



Get your organization in shape: Keep a Clean Core with SAP Business Technology Platform



Today's Speaker

Dev & Ops with SAP Business Technology Platform



Mariajose Martinez, “Majo” (pronounced Maho)

Sr. Solution Advisor for SAP Business Technology Platform, SAP Canada



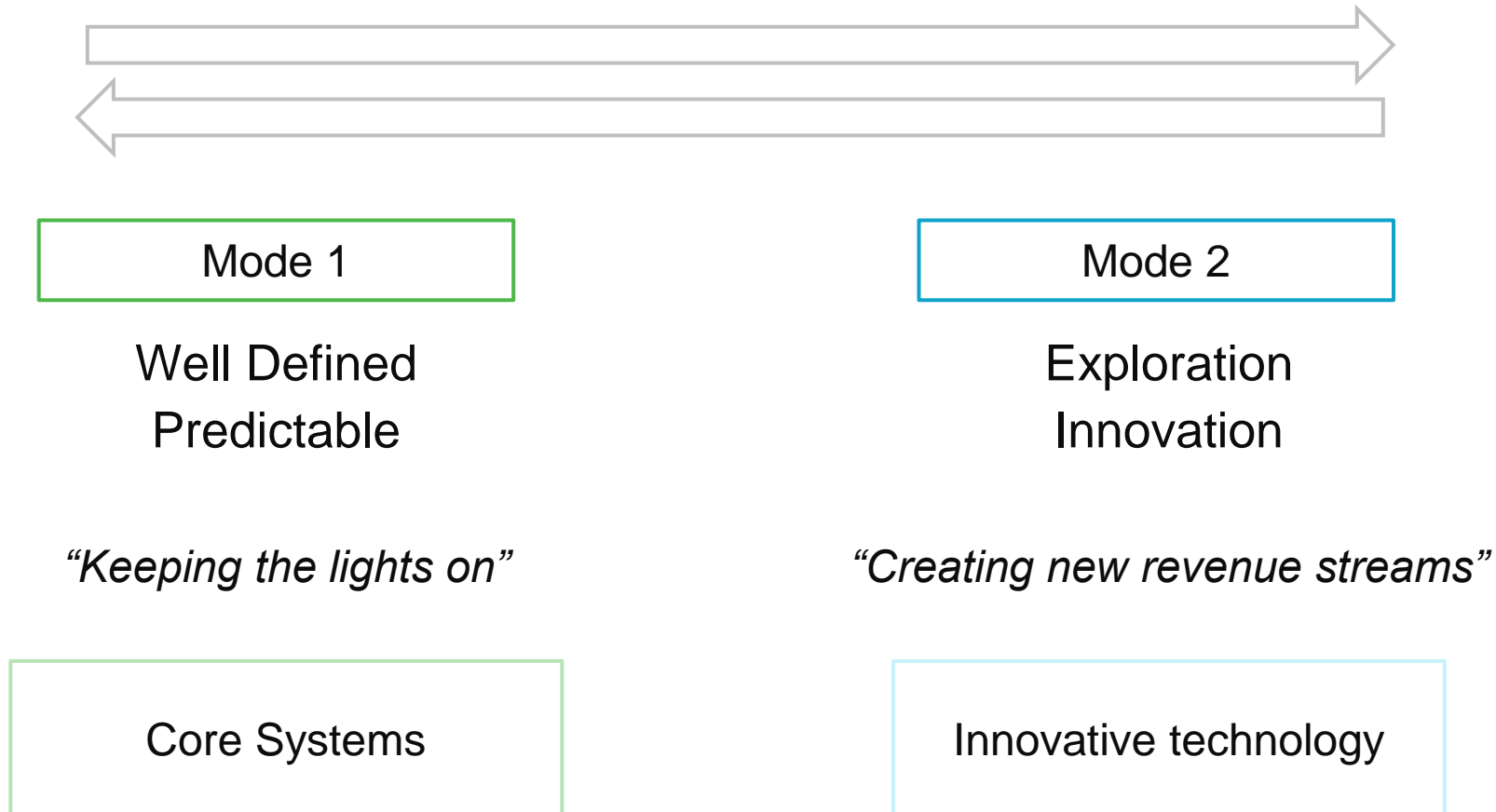
The Why?
The How?
The What?

The Why?

The How?

The What?

BI Modal IT



(C)LEAN CORE CONCEPT

Benefits

■ Reduce TCO

- Make upgrades non-events from a custom code point of view
- Reduce test efforts for business users
- Reduce adaption efforts for developers
- IT service providers can offer upgrade projects at a fixed price

■ Speed and Innovation

- Absorb innovation delivered by SAP at a faster rate
- React fast on changing business requirements

■ Be cloud ready

- Lay the foundation today to move to the cloud from a custom extension perspective

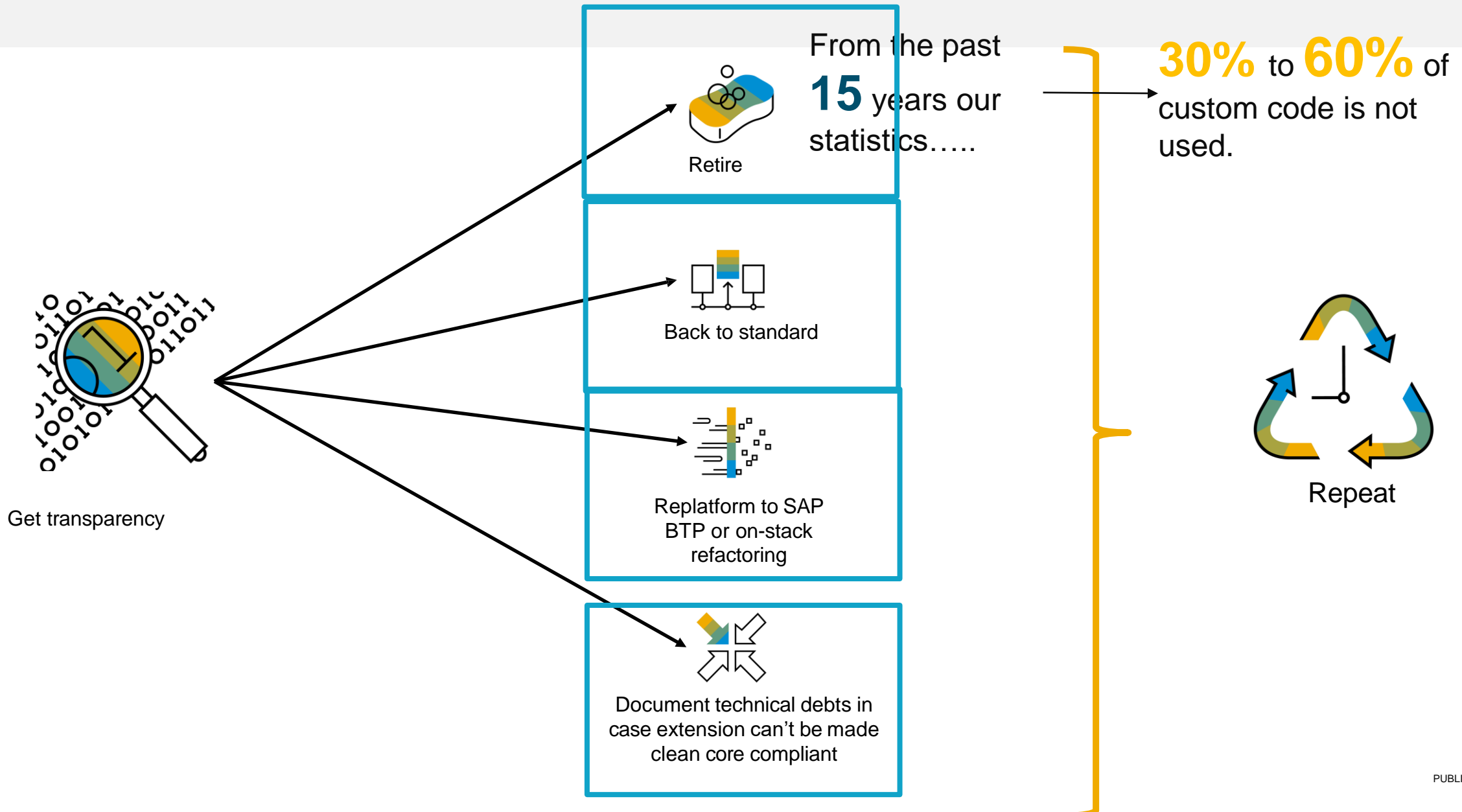


The Why?

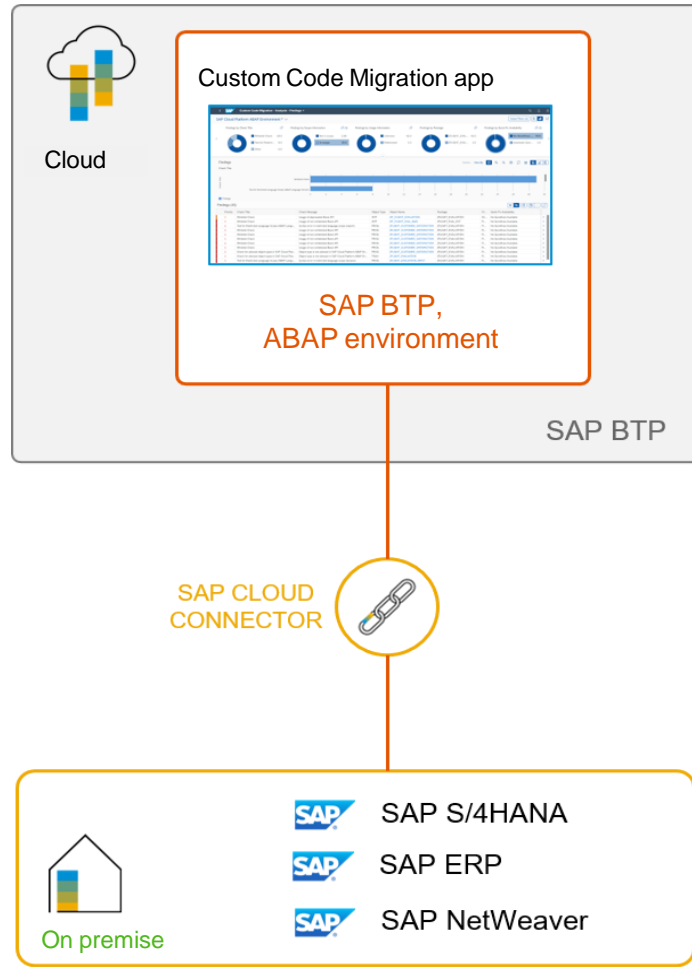
The How?

The What?







How to Clean the Core?



Custom Code Migration app – Overview



Solution overview

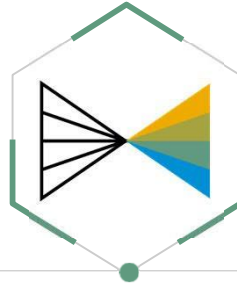
-  Analysis of custom code for SAP S/4HANA, SAP BTP or General Code Quality
-  Obsolete custom code removal based on usage data. Back up of custom code objects using abapGit or gCTS
-  Identification of custom code candidates for back-to-standard and redesign
-  Evaluation of custom code for semiautomated adaptation (quick fixes)
-  Automated setup and configuration in SAP BTP, ABAP environment
-  Analytical representation & burndown charts of analysis results

Best point in time to make the Core clean?



