



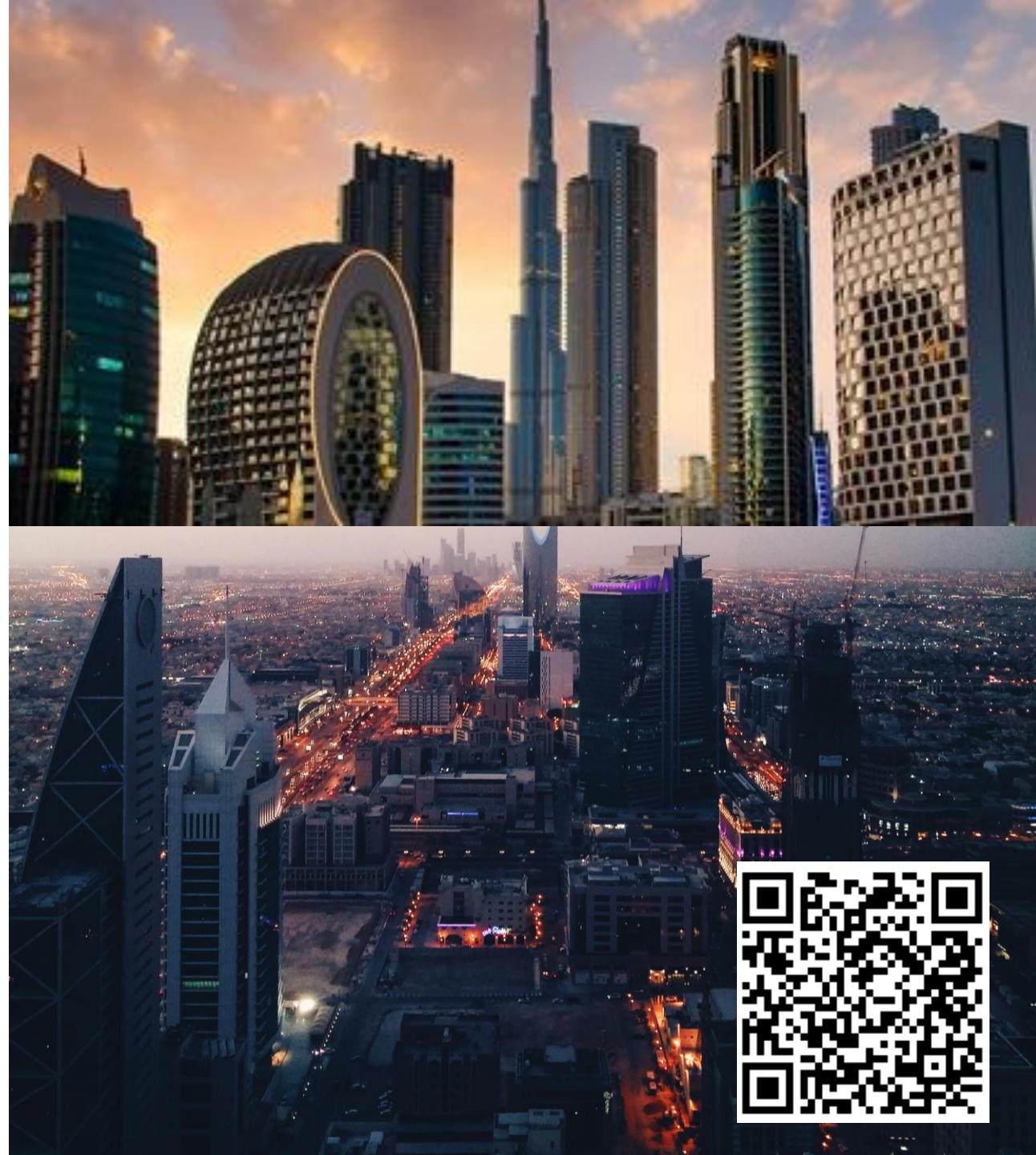
# SAP Exploration Workshop - Practicing Clean Core for SAP S/4HANA Cloud



Navigating the AI Era: Building new  
ERP Business Capabilities without the  
burden of technical debt

Tuesday July 16th in Riyadh and Thursday July 18th in Dubai

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# SAP Exploration Workshop - Practicing Clean Core for SAP S/4HANA Cloud

Navigating the AI Era: Building new ERP  
Business Capabilities without the burden of  
technical debt

## WELCOME





G42

SAP

Accelerating Tomorrow.

PETRONAS

Snapdragon





# TODAY'S Speakers



**Markus  
Albrecht**

Senior Vice President  
Head of BTP Solution  
hub



**Kevin  
Elbers**

Head of Data and  
Technology Services  
Integration Germany



**Faisal  
Haneef**

Senior Director Cloud  
Platform MENA



**Savatore De Caro**

Director of Solution  
Advisory SAP Signavio,  
EMEA South



**Fabian  
Sölker,**

Senior Consultant BTP  
Extensability



**Fabian  
Sölker,**

Daniel Mesics, Senior  
Technology Consultant

# Agenda

09:45 a.m.	<b>How Generative AI is transforming how we develop and simplify Enterprise apps</b> Markus Albrecht, Senior Vice President Head of BTP Solution hub
10:30 a.m.	<b>How Can SAP help achieve Clean Core in your ERP transformation, <a href="#">its not just about ABAP Code!</a></b> Kevin Elbers, Head of Data and Technology Services Integration Germany Faisal Haneef, Senior Director Cloud Platform MENA
11:15 p.m.	<b>Prayer, Coffee, &amp; Networking break ( Prayer at 11:58 AM)</b>
12:15 p.m.	<b><a href="#">Optimize ineffective or inconsistent Processes (Process dimension)</a></b> How to keep competitiveness while reducing complexity Salvatore De Caro, Director of Solution Advisory SAP Signavio, EMEA South
13:00 p.m.	<b><a href="#">Decouple your developments (Extensibility dimension):</a></b> How separating extensions from the core and understanding the pertinent development guideline will free your capacity to innovate Fabian Sölker, Senior Consultant
13:45 p.m.	<b><a href="#">Control the Data according to latest standards (Data Dimension):</a></b> How deploying a holistic data strategy (master data, configuration data, transaction data, data volume and data sizes) will help built trust, reliability and insights with the business Daniel Mesics, Senior Technology Consultant
14:30 p.m	<b>Executive Panel and attendee Q&amp;A</b> Next Steps & Closing Remarks
15:00 p.m.	<b>Lunch</b>





# How **Generative AI** is transforming how we develop and simplify **Enterprise apps**



**Markus  
Albrecht**

Senior Vice President  
Head of BTP Solution  
Hub

# How to be the Fast One

## BE **UP-TO-DATE**

Keep your SAP products up-to-date to leverage the latest SAP and gain innovations from competitive edge.

**UPGRADE  
READINESS**

**RUN  
AGILE**

## BE **ADAPTABLE**

Keep your system agile to react proactive and fast on changing market- and customer demands

standardization is key

**STANDARDIZATION**

**VS**

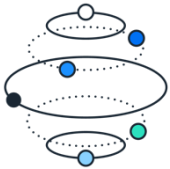
**DIFFERENTIATION**



**„Code is not an asset,  
it is a liability“**

**Titus Winters, Tom Manshreck, Hyrum Wright**  
Software Engineering at Google

# What are the other Benefits of having a Clean Core



Access to Innovation



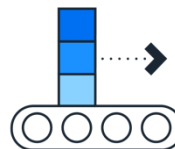
Upgrade Simplicity



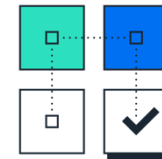
Lower TCO



Enhanced Security



Improved Performance



Data Simplification



# Clean Core: Customer Example

Accelerated SAP S/4HANA Cloud upgrade cycles | shortened project times | lowered costs

**HITACHI**  
Inspire the Next

 Hitachi High-Tech Corporation

**94% fewer**

SAP ERP add-ons  
decreased from over 9,000  
to 520

**1 Month**

Time spent on upgrading  
ERP versions cut from  
one and a half years to  
approx one month

“We previously upgraded SAP ERP version **every five years**, taking about a **year and a half from preparation to implementation**,” says Yuri Yasuda.

“However, we’re now able to perform major upgrades of SAP S/4HANA Cloud for our domestic group yearly and minor **upgrades twice a year**. We’ve also cut the time from **preparation** to switchover to around **one month**.”

[→ Read the full Customer Success Story](#)

# Addressing clean core and the individual dimensions

## BUSINESS PROCESSES

Keep **competitiveness** while **reducing complexity**.

1

## EXTENSIBILITY

**Decouple extensions** from standard.

2

## DATA

Control data according to **latest standards**.

3

## INTEGRATION

Keep the landscape **reliable and flexible**.

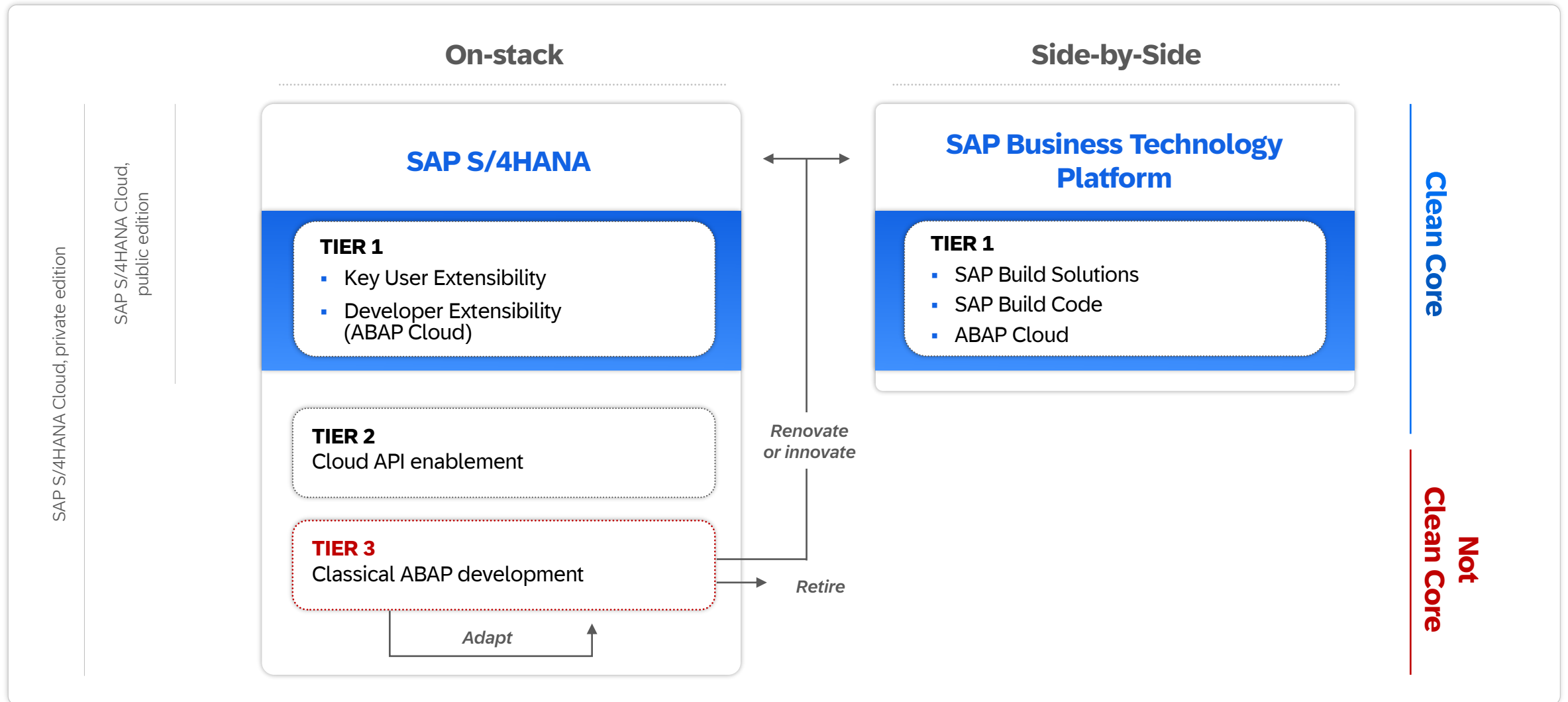
4

## OPERATIONS

Keep the operations **effective and efficient**.

5

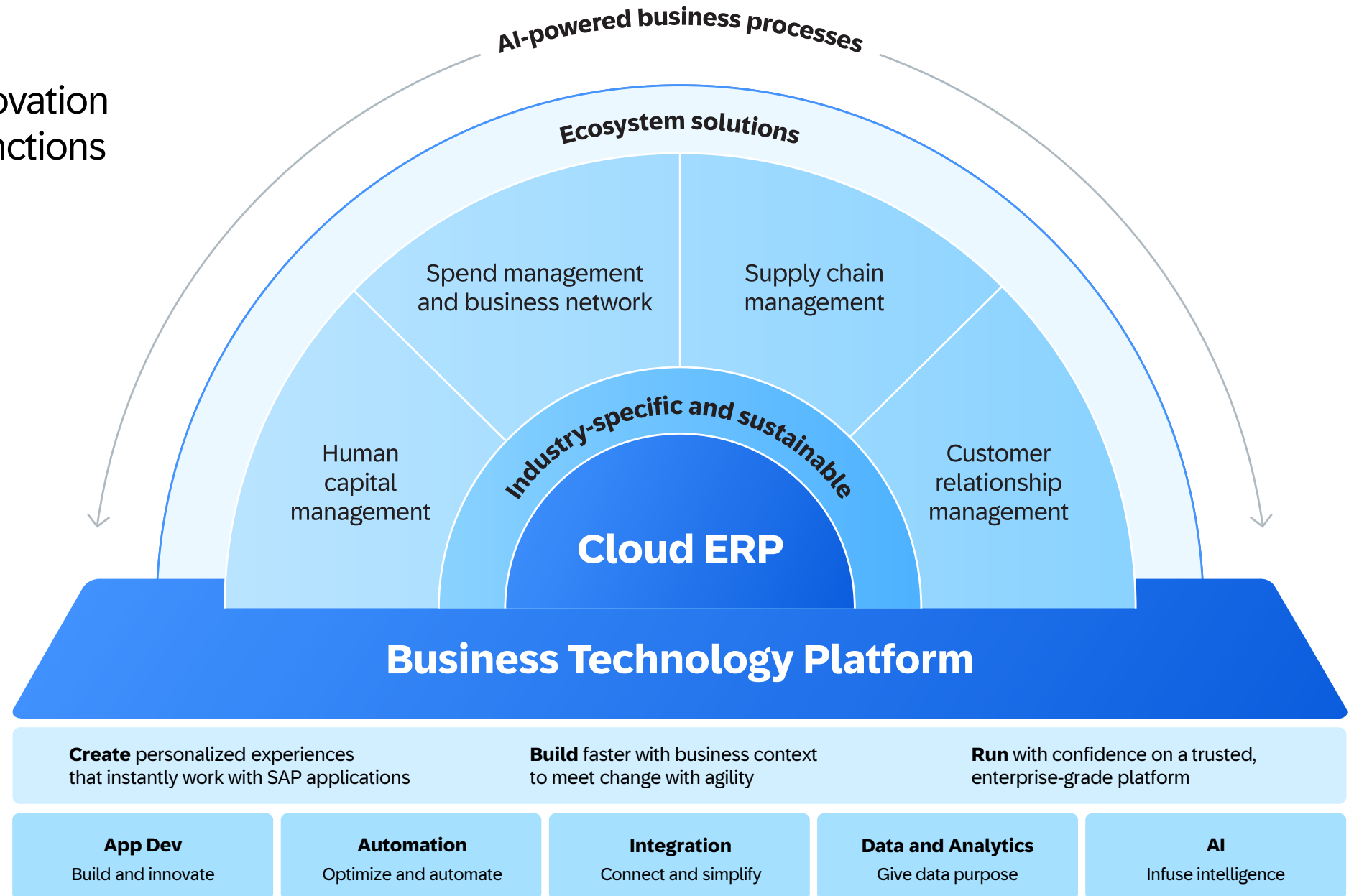
# Extensibility Model for S/4HANA – Decoupling SAP and Custom Code is Key





# SAP BTP

Unleash digital innovation  
across business functions

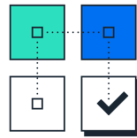


# SAP BTP as **THE** Platform for SAP Landscapes



## Accelerate move to cloud

Benefit from SAP BTP's capabilities before, during and after your move to the cloud in disciplines like **data** and **extension migration, integration** or consolidation



## Keep the core clean

Create and operate highly integrated **side-by-side** solution **extensions** to individualize your business processes without harming the stable application core.



## Optimize & automate business processes

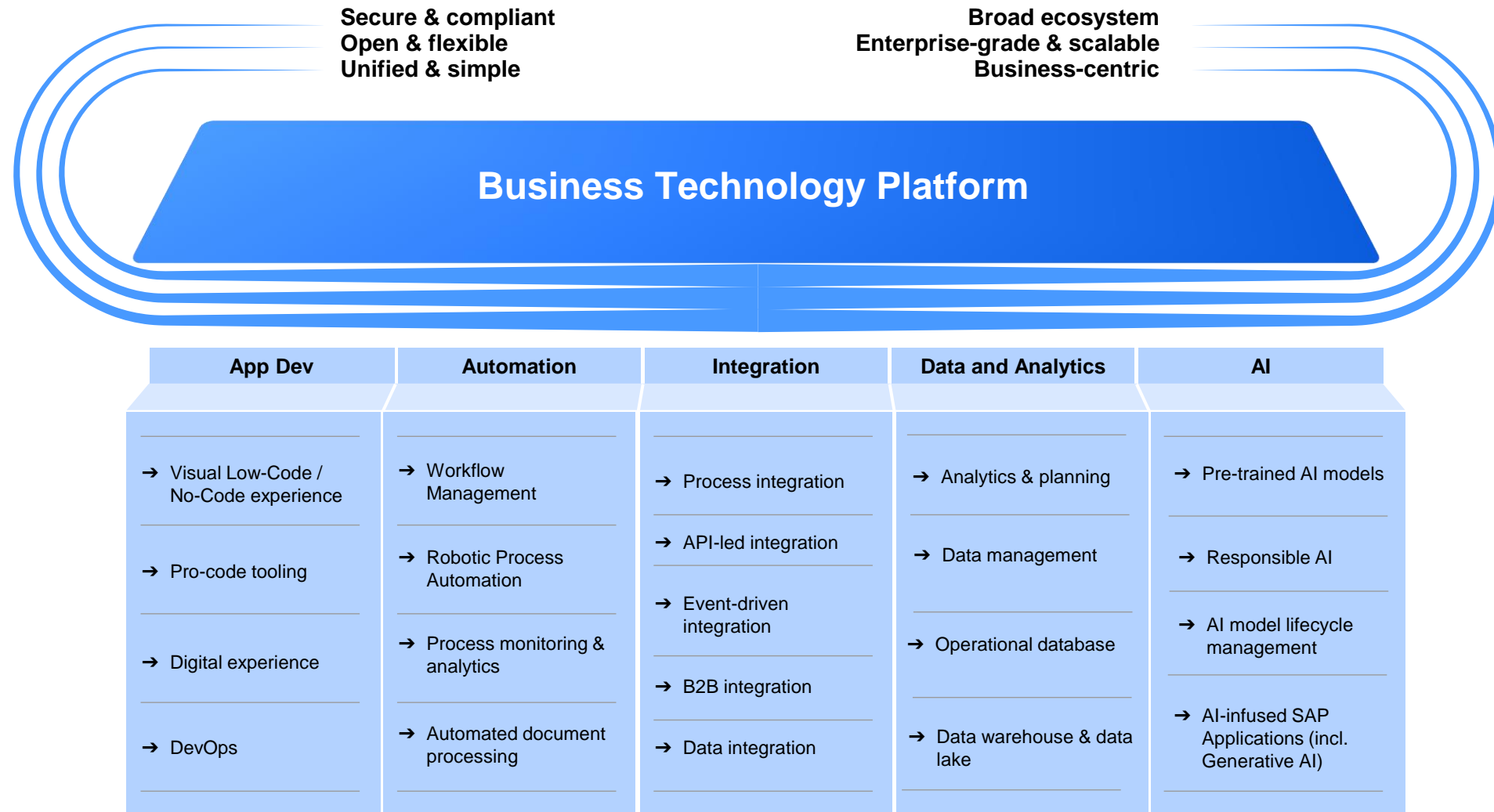
**Automate manual tasks** as well as crossapplication **workflows**, leveraging a broad set of pre-defined content



## Drive decisions based on data

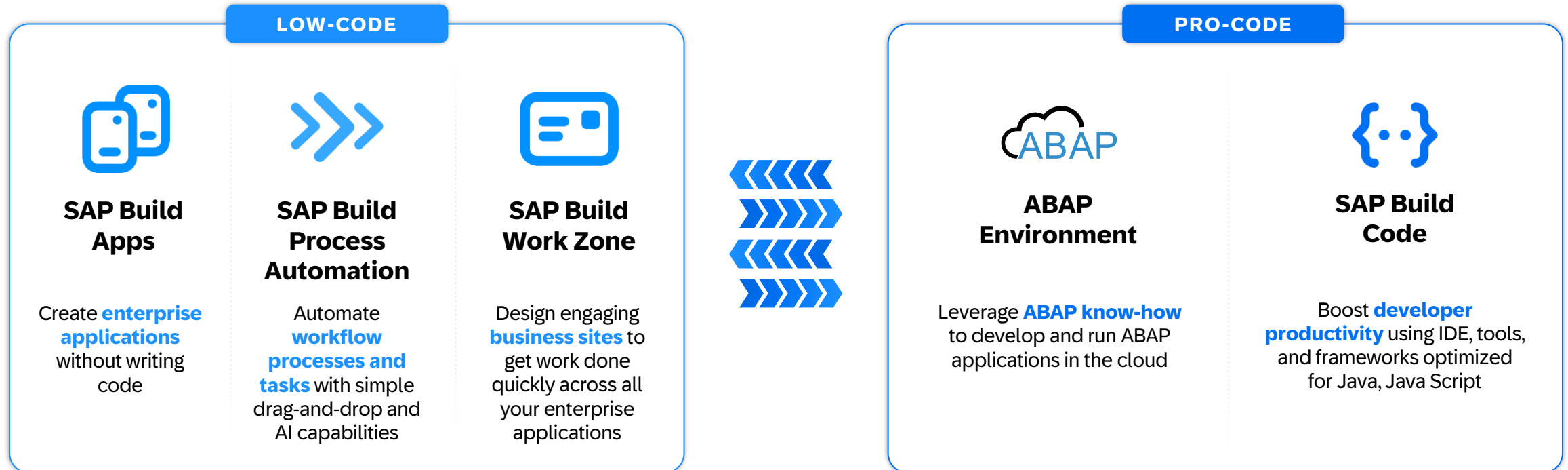
Support your business users with the right information at hand or **AI**-based recommendations to **improve decision speed** and **quality** – leveraging any data sources

