Worry-free Innovations and Extensions

SAP S/4HANA and SAP BTP

April 2023

SAP BTP Services EMEA North

Public

Worry-free Extensions – Clean Core Approach

SAP S/4HANA Cloud private edition, and on-premise

unique business processes

GOALS

1 Future proof solution/extensions

2 Ensure faster deployment & smoother SAP upgrade

3 Take advantage of yearly innovation release cycles on S/4

Clean Core Approach

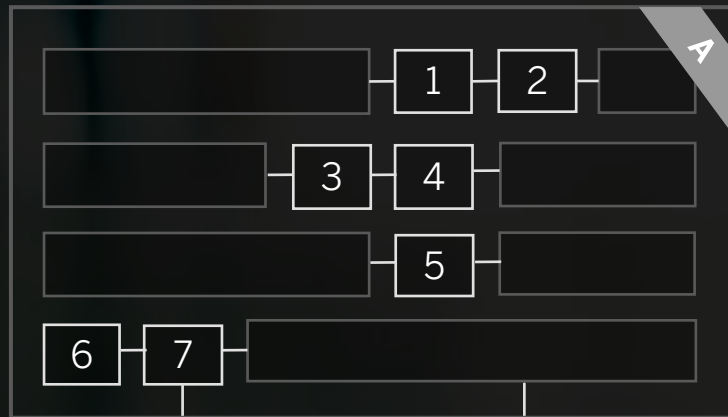Follow the public cloud extensibility rules whenever possible

Extensions must be clearly separated from SAP code

No modifications to SAP objects allowed

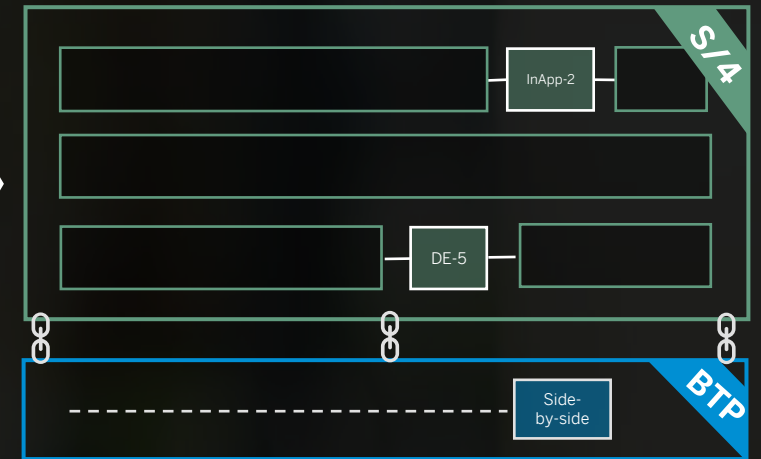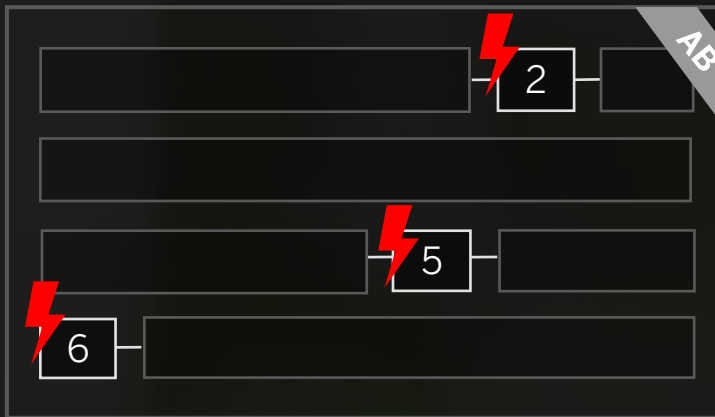Only stable public APIs & SAP extension points can be used