Before

SAP S/4HANA conversion
(planning)



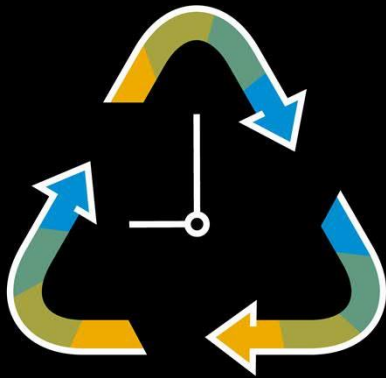
During

SAP S/4HANA conversion
(migration)



After

SAP S/4HANA conversion
(run)



Clean Core is **NOT** a one-time action item – it's a philosophy that requires




- Governance Model
- Clear extension guidelines
- Ongoing custom code analysis and assessment

The Why?

The How? Extensibility Options?

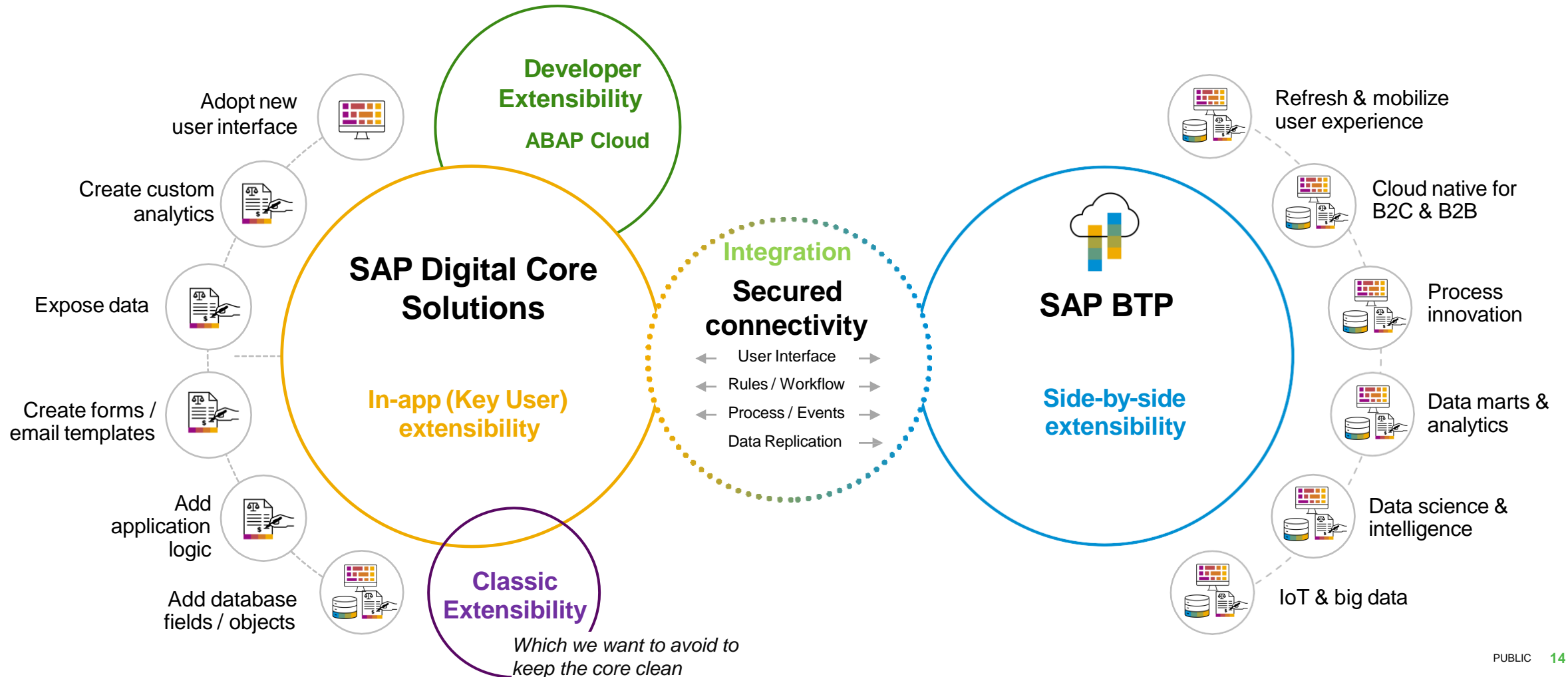
The What?

SAP Extensibility Big Picture

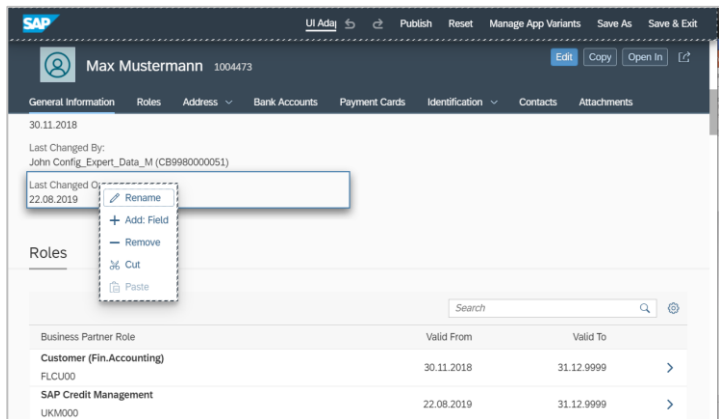
User Interface Layer  Application Layer  Database Layer 

In-App Extensions

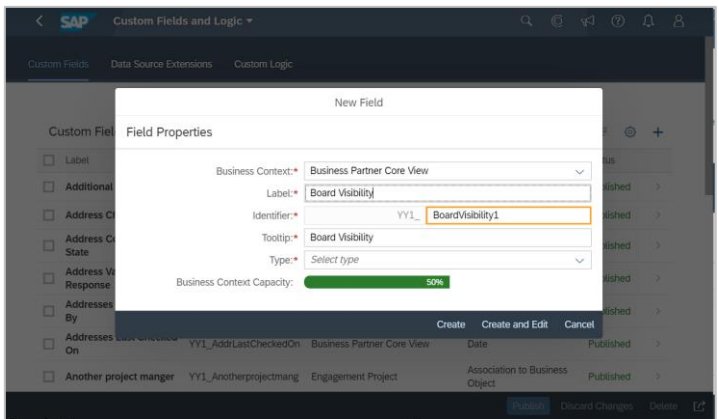
Cloud Extensions



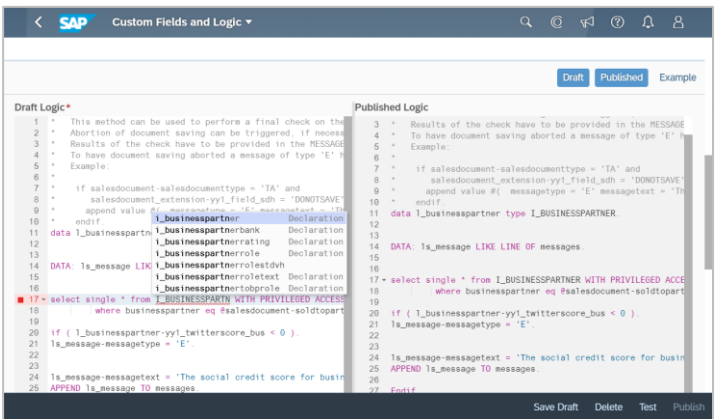
Examples of Key-User tools



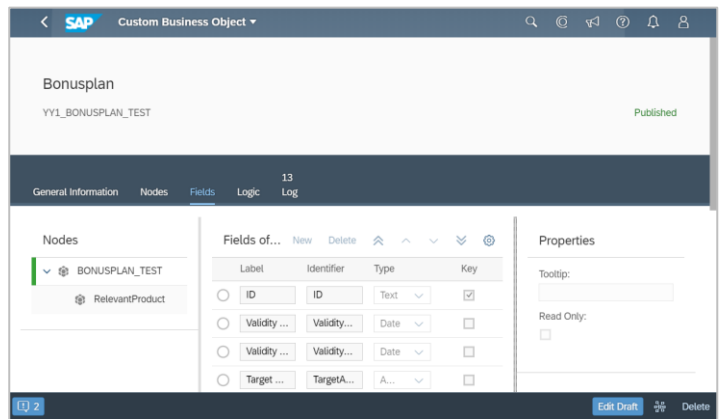
UI adaptation mode – adaptation mode with drag-and-drop configuration



