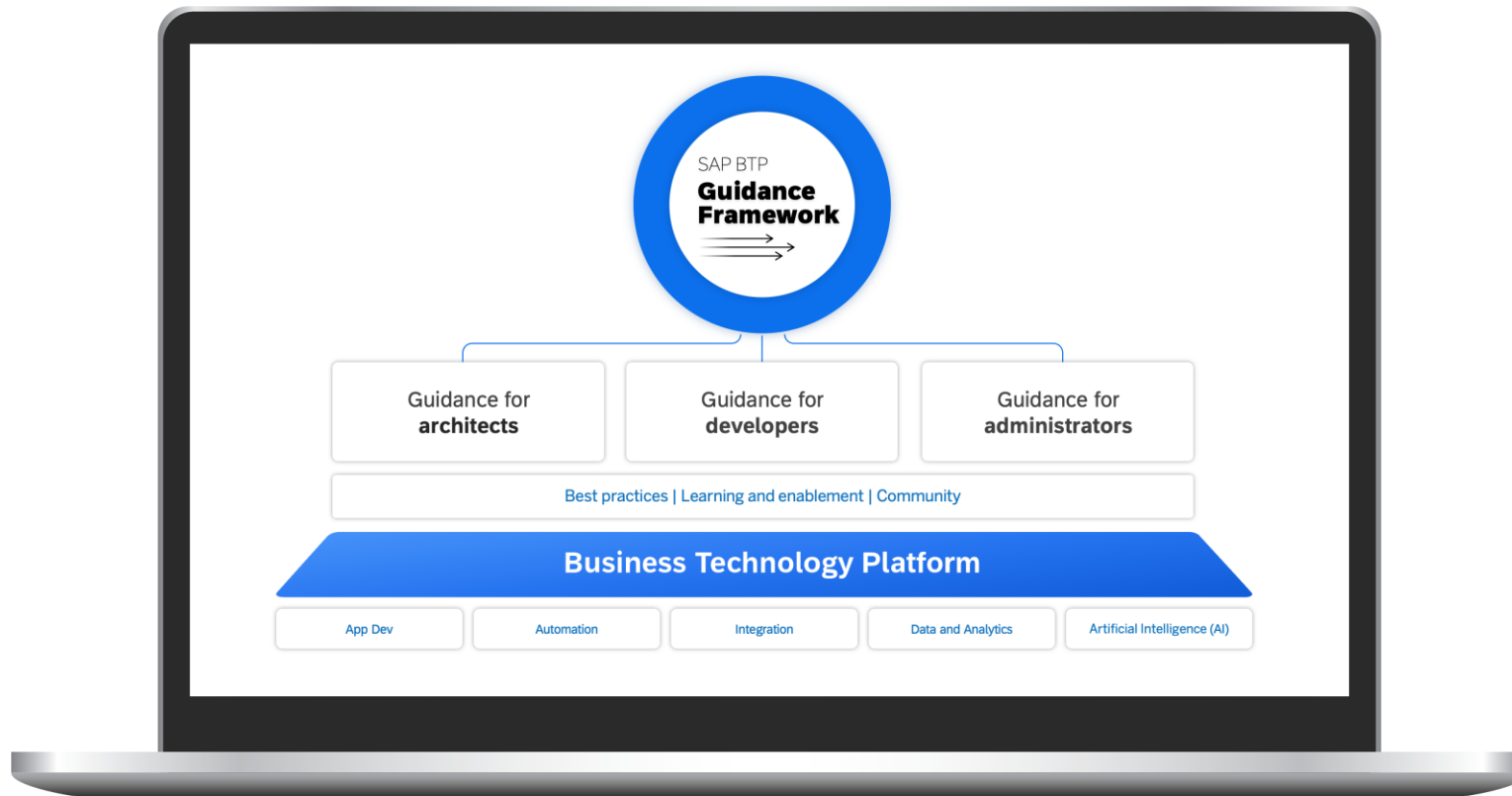
- Realize the use cases as a mission
- Be inspired by [Customer Stories](#)
- Explore how to architect solutions
- Adapt the architecture
- Analyze cost with [estimator](#)
- Gain more insights into [Roadmaps](#) and [Service plans](#)



Scan this code or
click [here](#) to learn more



Explore the SAP BTP Guidance Framework



<https://url.sap/3ifarc>

Wrap up

- SAP BTP is the innovation platform optimized for SAP applications in the cloud
- Hyperscalers are a central part of SAP's strategy
- SAP BTP Guidance Framework is your compass for architecting, developing and operating solutions on SAP BTP
- SAP Discovery Center helps you to explore how to architect solutions and adapt the architecture

Where to Find More Information

- SAP Discovery Center: <https://discovery-center.cloud.sap>
 - Customer stories
 - Reference architectures
 - Cost estimator
 - Roadmaps and service plans
- SAP BTP Guidance Framework: <https://url.sap/3jfar>
 - SAP BTP Developer's Guide
 - Reference architectures in SAP Discovery Center

Key Points to Take Home

- SAP Business Technology Platform (SAP BTP) is the foundation for a smoothly integrated SAP portfolio.
- SAP BTP is the platform for SAP, customers, and partners to innovate and transform.
- Hyperscalers are an essential part of SAP's strategy
- Hyperscaler reference architectures are derived from joint partnerships between SAP and hyperscalers

Thank you! Questions?

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