# SAP BTP Cloud Capabilities





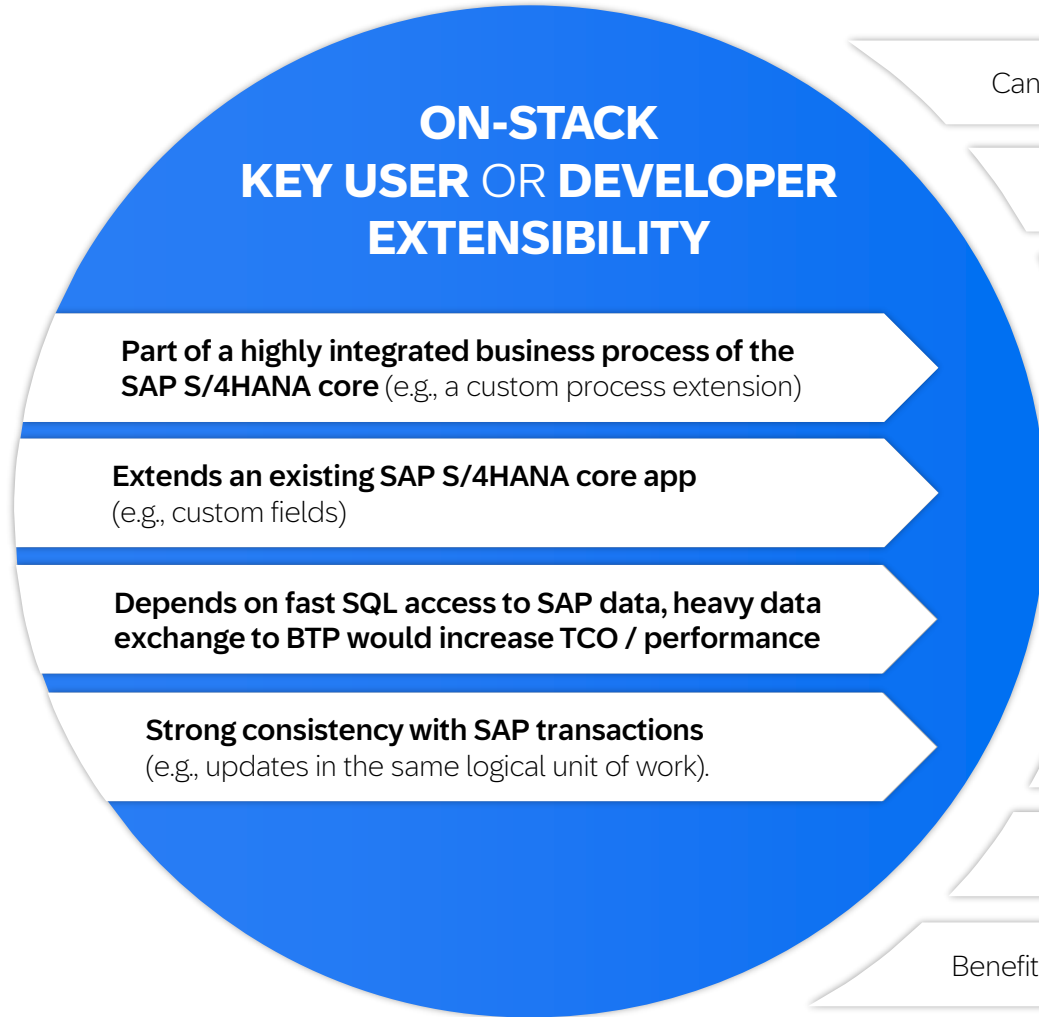
# Side-by-Side Extensibility Options



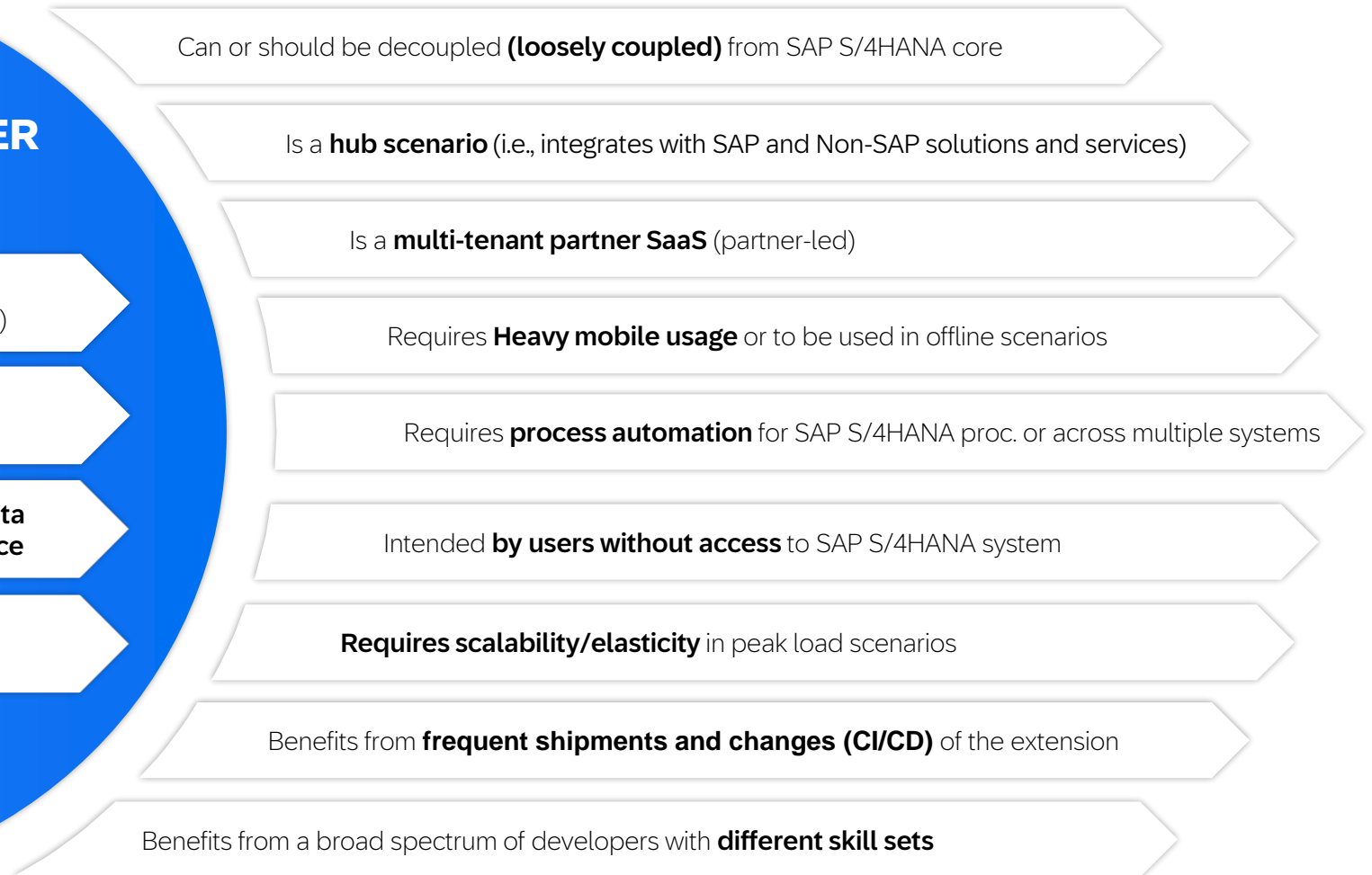
**Not one-size fits all,**

but rather the use of the entire spectrum of clean core extensibility options is necessary.

# When to use which extensibility option?



## SIDE-BY-SIDE EXTENSIBILITY ON SAP BTP





# Key Takeaway



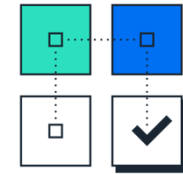
„Code is not an asset,  
**it is a liability**“

- ... but oftentimes required
- To run an agile ERP system it needs to be upgrade-ready and adaptable
- The right balance of standardization and differentiation is key to compete today



Be the  
**Fast One**

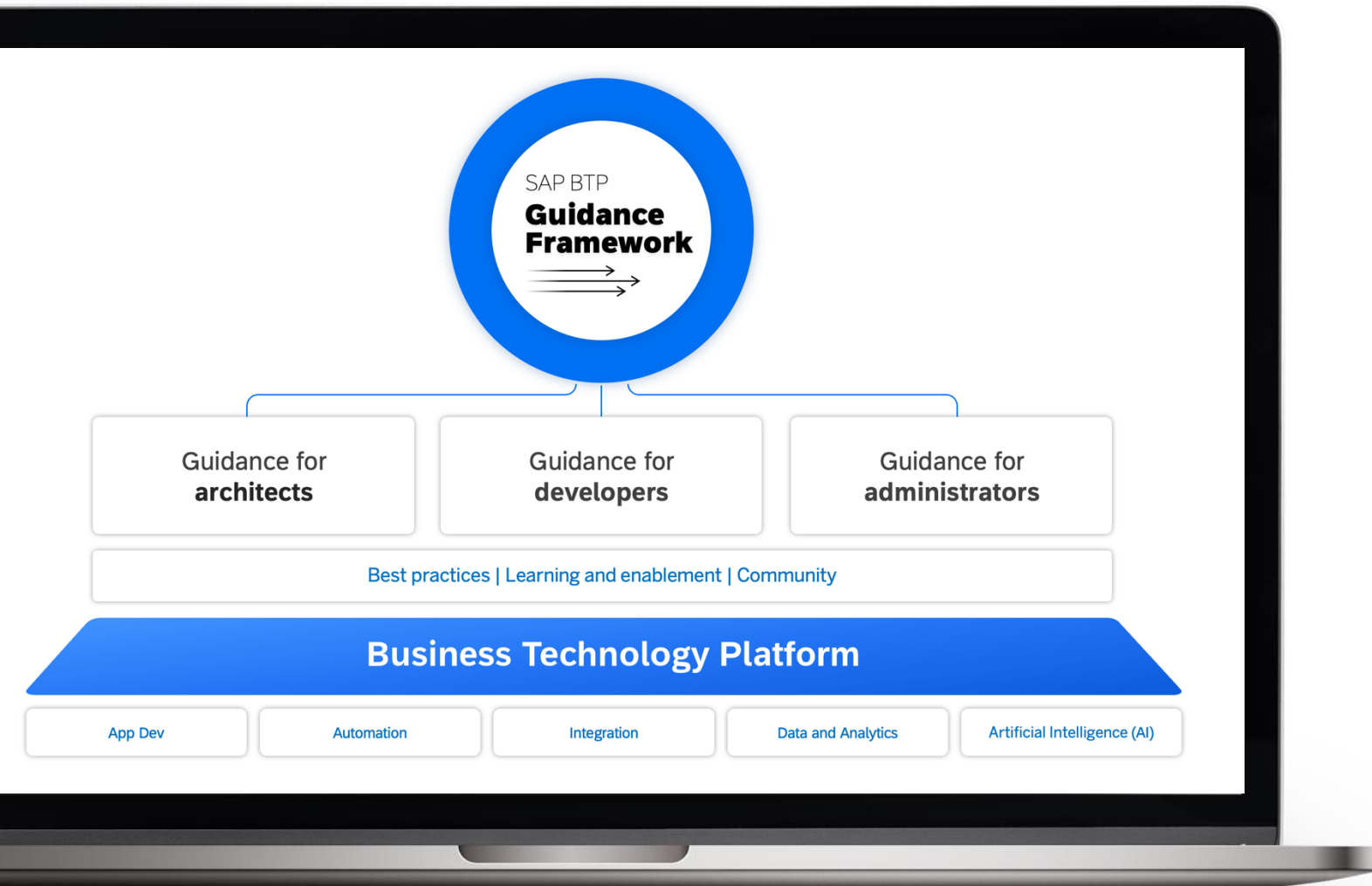
- **Clean Core** as future-proof approach to react proactively and fast on changing market- and customer demands
- **Avoidance, Decoupling, and Governance** are key pillars of a clean core strategy



Leverage the full value of  
**your SAP Solutions**

- SAP S/4HANA and SAP BTP building a strong foundation for your next cloud transformation steps
- With on-stack to side-by-side extensibility, you can expand SAP S/4HANA in an effective, and cloud-compliant manner

# SAP BTP Guidance Framework



## SAP BTP Guidance Framework

Provides a central access point for architects, developers and administrators to build and run enterprise-grade solutions on SAP BTP.



# Extend SAP S/4HANA in the cloud and on-premise with ABAP based extensions

## SAP S/4HANA Extensions

(cloud, private cloud, and on-premise)

- Guidelines for extension project managers, key users, and ABAP developers
- Learn how to choose, implement, and use the extensibility options correctly
- Move from classic custom ABAP extensions to an SAP S/4HANA extensibility model for future-proof extensions



To access scan this code or click [here](#).



PUBLIC

**Extend SAP S/4HANA in the cloud and on premise with ABAP based extensions**  
Guidelines for extension project managers, key users, and ABAP developers



VERSION 2.0 / MAY 2023

SAP Cloud rules, the use of an ATC baseline is...  
usage of ABAP Cloud can be found in the blog post [s-cocpit-supports-you-to-adopt-abap-cloud/](#)

is given in the table below.

ON-STACK	STRUCTURING
ment model is used... s are created in language... Development... are enforced by syntax... ry IDE... emplate... VELOPER_5.	Software component with... language version ABAP for... Cloud Development.
created in language... AP... ll be released for Cloud... asable in tier 1... re enforced via the ATC... model IDE... emplate... VELOPER_5 and add the... ndard ABAP via	New packages in HOME or... own software component for... classic ABAP if a namespace... is used.
s are created in language... AP... Cloud rules are... empted from ABAP... a base line	Packages in HOME or... existing software component... for classic ABAP.

nt objects in a software component for classic ABAP...  
quired (→ Figure 5.5).

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nd services are developed in the modern, Eclipse-...  
efficient development flow, and a rich feature set for...  
ch SAP Fiori-based toolset for key users for creating...  
ports, KPIs and analytical stories...  
nd [SAP S/4HANA embedded analytics – User Roles](#)

is based on CDS. Based on an opt-in approach, the...  
tensibility use cases depending on the specific data...  
ilities for dedicated extension points, enabling a...  
al data model and line extensions.

**SAP Analytics Cloud**  
with standard SAP access

SERVICE BINDING  
SERVICE DEFINITION

ANALYTICAL QUERY

CREATE NEW ANALYTICAL QUERY

LYTICAL DIMENSION : CUSTOM DIMENSION

HIERARCHY : CUSTOM HIERARCHY

MOUSE MODELS : CREATE NEW DIMENSION

odels...  
it can be extended individually using predefined...  
ou can use extension points to make your own...  
ered SAP content.

**EXTENSIBILITY TASK**

**Extensibility Enablement:**

dd annotations and extension include...  
ructures to the original dimension to enable...  
ata model extensions like fields or...  
sociations.

**Extension Development:**

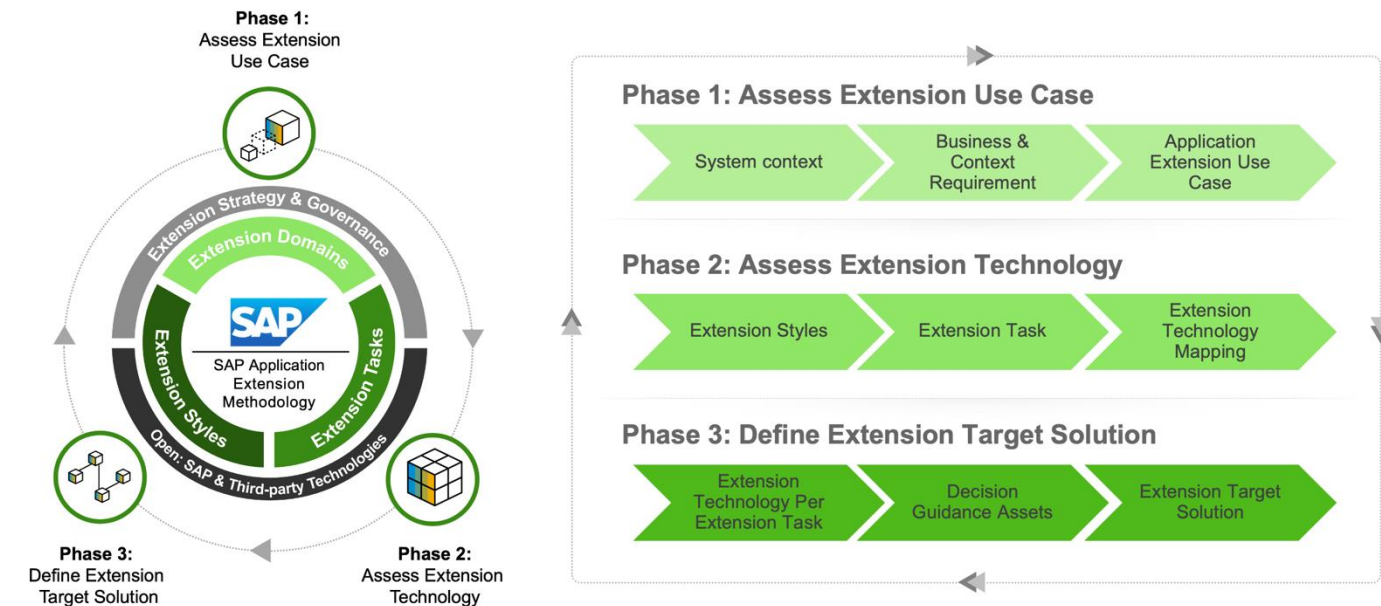
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# SAP Application Extension Methodology

## SAP Application Extension Methodology – Overview: Phase 1 - 3



## SAP Application Extension Methodology

The SAP Application Extension Methodology (AEM) helps you to define, document, and execute an enterprise extension strategy for your organization.



To access scan this code or click [here](#).

# Thank You

Contact information:



**Markus Albrecht**

Senior Vice President, Head of BTP Solution Hub

**E:** [markus.albrecht@sap.com](mailto:markus.albrecht@sap.com) |  [markus-albrecht-mac](https://www.linkedin.com/in/markus-albrecht-mac)





**How Can SAP help achieve  
Clean Core in your ERP  
transformation, **its not just  
about ABAP Code!****



**Kevin  
Elbers**

Head of Data and  
Technology Services  
Integration Germany



**Faisal  
Haneef**

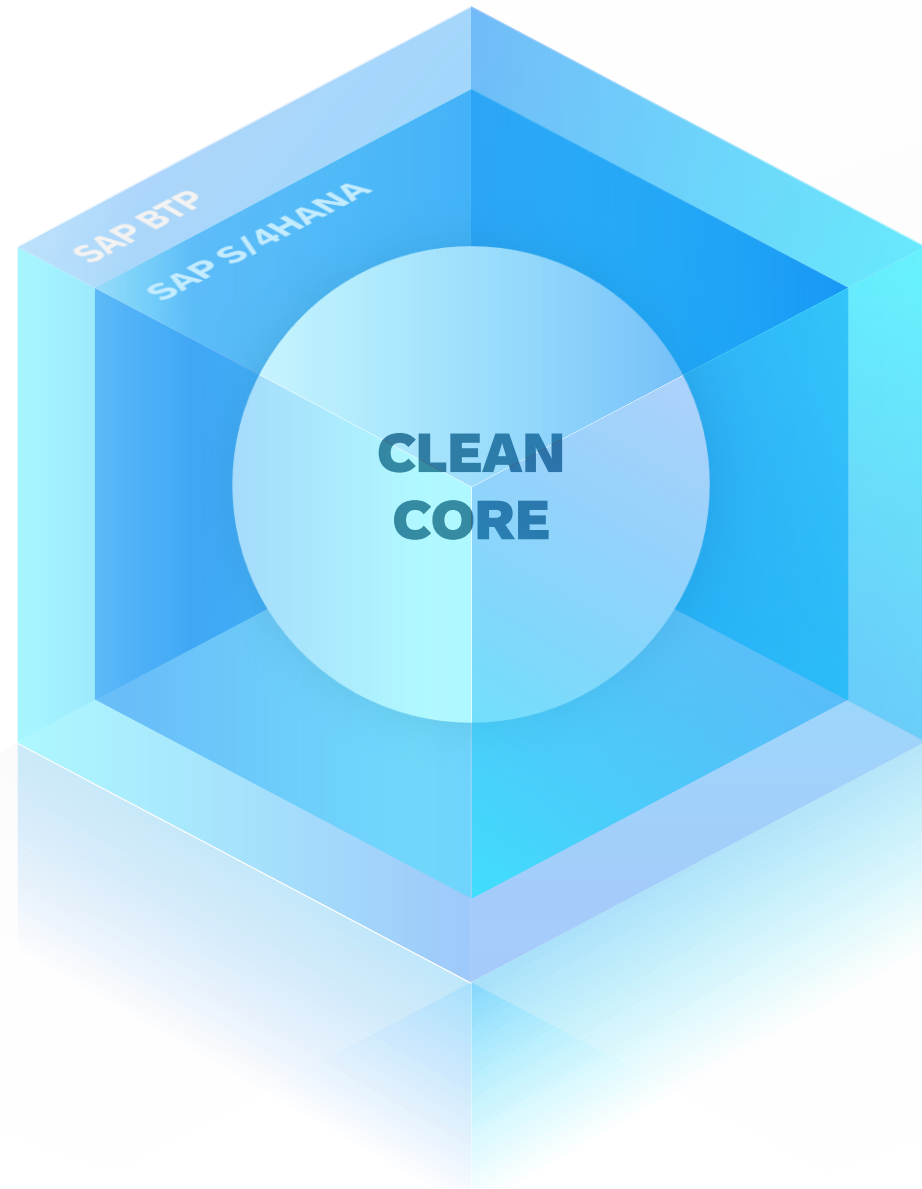
Senior Director Cloud  
Platform MENA

**Clean means up-to-date,  
documented, unmodified,  
consistent, efficient and  
cloud compliant.**

Clean Core is relevant and applicable for  
**SAP S/4HANA Cloud, private edition.**  
SAP S/4HANA Cloud, public edition is clean  
per definition.

Capabilities of the core depend on the  
implemented software-stack.

A clean core fosters agility and helps to  
compete in a fast-changing world.