Extensibility Options with SAP S/4HANA and BTP

Transformation Project or Upgrade

Clean Core Architecture

Custom Processes build with classic extensibility

Standard Processes

Extensibility Options

1 — **In-App Extensibility S/4HANA**

2 — **Developer Extensibility S/4HANA**

3 — **Side-by-Side Extensibility SAP BTP**

Extensibility Options

1	In-App Extensibility S/4HANA	2	Developer Extensibility S/4HANA	3	Side-by-Side Extensibility SAP BTP

SCENARIO

Low-code/no-code adaptions and extensions of SAP S/4HANA applications

Custom ABAP development projects that need proximity to SAP S/4HANA data, apps or transactions

Loosely-coupled applications and partner SaaS solutions

BENEFITS

Fully managed and integrated in SAP S/4HANA

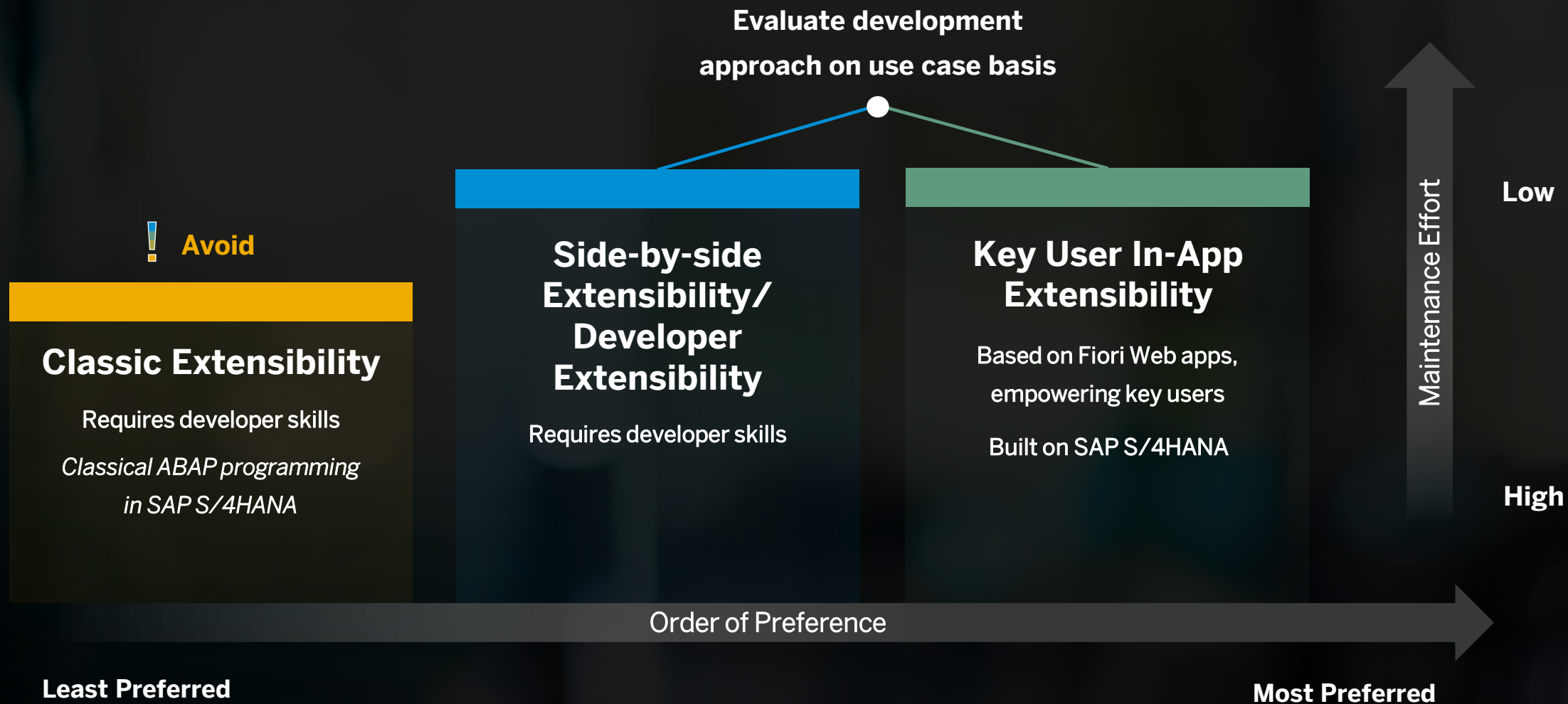No or only very basic development skills required

