

16/11/2024

# SAP Business Technology Platform

As a foundation for partner multitenant solutions





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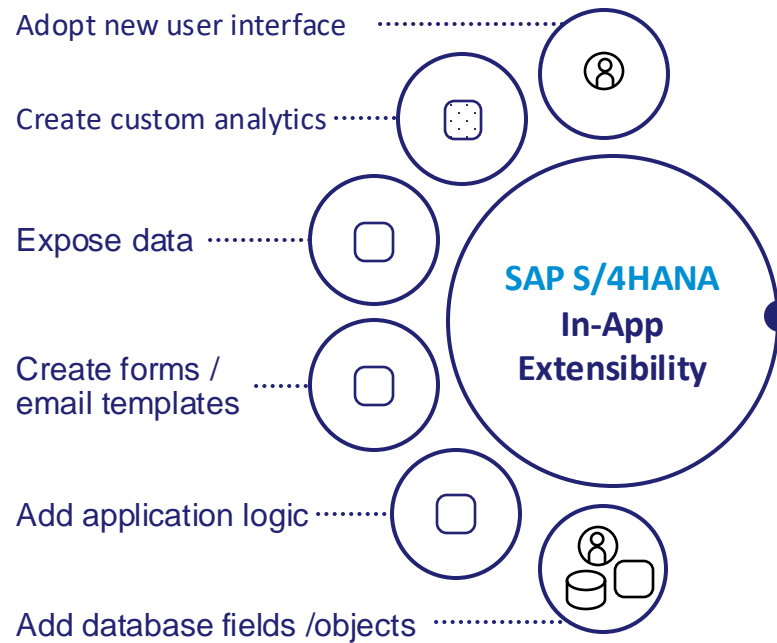
Q & A