# Benefits of having a Clean Core



**Access to  
Innovation**



**Upgrade Simplicity**



**Lower TCO**



**Enhanced Security**

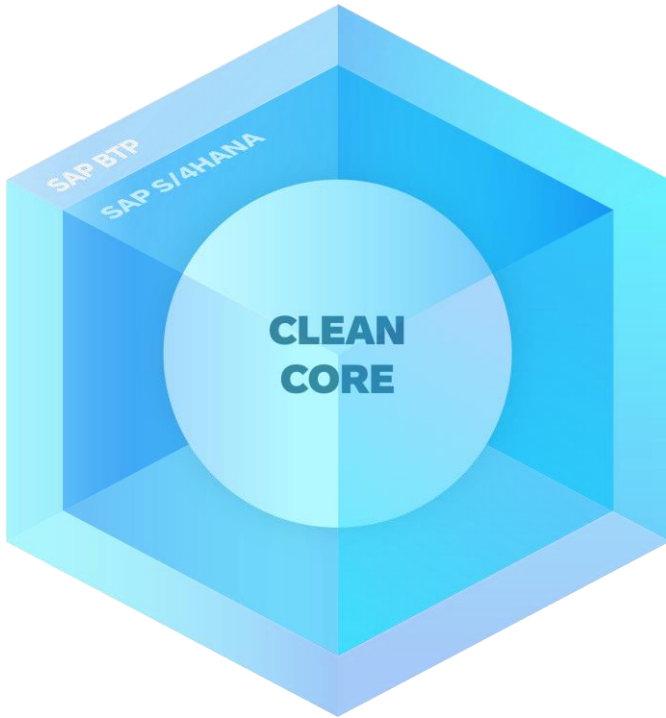


**Improved  
Performance**



**Data Simplification**

# Clean Core: Guiding Principles



## Avoid

- Avoid extensions where not necessary
- Stay as close as possible to SAP standard

## Be Aware

- Know your technical debts and evaluate them on a regular basis
- Establish a binding governance framework

## Cloud Ready

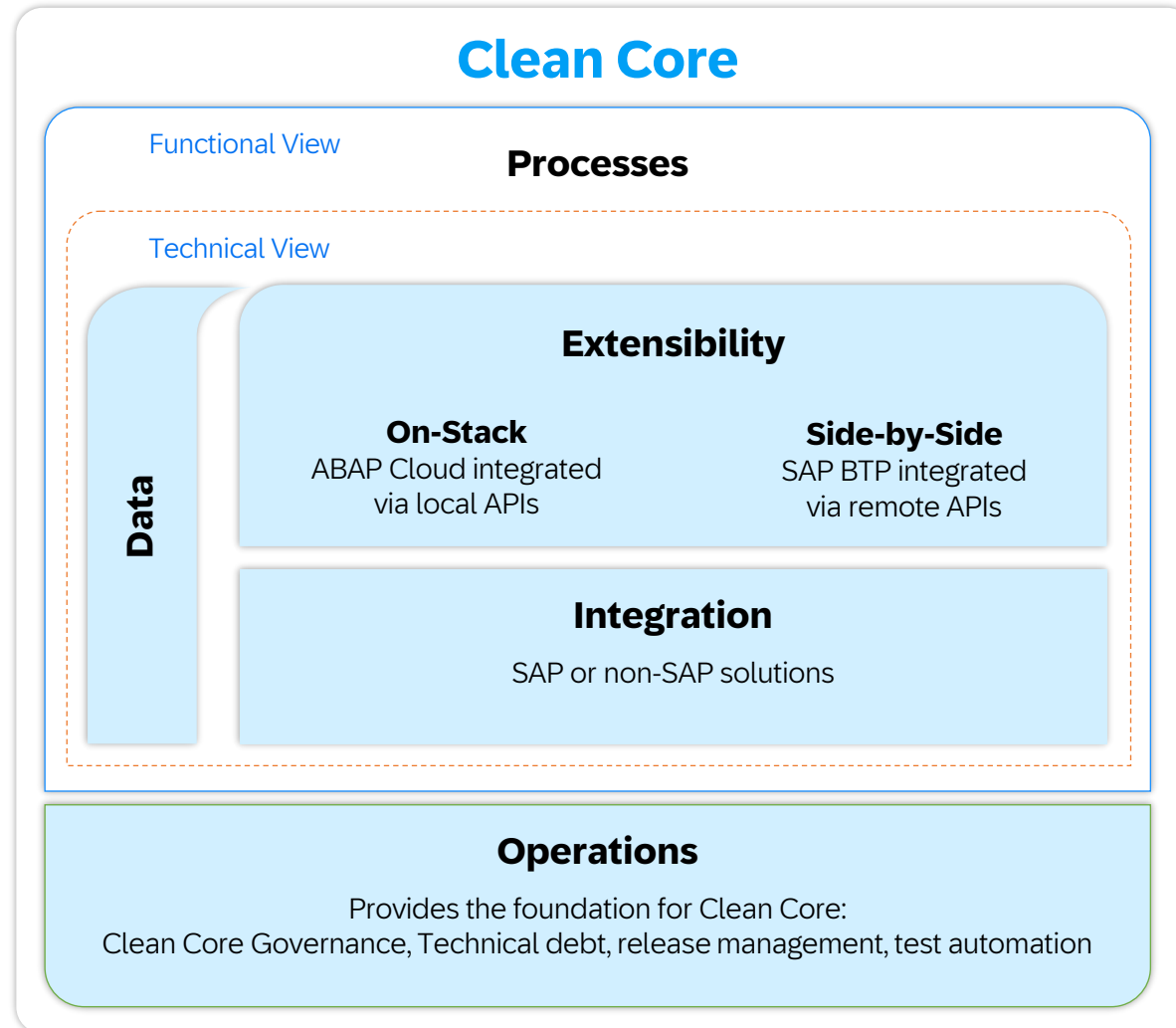
- Extend and Integrate in a stable and transparent manner
- Apply a zero-modification policy

## Decouple

- Leverage BTP as a platform to innovate for additional differentiation
- Automate with standard APIs and Events



# How do Clean Core Dimensions relate to each other?



- **Clean Core** – reducing upgrade cost, complexity, risk and duration by using clean core-compliant **Extensibility** options and implementing **Integrations** via standard APIs
- **Processes** must be as close to standard as possible. If functionality is not available in standard, **Processes** are extended by using Clean Core-compliant **Extensibility** and / or **Integrations**.
- **Operations** provides the organizational and technical governance for Clean Core
- Clean Core improves **Data** quality. Improved **Data** quality is prerequisite for adoption of innovation and the value of Clean Core
- Legacy – deprecated non-Clean Core technology that does not impact upgrades

# Clean Core is a journey

Establish a strategy and governance model that fosters clean core principles.



## • Greenfield

- Unique opportunity
- Follow Clean Core principles right from the beginning.
- Establish strong governance



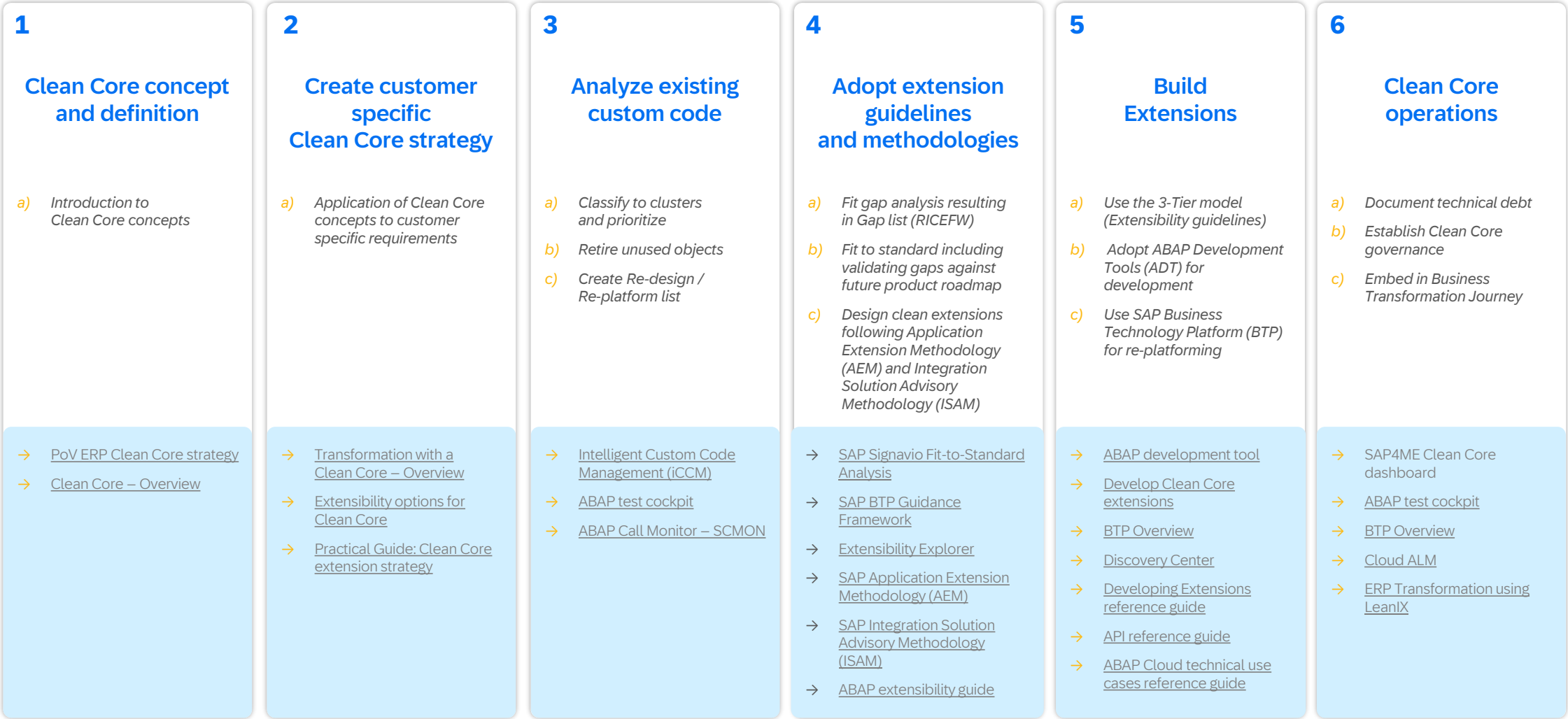
## • Brownfield

- Establish Clean Core principles for every NEW development.
- Plan your journey towards a clean core and follow an iterative approach.
- Clean Core does not happen over night.

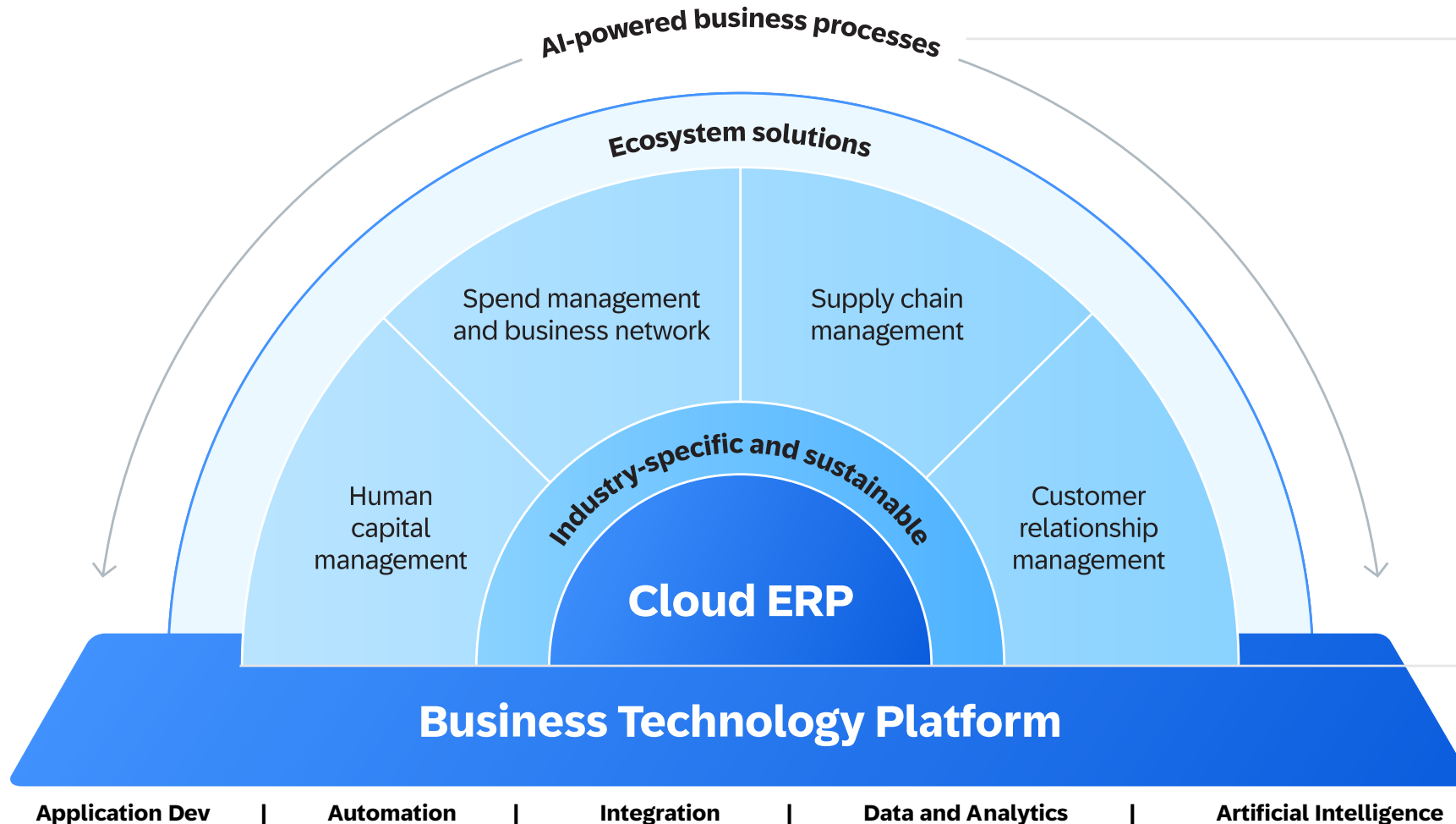
# Your Path to Clean

PATH TO CLEAN

TOOLS & LEARNINGS



# SAP BTP is the foundation for a clean and integrated SAP portfolio










Recruit to retire

Source to pay

Design to operate

Lead to cash

## Suite qualities

-  Seamless user experience
-  Consistent security and identity management
-  One workflow inbox
-  Aligned Domain Models and integration content
-  Embedded and cross-product analytics
-  Coordinated lifecycle management
-  End-to-end process blueprints

# Leverage SAP BTP to drive stellar results



**SAP**  
**BTP**

**40% reduction**

In TCO across integration landscapes

**4–5 hours saved**

For generating reports each month

**40% cost savings**

New business models unlock full business potential

**>5x increase**

Project speed and lower costs compared to former projects

**80% data utilization**

Up from 30% – to drive better business decisions

**40%–50%**

Less IT spend with SAP BTP

# Getting the most value from your investments with a clean core strategy

## Customer Success



### Hewlett Packard Enterprise

**Less than 10% of digital  
capabilities are customized**

Take a look at how HPE kicked off a next-generation digital transformation program by creating the right architecture for an enterprise-wide IT revolution.

Read the story [here](#)



**vodafone**

**70% of business processes  
automated company-wide**

Explore how Vodafone is increasing process automation and standardization to deliver an improved user experience and better data insights for its employees.

Read the story [here](#)

## AMORIM

**30% fewer reconciliations  
done manually**

Find out how Amorium achieved the process visibility and standardization required to keep pace with rising demand by unifying operations and data enterprise-wide.

Read the story [here](#)

**80%**

less software  
customizations

**70%**

of core business  
processes are  
automated

**50%**

Reduction in database  
size

**80%**

of core business  
processes standardized



# Clean Core: Customer Example 1.5 years for major ERP Upgrades ...



“ We previously upgraded SAP ERP version **every five years**, taking about **a year and a half** from preparation to implementation. ”

“ However, we’re now able to perform **major upgrades** of SAP S/4HANA Cloud for our domestic group **yearly and minor upgrades twice a year**. We’ve also cut the time from preparation to switchover to **around one month**. ”

- Accelerated **SAP S/4HANA Cloud upgrade** cycles
- shortened project times
- lowered costs

**94% fewer**  
SAP ERP add-ons decreased from over 9,000 to 520

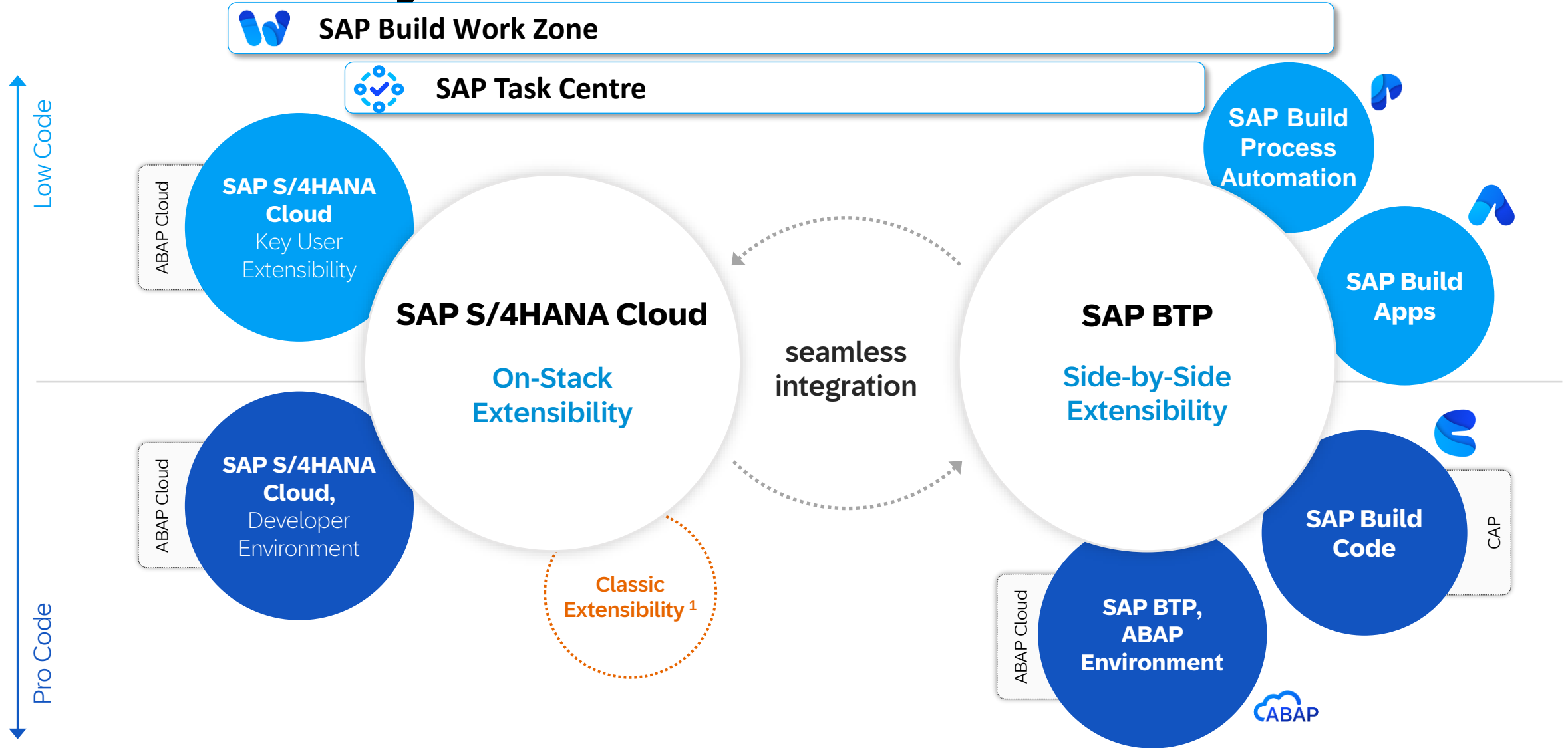
**1 Month**  
Time spent on upgrading ERP versions cut from one and a half years to approx one month



Explore **Hitachi High-Tech's** journey towards a Clean Core with SAP

- says Yuri Yasuda.

# Extensibility Portfolio for SAP S/4HANA Cloud



<sup>1</sup> SAP S/4HANA Cloud Private Edition and on premise only; **not** "clean core"

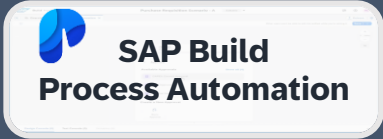
SAP Build Marketecture

Fusion Team  
Development

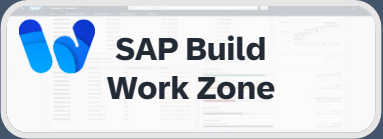
Apps & Extensions



Workflows & Automations



Digital Workspaces



Centralized governance, security, and life cycle management

# SAP Build Marketecture

The screenshot displays the SAP Build Marketecture interface for designing a mobile application. The main workspace shows a design for an iPhone XR/XS Max (414px) at 100% zoom. The app is titled "Record Project Requests - Mobile App" and is part of the "SAP BTP Authentication" project.

**Left Panel (Marketplace):**

- CORE:** Includes sections for "BY ME" and "INSTALLED".
- IMAGE:** Contains widgets like Spinner, Image, Text, Title, Icon, and Card.
- FORMS:** Contains widgets like Button, Input field, Password field, Slider field, Checkbox field, and Dropdown field.
- SCROLL VIEW:** Contains widgets like Container, Scroll view, and Row.
- LISTS:** Contains widgets like List divider, List section header, Toggle list item, Search bar, Icon list item, and List item.
- PRIMITIVES:** Contains widgets like Large image list item and Image list item.

**Top Bar:**

- Navigation icons: UI CANVAS, LAUNCH, THEME, NAVIGATION, DATA, AUTH, HELP.
- Buttons: REVERT, SAVE.
- View toggle: VIEW (selected), VARIABLES.

**Right Panel (Properties):**

- PROPERTIES:** Includes fields for Page name (SAP BTP Authentication), Short description (SAP BTP Authentication page that automatic), ID (page.Page2), and a toggle for "Show spinner on page load" (checked).
- ADVANCED PROPERTIES:** Includes a field for "DEFAULT PAGE".
- TREE:** Shows the page layout structure:
  - PAGE LAYOUT
    - Container 4
    - Container 6
      - Container 5
        - Title 2
        - Input field 1
        - Dropdown field 1
        - Input field 4
        - Dropdown field 3
        - Input field 2

**Main Canvas:**

- The design features a blue header with the title "Project Requests".
- Below the header is a white card titled "Create request".
- The card contains the following form elements:
  - Customer Name: A text input field with placeholder text "Write here".
  - Product: A dropdown menu with "Select option" as the selected value.
  - Product Variant: A text input field with placeholder text "Type here...".
  - Requested Delivery Date: A dropdown menu with "Select option" as the selected value.
  - Comments: A text area with placeholder text "Provide conversation notes".
- At the bottom of the card are "Cancel" and "Create" buttons.

# SAP Build Marketecture

The screenshot displays the SAP Build Marketecture interface, which is used for creating SAP Fiori applications. The interface is divided into several sections:

- Joule AI Assistant (Left Panel):** A purple sidebar containing the Joule logo and text explaining its role as a specialized AI assistant for creating initial CAP apps. It provides heuristics for entity creation and lists two example prompts: "Create an app with entities books and authors, where each book is linked to its author." and "Create an app where customers can report incidents. Each incident includes replacement items, and each replacement is linked to a product, which has its own entity."
- Storyboard (Main Area):** A workspace for designing the application's user interface. It shows a storyboard titled "CustomerLoyalty" with a "Product" entity selected. The storyboard includes a search bar for application components and a "Basic View" dropdown. A "Create UI" button is visible in the bottom right corner.
- Code Editor (Bottom Panel):** A panel for writing SAP CDS (Core Data Service) code. It shows the following code snippet:

```
namespace CustomerLoyalty;

entity Customers {
  key ID: UUID;
  customerId: String(50) @assert.unique @mandatory;
  contactData: String(500);
  totalPoints: Integer;
  totalPurchaseValue: Integer;
  numberOfPurchases: Integer;
  redeemedPoints: Integer;
}

entity Purchases {
  key ID: UUID;
  purchaseId: String(50) @assert.unique @mandatory;
  purchaseValue: Integer;
  rewardPoints: Integer;
  customer: Association to Customers;
}
```

# SAP Build Marketecture

The screenshot displays the SAP Build Process Automation interface for a "Purchase Requisition Scenario - A". The top navigation bar includes the SAP logo, "Build Process Automation", the scenario name, an "Editable" status, and user initials "AL". Below the navigation bar, there are tabs for "Overview" and "\*Simple PR Automation". A "Release" button and a "Save" button are visible on the right. A notification states: "Other users won't be able to edit this artifact while you're editing it." The main workspace shows a process diagram with a "Trigger" node labeled "Form to order". An "Approval" dialog box is open, showing a list of "Available Approvals": "CAPEX Council Approval", "CFO Approval", and "Internal Approval". A "Create a New Approval" section at the bottom of the dialog offers a "Blank Approval" option. The bottom status bar shows "Design Console (0)", "Test Console (0)", and "Variables (0)".

SAP Build Process Automation

Purchase Requisition Scenario - A Editable

AL

Overview \*Simple PR Automation X

Release Save

Other users won't be able to edit this artifact while you're editing it.

Trigger  
Form to order

Approval

Available Approvals [Show all \(4\)](#)

- CAPEX Council Approval
- CFO Approval
- Internal Approval

Create a New Approval

Blank Approval

Design Console (0) Test Console (0) Variables (0)



# SAP Build Marketecture

<
Home - Home

---

BestRun™ This dashboard refers to BestRun inc.

#### Invoice Status

Reversed invoice are almost 10%

Status	Percentage
Parked	7.9%
Reversed	9.8%
Correct	82.3%

#### Global Currency Orders

Currency	Count
US dollar (USD)	~45
Euro (EUR)	~25
Japanese yen (JPY)	~18
Pound sterling (GBP)	~10
Australian dollar (AUD)	~5
Others	~5

#### Global Orders (US Dollars)

Region	Orders (US Dollars)
EMEA	~40
Asia	~25
Americas	~45
Africa	~15

#### Unacknowledged POs

Purchase Order	Amount	Received At	Status
5000010058	350K USD	29 Sep 2020	3 days ago
5000010057	222K USD	29 Sep 2020	3 days ago
5000010056	100K EUR	29 Sep 2020	3 days ago
5000010055	150K GBP	01 Oct 2020	1 day ago
5000010054	50K USD	01 Oct 2020	1 day ago
5000010053	750K EUR	01 Oct 2020	1 day ago
5000010052	150K USD	02 Oct 2020	8 hours ago
5000010051	1000K GPY	02 Oct 2020	8 hours ago
5000010050	930K ILS	02 Oct 2020	4 hours ago

#### Purchasing Trends

Revenue | US Dollar

**6.34** K ▲

Growth: 487%    Deviation: 34.7%

Q4, 2020

Month	Revenue (US Dollar)
Apr	231,000.22
May	294,000.3
June	391,000.17
July	536,000.34
Aug	675,000
Sep	859,000.14
Oct	880,000

#### Unapproved Purchase Orders

You have Purchase Orders that need to be Approved!