Development of extensions inside the SAP S/4HANA system
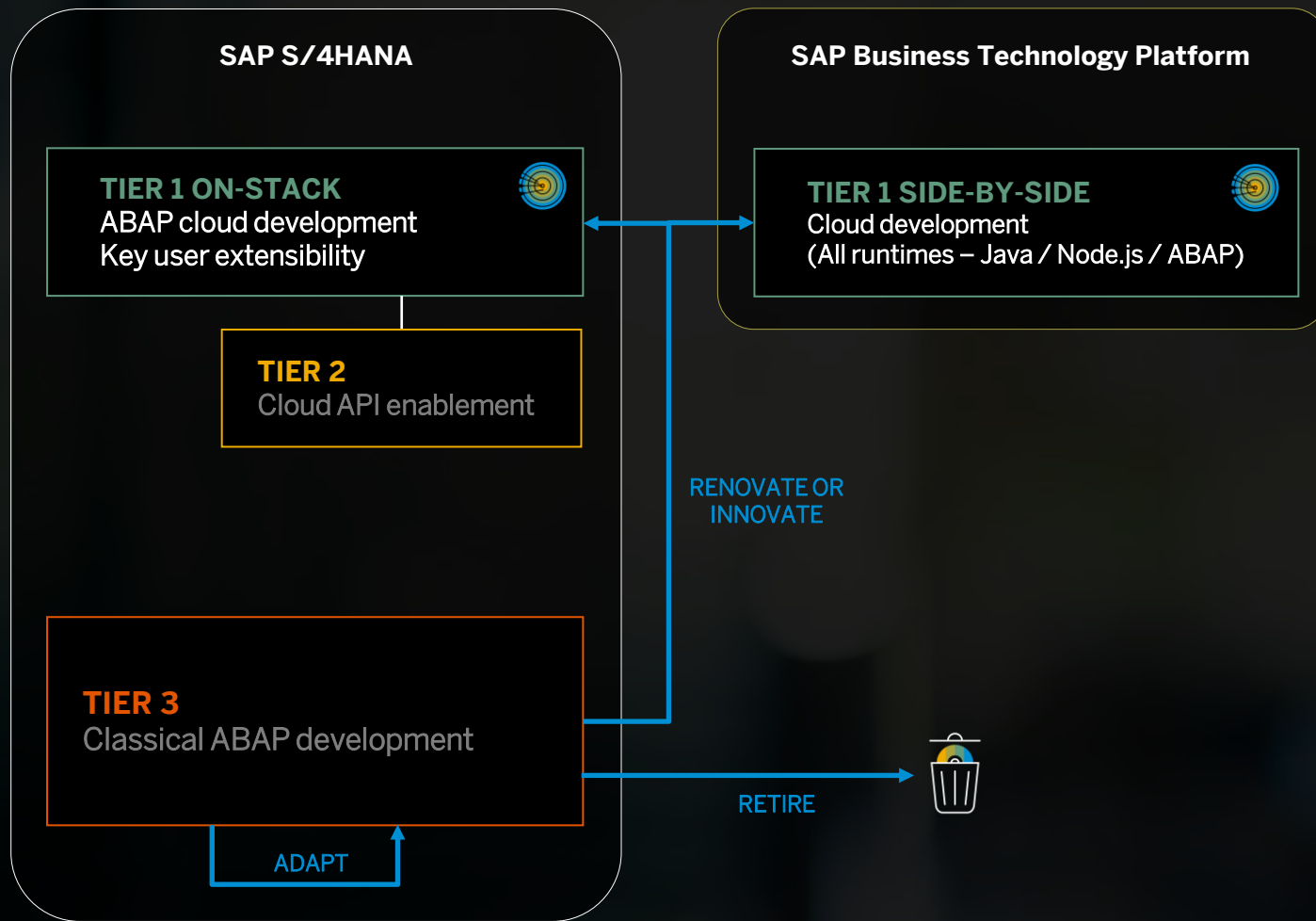
No remote access or data replication required