# Past vs Today

# Today

## In-App Extensions

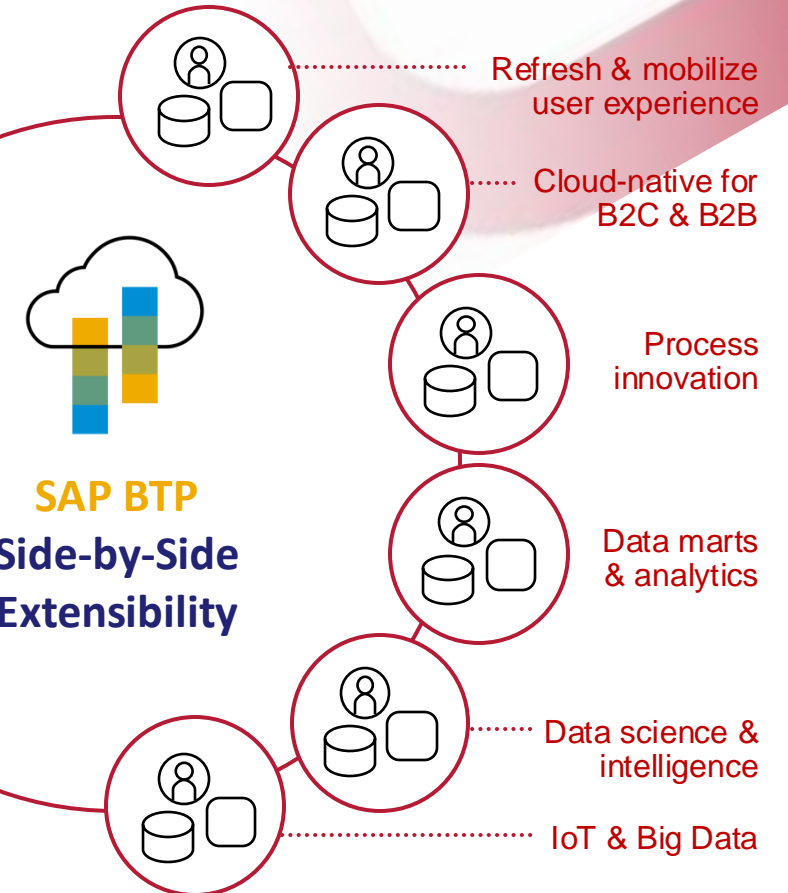


## Integration



## Cloud Extensions

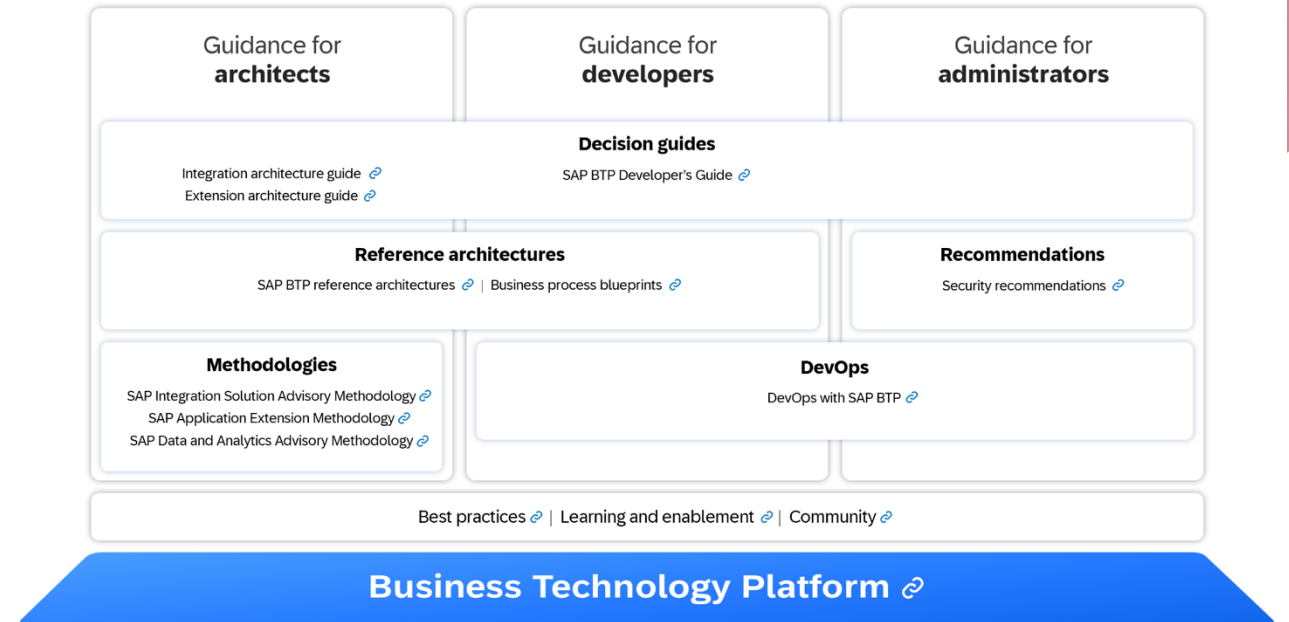
## SAP BTP Side-by-Side Extensibility



# Today

## Adoption & cloud-first mindset

- Totally different mindset compared to the past 5-10 years
- Companies & developers struggle adopting SAP Business Technology Platform as their primary development platform
- SAP Business Technology Platform can be quite overwhelming when first starting out
- SAP BTP Guidance Framework is your one stop shop to get yourself familiar with SAP BTP





**The real challenge?**

# Leaving behind the monolith



## Embracing microservices



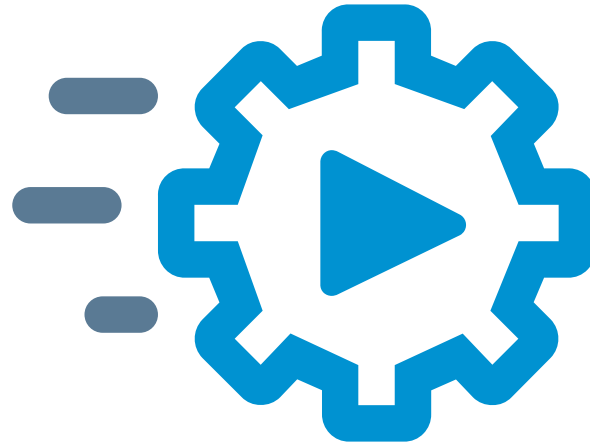
# **SAP Business Technology Platform basics**



# Runtimes



**ABAP**



**Cloud Foundry**



**Kyma**

# ABAP

## Some insights

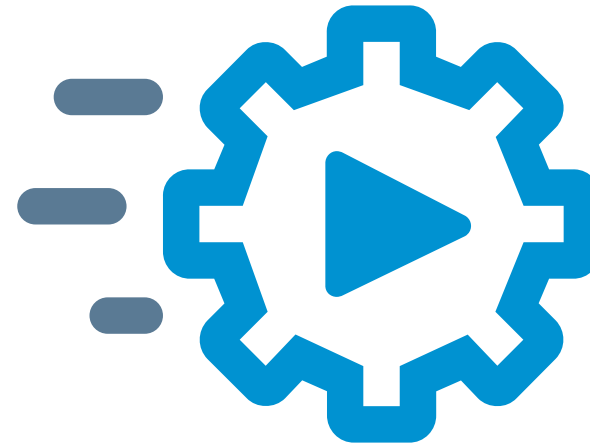
- Enable ABAP Developers to go to the cloud
- Re-use existing on-premise ABAP assets
- Integrated development cycle
- Still a monolithic approach
  - Single instance to host all web services
  - Services can't be scaled individually (you have to scale the whole instance)



# Cloud Foundry

## Some insights

- Built on industry-standard, open-source components
- Freedom to choose programming languages & programming models
- Takes away the infrastructure complexity
  - Load balancing
  - Routing
  - Health checks
  - Security updates
  - Pre-configured build packs
- Multi-cloud deployments without vendor infrastructure vendor lock-in



# Kyma

## Some insights

- Built on industry-standard, open-source components
- Freedom to choose programming languages & programming models
- Serverless functions
- More flexibility
- Determine exactly how the code should run
- Can run everything that Cloud Foundry can run
- Can run workloads that Cloud Foundry can't run



# Choosing the right runtime

	ABAP	Cloud Foundry	Kyma	Pure Gardener
Restful Application Programming Model (RAP)	X			
Cloud Application Programming Model (CAP)		X	X	(X)
Micro-service Architecture		X	X	X
Programming Language	ABAP	BYOL *	BYOL *	BYOL *
Simplicity vs. Empowerment	S	S	E	E