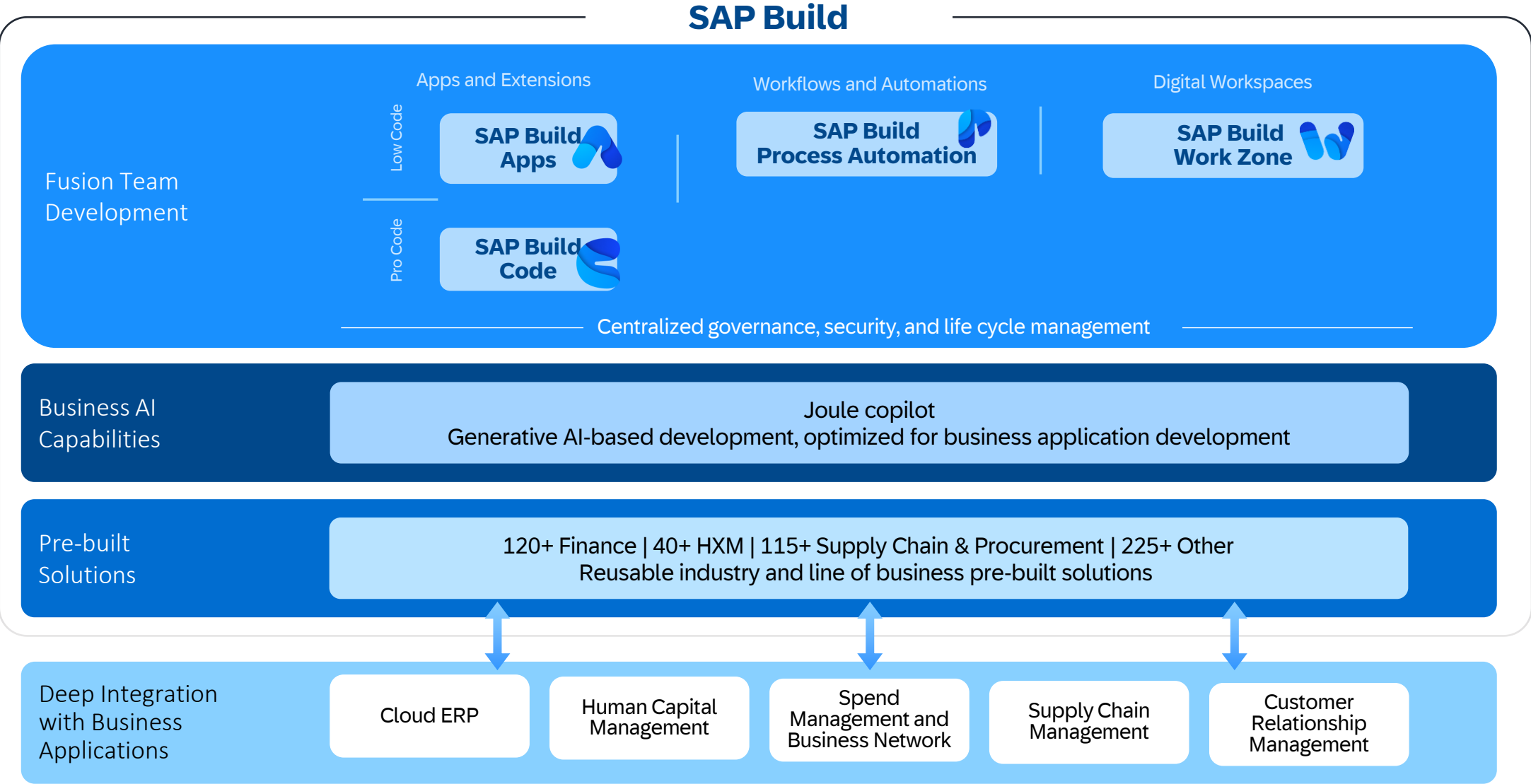
top 12

#### Your Purchase Contracts

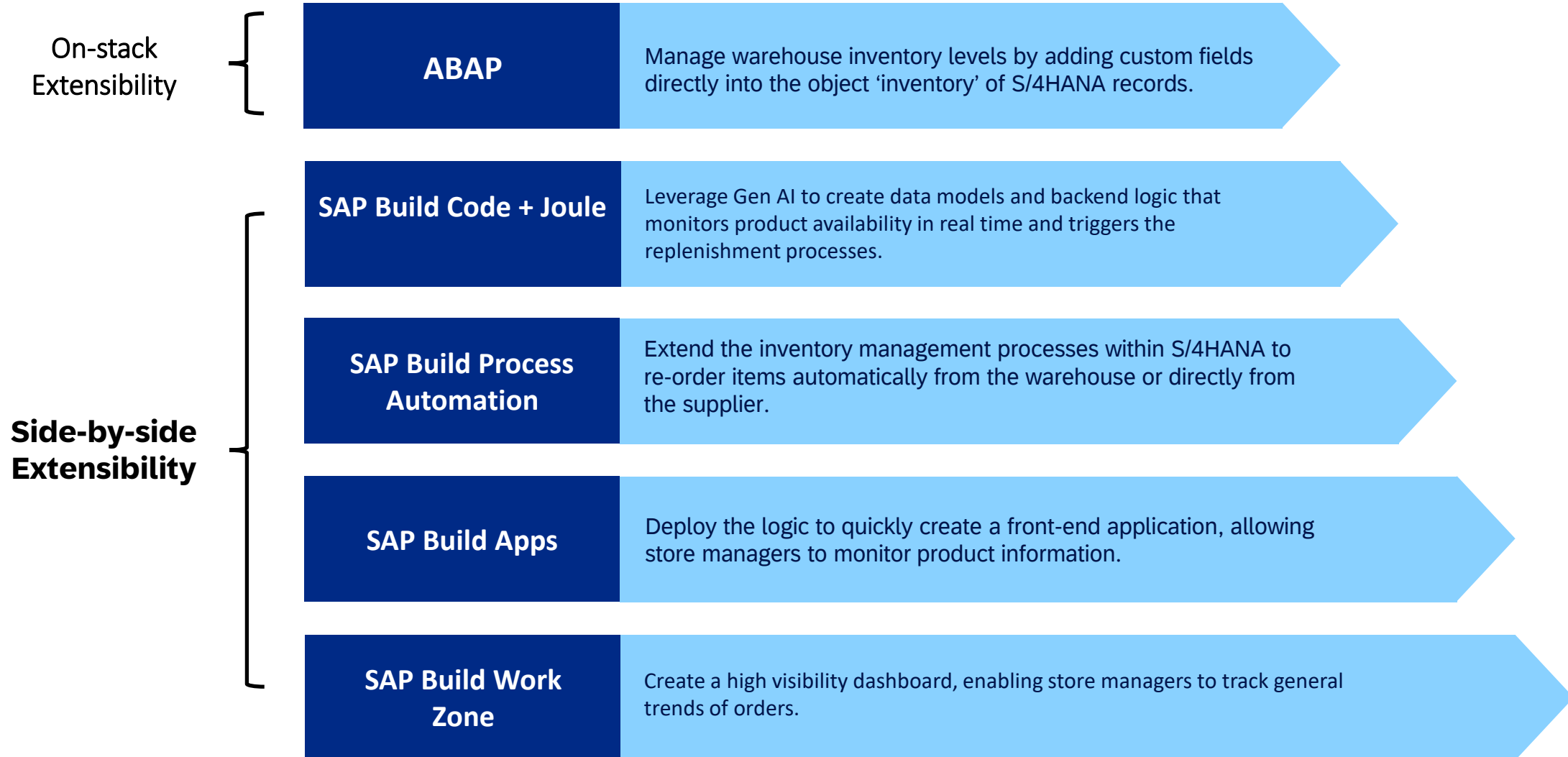
Consumption Percentage

5 of 27 ...

# With the right tools for the job



# Leveraging SAP Build End-to-End



# Addressing clean core and the individual dimensions

A **clean core** describes a system or a landscape of systems that is as close to standard as possible, while running cloud-compliant extensions and integrations.

It allows you to **adapt your system and system landscape** to changing business requirements and in order to **adopt new capabilities**.

A **strong governance** is required for each technical dimension of clean core.

Keep **competitiveness** while **reducing complexity**.

1

Business Processes

**Decouple extensions** from standard.

2

Extensibility

Control data according to **latest standards**.

3

Data

Keep the landscape **reliable and flexible**.

4

Integration

Keep the operations **effective and efficient**.

5

Operations



# Optimize ineffective or inconsistent Processes (Process dimension)

How to keep competitiveness while reducing complexity



**Savatore De Caro**

Director of Solution  
Advisory SAP Signavio,  
EMEA South

# Agenda

**01**

**Overview on business transformation**

**02**

**Introduction to clean core**

**03**

**Hurdles to maintain clean core**

**04**

**Clean core solution overview**

**05**

**Key takeaways**



# Transforming towards agile, sustainable and resilient enterprise

Enable every organization and every industry to become a network of sustainable enterprises



# Transforming towards agile, sustainable and resilient enterprise

Enable every organization and every industry to become a network of sustainable enterprises



**Every organization  
becomes an agile  
enterprise**

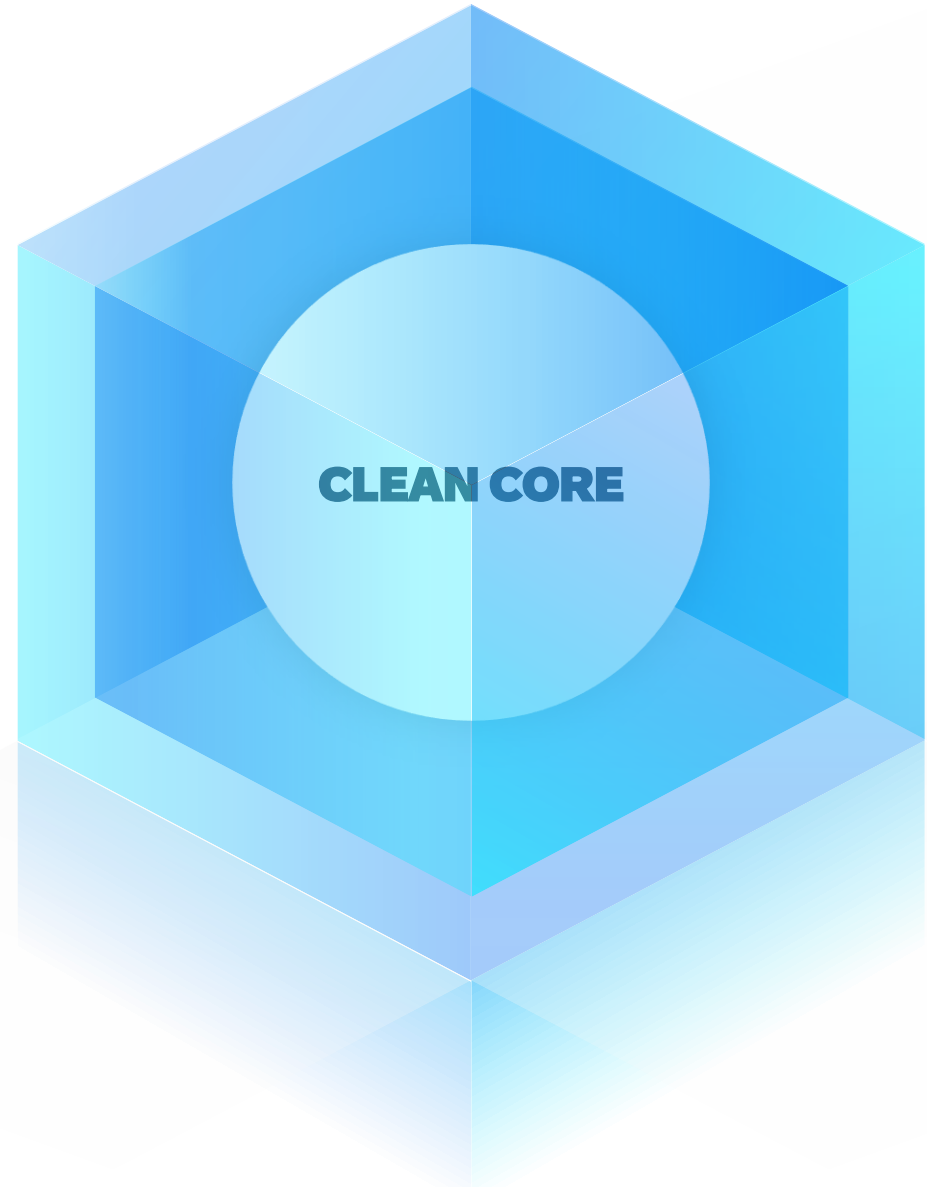
Business agility

A **clean core** strategy is **imperative** for all organizations to implement before, during and after transformation for **maintaining agility** and **driving continuous innovation**

# What is clean core?

**A system** or a landscape of systems that is **as close to standard possible**, while running **cloud- compliant** extensions and integrations

---



# Addressing clean core and the individual dimensions

Clean core **does not** only mean **cleaning your custom codes** but also...

Keep **competitiveness**  
while **reducing complexity**.

1 Business Processes

**Decouple extensions**  
from standard.

2 Extensibility

Control data according to  
**latest standards**.

3 Data

Keep the landscape  
**reliable and flexible**.


4 Integration

Keep the operations  
**effective and efficient**.

5 Operations

# RISE with SAP Methodology | How (People , Process , Toolchains & Platform)



Prescriptive Checklists, Recommendations & Monitoring	Onboarding	Clean core success plan execution through the customer value journey  For each phase		
	to the Methodology incl. clean core success plan creation	Success plan tasks management		
		Quality-Gate process execution		
		Reporting and follow-on activities		

Supported by experts and years of experience



Digital Platform and an Integrated Tool Chain



# **SAP Signavio & SAP LeanIX**

support your entire clean core journey

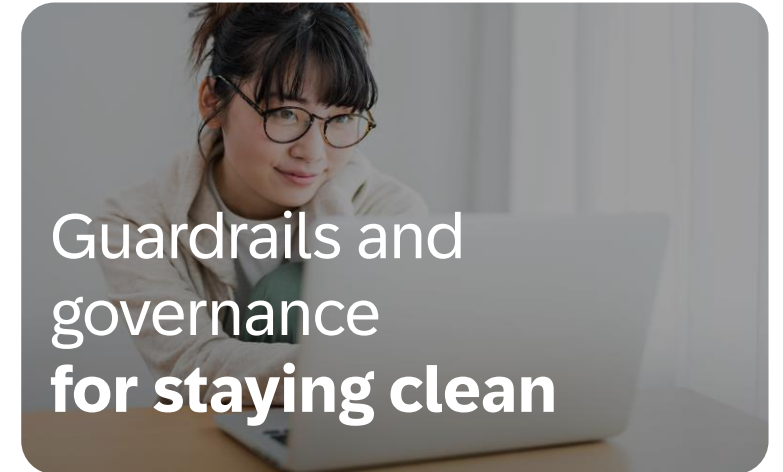
**Uncover IT  
standardization and  
process standardization  
and improvement  
opportunities**

**Plan and map  
your clean core journey  
and track transformation  
progress**

**Continuously monitor  
process adoption and  
maintain clean  
technology standards**

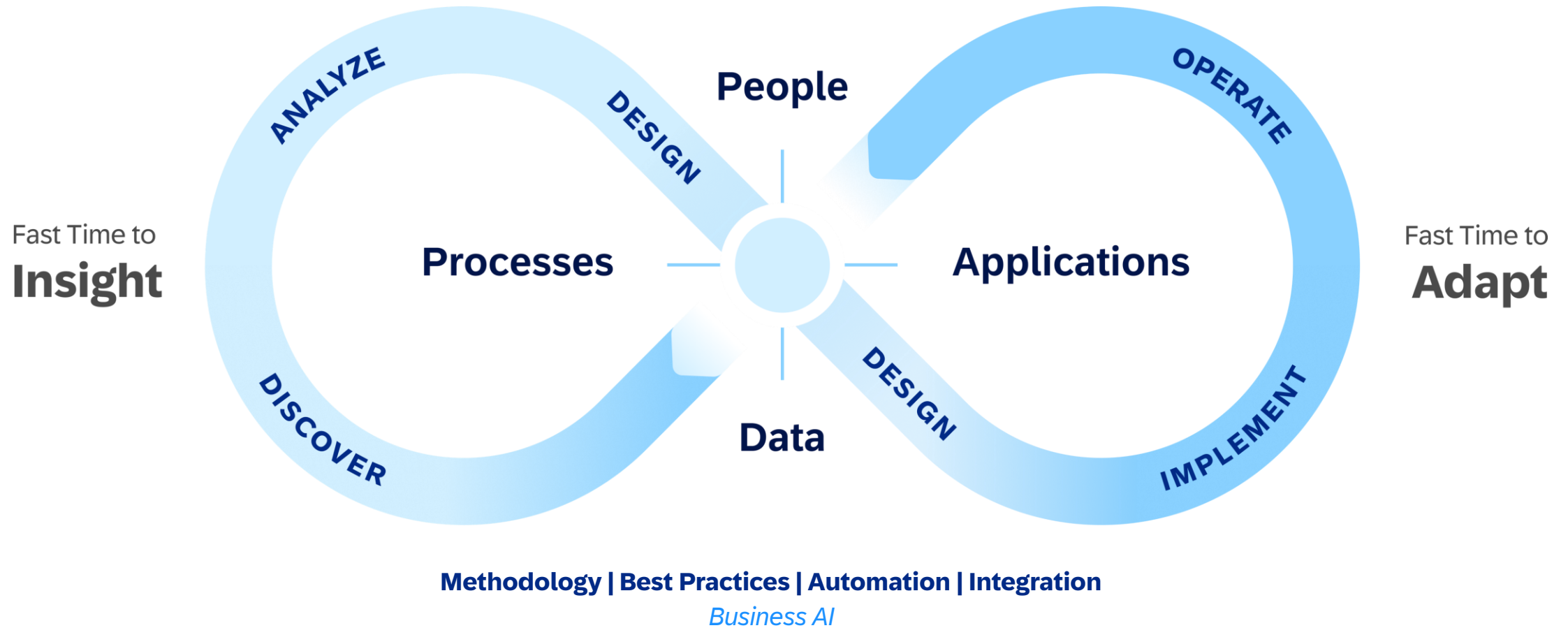


# Hurdles to overcome for clean core

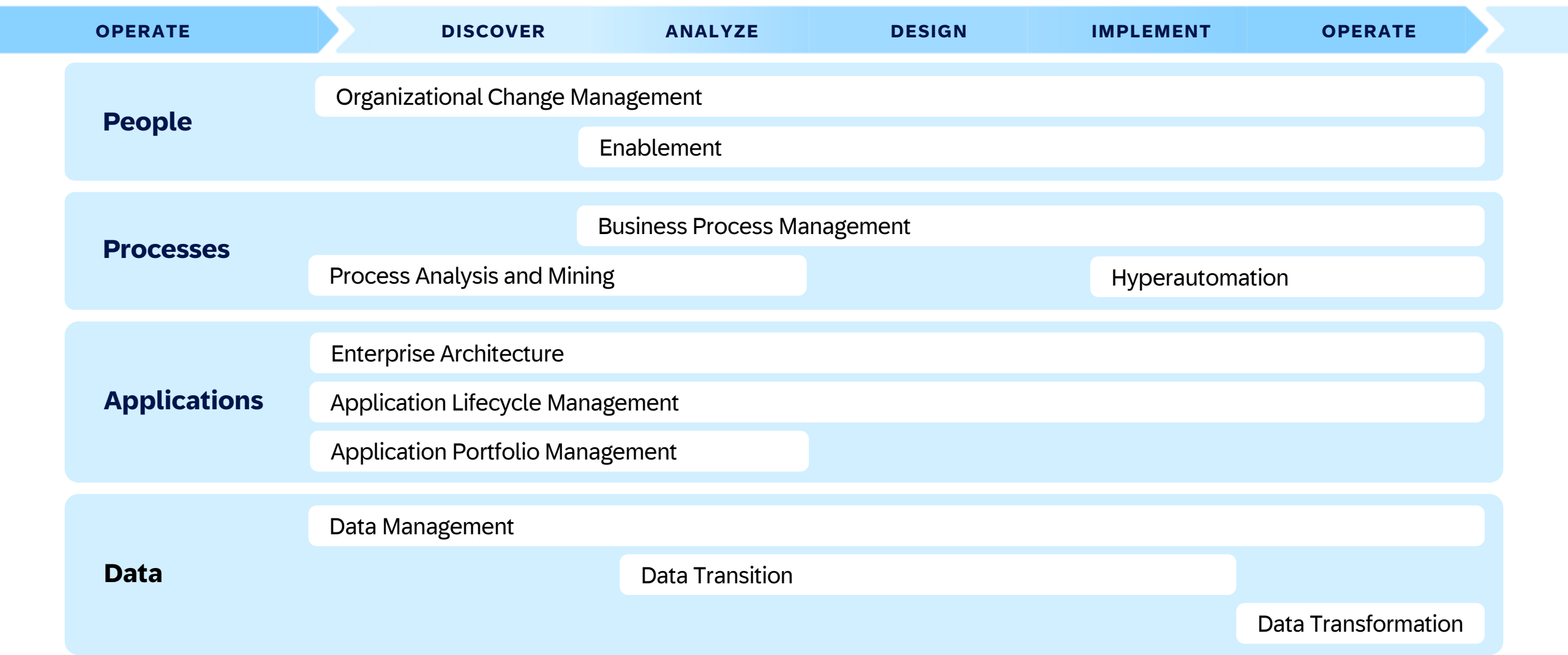




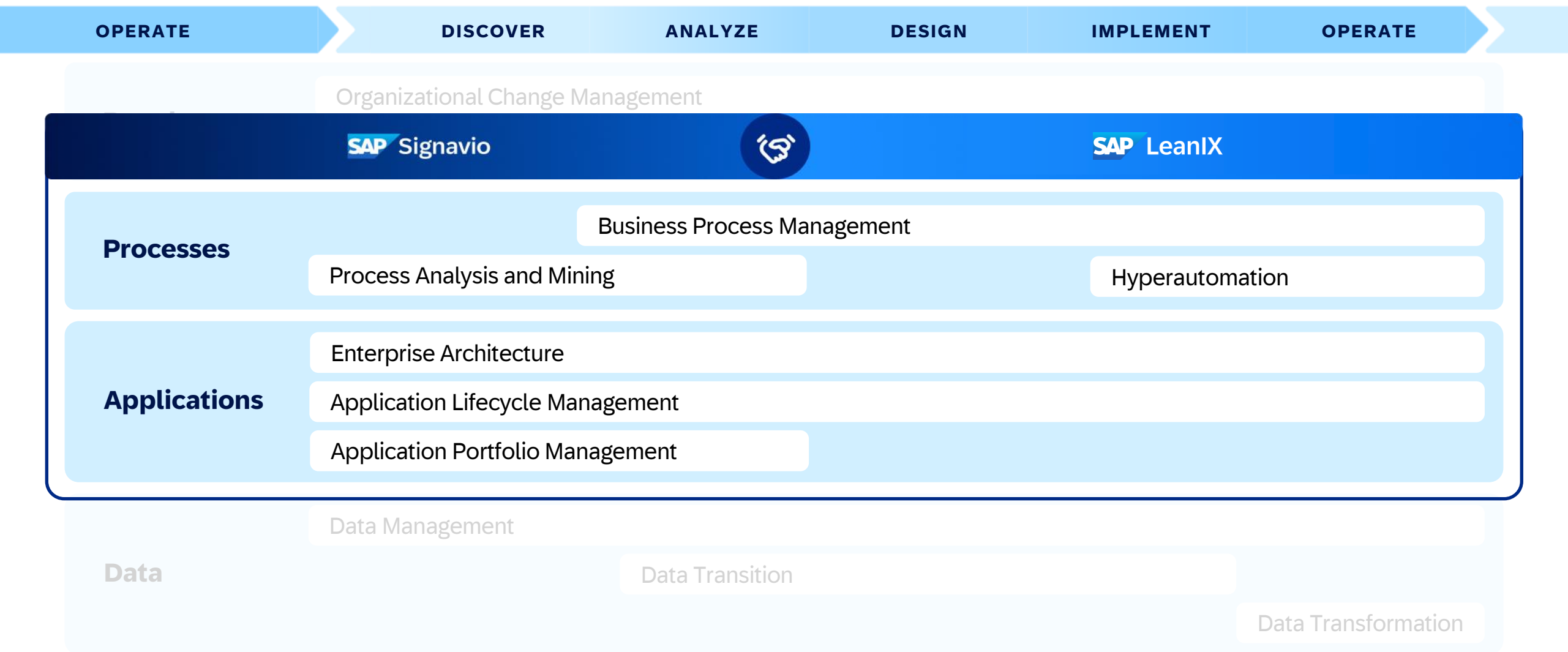
# Clean core transformation: From strategy to execution