Decoupled extensions independent of SAP S/4HANA operation and lifecycle management

Take advantage of the inherent BTP benefits (outlined later)

Extensibility Recommendations

Evaluate development approach on use case basis

! **Avoid**

Classic Extensibility

Requires developer skills

Classical ABAP programming in SAP S/4HANA

Side-by-side Extensibility/ Developer Extensibility

Requires developer skills

Key User In-App Extensibility

Based on Fiori Web apps, empowering key users

Built on SAP S/4HANA

Maintenance Effort

Low

High

Order of Preference

Least Preferred

Most Preferred

3-tier extensibility model for SAP S/4HANA private cloud and on-premise

SAP S/4HANA

TIER 1 ON-STACK
ABAP cloud development
Key user extensibility

TIER 2
Cloud API enablement

TIER 3
Classical ABAP development

ADAPT

ON-STACK - tightly coupled

SAP Business Technology Platform

TIER 1 SIDE-BY-SIDE
Cloud development
(All runtimes – Java / Node.js / ABAP)

RENOVATE OR INNOVATE

RETIRE

SIDE-BY-SIDE - loosely coupled

TIER 1 – Cloud extensibility model

Cloud-ready and upgrade-stable development of new applications and extensions

Same development model as used in SAP S/4HANA Cloud, public edition

Default for new extensions and custom apps

TIER 2 – Cloud API enablement

Extends and enables tier 1 for private cloud and on-premise
Mitigates missing public SAP APIs or extension points:
- Develop custom wrapper objects for not released SAP objects to be used in tier 1
- Retire wrapper once a released SAP API is available

TIER 3 – Classic ABAP extensions

Legacy/existing custom ABAP code or new on-stack extensions code that cannot follow the rules of tier 1 and 2
Avoid and reduce the content in tier 3

This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice.