←

→

Opinionated

Flexibility

\* Bring Your Own Language



# **Real-life example**

## **Partner Portal**

# Partner Portal

## Some insights

- Multitenant solution built on top of SAP Business Technology Platform
- Side-by-side extensibility on top of SAP Service Cloud
- Allowing customers, supplier, distributors to
  - Create support tickets
  - Follow-up their contracts
  - Get an overview of their equipments and their warranty status
  - Download documents related to their equipments
- Allowing administrators to
  - Easily upload documents on any level of the product hierarchy



**Partner Portal**





**How does this look like?**





Home >

Search in App



My Home

Partner Portal - User

## Partner Portal - User

My Tickets  
Manage



My Equipment  
Monitor



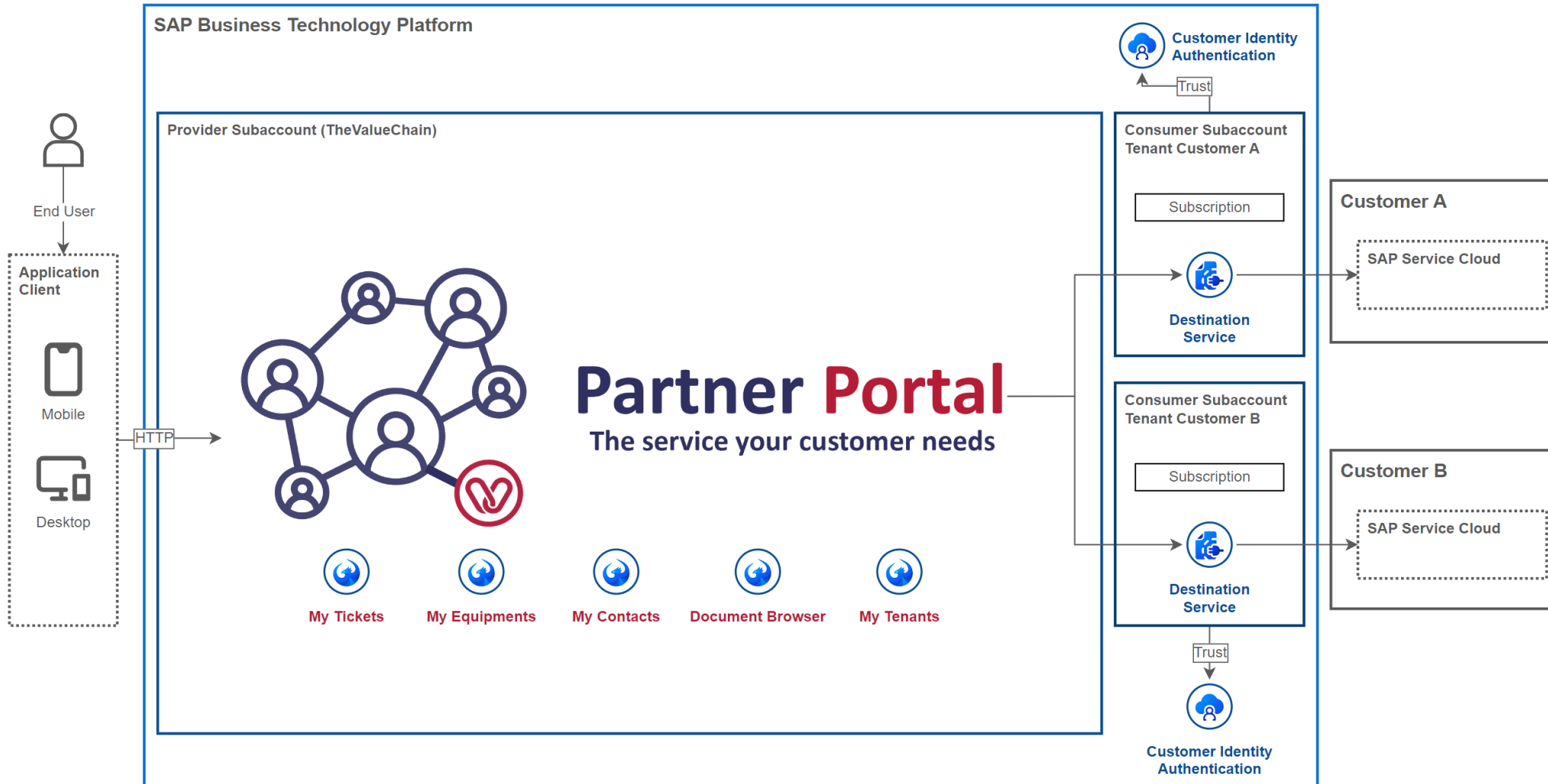
My Contacts  
Manage



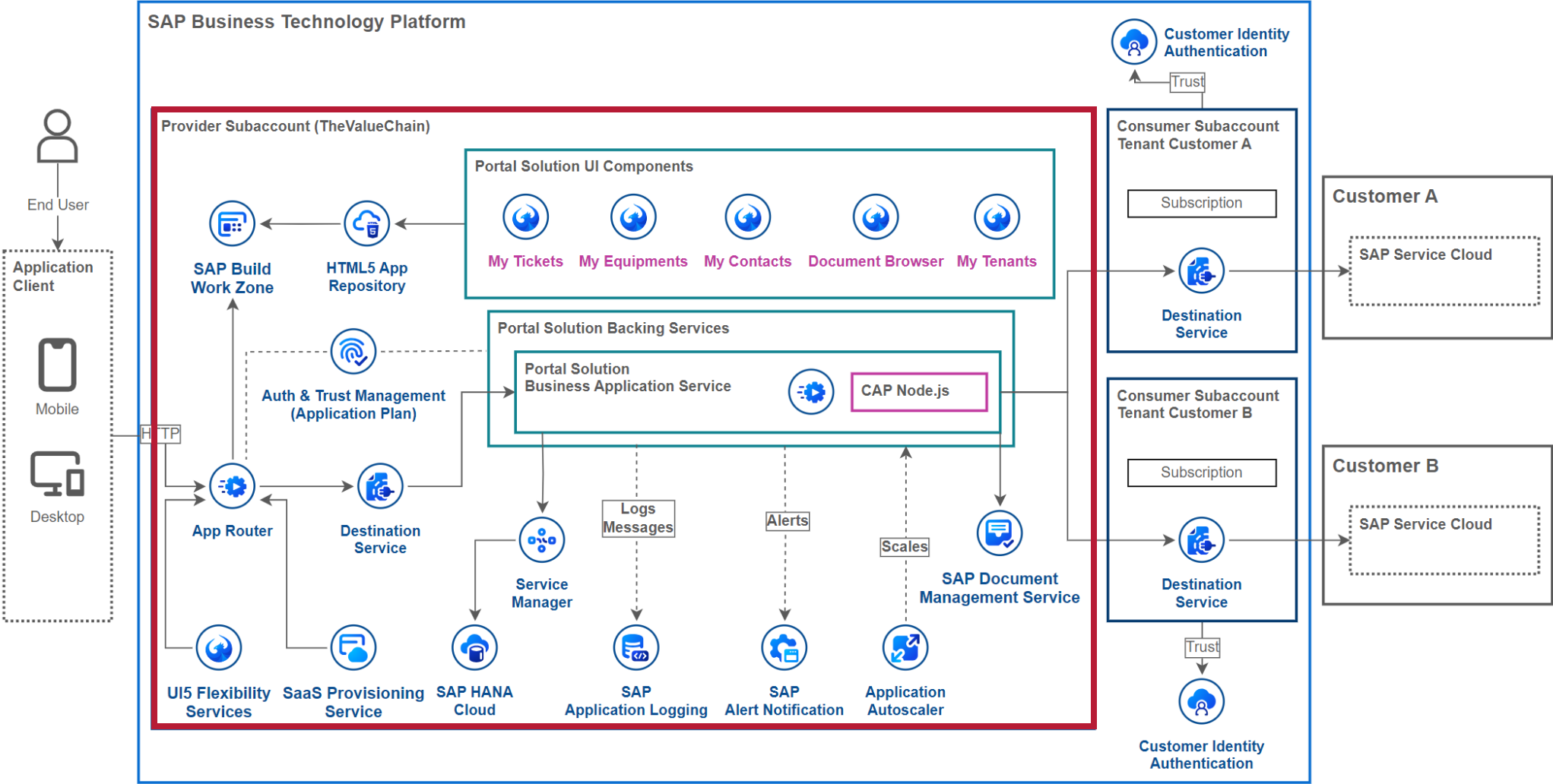


# **Partner Portal Architecture Breakdown**

# High-level Solution Architecture



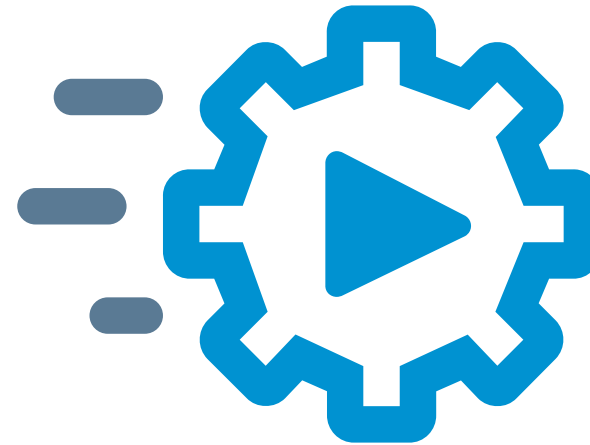
# Solution Architecture



# Solution Architecture - Runtime

## Cloud Foundry

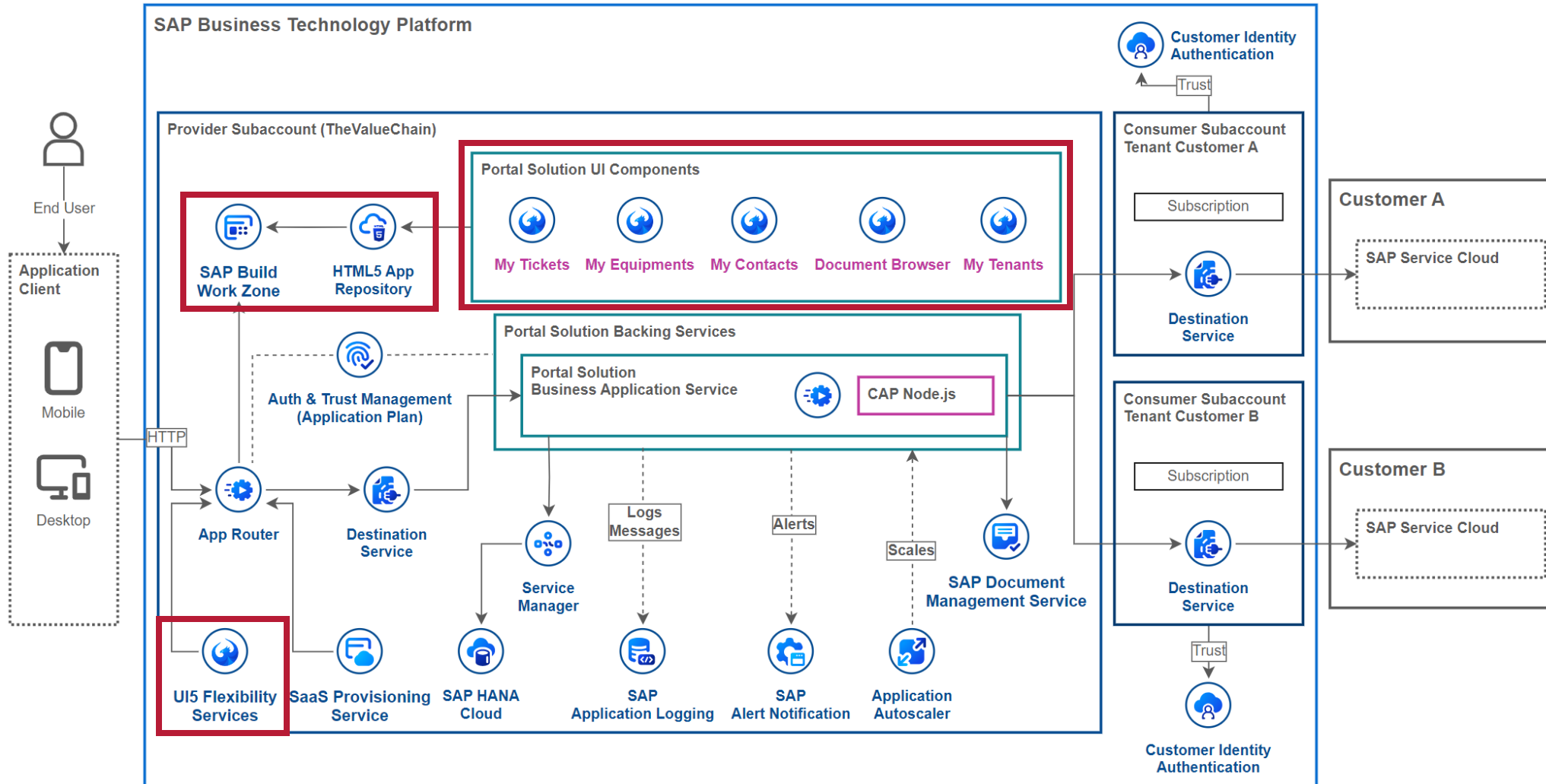
- Data isolation
  - ABAP → Discriminator Column
  - Cloud Foundry / Kyma → HDI Container
- Load balancing
  - ABAP → Vertical Scaling
  - Cloud Foundry / Kyma → Horizontal Scaling
- Why not Kyma?
  - No planned workloads that can't be handled by Cloud Foundry
  - Focus on development not platform configuration
  - If needed, we can still move our components to Kyma in the future (Kyma can run everything Cloud Foundry can run)





# UI Components

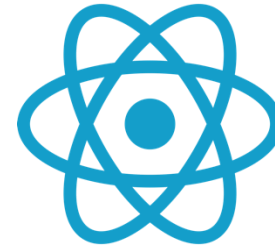
# UI components



# UI components

## Why SAPUI5 as frontend technology?

- SAPUI5 is commonly known within our organization
- SAPUI5 can generate user interfaces based on metadata
- Aligned with SAP's strategy "unified user interface"
- Perfectly blends in with standard SAP solutions
- When using SAP Build Work Zone, application themes are automatically taken over from the theme designer