# A holistic end-to-end approach to get and stay clean

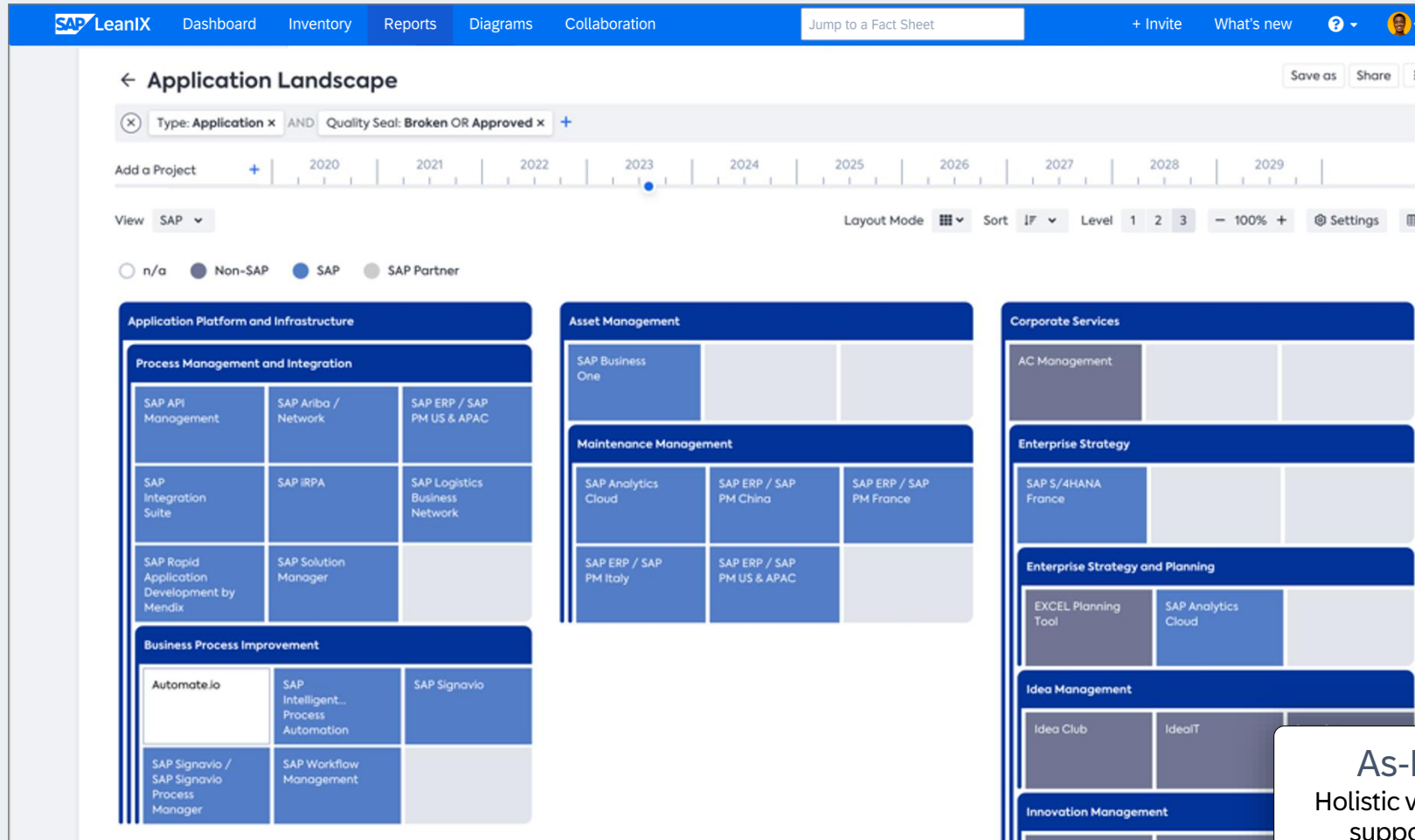


# Clean core solution overview



## Discover & Analyze

# Understand the as-is IT landscape and discover harmonization opportunities



**As-Is landscape**  
Holistic view of all applications  
supporting your business

Discover & Analyze

Automated and continuous SAP landscape discovery



LeanIX | Discovery Inbox

SaaS Discovery

SAP Landscape Discovery

Not linked

25

Linked

70

Rejected

95

Total SAP Discoveries

195

List of discoveries

Filter

Search by Finding or Fact Sheet name

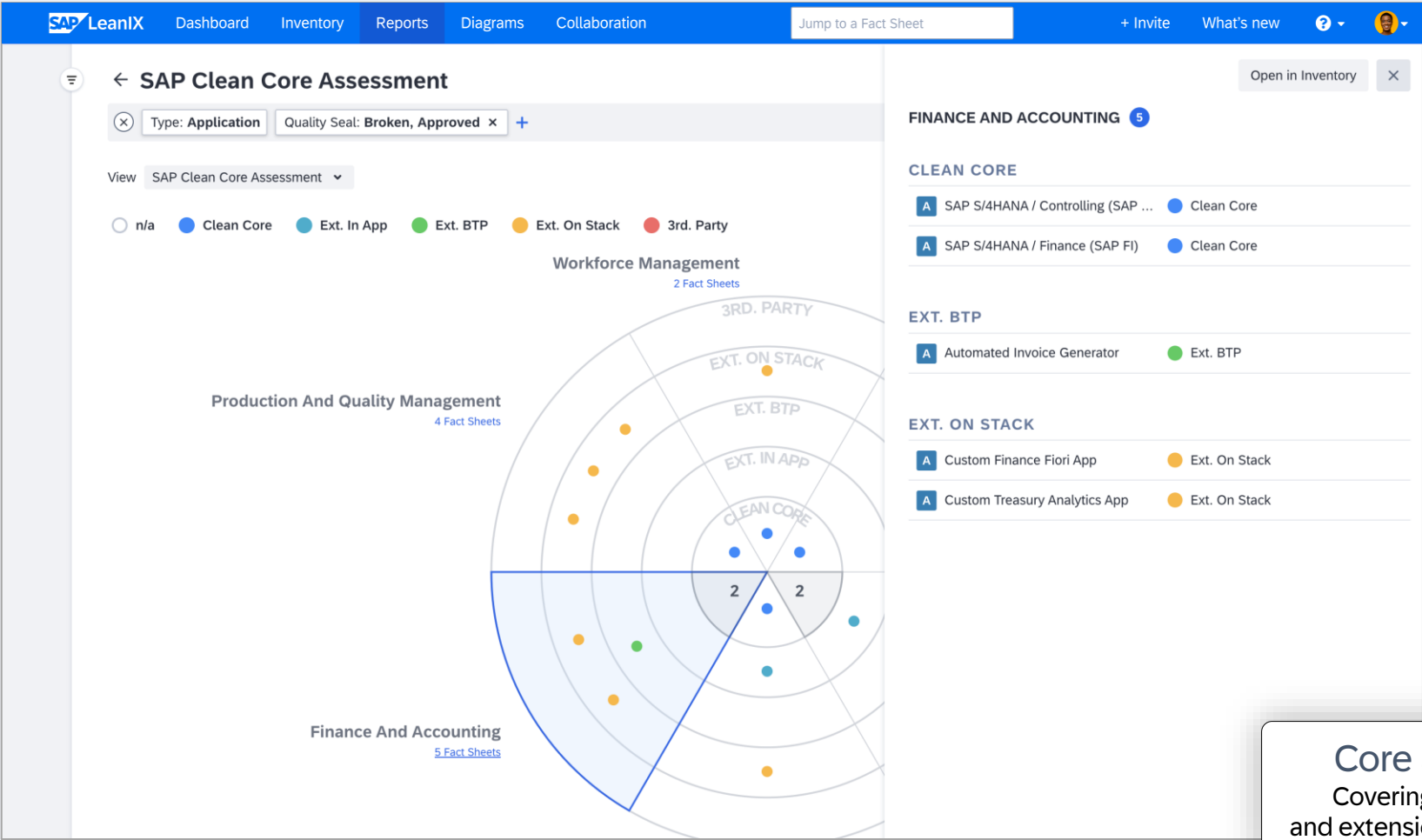
Total 195 results

Discovery item	Classification	Status	Fact Sheet link	Integration	Discovery date	Action by
SAP S/4HANA (sh4567)	ERP SaaS	Action needed	Link to SAP S/4HANA (sh4567) +12	SAP Landscape Discovery	10.3.2024	-
SAP Marketing Cloud (MC-US)	SaaS	Action needed	Create SAP Marketing Cloud (MC-US) +12 Create SAP Marketing Cloud (MC-US) Create SAP	SAP Landscape Discovery	10.3.2024	-
SAP Solution Manager (PSM)	On-Prem	Action needed	Create SAP Solution Manager (PSM) +12	SAP Landscape Discovery	10.3.2024	-
SAP S/4HANA (PS4)	ERP SaaS	Linked	SAP S/4HANA PS4 +12 SAP S/4HANA PS4 SAP	SAP Landscape Discovery	10.3.2024	Anthony James on 10.3.2023
SAP Signavio Process Manager	ERP SaaS	Linked	SAP Signavio Process Manager +12	SAP Landscape Discovery	10.3.2024	Auto
SAP Ariba (Test)	SaaS	Rejected	SAP S/4HANA PS4 +12	SAP Landscape Discovery	10.3.2024	Ant
SAP Ariba (Dev-EU)	SaaS	Rejected	-	SAP Landscape Discovery	10.3.2024	Ant

Complete visibility  
An overview of all SAP cloud  
and on-premise systems

Discover & Analyze

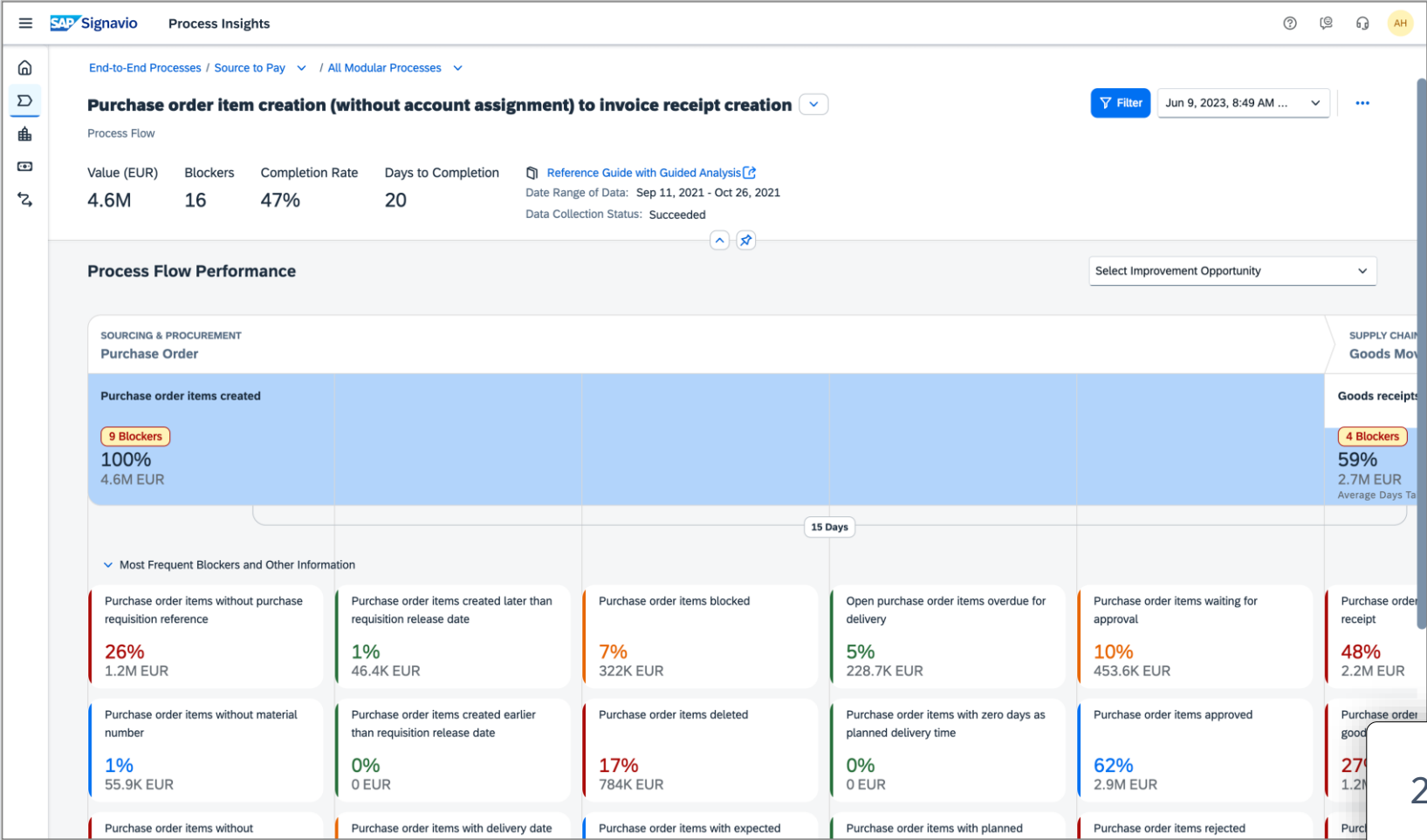
# Understand and assess your clean core



Core assessment  
Covering the applications  
and extensions in your landscape

Discover & Analyze

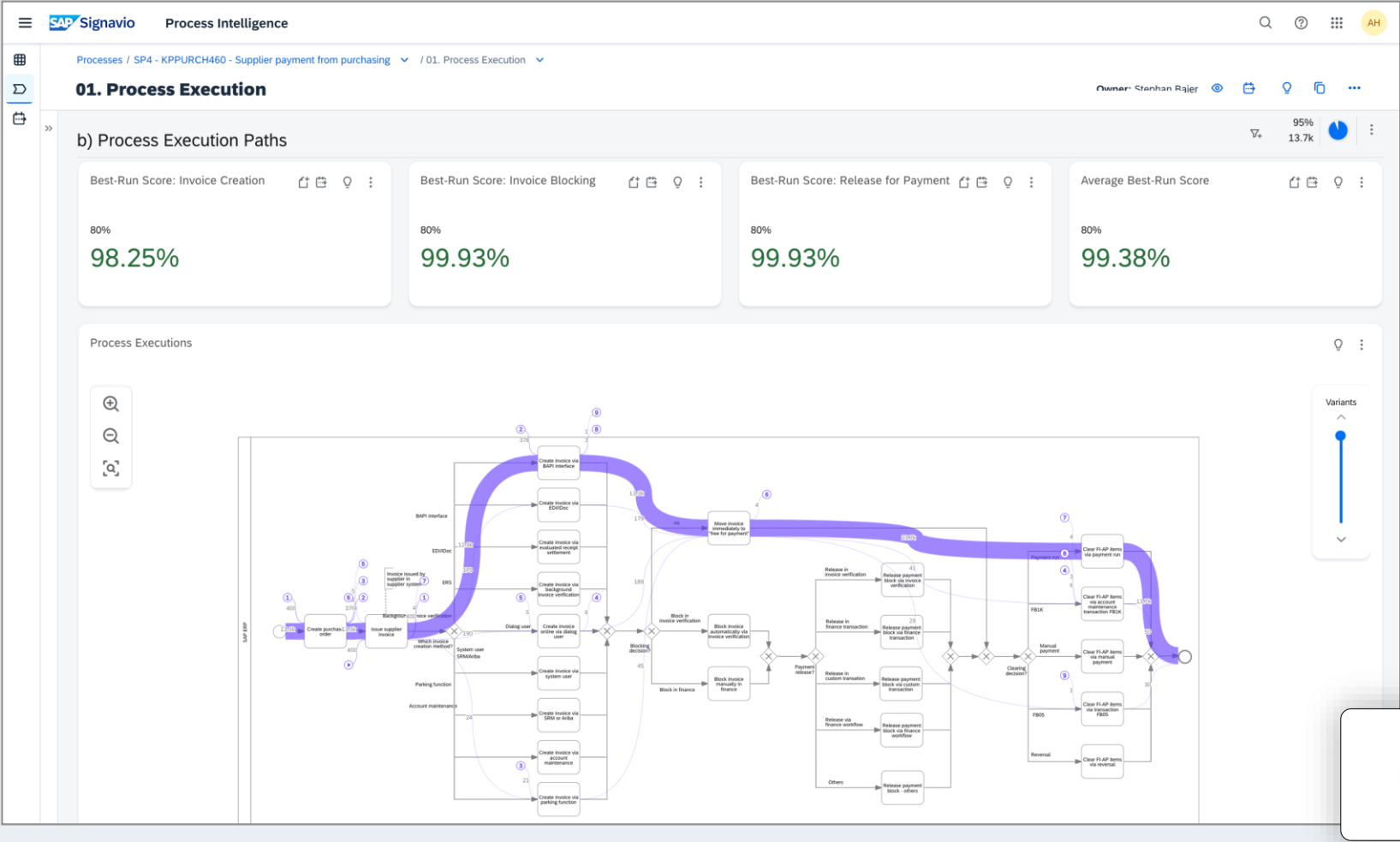
Data-driven prioritization of standardization opportunities





Discover & Analyze

Data-driven prioritization of standardization opportunities



Discover & Analyze

# Tailored innovation recommendations for suitable standard functionality

SAP Signavio

Process Insights

?

AH

End-to-End Processes / Lead to Cash / All Modular Processes / Sales documents created

6 Jul 2023, 14:50 CEST

Sales documents created

Performance Indicator - Throughput - Automation Rate

BenchmarksDetailsCorrection Recommendations (4)Innovation Recommendations (11)

Innovation Recommendations (11)

Filter by Categories

Recommendation	Relevance	Industry Popularity (Engineering, Con...	Type	End-to-End Processes	Lines of Business
Create Sales Orders from Unstructured Data	<div><div></div><div></div><div></div><div></div></div>	-	AI Scenarios	Lead to CashSource to Pay	S...Supply ...Sourcing & Procur...
Sales Performance - Plan/Actual	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	SAP Fiori Apps	Lead to Cash	Sales
Create Sales Orders - Automatic Extraction	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	SAP Fiori Apps	Lead to Cash	Sales
Import Sales Orders	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	SAP Fiori Apps	Lead to Cash	Sales
Automatic Creation of Sales Orders from E...	<div><div></div><div></div><div></div><div></div></div>	-	Automations	Lead to Cash	Sales
Predictive Analytics Model Training - Sales ...	<div><div></div><div></div><div></div><div></div></div>	-	Machine Learning	Lead to Cash	Sales
Quotation Conversion Rates	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	SAP Fiori Apps	Lead to Cash	Sales
SAP SuccessFactors Incentive Management	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	Finance Optimization	Fl...Idea ...Gov...Plan...Lea...	Suppl...Se...Manuf...S...Fin...
Data Not Extracted for Order Creation	-	-	Situation Handling	Lead to Cash	Sales
Data Incomplete for Order Creation	-	-	Situation Handling	Lead to Cash	Sales
Automatic Creation of Sales Order from Un...	-	-	Automations	Lead to Cash	Sales

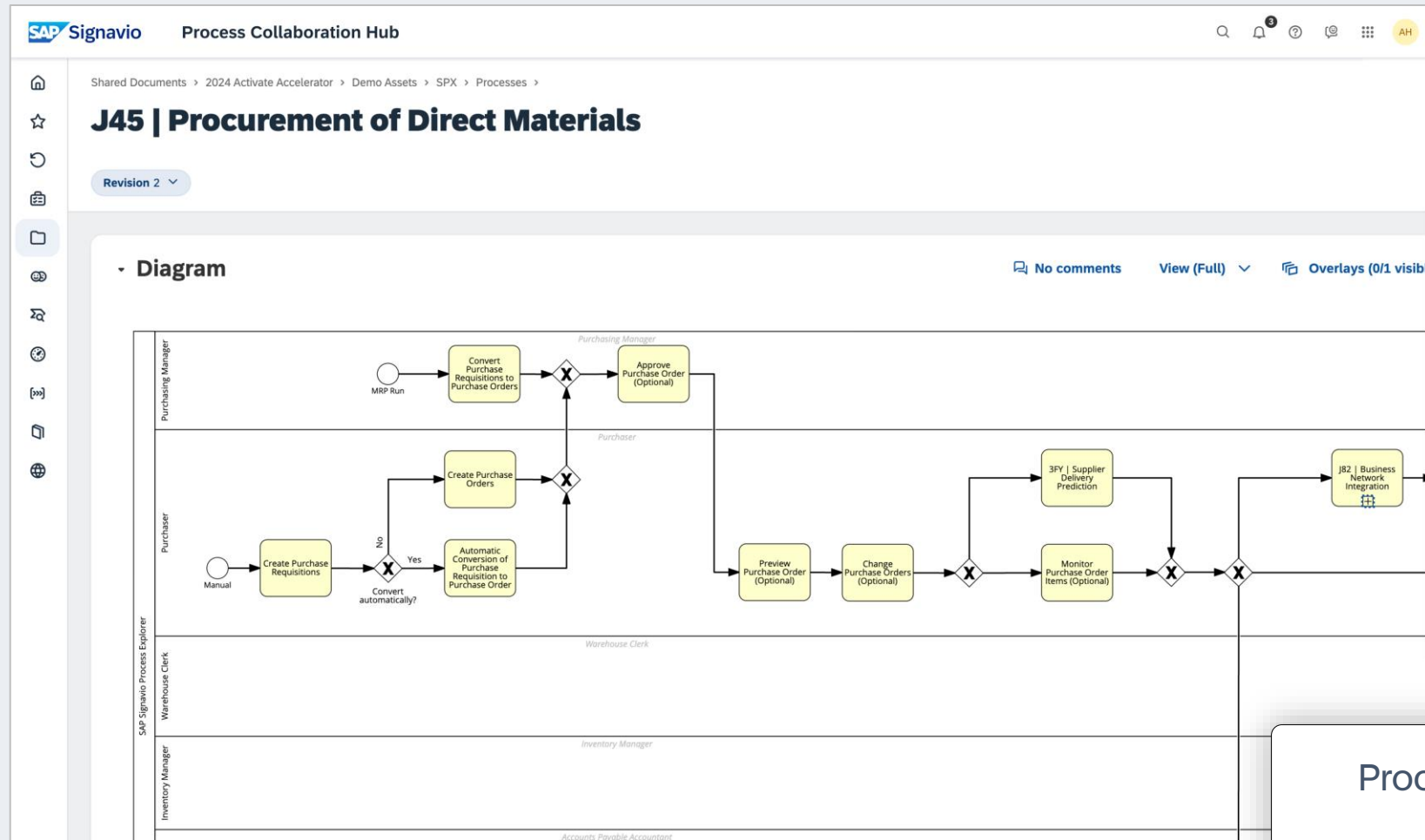
Recommendations  
Covering the majority of  
the SAP solution portfolio

# Design future processes starting from best practices

**Value Accelerators**  
Library with best practices,  
performance indicators, APIs etc.

## Design & Implement

# Design future processes starting from best practices



# Design & Implement

## Simulate the business impact of your process changes

**SAP Signavio Process Manager**

### Procurement of Direct Materials (Target)

Step by Step  
One Case  
Multiple Cases

Restart Target Duration: 5 days

Current run (Target)	Last run (Current)
Costs 5.905,83 € <a href="#">more...</a>	Costs 9.658,33 €
Total cycle time 8d 21h 03m 17s <a href="#">more...</a>	Total cycle time 27d 16h 51m 08s
Resource consumption 4d 22h 07m 00s <a href="#">more...</a>	Resource consumption 8d 01h 10m 00s
Bottlenecks ---	Bottlenecks (1) Purchaser

Excel Export

### Scenarios

Current Target +

Task	Execution costs
1. Create Purchase Requisitions	0,00 €
2. Create Purchase Orders	0,00 €
3. Automatic Conversion of Purchase Requisition to Purcha...	0,00 €
4. Convert Purchase Requisitions to Purchase Orders	0,00 €
5. Approve Purchase Order	0,00 €

Remove scenario Save scenario

**Digital Twin**  
Understand business impact  
of process change

# Define target architecture aligned with SAP's recommendations

NEW

The screenshot displays the SAP LeanIX web application interface. The top navigation bar includes links for Dashboard, Inventory, Reports, Diagrams, and Collaboration, along with a search bar and user profile. The left sidebar contains a search bar and a list of navigation items: Users, User Roles, ADVANCED SETTINGS (Automations, Collections, Export, KPIs, Notifications Center, Optional Features & Early Access, Portals, Reports, Surveys, To-Dos), and DISCOVERY & INTEGRATIONS (API Tokens, Developer Tools, Integrations). The main content area is titled 'Reference Catalogs' and features a sub-header explaining that these catalogs provide standard information for Business Capabilities, Applications, IT Components, Providers, and Tech categories. Below this, there are tabs for Business Capability Catalog, Reference Business Architecture (which is selected), SaaS Catalog, Lifecycle Catalog, and Tech Category Catalog. The Reference Business Architecture tab contains a paragraph explaining its purpose in adopting SAP best practices and a link to documentation. A yellow warning box states: 'If you want to import an industry map from the Business Capability Catalog, navigate to the Business Capability Catalog tab.' Below this, a section titled 'Select the industry maps you'd like to import' lists various industries with checkboxes: Automotive (checked), Chemicals, Consumer Products, Cross Industry, Engineering, Construction, and Operations, High Tech (checked), Industrial Manufacturing, Media, Oil, Gas, and Energy, Professional Services, Public Sector, Retail, Telecommunications, Travel and Transportation, Utilities, and Wholesale Distribution.