Clean Core

SAP
Build

SAP
Build

App Dev

+

Integration

+
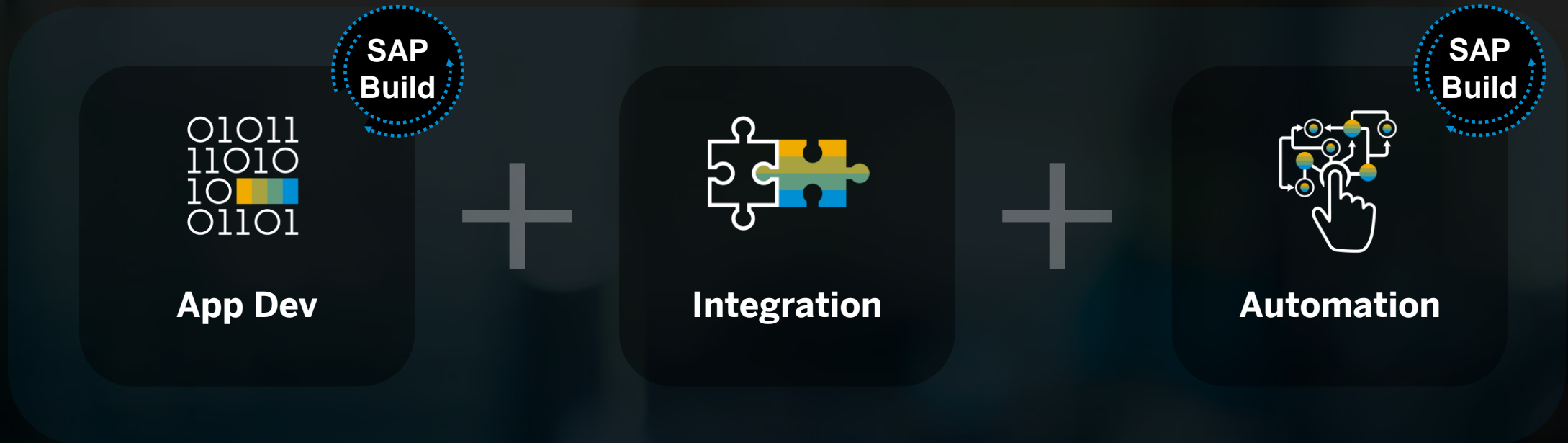
Automation

SAP Build - Innovate and extend using Low-Code/No-Code Unified Offering

Application Composition

Build **business apps** with low-code/no-code capabilities

SAP Build
Apps

+

Process Automation

Design, integrate and run **business processes**
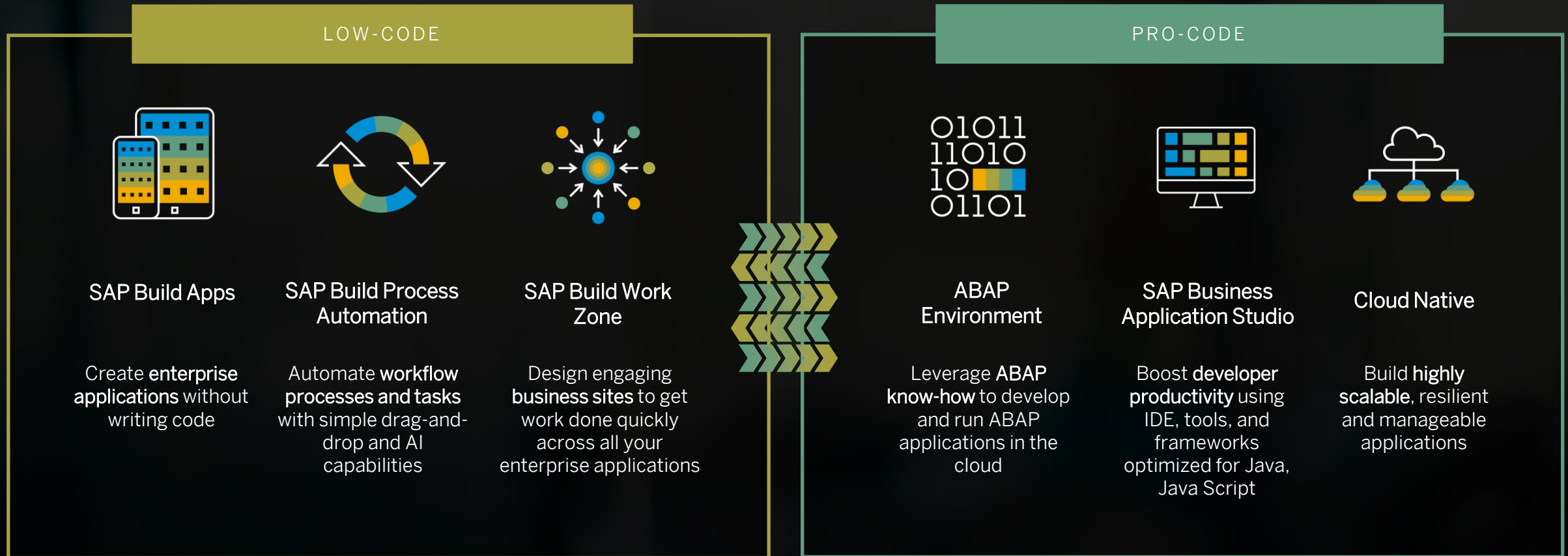
SAP Build
Process Automation