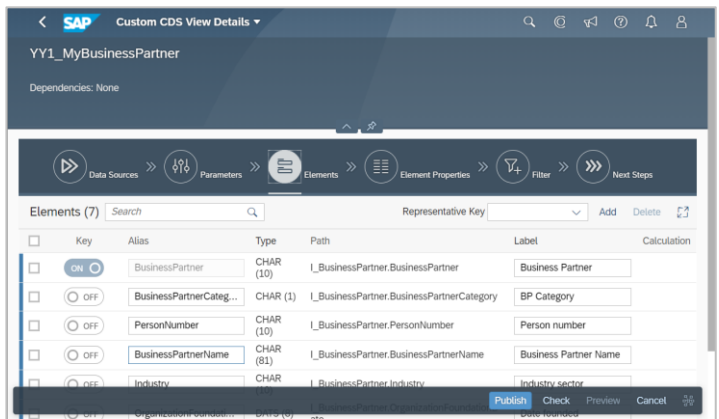
Custom fields SAP Fiori app



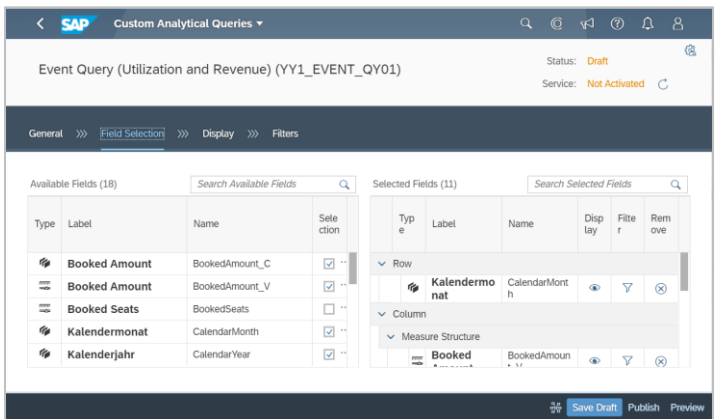
Custom business logic SAP Fiori app



Custom business objects SAP Fiori app



Custom CDS views SAP Fiori app



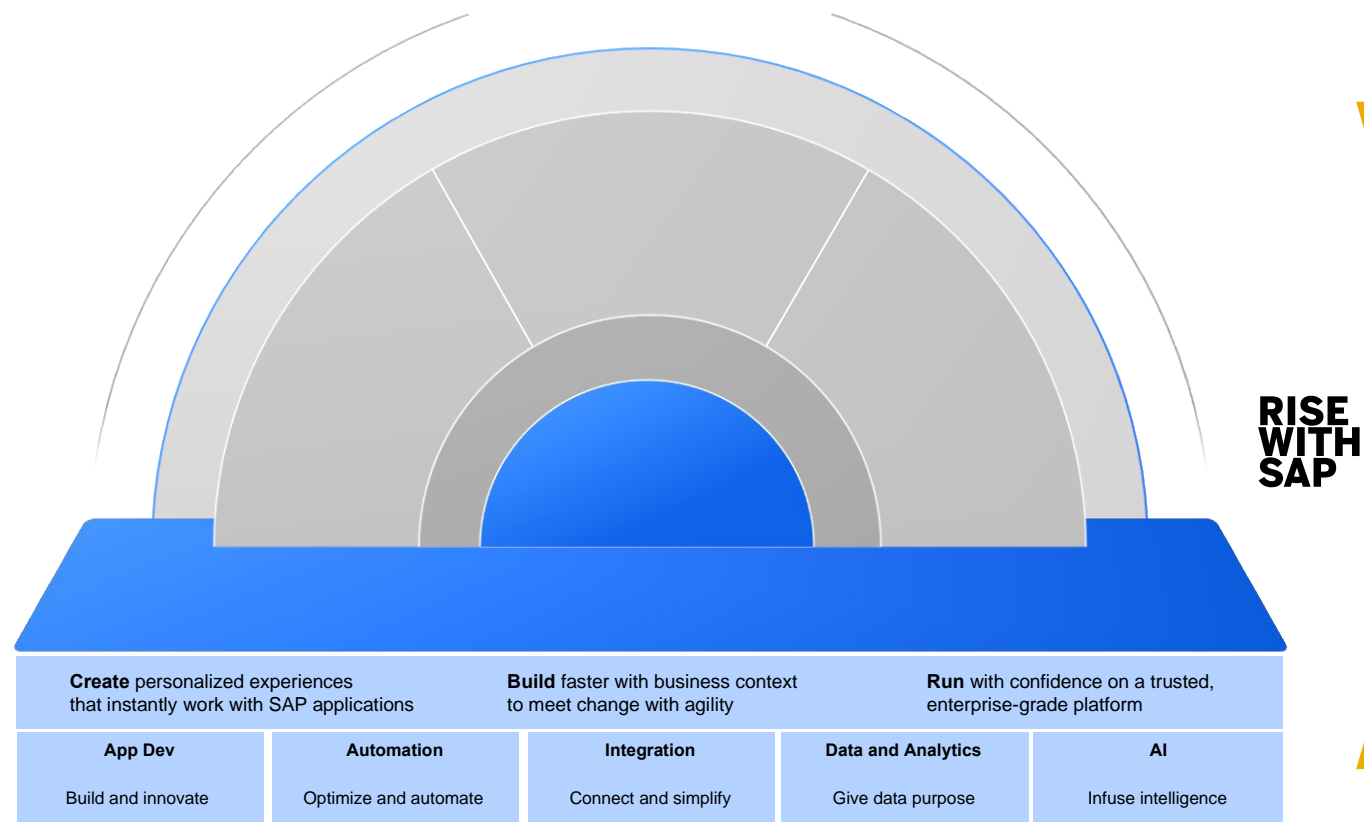
Custom analytical queries SAP Fiori app

The Why?

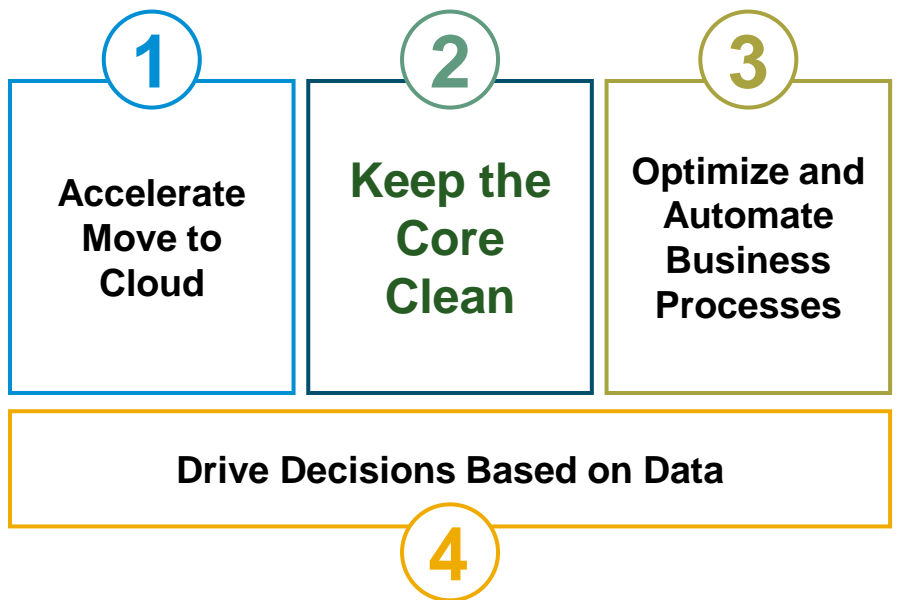
The How?

The What?

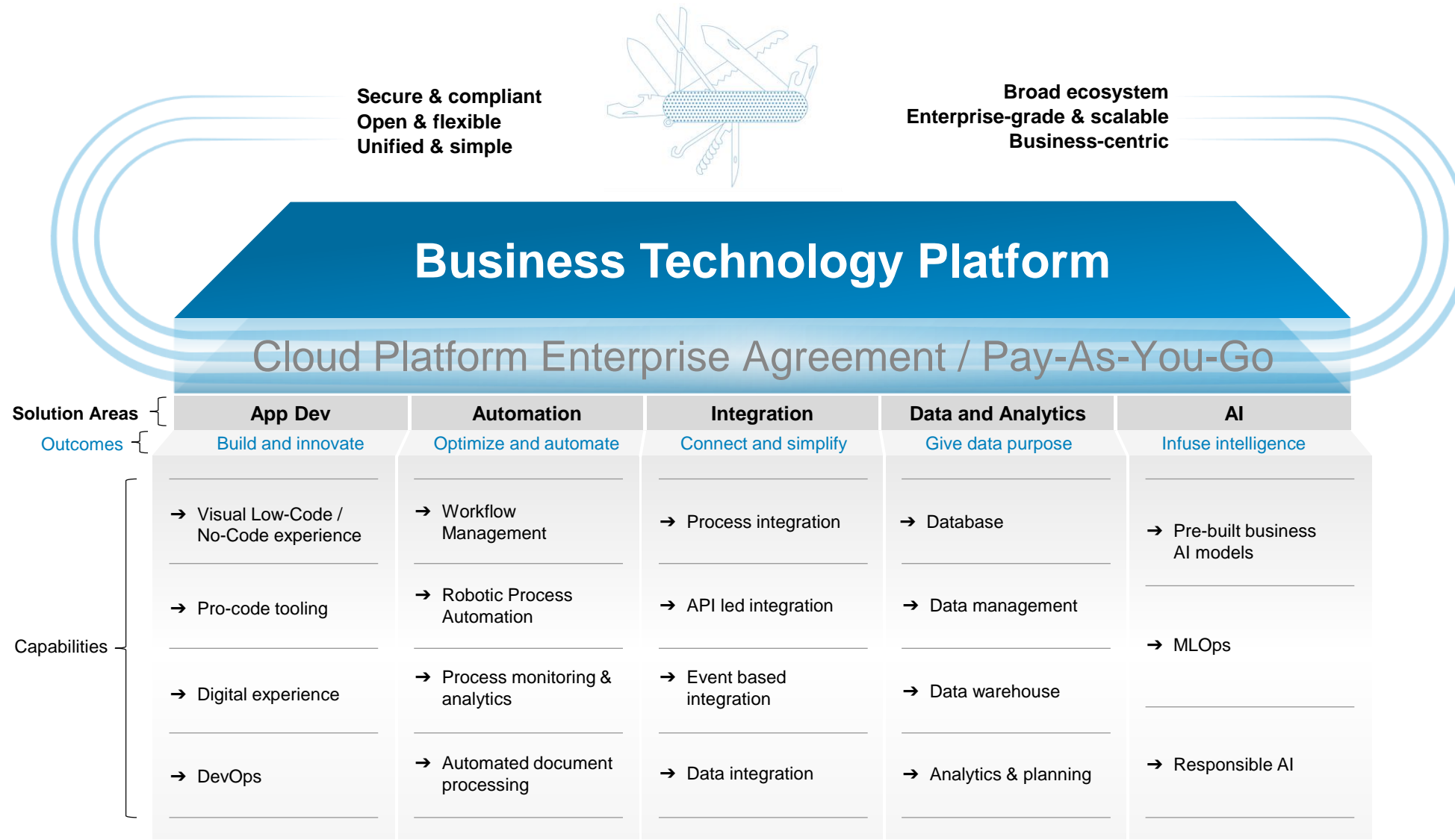
Unlocking 4 sources of differentiating value



SAP Business Technology Platform



SAP BTP Cloud Capabilities



40% cost savings
New business models
unlock full business potential

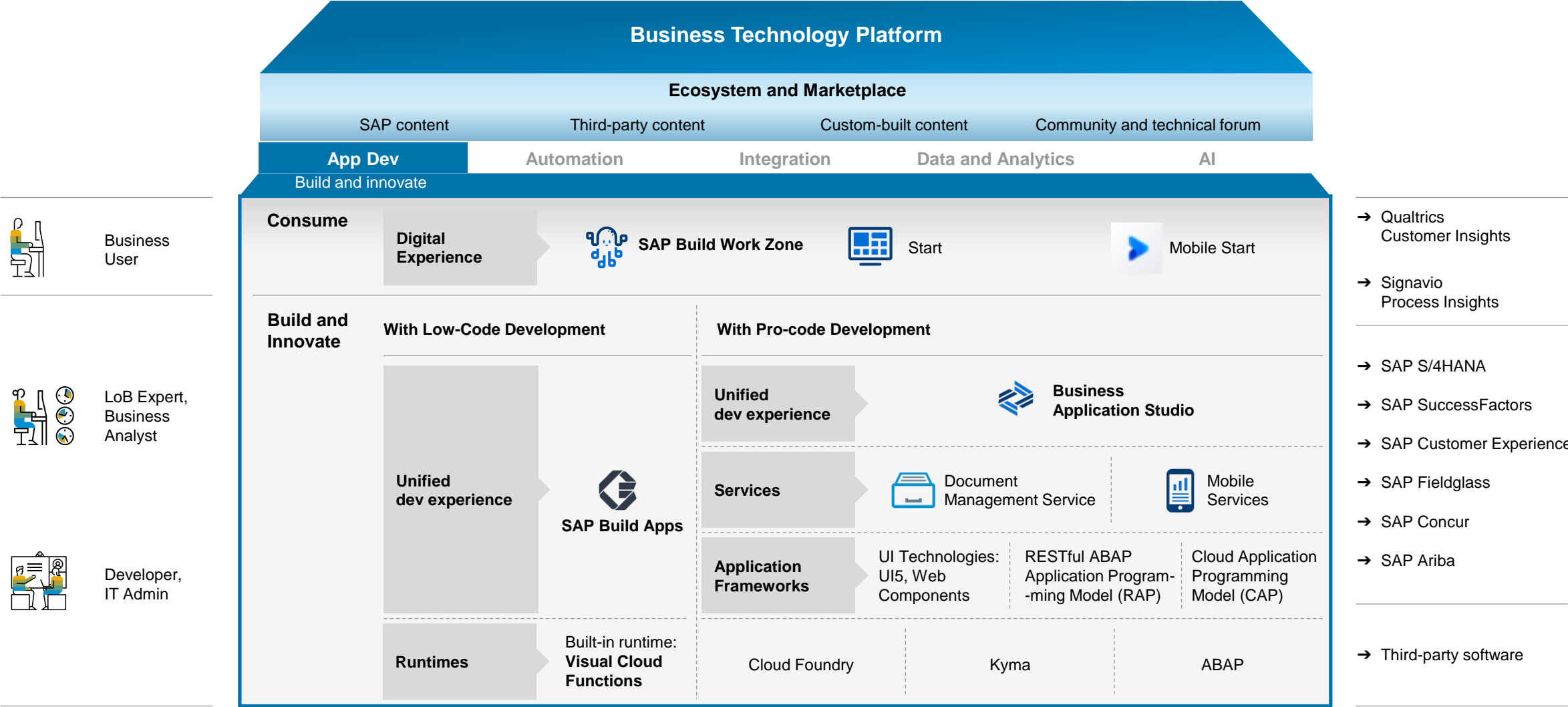
40% reduction
In TCO across integration
landscapes