**Reference Catalogs**

Reference Catalogs provide standard information for Business Capabilities, Applications, IT Components, Providers, and Tech categories. By activating these features you will be extending the Meta Model of your Fact Sheets and can define which fields and relations you want to automatically synchronise with our catalogs.

Business Capability Catalog   **Reference Business Architecture**   SaaS Catalog   Lifecycle Catalog   Tech Category Catalog

Reference Business Architecture enables customers to easily adopt SAP best practices Business Capability maps (tailored to industries) into your workspace and customize it for your organization. [View Documentation](#)

! If you want to import an industry map from the **Business Capability Catalog**, navigate to the Business Capability Catalog tab.

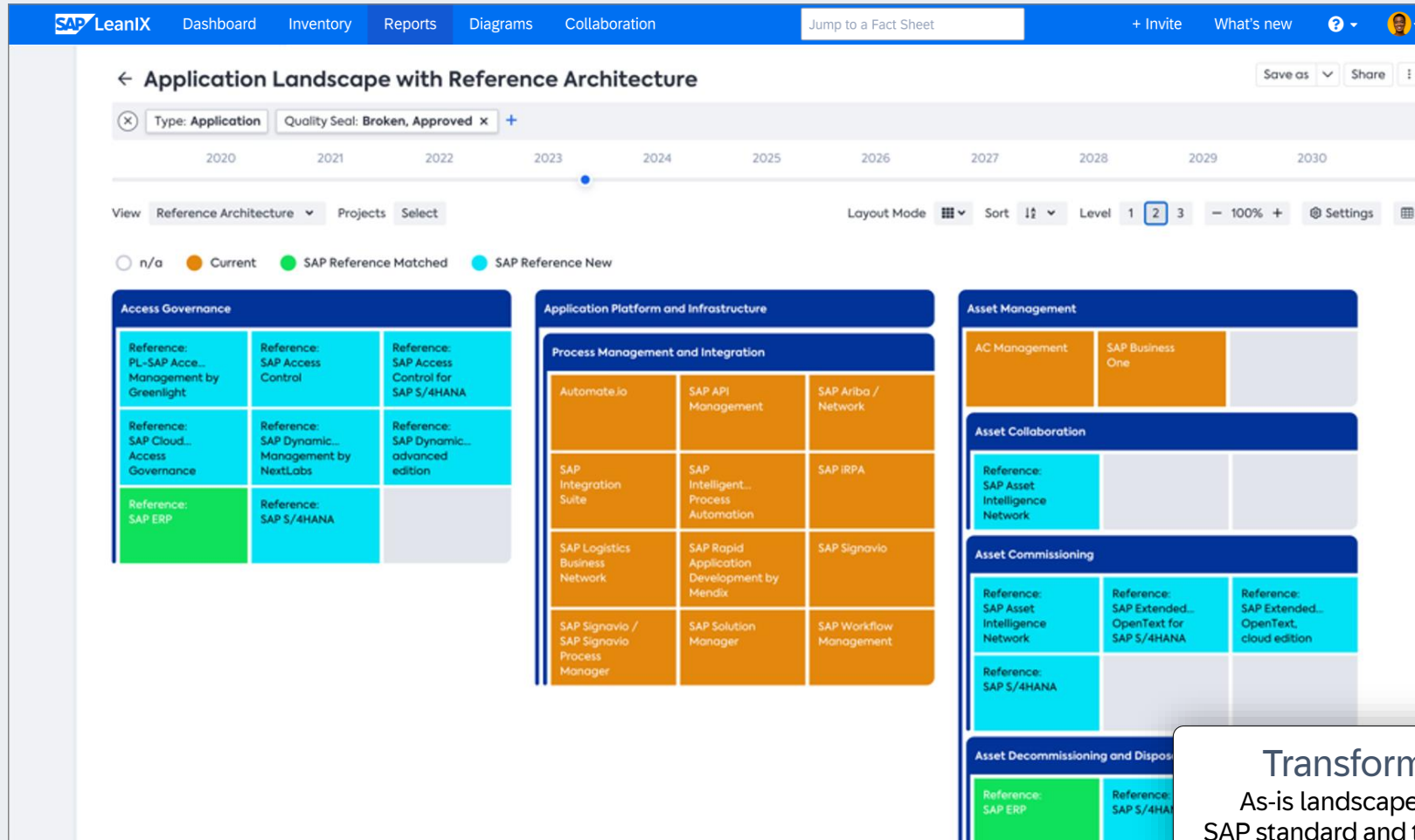
**Select the industry maps you'd like to import**

- ☒ Automotive
- ☐ Chemicals
- ☐ Consumer Products
- ☐ Cross Industry
- ☐ Engineering, Construction, and Operations
- ☒ High Tech
- ☐ Industrial Manufacturing
- ☐ Media
- ☐ Oil, Gas, and Energy
- ☐ Professional Services
- ☐ Public Sector
- ☐ Retail
- ☐ Telecommunications
- ☐ Travel and Transportation
- ☐ Utilities
- ☐ Wholesale Distribution

**Reference architecture**  
Recommendations on business capabilities and applications

## Design & Implement

# Scope and design the path to clean transformation



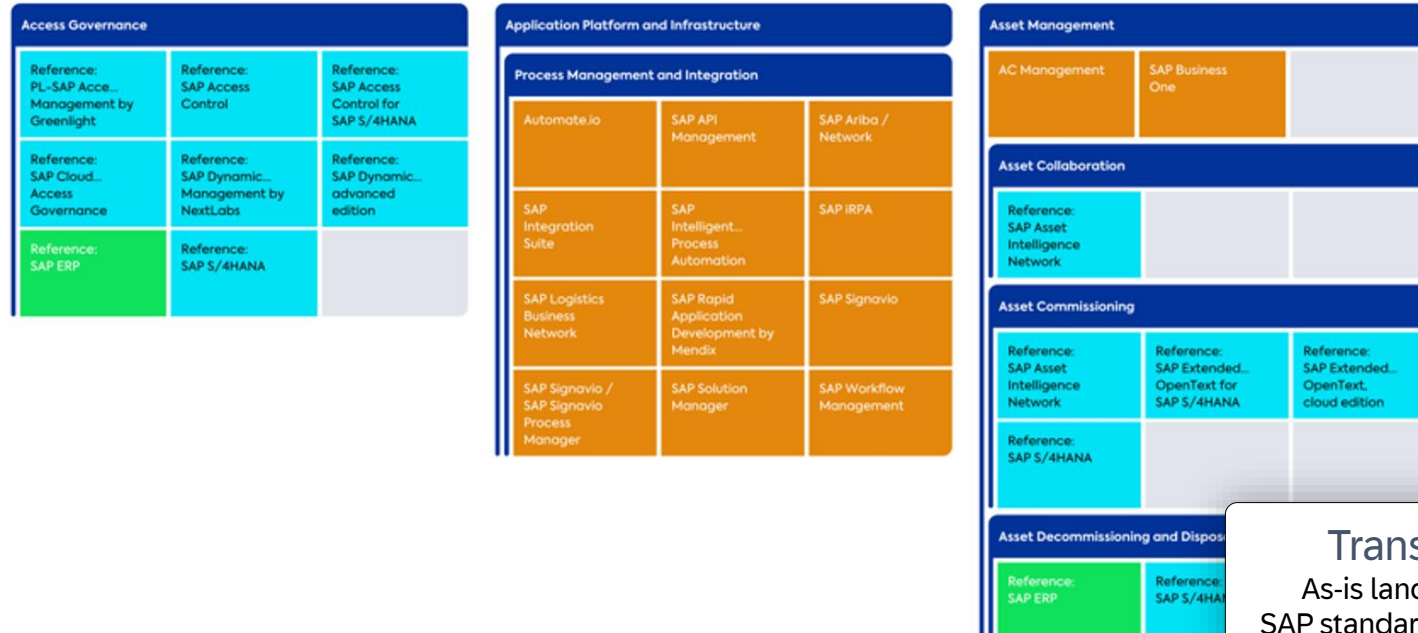
Type: Application Quality Seal: Broken, Approved x +

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

View Reference Architecture Projects Select

Layout Mode Sort Level 1 2 3 - 100% + Settings

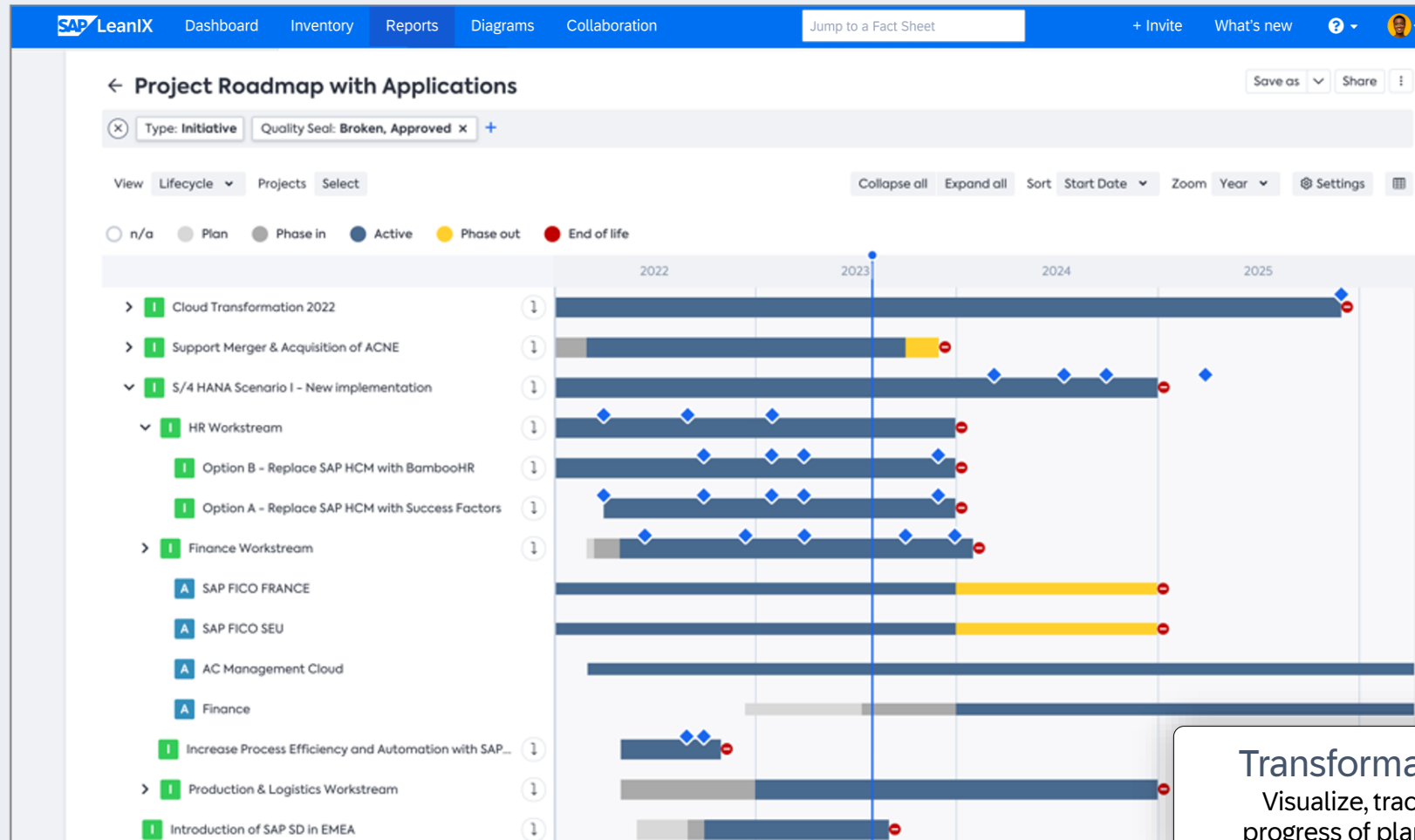
n/a Current SAP Reference Matched SAP Reference New



**Transformation scope**  
As-is landscape assessment versus  
SAP standard and to-be landscape design



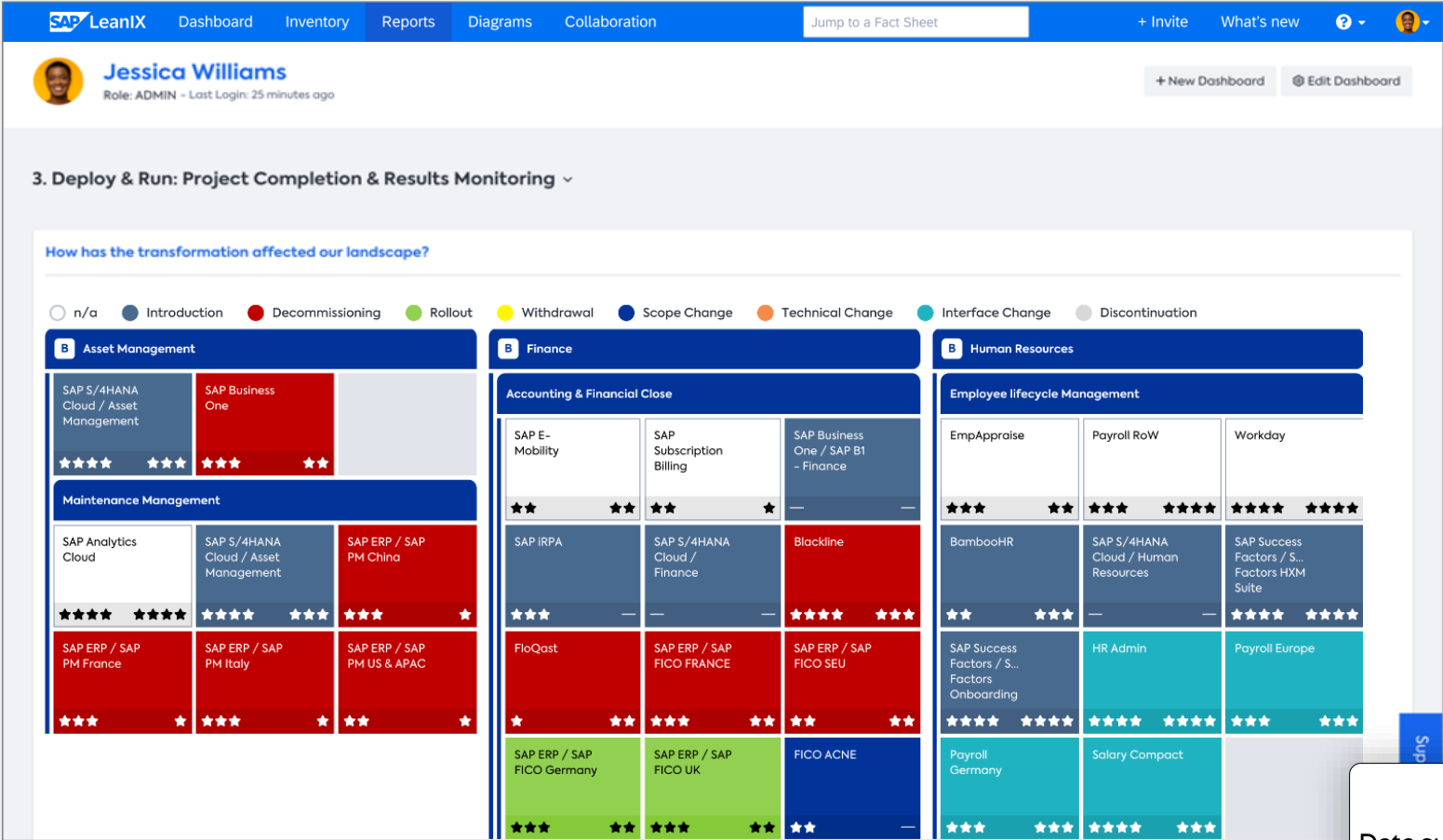
# Plan and build clean core transformation roadmaps



**Transformation roadmap**  
Visualize, track and monitor the progress of planned improvements

Design & Implement

Continuously track and measure architecture improvements

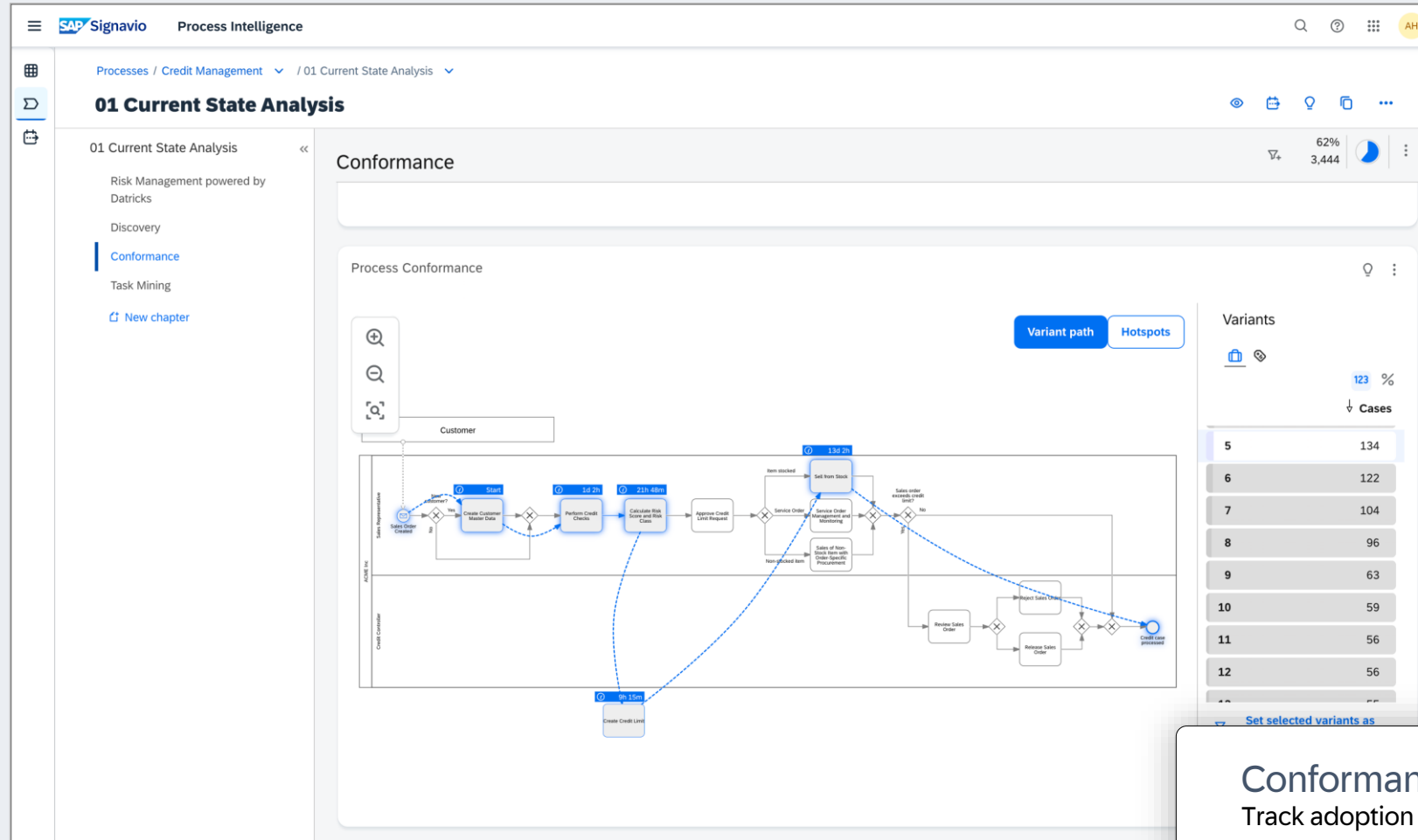


Dashboards

Data summary for both business & IT stakeholders

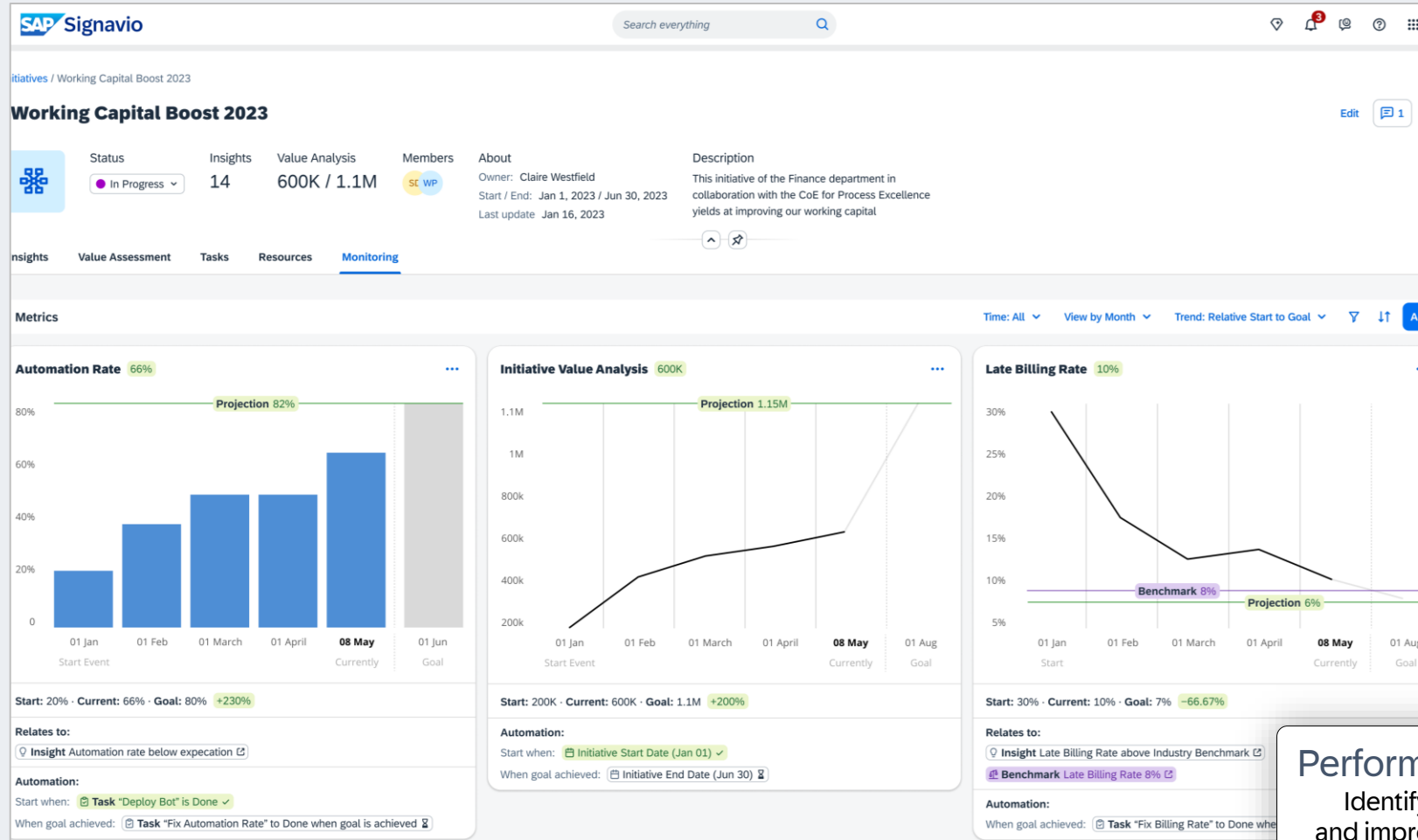
## Design & Implement

# Measure conformance and identify need for (re)training or correction in a timely manner



## Operate

# Monitor processes, share insights, raise team collaboration and constantly improve business performance



Performance monitoring  
Identify performance gaps  
and improvement opportunities

# Operate

## Clear governance of process changes

Task overview

DS

formal approval

Last updated at 14:49:27. [Refresh](#)

Process Approval

Approval: Procurement of Direct Materials (Current) (revision 4) 1/16/24

formal approval

Assignment

DS

Demo Signavio  
jean-patrick.ascenci+admin@signavio.com

Task due date  
Not set

In order to complete this task you need to take the assignment first.