SAP Build

+

Digital Experience

Provide **seamless access** to business processes and apps

SAP Build
Workzone

SAP Build - Innovate and extend using Low-Code/No-Code Unified Offering

LOW-CODE

PRO-CODE

SAP Build Apps

Create **enterprise applications** without writing code

SAP Build Process Automation

Automate **workflow processes and tasks** with simple drag-and-drop and AI capabilities

SAP Build Work Zone

Design engaging **business sites** to get work done quickly across all your enterprise applications

ABAP Environment

Leverage **ABAP know-how** to develop and run ABAP applications in the cloud

SAP Business Application Studio

Boost **developer productivity** using IDE, tools, and frameworks optimized for Java, Java Script

Cloud Native

Build **highly scalable**, resilient and manageable applications

Typical Clean Core Customer Journey

Intelligent Custom Code Management Service (iCCM) by SAP

Enable	Assess	Deploy	Run

1 Enablement Session on Clean Core for Business and IT

2 Technical Deep Dive for IT

3 Analysis of Custom Code to cluster the code (iCCM) and identify gaps

4 Cluster/Use Case selection

5 Design Walkthrough

6 PoC or Deployment of Cluster/Use Case

7 Use of Extensibility Guidelines to deploy remaining Clusters/Use Cases

Understand and customize Extensibility Guidelines

Continue your Clean Core Journey

! SAP support in Design Authority / Governance

1 week ————— **4-5 weeks** ————— **Depends on Scope** →

Thank you.

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SAP Application Extension Methodology

0

Overview & Terms of Use

1

Assess Extension Use Case

2

Assess Extension Technology

3

Define Extension Target Solution

Extension Strategy & Governance

Extension Domains

SAP

SAP Application Extension Methodology

Extension Styles

Extension Tasks

Open: SAP & Third Party Technologies
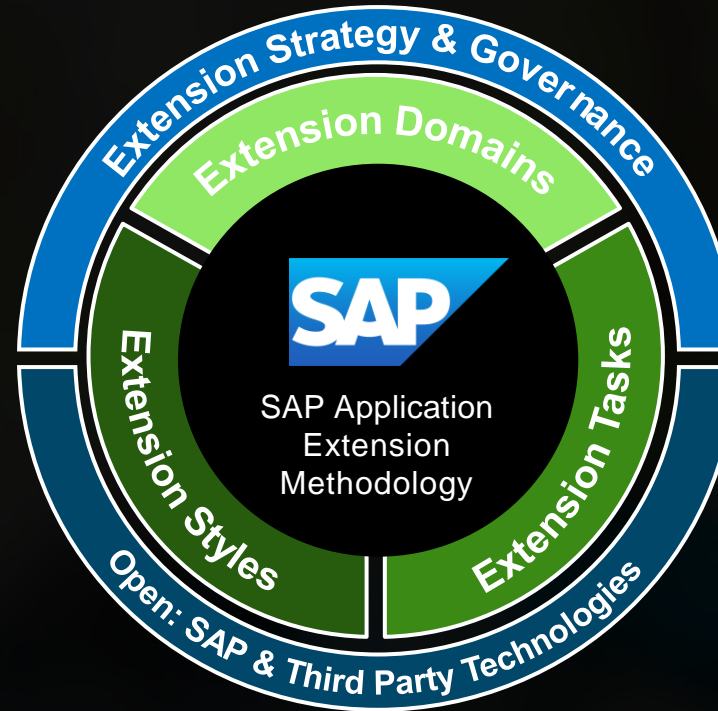
SAP Template Available