4–5 hours saved
Generating reports each
month

40–50%
Less IT spend with SAP
BTP

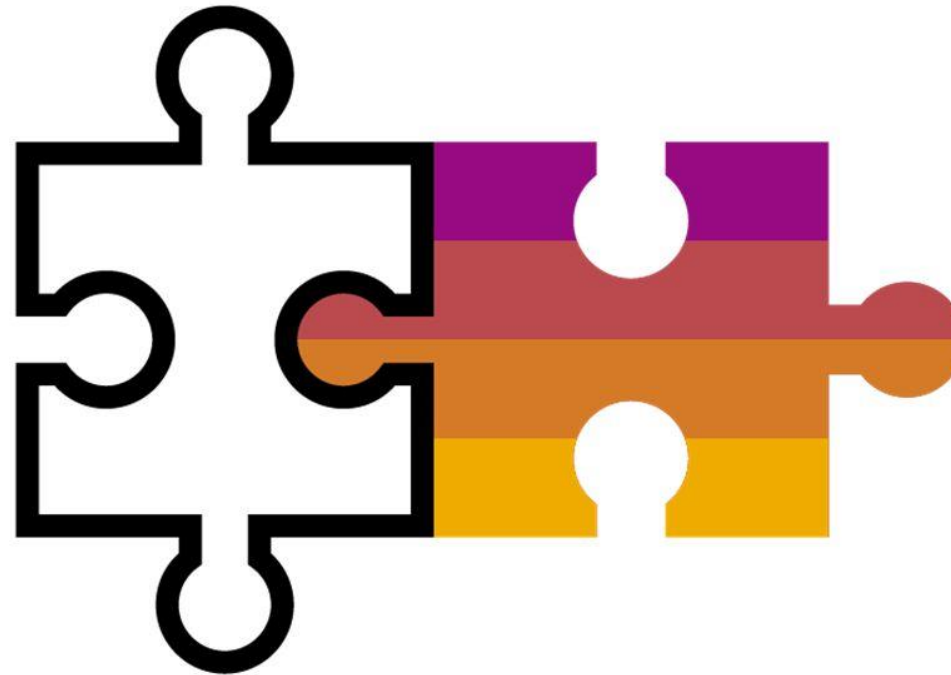
Application Development Services

Build and Innovate



To: SAP BTP

You complete me.



Yours truly,
SAP S/4HANA

<https://discovery-center.cloud.sap/>



<https://www.sap.com/products/technology-platform/trial.html>



<https://learning.sap.com/>





Dev & Ops with SAP Business Technology Platform



Why DevOps?

Challenge of conflicting goals

DEV 

“I own the application!”

“I need to change it fast!”



 OPS

“I own the application runtime!”

“I need to keep it stable!”





“A **culture where people, regardless of title or background, **work together** to imagine, develop, deploy, and operate a system.”**

Definition by Ken Mugrage, ThoughtWorks

<http://kenmugrage.com/post/my-new-definition-of-devops/>

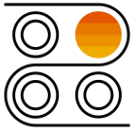
DevOps key principals



Culture



Automation



Lean



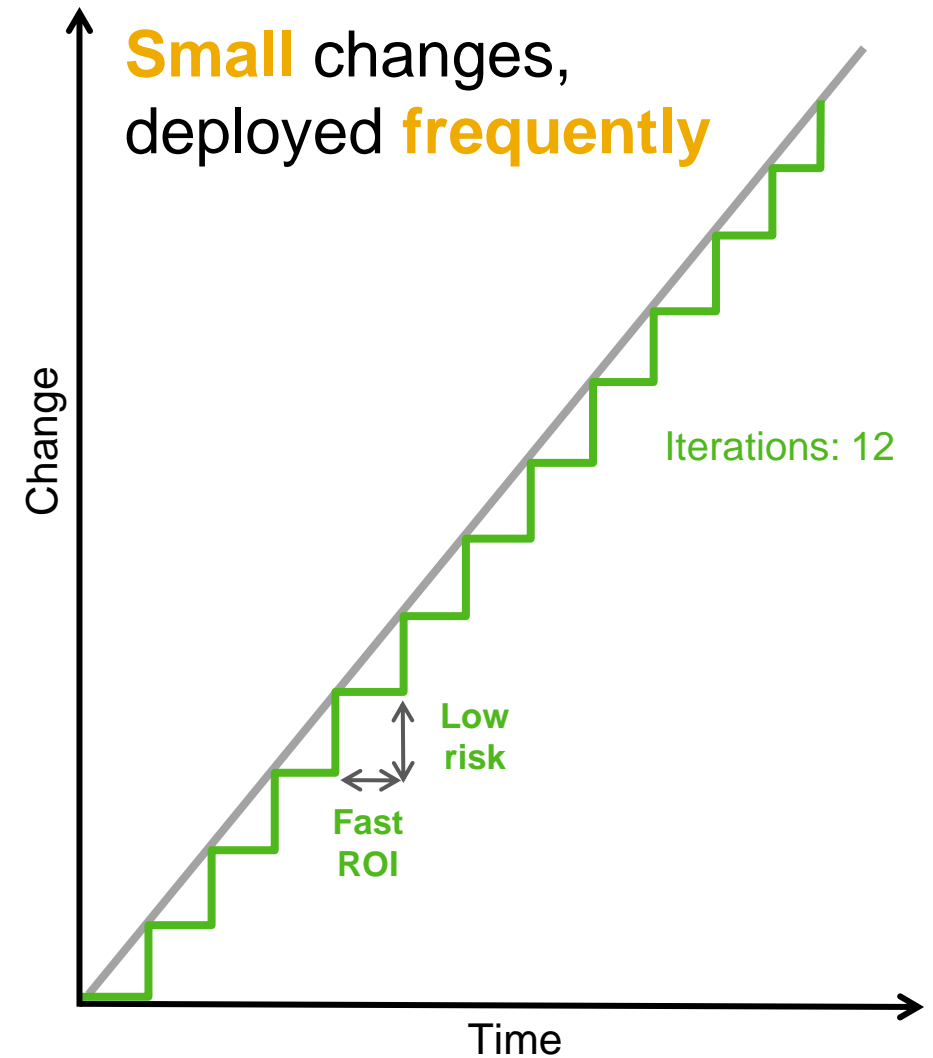
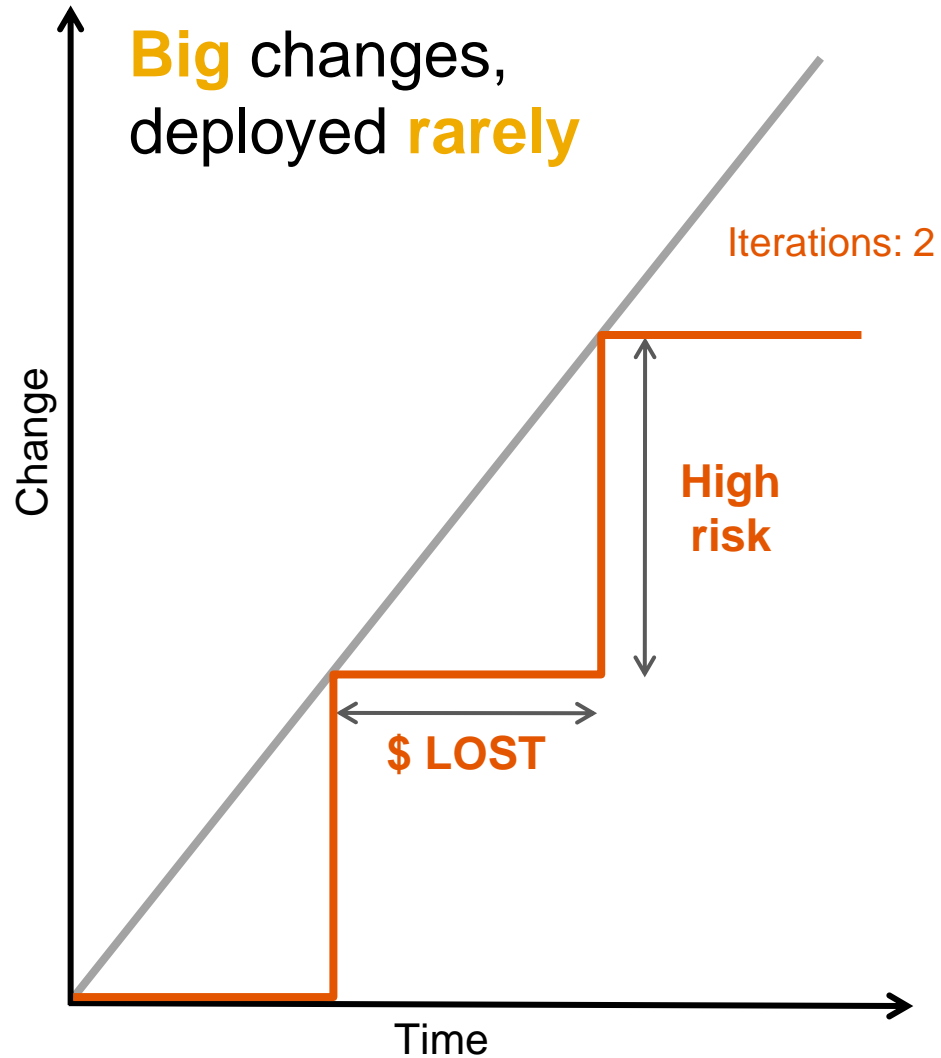
Measurement



Sharing

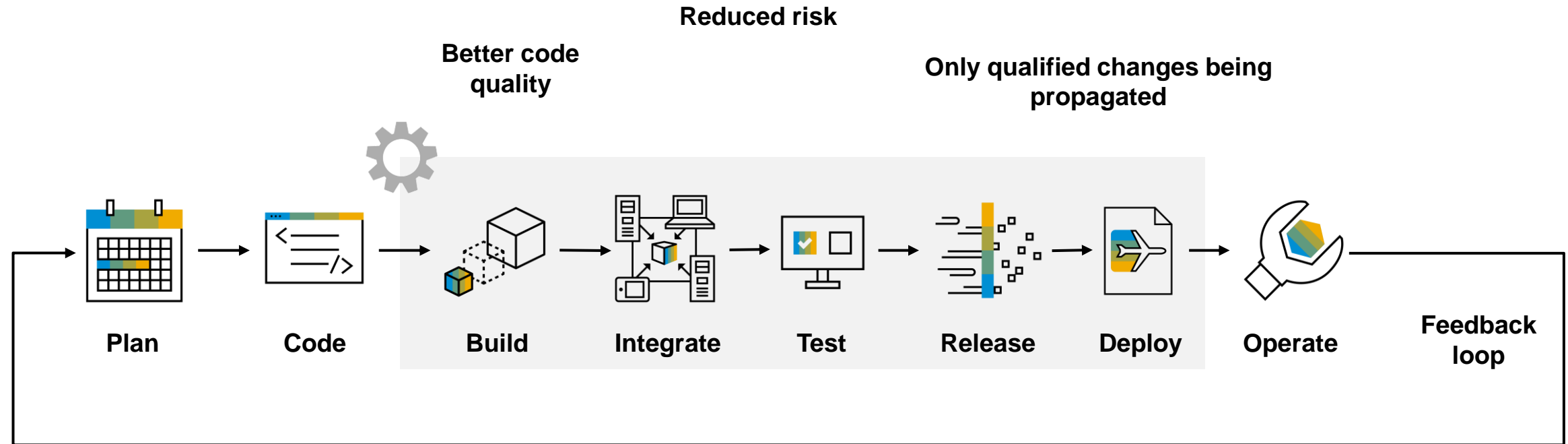


Benefits of continuously delivering software changes



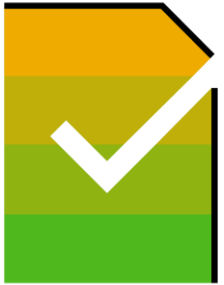
Continuous Integration and Continuous Delivery (CI/CD)

The deployment pipeline

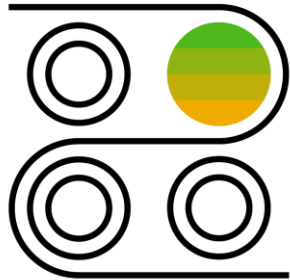


Continuous Integration and Continuous Delivery (CI/CD)