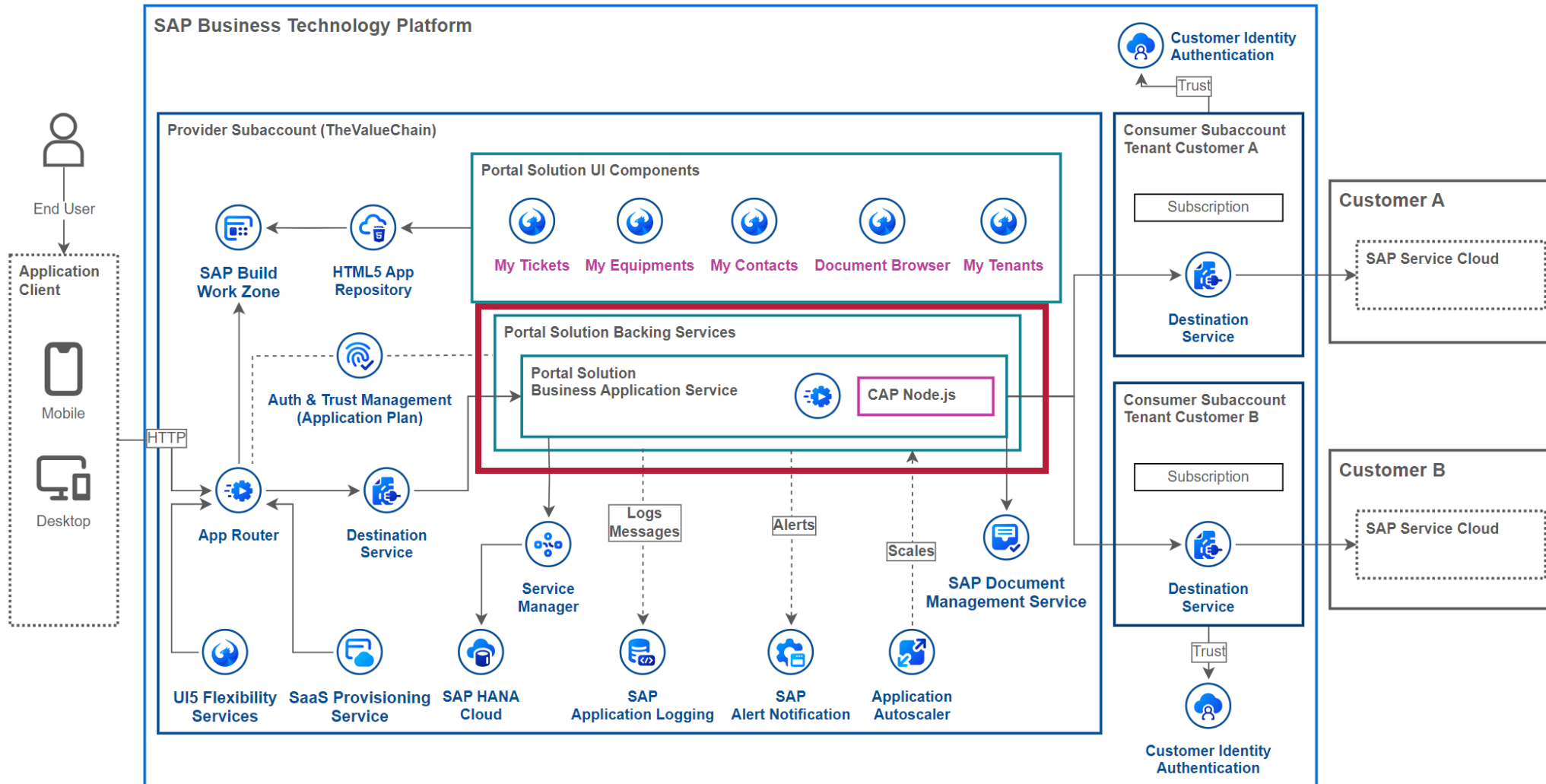






# Business Logic Components

# Business logic components



# Business logic components

## SAP Cloud Application Programming Model

- Focus on domain modelling
- Takes away the database complexity
  - Similar to ABAP, translating ABAP statements to database SQL statements
- Handles the database connection out-of-the-box
  - SAP HANA Cloud
  - PostgreSQL
- Handles the multitenancy complexity out-of-the-box (@sap/cds-mtxs library)
- Java, JavaScript / TypeScript