More Information
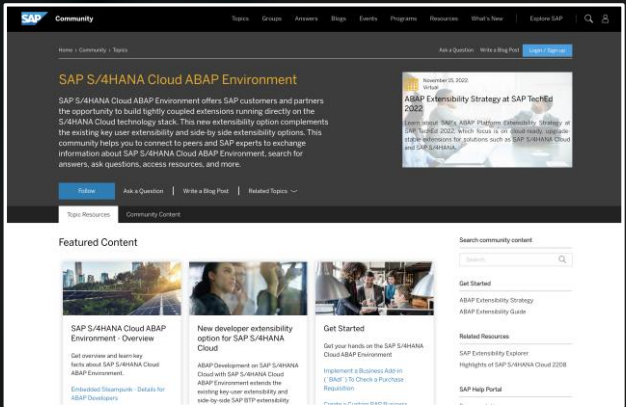
SAP Community
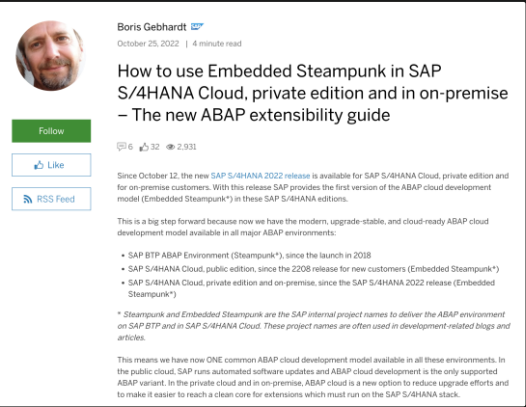
How to use Embedded Steampunk in SAP S/4HANA Cloud, private edition and in on-premise – The new ABAP extensibility guide | SAP Blogs
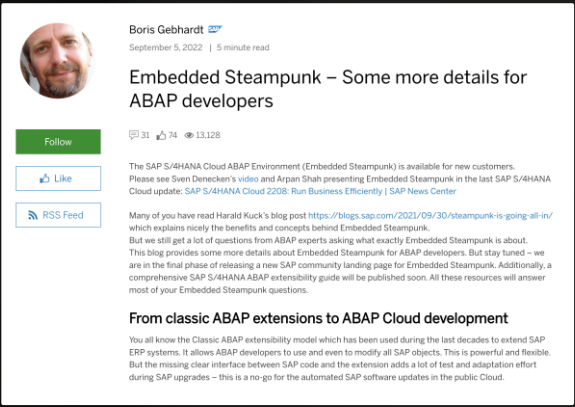
Embedded Steampunk – Some more details for ABAP developers | SAP Blogs
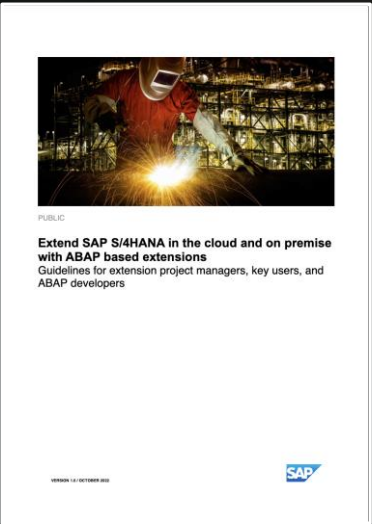
The new ABAP extensibility guide
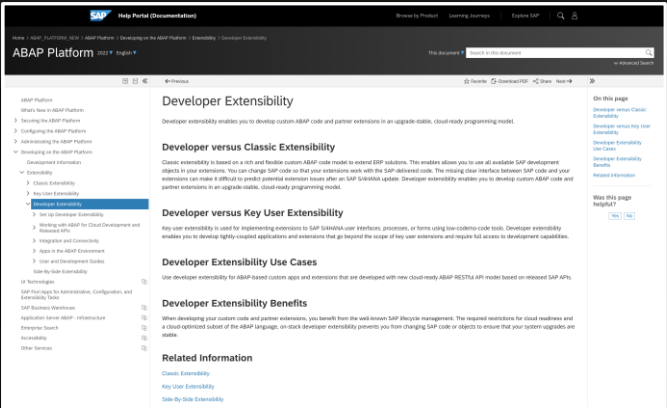
SAP documentation

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