The goal of continuous delivery



Build quality in



Faster deployment



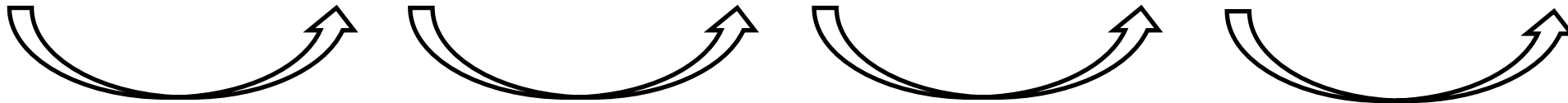
Faster feedback



Better software

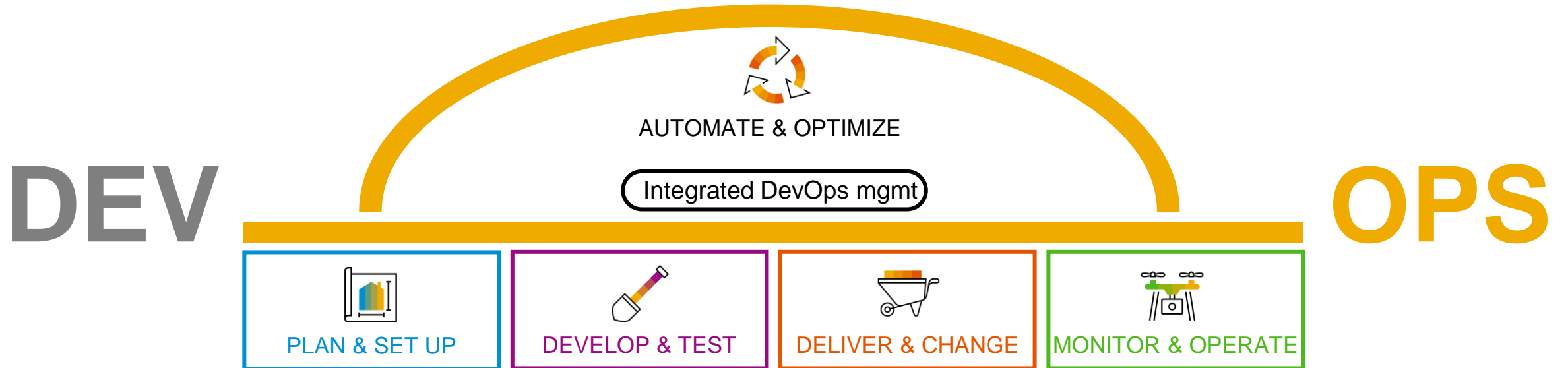


Happier customer



DevOps with SAP BTP

Categories



DevOps with SAP BTP

Plan & set up

DEV

OPS



PLAN & SET UP

Guidance

Account setup

Toolchain setup

CI/CD enablement

Best Practices for SAP BTP guide

Guidance

The screenshot shows the SAP Help Portal interface. At the top, the header includes the SAP logo, 'SAP Help Portal', and 'SAP Business Technology Platform (SAP BTP)'. Navigation links for 'Browse by Product', 'Learning Journeys', and a search icon are present. The main title 'Best Practices for SAP BTP' is displayed in English. Below the title is a search bar with the placeholder 'Enter keywords or a product name' and a 'Download PDF' button. A breadcrumb trail shows 'Home / Set Up and Plan /'. The left sidebar contains a 'Table of Contents' with a list of topics. The main content area is titled 'Setting Up Your Security and Compliance Model' and includes an introductory paragraph, a 'Security Concepts' section, and several sub-sections: 'Setting Up Authentication', 'Setting Up Authorization', 'Setting Up Identity Propagation', 'Complying with Data Protection and Privacy Requirements', and 'Giving Access Rights to Platform Users'. Each sub-section has a brief description of the topic.

SAP Help Portal SAP Business Technology Platform (SAP BTP)

Best Practices for SAP BTP English

This document Enter keywords or a product name Advanced Search

Download PDF

Home / Set Up and Plan /

Table of Contents

- Best Practices for SAP BTP
 - Basic Platform Concepts
 - Shared Responsibility Model Between You and SAP
 - Getting Started Checklist
 - Set Up and Plan
 - Creating a Governance Model
 - Setting Up Your Account Model
 - Setting Up Your Security and Compliance Model**
 - Security Concepts
 - Setting Up Authentication
 - Setting Up Authorization
 - Setting Up Identity Propagation
 - Complying with Data Protection and Privacy Requirements
 - Giving Access Rights to Platform Users
 - Planning Failover on SAP BTP
 - Develop and Build
 - Deploy and Deliver
 - Integrate and Test
 - Go Live and Monitor
 - Improve and Retire

Setting Up Your Security and Compliance Model

Applications on SAP BTP are exposed to the Internet and should therefore fulfill the highest possible security requirements to prevent unauthorized access.

Security Concepts

The level of security you implement may vary depending on your use case and your company's general security requirements. However, there are a few best practices that we recommend, regardless of your implementation.

Setting Up Authentication

SAP BTP provides various options for implementing user authentication.

Setting Up Authorization

SAP BTP provides various options for implementing user authorization.

Setting Up Identity Propagation

SAP BTP provides various options for identity propagation.

Complying with Data Protection and Privacy Requirements

All companies must respect data protection and privacy rights of individuals. Data protection and privacy most likely influences your architecture and the functionalities of your application and should be considered as early as possible in your development process.

Giving Access Rights to Platform Users

If you've set up a staged development environment using different subaccounts or spaces, such as for development, testing, and production, we recommend that you grant the Cloud Development Team access to development subaccounts and spaces, but that you grant only the Cloud Administration Team access to the testing and production subaccounts or spaces.

Set up **CI/CD** efficiently for **SAP** environments

CI/CD enablement

Our mission

... is to enable the implementation of CI/CD for the development of business solutions on SAP BTP and thereby, strongly focus on our customers' and partners' needs.

You can choose from two different solutions, depending on your level of **expertise** and the level of **flexibility** you require:



SAP Continuous Integration and Delivery



- Simplify and speed up your CI/CD setup through predefined pipelines that are ready-to-use
- Follow SAP recommendations and best practices
- Don't worry about the underlying CI/CD infrastructure

Simplicity

for typical SAP business application
developers

Onboard **SAPUI5**
and **CAP** apps

Connect
with
GitHub

Monitor
Build
Status

Integrate
with **TMS**

...

Set up CI/CD efficiently for SAP environments

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Simplicity

for typical SAP business application developers



Project "Piper"



- Build custom pipelines with the help of our shared library
- Reuse your own CI/CD infrastructure
- Simplify your tool setup through our set of Docker images



CI/CD Best Practices Guide



Apply CI/CD principles to SAP-specific technologies

Flexibility

to automate complex and customer-specific development scenarios

Continuous Integration and Delivery

Continuous Integration and Delivery Best Practices Guide

CI/CD enablement

The screenshot shows the SAP Help Portal interface. The browser address bar displays the URL: `help.sap.com/viewer/3324745951b44b578bd65221d2ff8f9a/Cloud/en-US`. The page title is "Continuous Integration and Delivery Best Practices Guide". A search bar is located below the title. On the left, a "Table of Contents" sidebar lists sections like "Continuous Integration and Delivery Best Practices Guide" and "Procedures for CI/CD Pipelines". The main content area features a "Note" box stating that the guide is under construction. Below this, the section "What Is This Guide About?" explains the guide's purpose. At the bottom, a diagram shows a four-stage pipeline: Build, Test, Deploy, and Extend, with a legend indicating that the first three stages are for "Set Up Your Pipeline" and the last stage is for "Extend Your Pipeline".

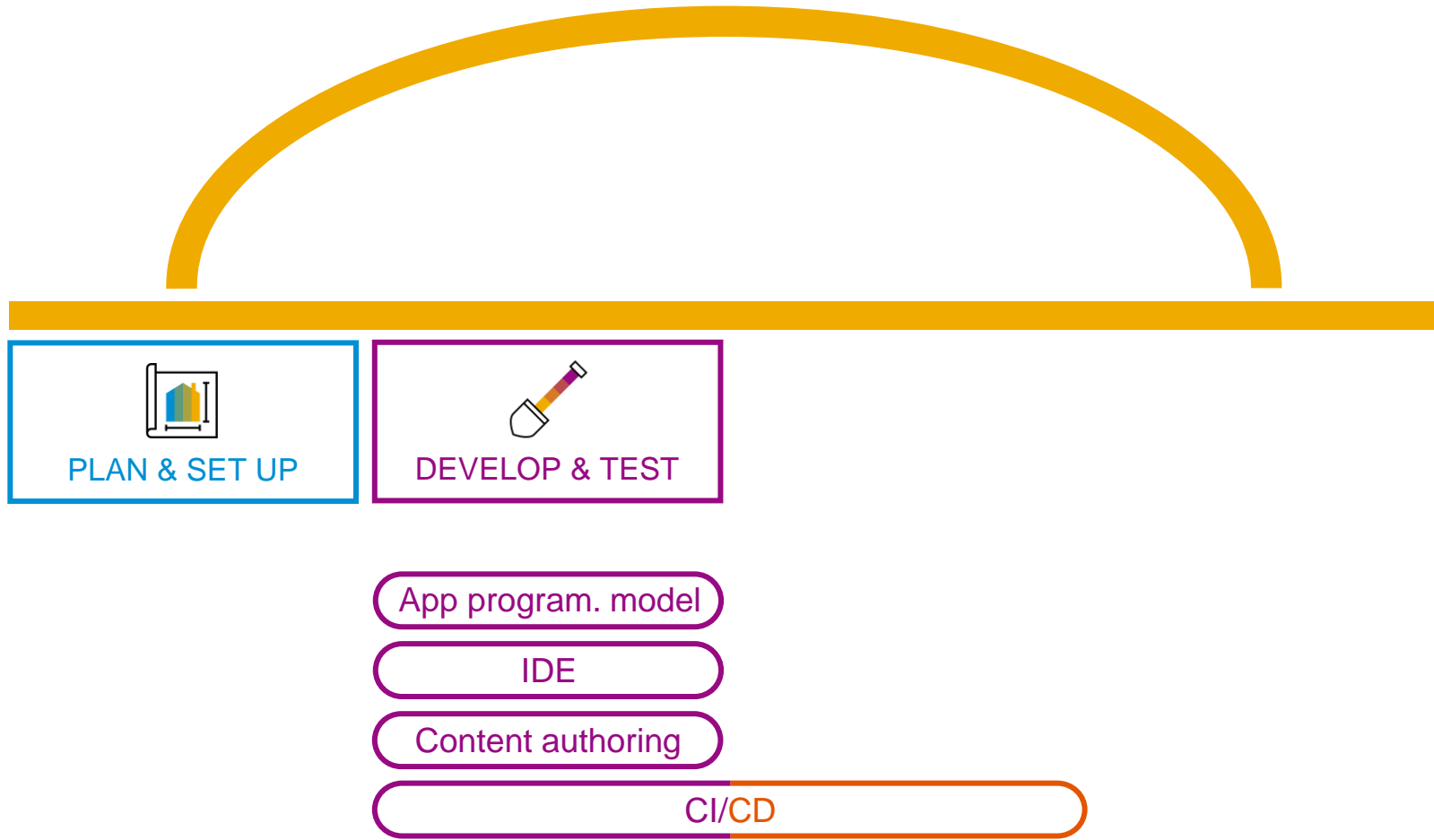
- Provides simple procedures to implement continuous delivery pipelines **on any CI/CD stack**
- Demonstrates how to apply principles of CI/CD to **SAP-specific technology**