Add a task description

Model name

Procurement of Direct Materials (Current)

Model image

Procurement of Direct Materials (Current).png

128 kb

Show comments

[editor.signavio.com/p/portal#/model/6e4c46ddb3d494c96fd881a6a33e0f8](#)

Compare revisions

[editor.signavio.com/p/comparator#/revision/0c5dcc316f9748529ad1a269bf7d43bd/revision/d2...](#)

Feedback

No value set

Reject

Approve

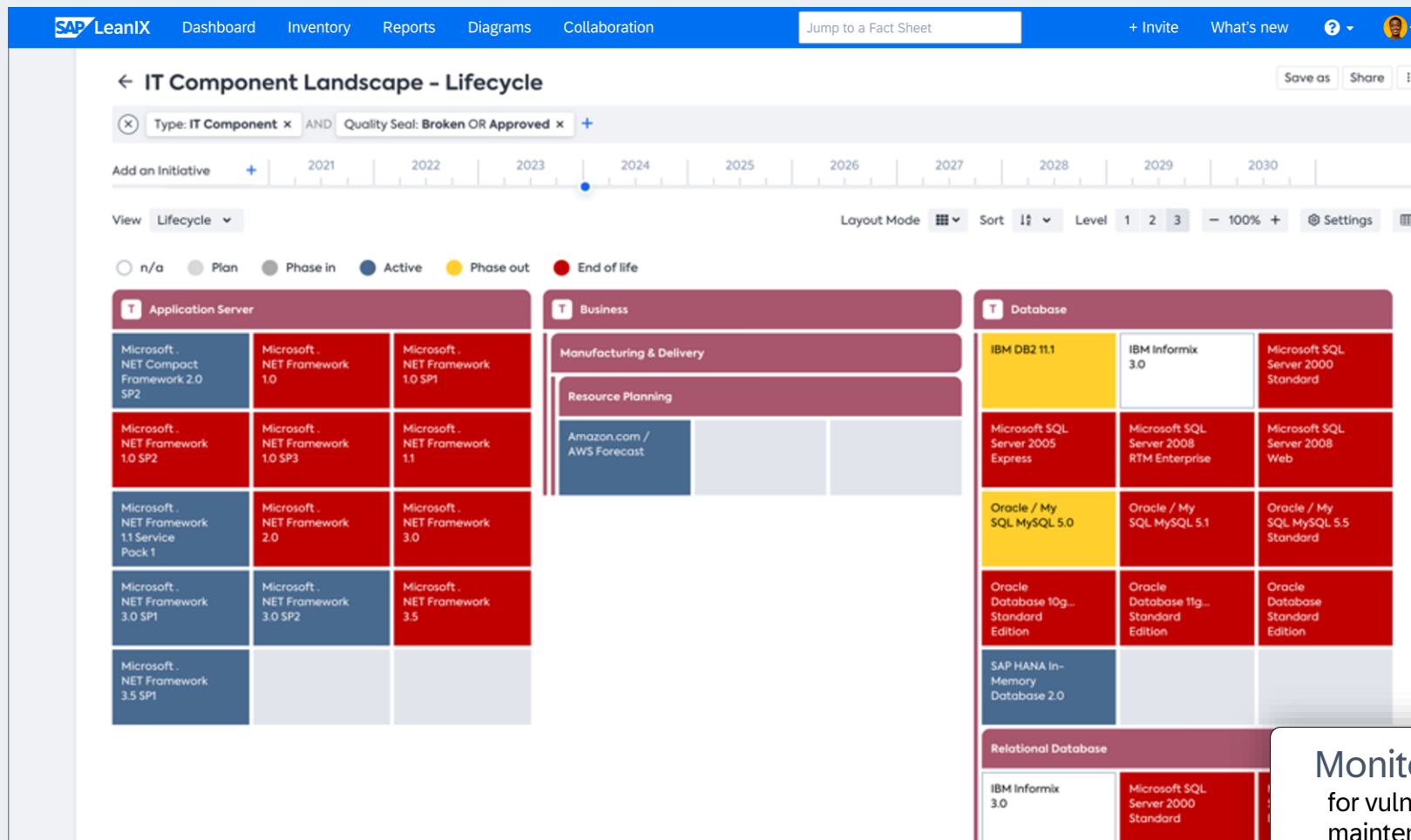
Subtasks

Add a new subtask

Collaboration and Governance

workflows, commenting  
and documentation

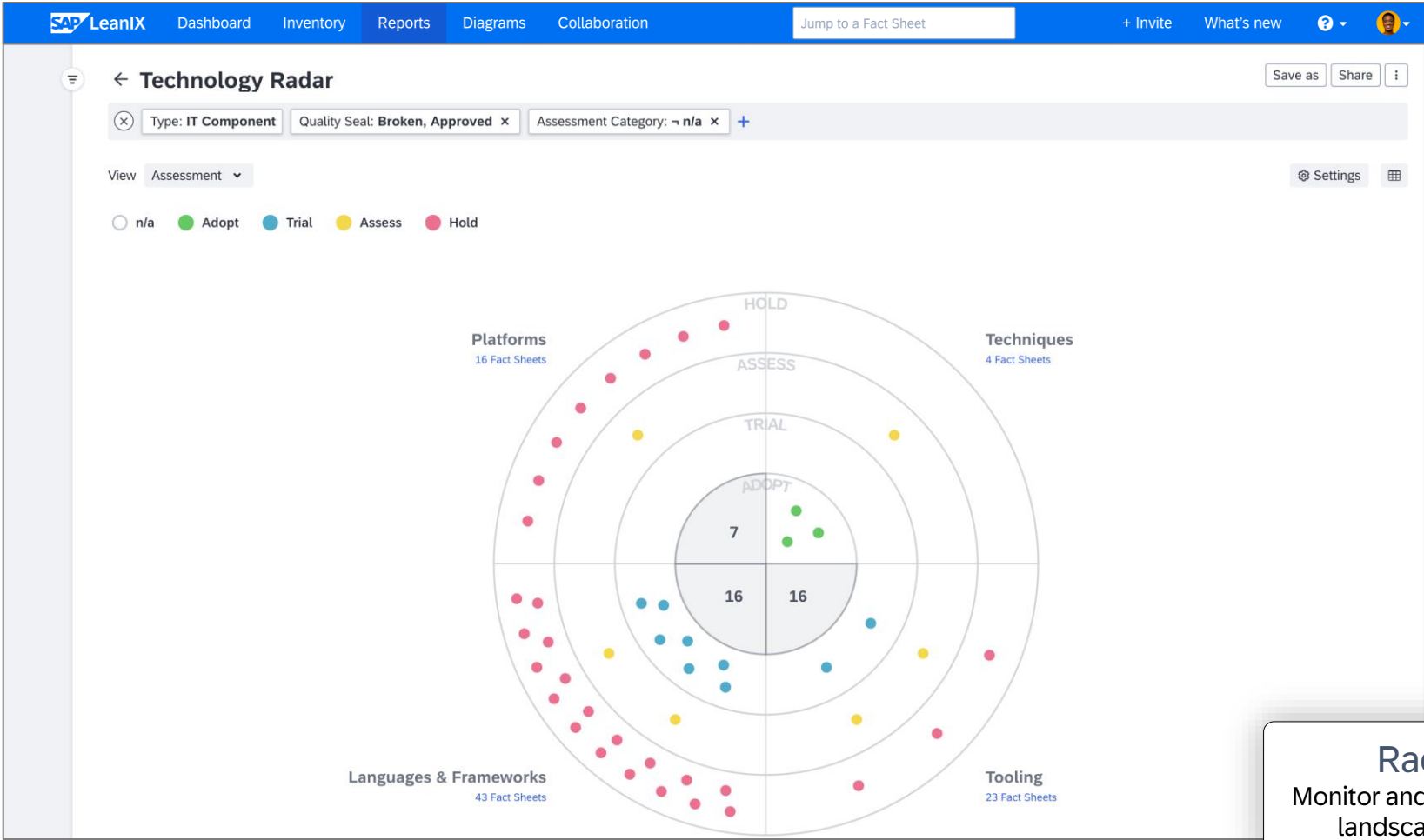
# Monitor your IT landscape and avoid risks



Monitor IT landscape for vulnerabilities like end of maintenance and avoid risks

Operate

Monitor, govern and evaluate technology standards

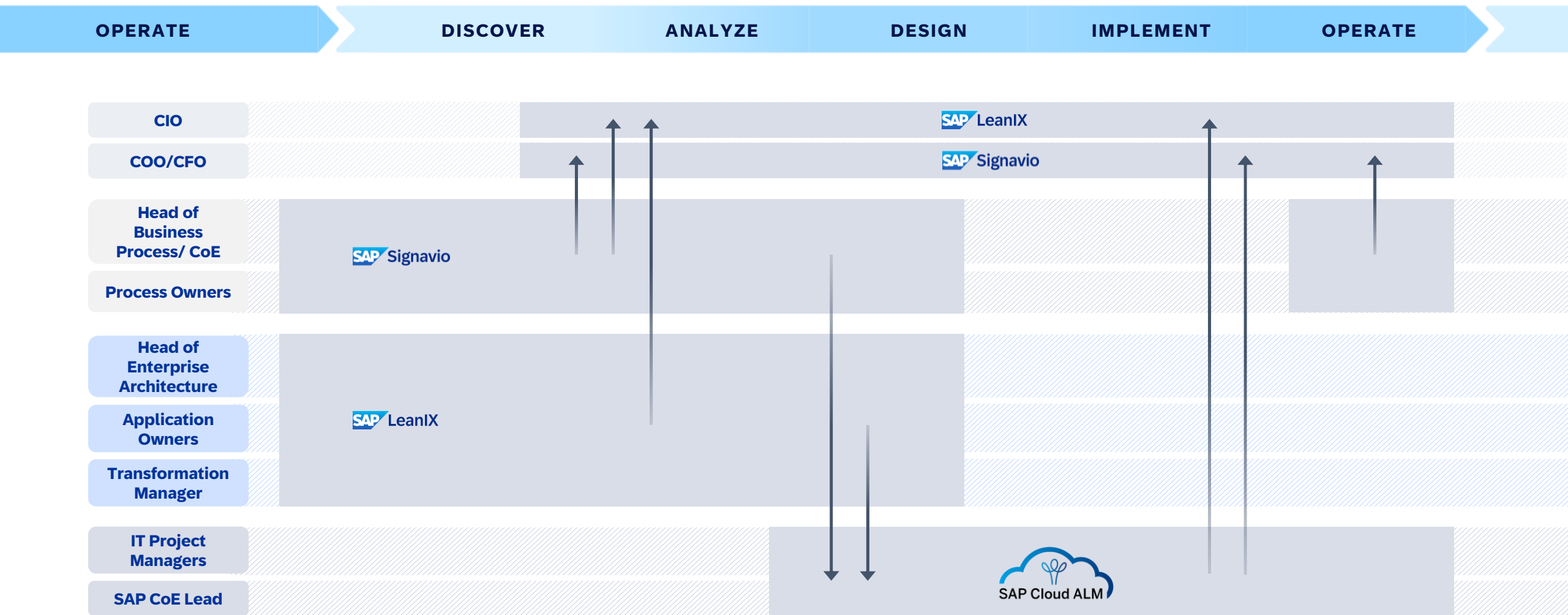


Radar report

Monitor and evaluate technology landscape and standards



# Clean core end-to-end tool chain



# Joint value to help overcome hurdles to clean core

## Analyze and decide

### Secures Business buy-in

- Compelling **visualization** of **process deficits**, supported by **tailored recommendations**
- Clear visualization of **interdependencies**: applications, business capabilities and processes
- **Collaboration** business and IT via a **single source of truth**

## Get clean

### Planning and execution across all layers

- **Highly integrated management** of process, enterprise architecture and application level
- **Best practice content** and value accelerators
- Mapping and planning **transformation roadmap** holistically

## Stay clean

### Guardrail and Governance

- **Early risk detection** through continuous monitoring of applications, interfaces and process variants
- Built-in **governance capabilities**

# SAP Signavio and SAP LeanIX **are positioned as Leaders** across different market categories by customers and various analysts

SAP Signavio is a market leader  
in **Process Transformation**

SAP LeanIX is a market leader  
in **Enterprise Architecture**

Process Mining Tools

[Gartner](#)

Enterprise Architecture Tools

[Gartner](#)

Digital Twin of an Organization

[Spark](#)

Enterprise Architecture

[G2 Grid](#)

Customer Journey Mapping

[Spark](#)

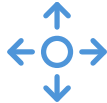



Application Portfolio Management

[G2 Grid](#)

SAP Signavio and SAP LeanIX believe that placement in the various quadrants as Leaders is a testament to our continued commitment to providing customers with innovative world-class solutions.

Leaders

## Key takeaways

-  To implement a clean core strategy, it is important to focus on all the dimensions
-  Moving to and maintaining clean core requires commitment from both the **business** and **IT**
-  Clean core is an ongoing strategic activity and must be done by continuous governance
-  **SAP Signavio and SAP LeanIX support in keeping your** process and architecture clean and adhere to standards

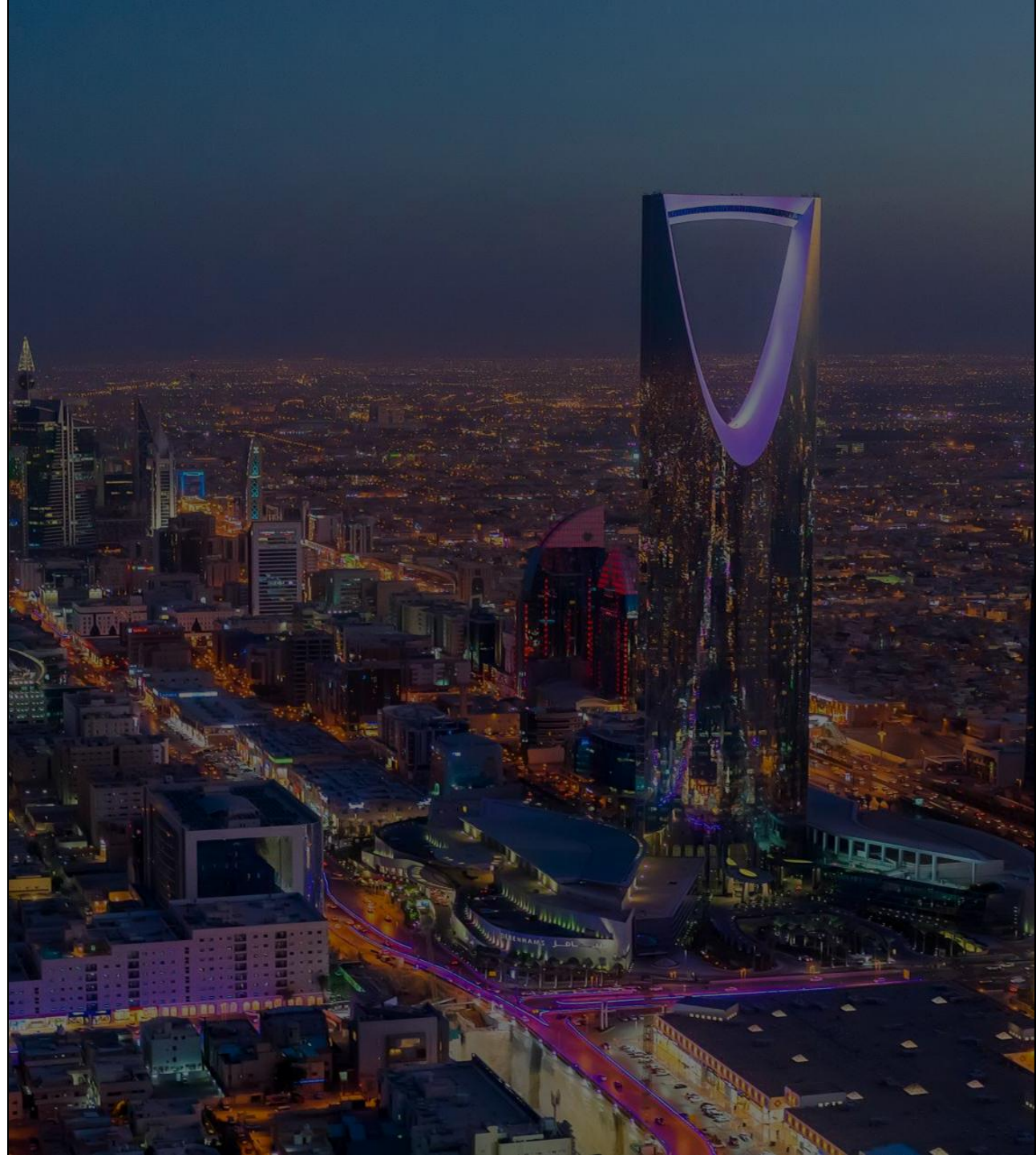
# Thank you.



**Salvatore De Caro**

Director Solution Advisor  
EMEA South

SAP Signavio







# Decouple your developments (Extensibility dimension):

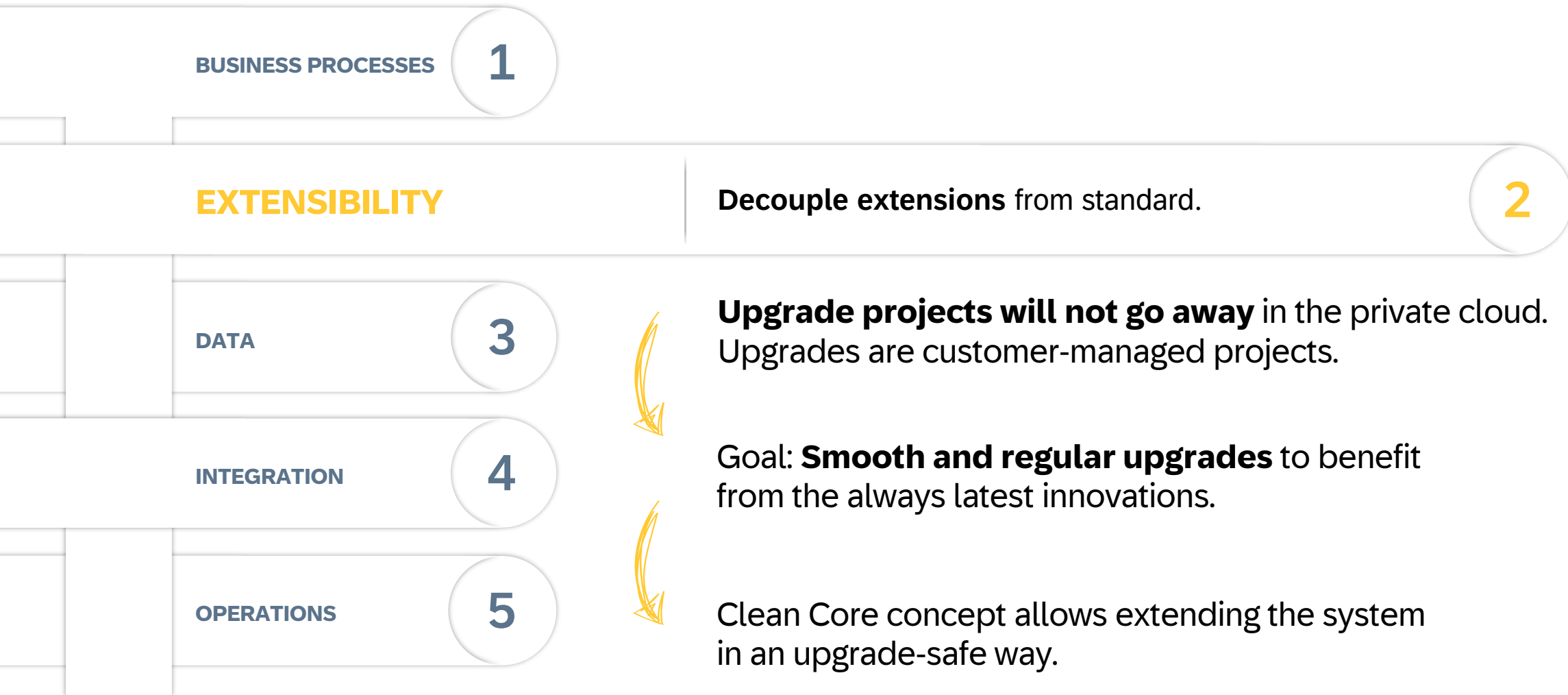
How separating extensions from the core and understanding the pertinent development guideline will free your capacity to innovate



**Fabian  
Sölker,**

Senior Consultant BTP  
Extensability

# Addressing clean core and the individual dimensions





# Addressing clean core and the individual dimensions

BUSINESS PROCESSES

1

EXTENSIBILITY

Decouple extensions from standard.