# Business logic components

## TypeScript

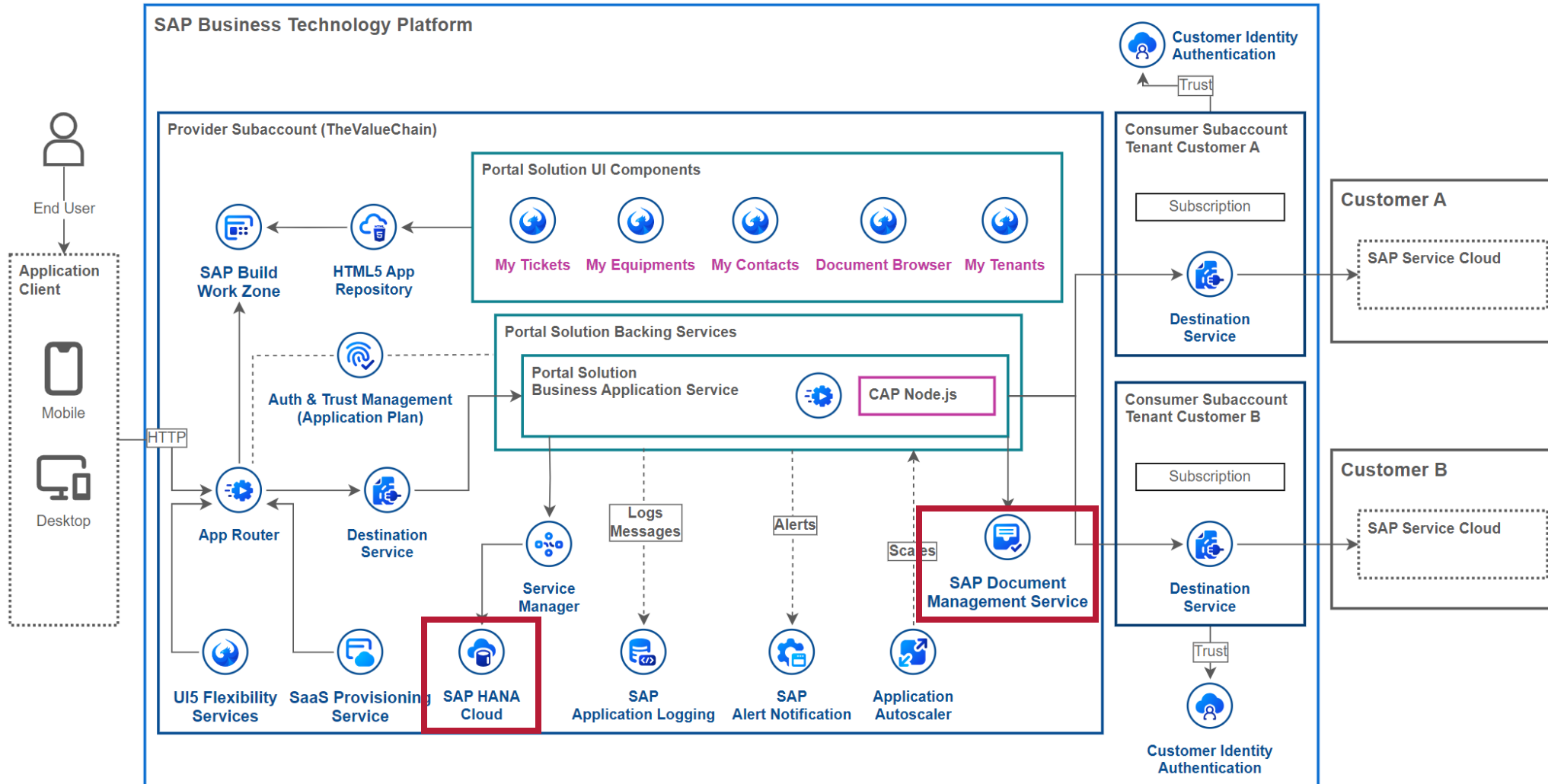
- Enforces type-safety
- Less bugs
- Improves code maintainability, especially in larger projects
- Enhanced developer productivity
  - Auto completion
  - Code navigation
  - Refactoring
  - ...
- Supported in both SAP Cloud Application Programming Model (CAP) and SAPUI5