DevOps with SAP BTP

Develop & test

DEV

OPS






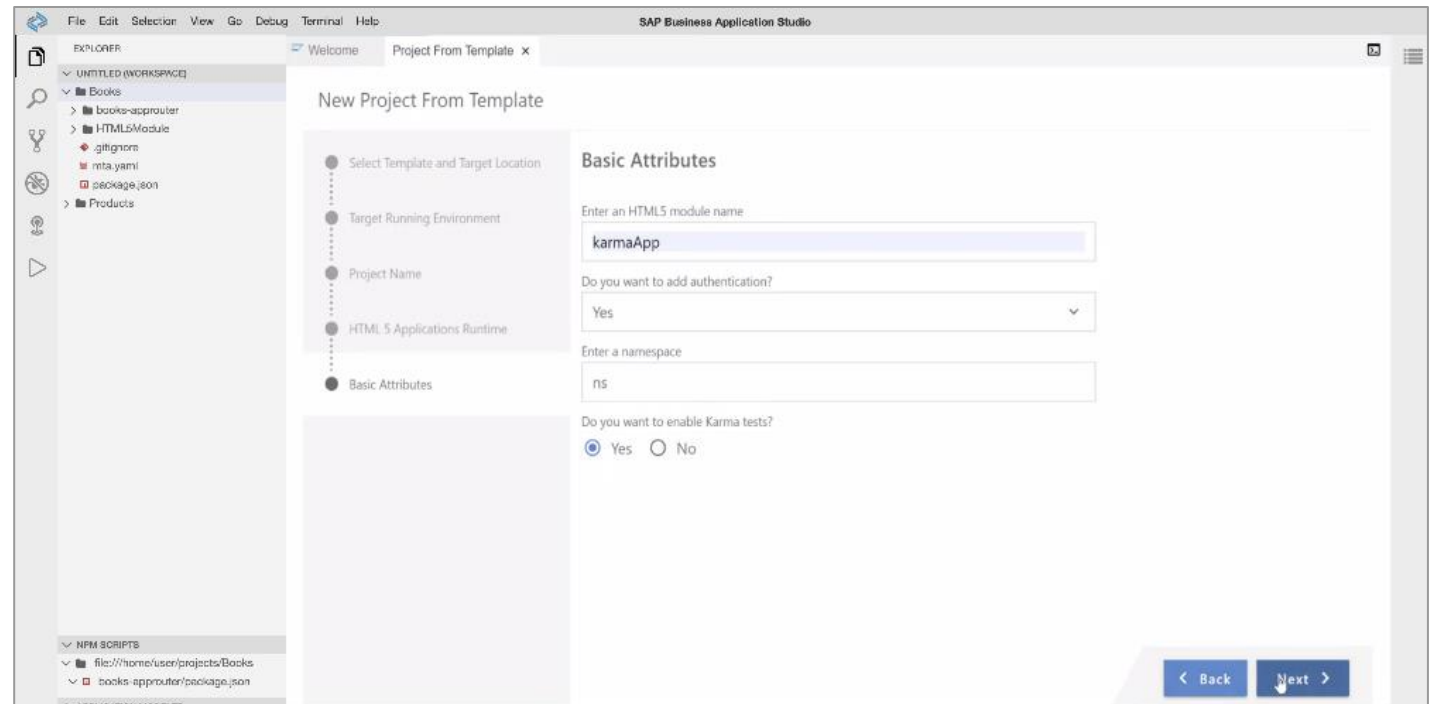
Develop your application

Development environments

IDE

Create & use your application **development environment**:

- Local environment, such as  eclipse + plugin/toolkit or Microsoft's  Visual Studio Code
-  SAP Business Application Studio:



Develop your application

Creation and handling of content

Content authoring

When developing apps (that is, creating or changing code), you normally also come up with **content** that is relevant for your business application:

- **Security** roles
- **Destinations**
- **Application-specific content**

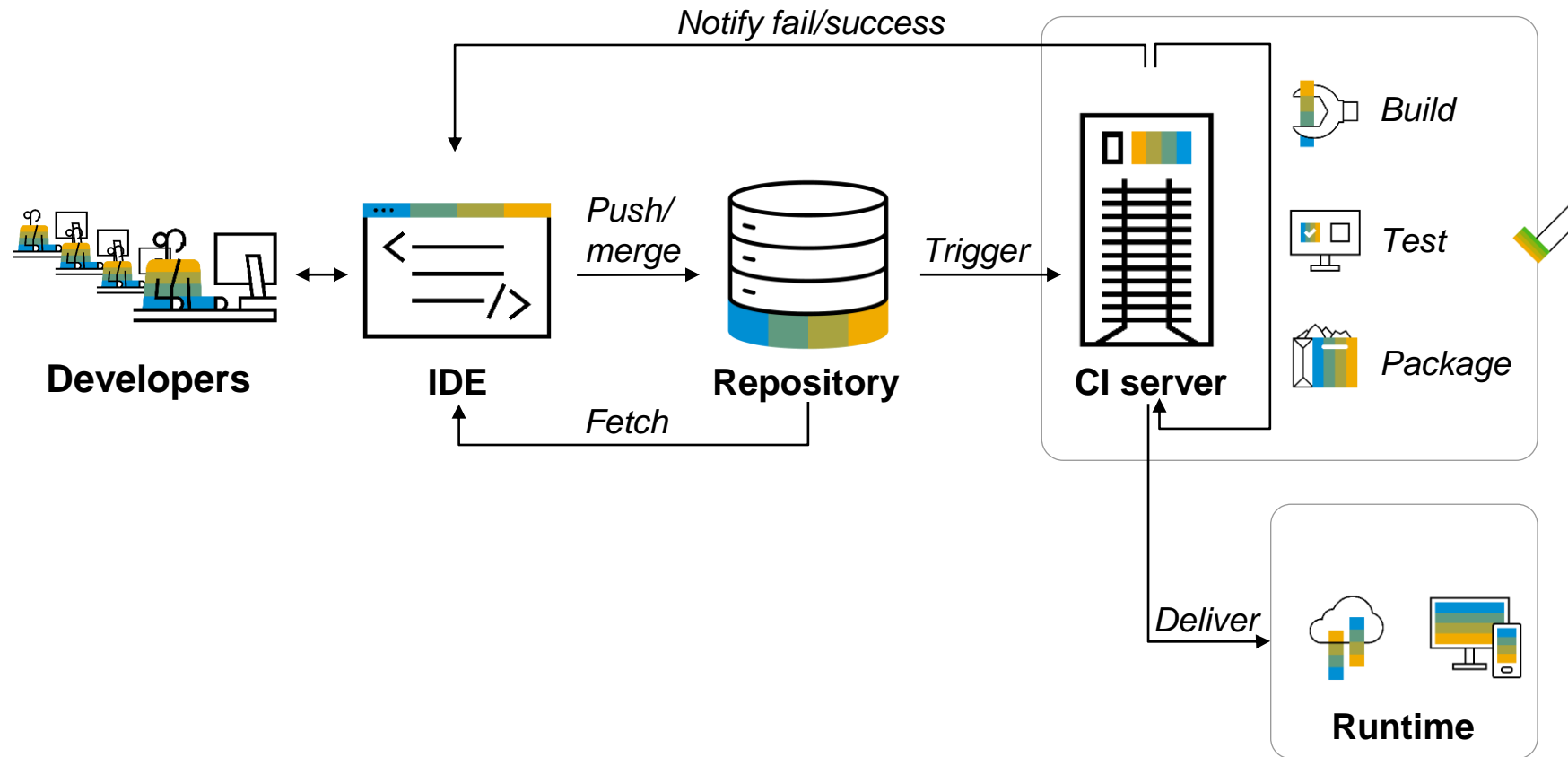


...

Agile development

CI/CD

Using automated Continuous Integration and Continuous Delivery pipelines



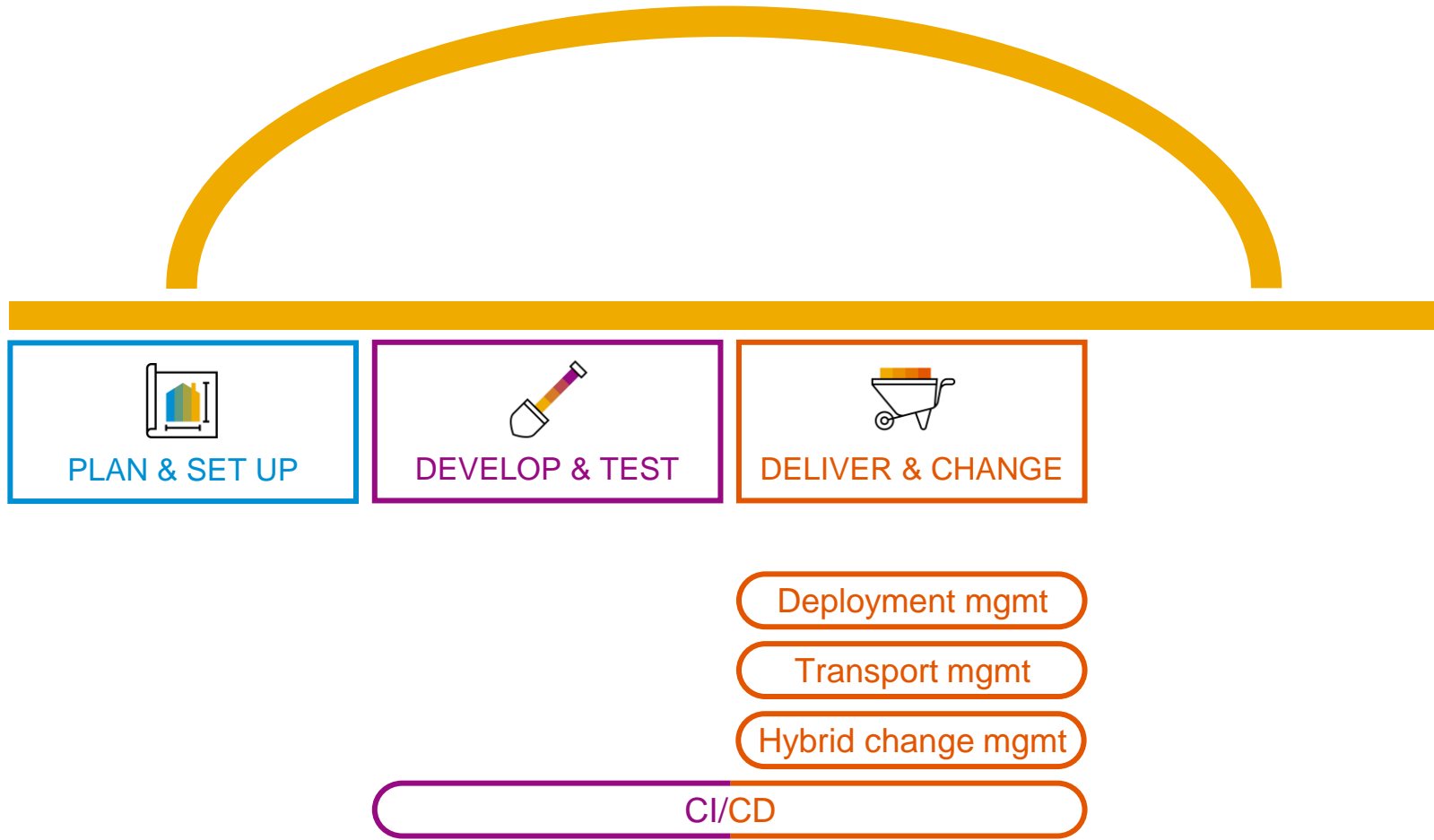
Continuous Integration and Delivery (CI/CD)

DevOps with SAP BTP

Delivery & change

DEV

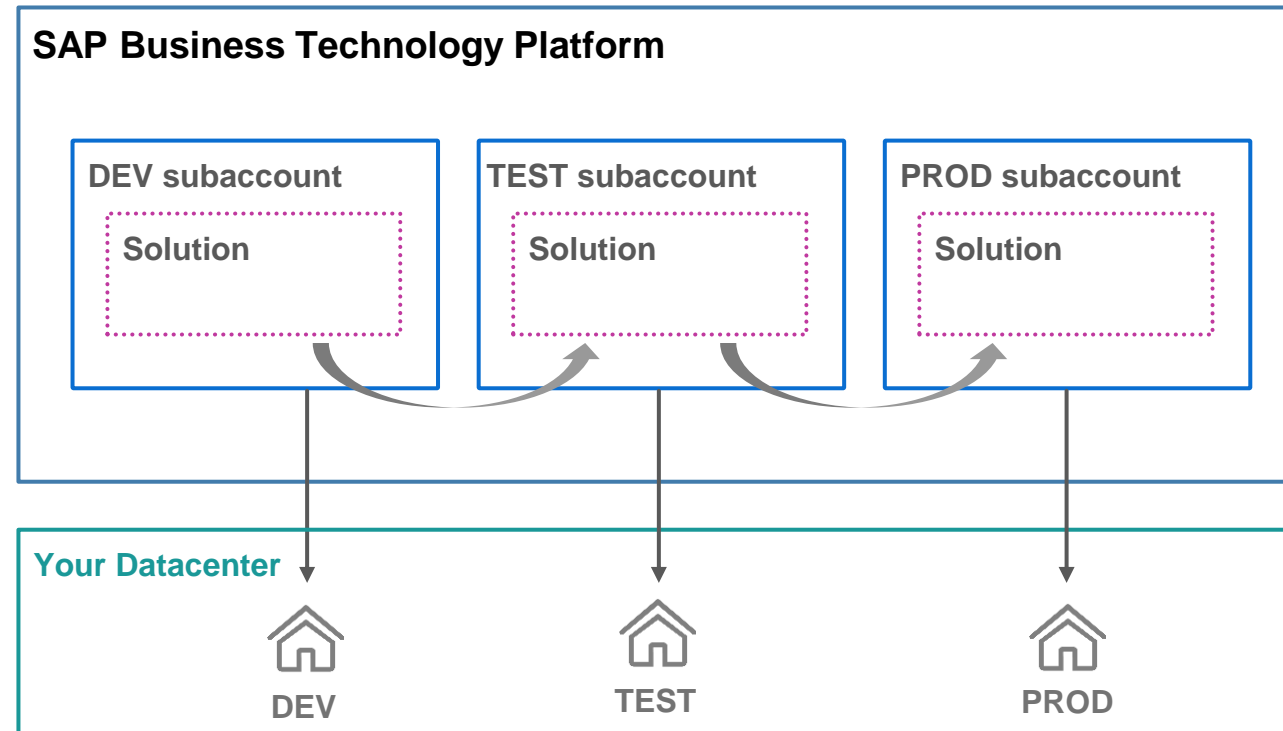
OPS



Deliver your changes toward production

Example app

Transport mgmt



Deliver your changes toward production

Combining agility + control

Transport mgmt

Development landscape

- Based on *Continuous Integration* principles, managed by DevOps team
 - Verification of single developer change
 - Typically fully automated



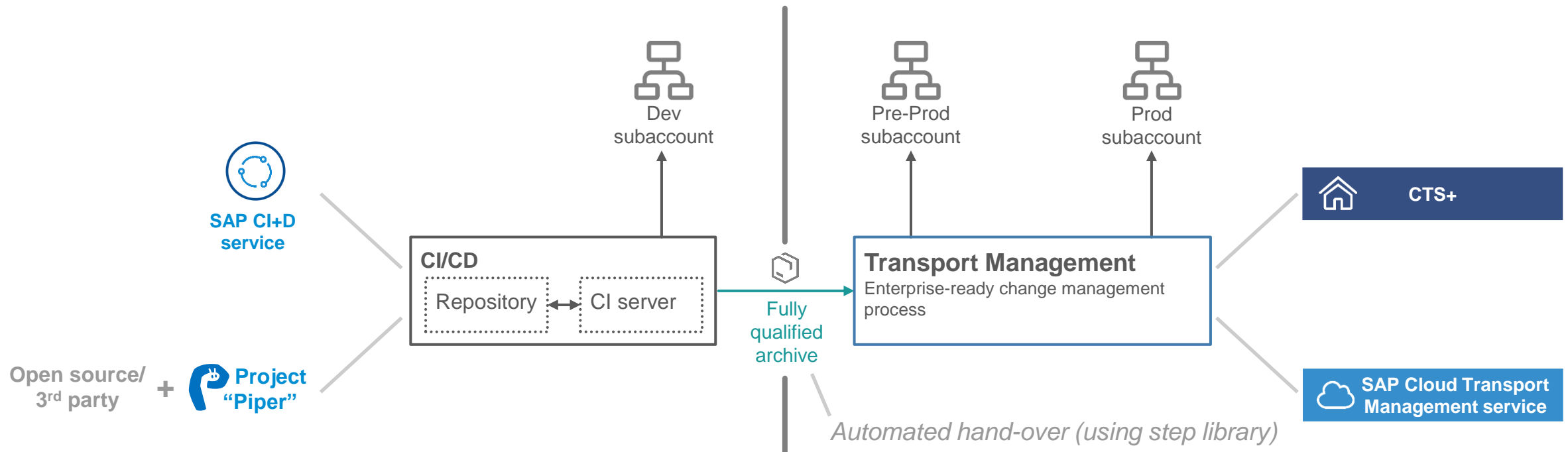
Developer User



Basis User

Delivery landscape

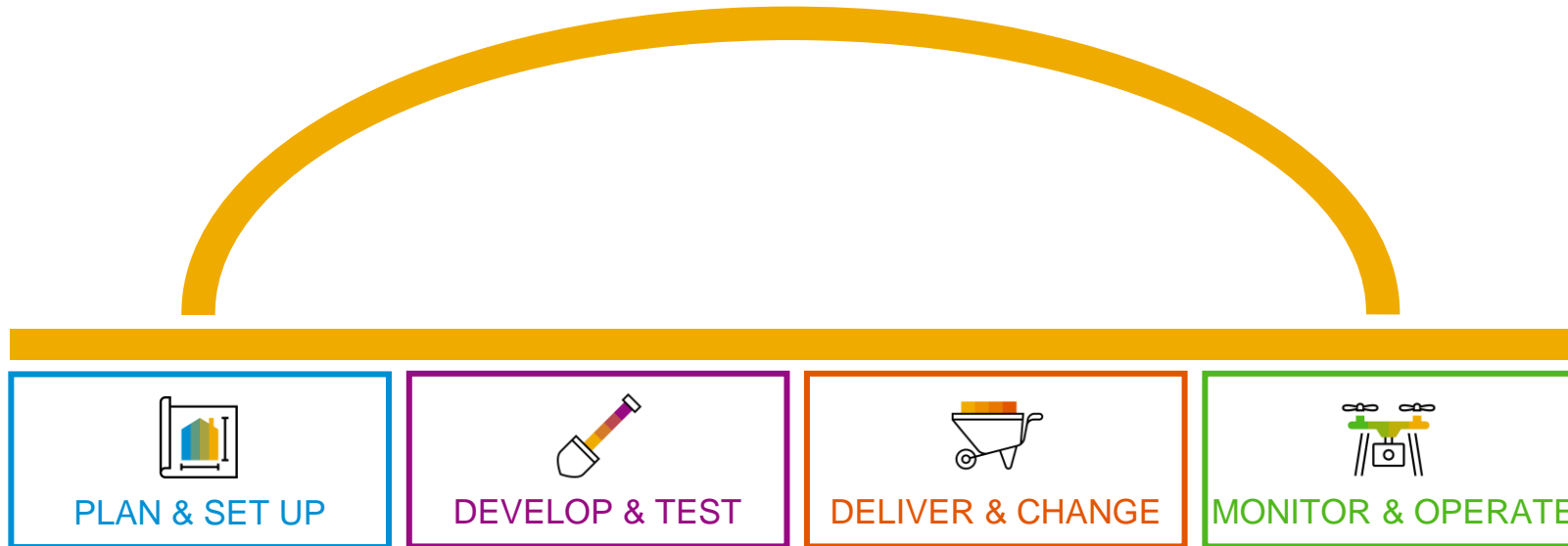
- Based on strict *Transport Management* rules (policies, schedules), managed by ops/approvers
 - Verification of release candidate version
 - Typically done with manual confirmation