# Data Storage Components

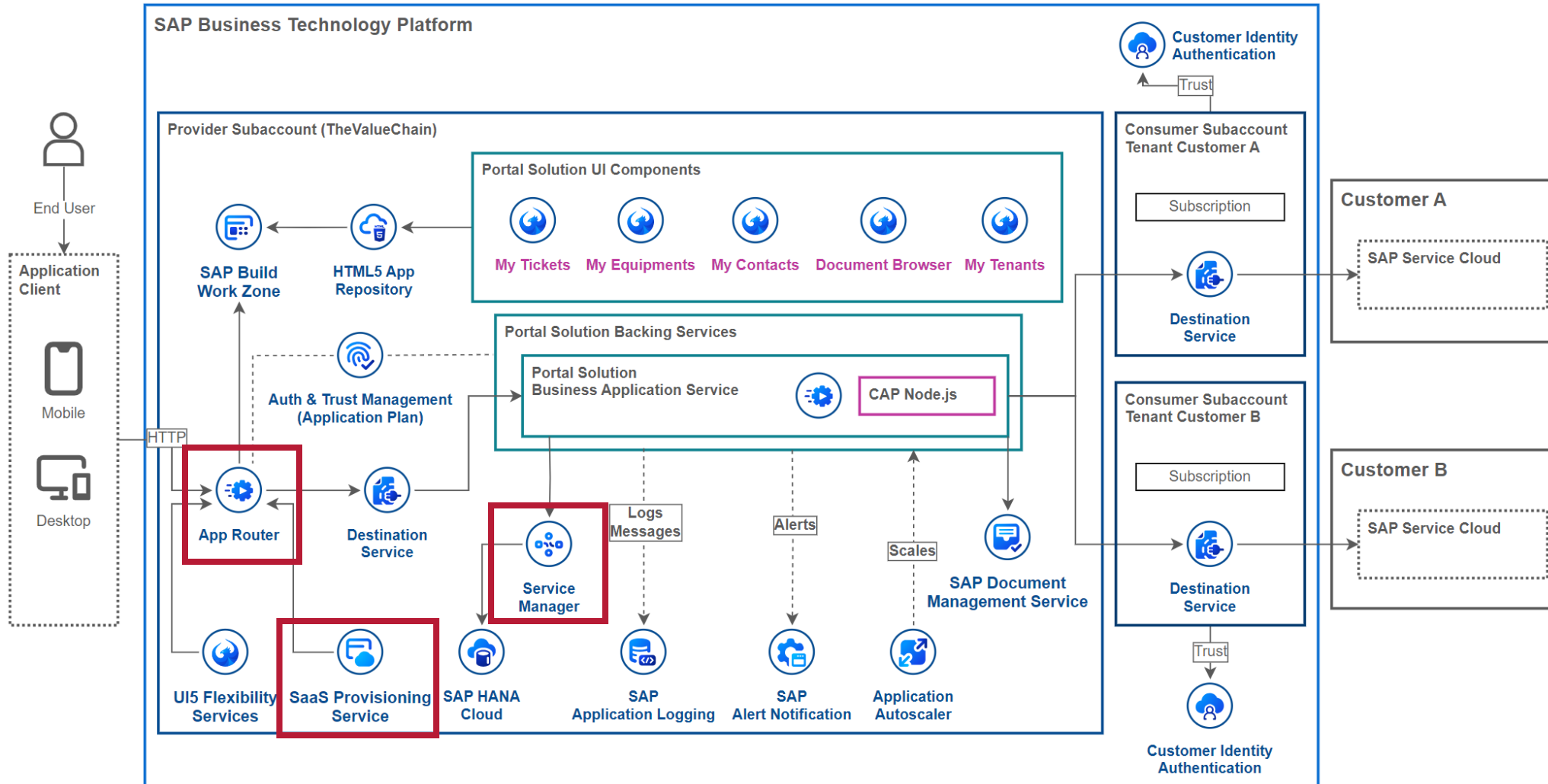
# Data storage components





# Multitenancy Components

# Multitenancy components

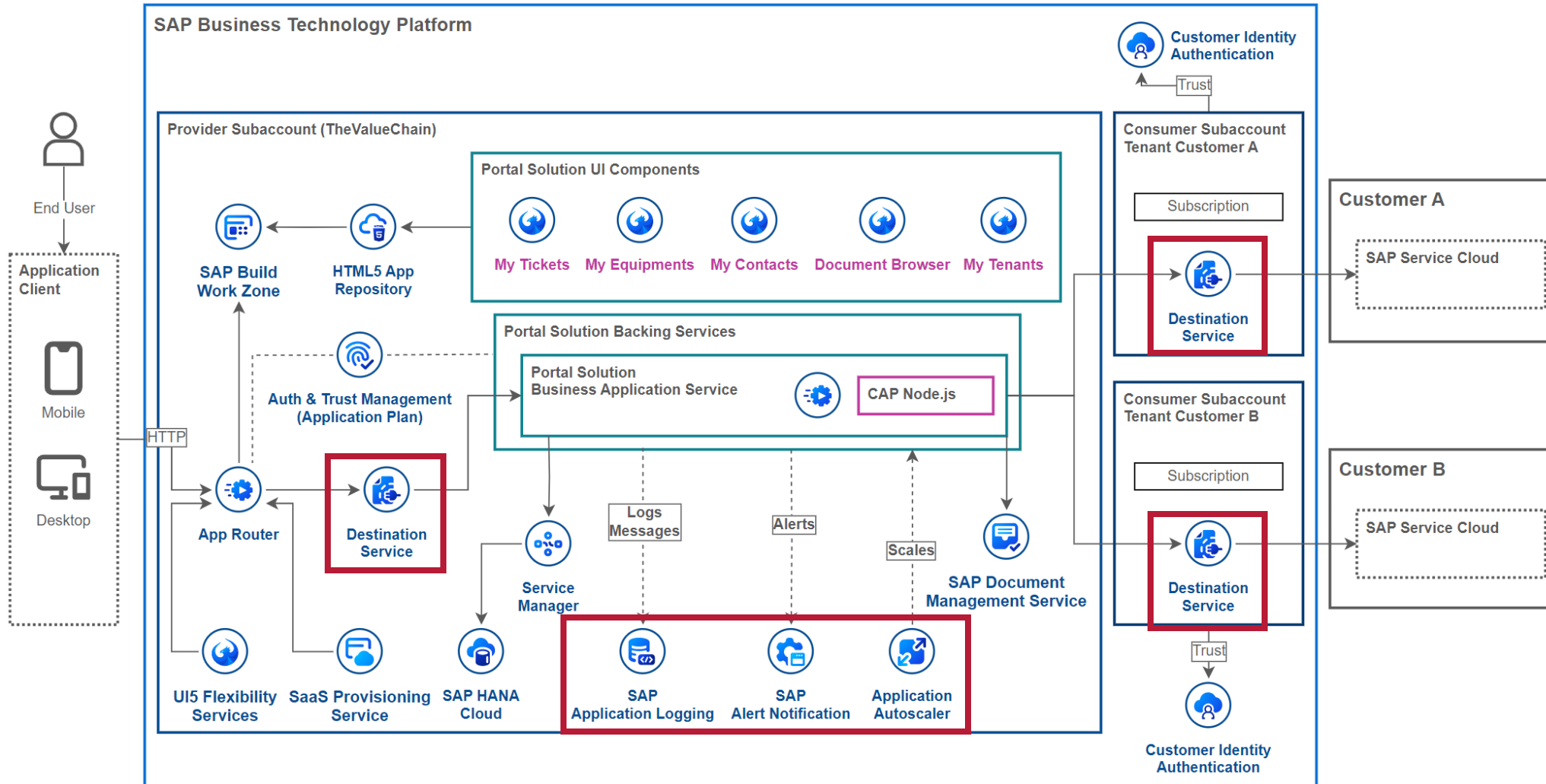






# Platform Components

# Platform components





# Wrap-up

# Wrap-up

## Key takeaways

- Embrace a microservice architecture
- You don't need to wait for an S/4HANA upgrade to start using SAP Business Technology Platform, you can already start today
- Get yourself familiar with JavaScript
  - TypeScript if you want type-safety like ABAP
- Focus on the “core” services that you'll be using most to get started





# Q&A



# Want to reach out?

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