DevOps with SAP BTP

Monitor & operate

DEV

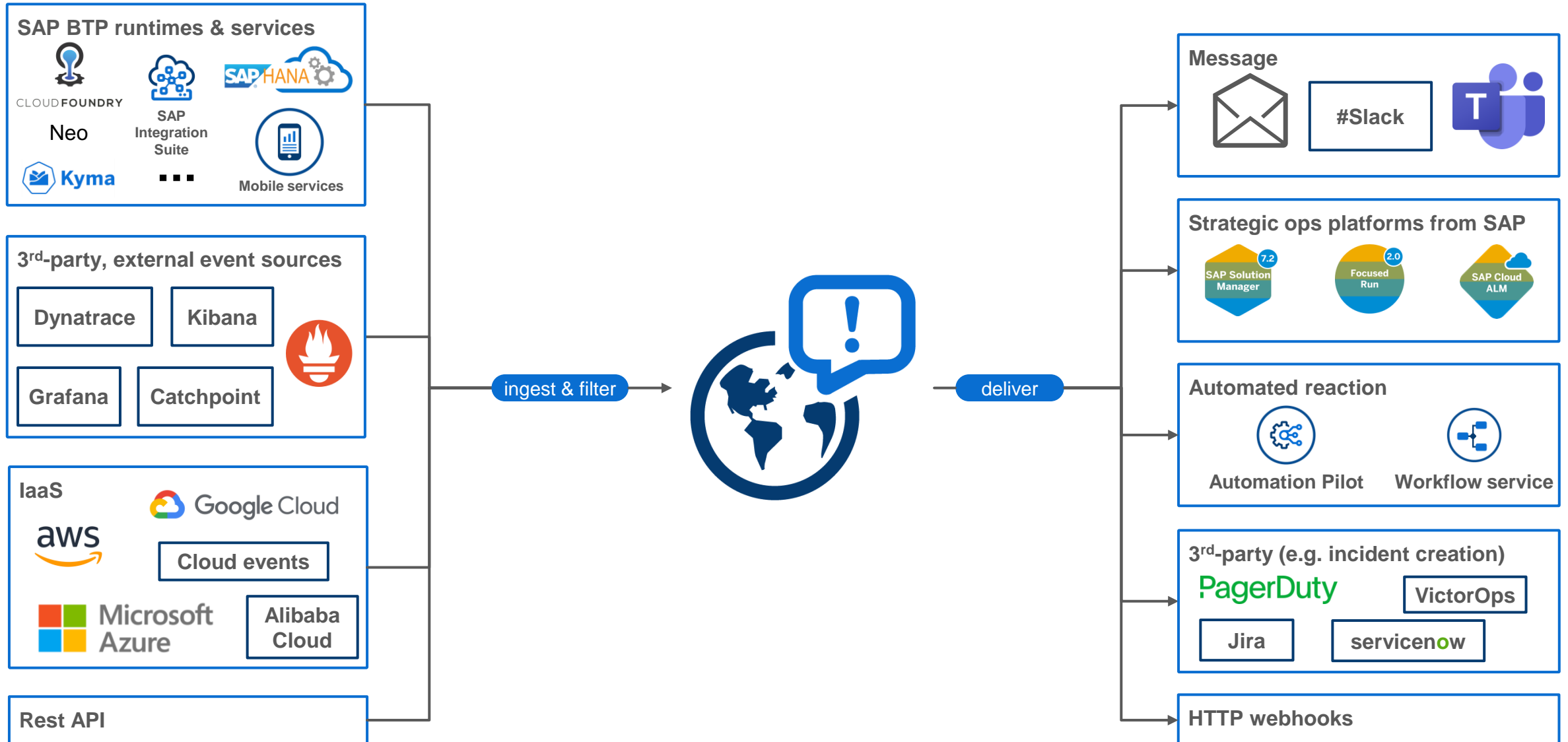


OPS

Operations for SAP BTP

SAP Alert Notification service for SAP BTP

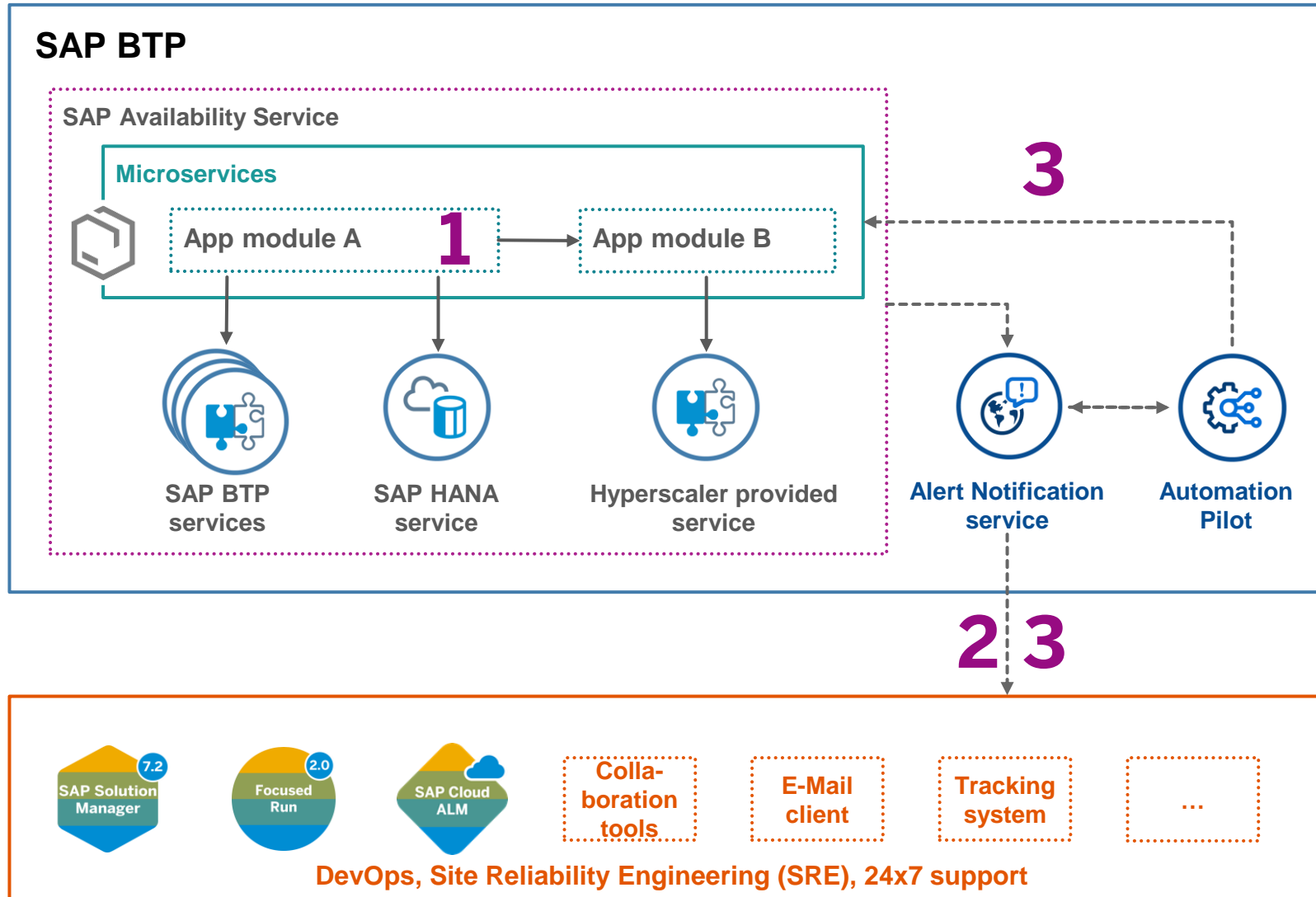
Alerting



Operations for SAP BTP

Example: complement alerts with automation

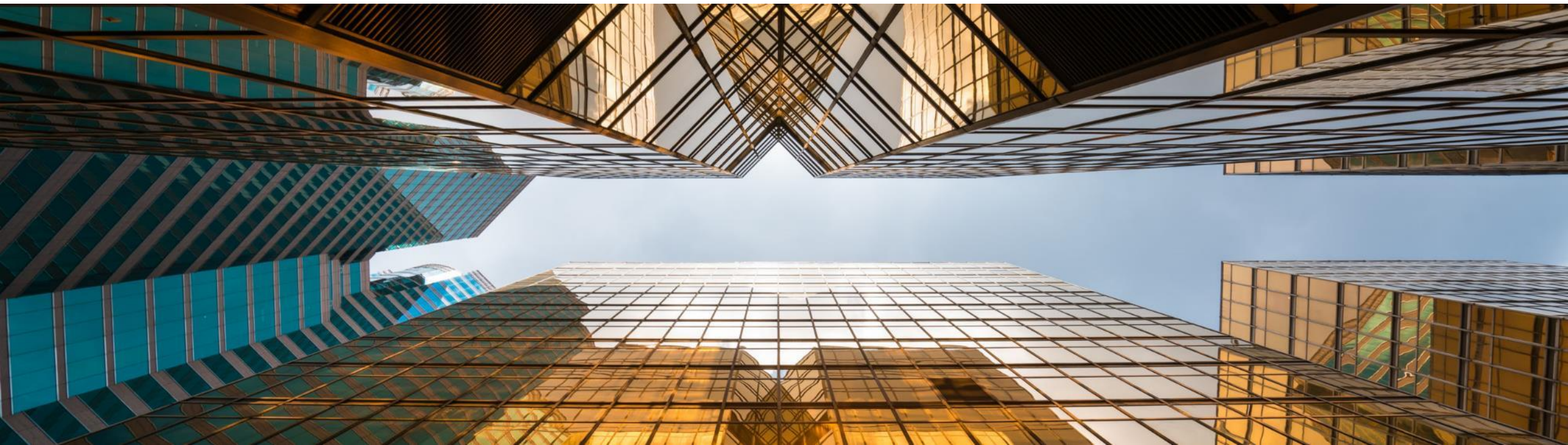
Ops automation



- 1 Event (e.g. service stops working)
- 2 Notify + trigger
- 3 Recover service + notify

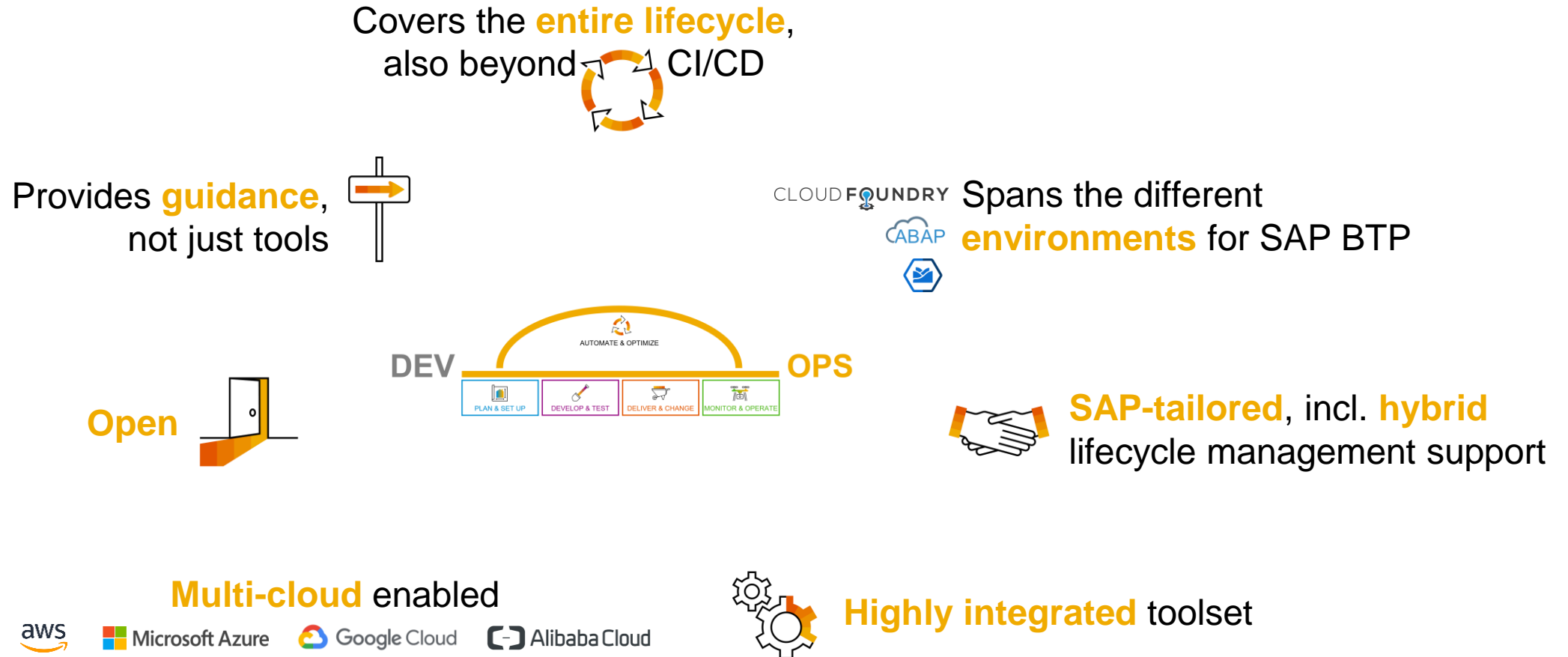


Summary



DevOps with SAP BTP

Corner stones of our offering



[Blog post](#)

openSAP course Efficient DevOps with SAP

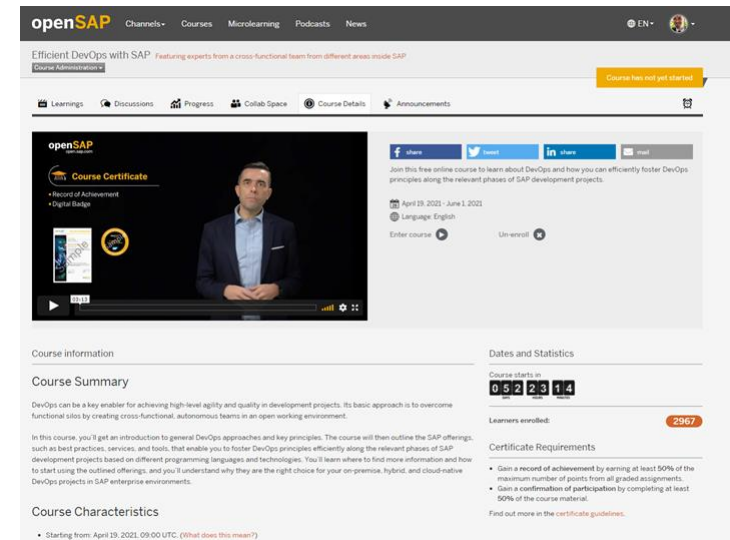
Available as self-paced course

Course language: English

Course content:

- Week 1: Introduction to DevOps
- Week 2: CI/CD with ABAP (On-Premise)
- Week 3: Delivery of Cloud Applications
- Week 4: Hybrid Change and Test Management
- Week 5: Operation of Your Solution and Summary

<https://open.sap.com/courses/devops1>





Thank You for Joining! 😊