2

DATA

3

INTEGRATION

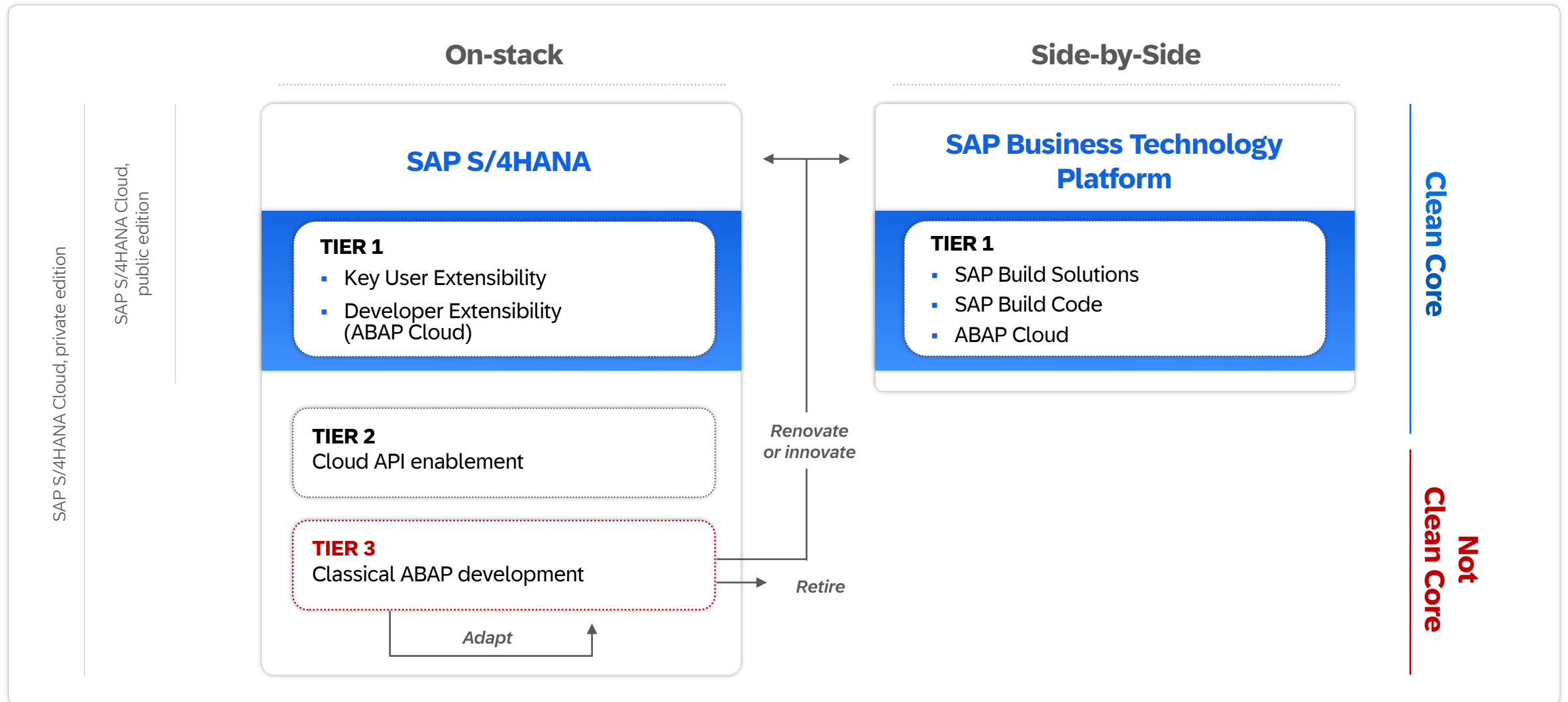
4

OPERATIONS

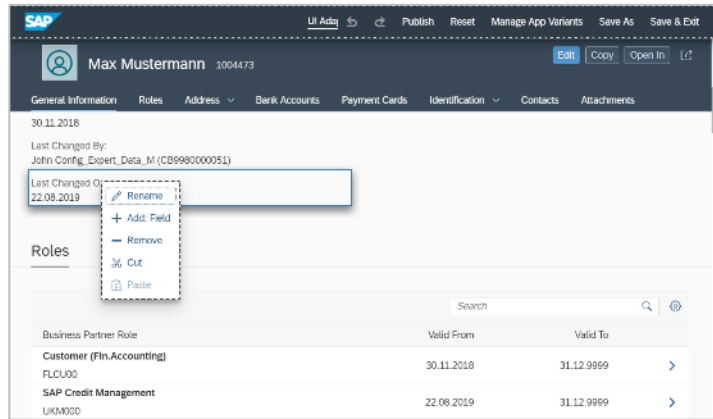
5

- Extensions should be **avoided** when possible
- Create **decoupled Extensions**, i.e. in a way that they would work in the cloud (3-Tier Model) by setting up a **strong governance**
- **Custom extensions** do not break an upgrade and **upgrades** do not break an extension\* - separate extensions by leveraging released APIs
- Create **technical debts** only as informed decision
- Leverage the full capabilities of extensibility **on the stack** as well as side-by-side **with SAP BTP**

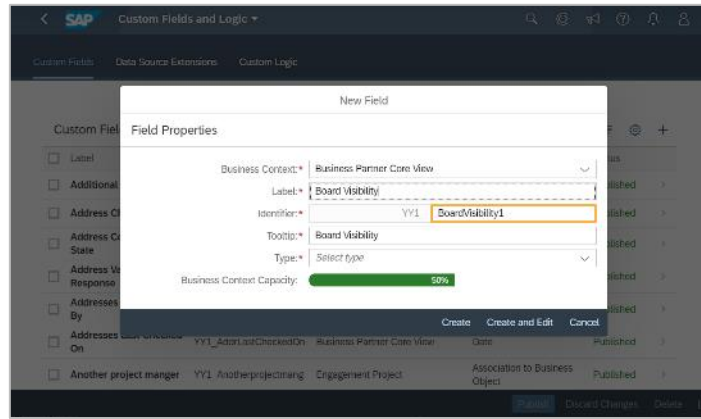
# Extensibility Model for S/4HANA – Decoupling SAP and Custom Code is Key



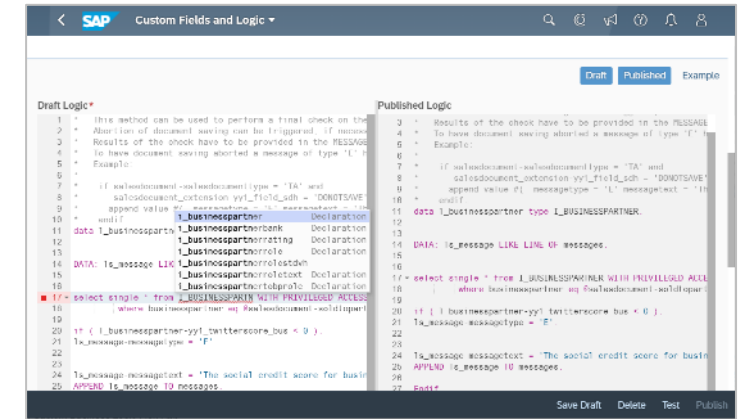
# Examples for Key User Extensibility On-stack



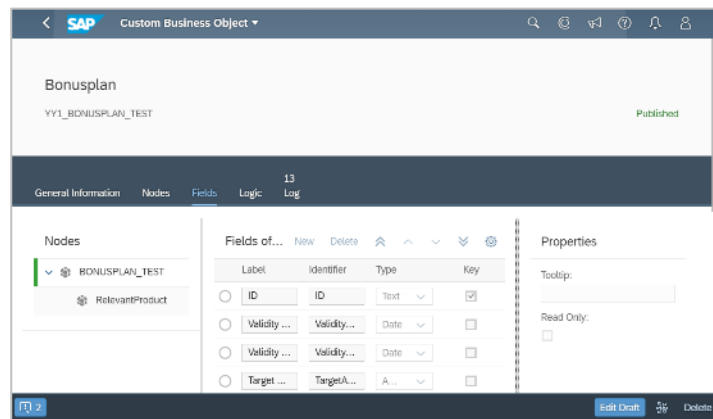
UI adaptation mode – adaptation mode with drag-and-drop configuration



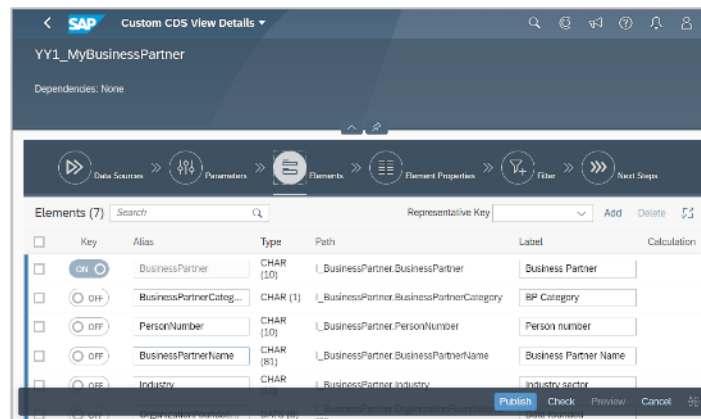
Custom fields SAP Fiori app



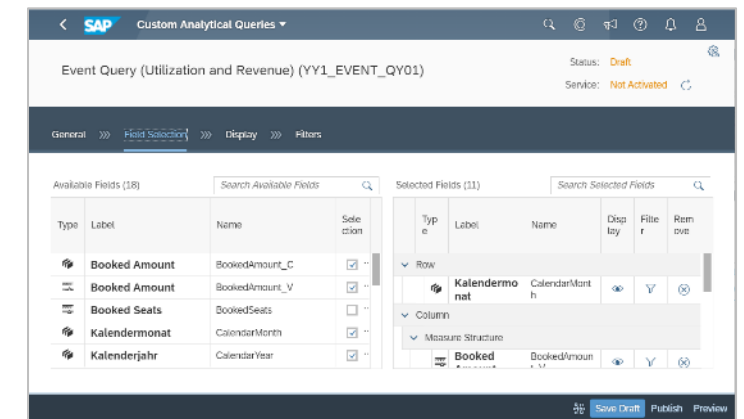
Custom business logic SAP Fiori app



Custom business objects SAP Fiori app



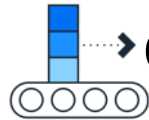
Custom CDS views SAP Fiori app



Custom analytical queries SAP Fiori app

<https://blogs.sap.com/2015/09/30/the-key-user-extensibility-tools-of-s4-hana/>  
[https://www.sap.com/documents/2018/05/606d1ee8-037d-0010-87a3-c30de2ffd8ff.html?need\\_redirect\\_to\\_background\\_page=false](https://www.sap.com/documents/2018/05/606d1ee8-037d-0010-87a3-c30de2ffd8ff.html?need_redirect_to_background_page=false)

# The cloud equivalent of **ABAP Extensibility** objects **On-stack**



## Classic ABAP

Direct table access

BAPIs

BOPF, BOR

Classic programming models/UI technologies like Dynpro, Web Dynpro, BSP

System access via SAP GUI

Customer functions/enhancement frameworks



## Clean Core ABAP

Core Data Services (CDS)

RAP Business Objects

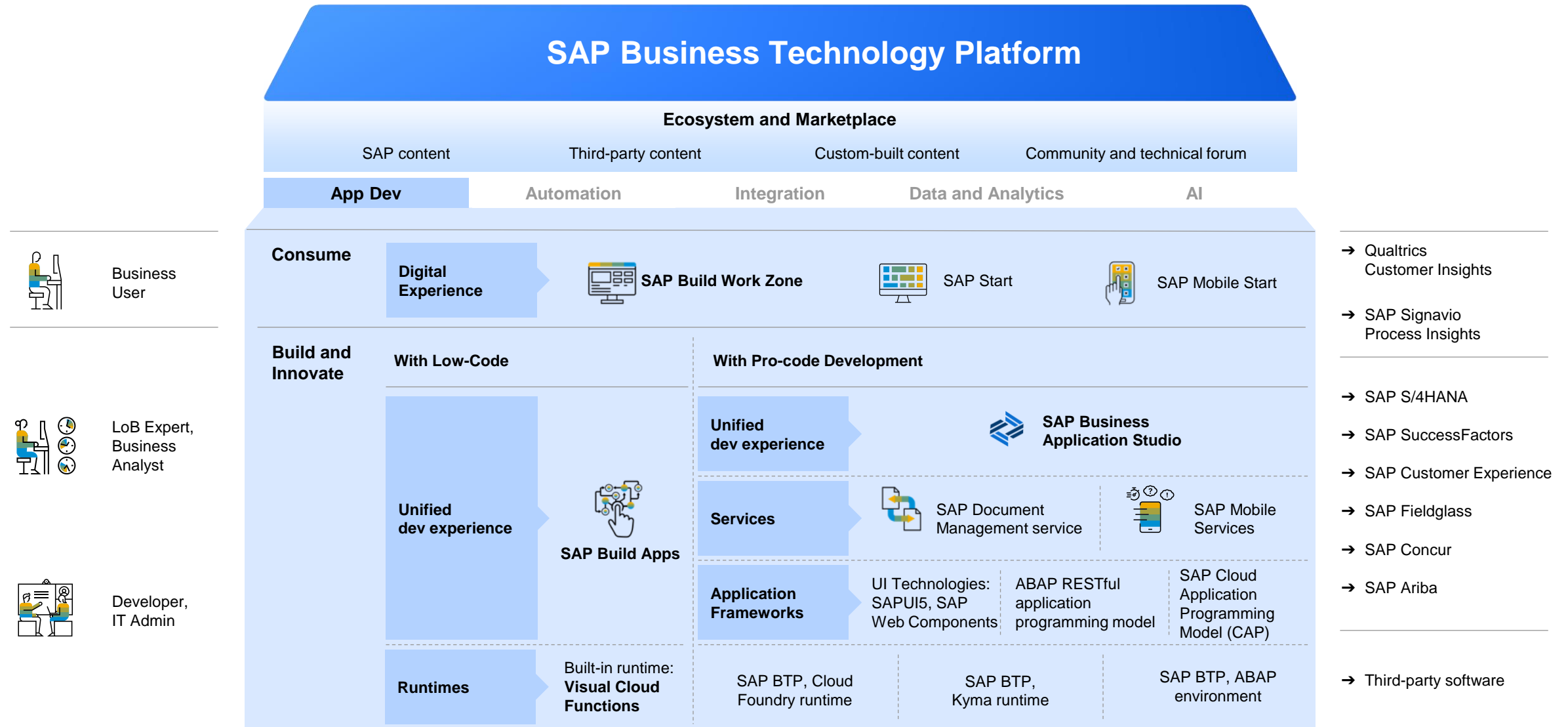
RAP Business Objects

SAP Fiori UIs

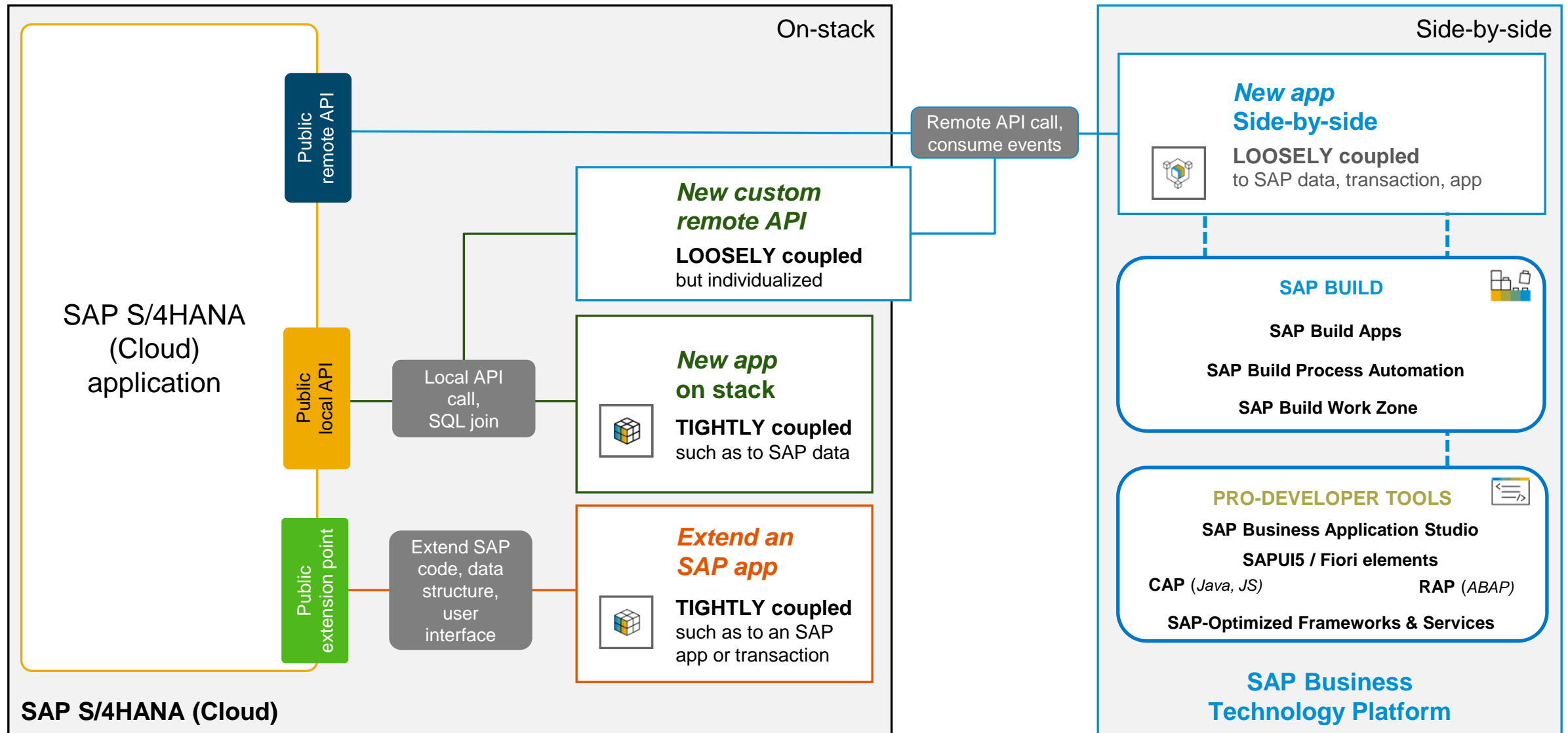
System access via ABAP Dev Tools

Released extension points for cloud development

# Side-by-side Extensibility using SAP Business Technology Platform



# SAP S/4HANA Cloud extensibility patterns



SAP Business Accelerator Hub

ExploreResourcesDiscover IntegrationsPartner with Us

Search by product, package, or category

Discover  
Products, Processes, and Partners.

Explore  
Integrations, APIs, and Accelerators.

Consume  
Visualize and consume integrations and workflows.

api.sap.com

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# SAP Business Accelerator Hub

Accelerate your integrations, extensions, and innovations

ProductsBusiness ProcessesCategoriesDomainsIndustriesMore

Choose a Product to Explore

See the various resources that each product has to offer

View All Products

FEEDBACK

SAP S/4HANA Cloud, public edition

Ready-to-run cloud ERP that delivers the latest industry best practices and continuous innovations. You can also accelerate and grow your business with continuous innovations.

🔗📄🔖📁👤📊🔄+7

SAP S/4HANA

A future-ready ERP system with built-in intelligent technologies, including AI, machine learning, and advanced analytics which transforms business processes with intelligent automation.

🔗🔗📄📄🔄📄👤+5

SAP Customer Experience

Bring together customer data, machine learning technology, and microservices to power real-time customer engagements across sales, service, marketing, and commerce.

🔗🔄👤👤📄👤📄

SAP Business Technology Platform

Accelerate business outcomes with integration, data to value, and extensibility.

🔗🔗📄🔄📄👤🔗+6

SAP SuccessFactors

A global, cloud-based human resource management software system, evolving to help people and businesses thrive in the experience economy.

🔗🔗📄📄👤🔗📄+4

SAP Ariba

A cloud-based innovative solution that allows suppliers and buyers to connect and do business on a single platform. It provides less costly ways of procurement and makes business simple.

🔗🔗📄👤🔗🔗📄+1

SAP Concur

Provides an integrated online and mobile business travel and expense management software solution that automates your travel expenses.

🔗👤📄📄

SAP Fieldglass

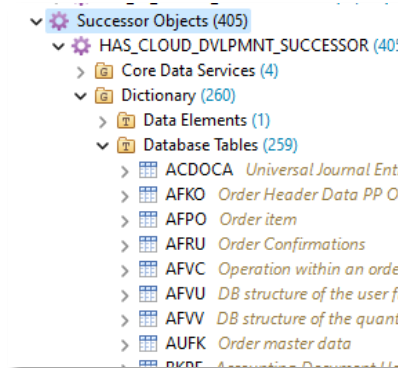
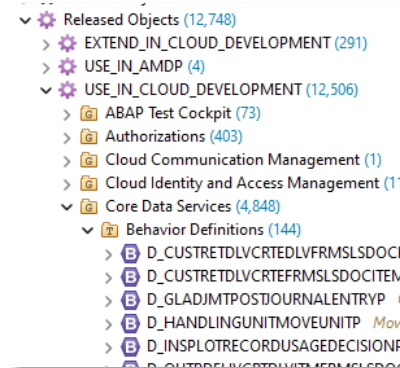
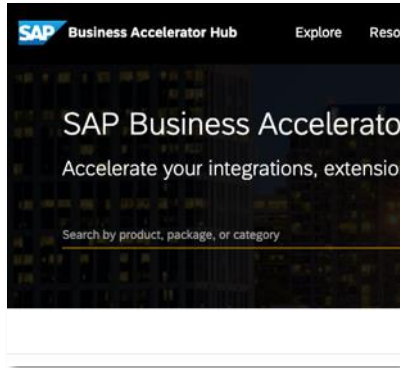
A cloud-based, open Vendor Management System that helps organizations find, engage, manage, pay, and unlock more value from this growing external workforce - anywhere in the world.

🔗📄👤📄

Chat (Beta)



# How to identify APIs for SAP S/4HANA

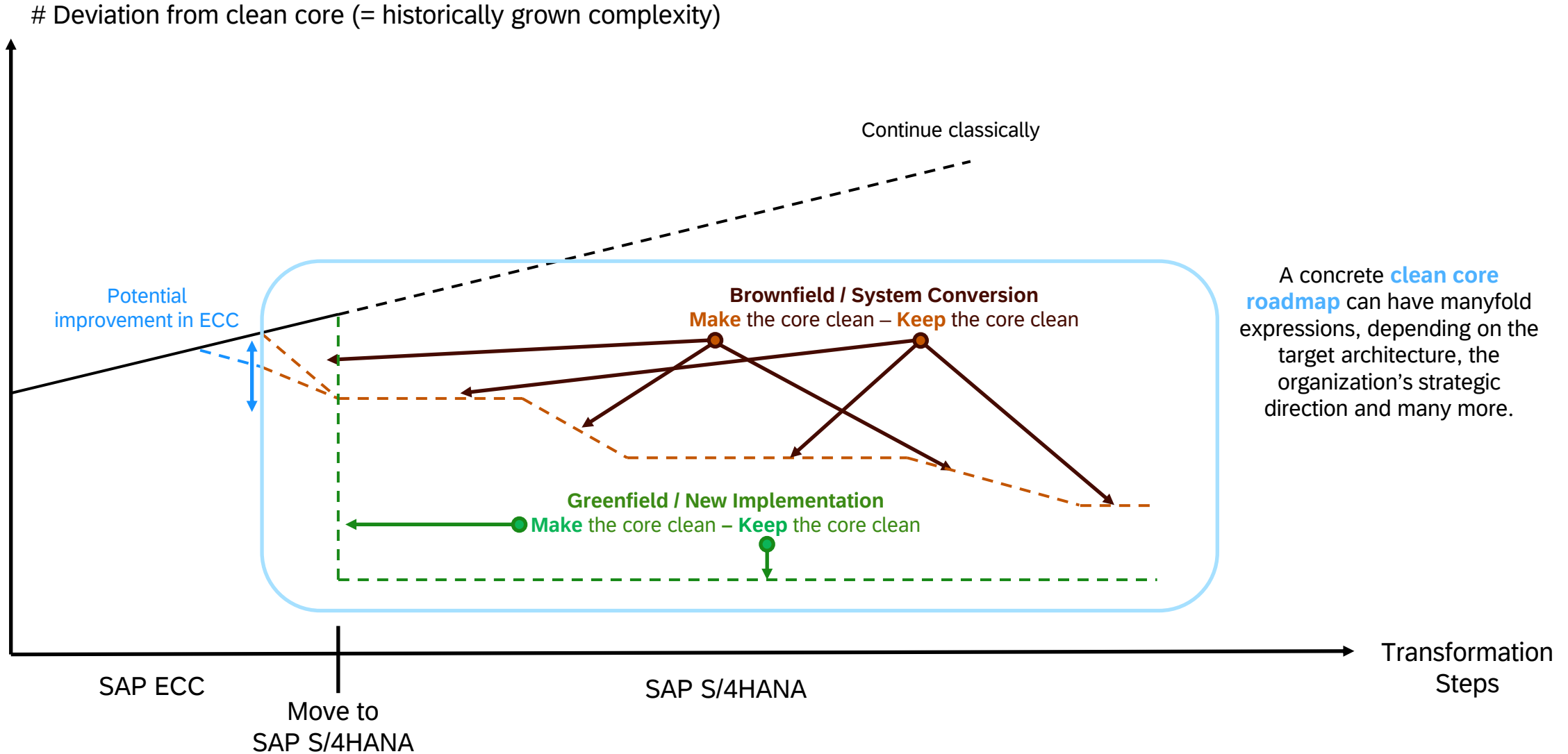


tadir_object	tadir_obj_name	object_type
926	TABL	MARA
927	TABL	MARA
928	TABL	MARA
929	TABL	MARC
930	TABL	MARC
931	TABL	MARC
932	TABL	MARC
933	TABL	MARC
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938	TABL	MARD
939	TABL	MARM

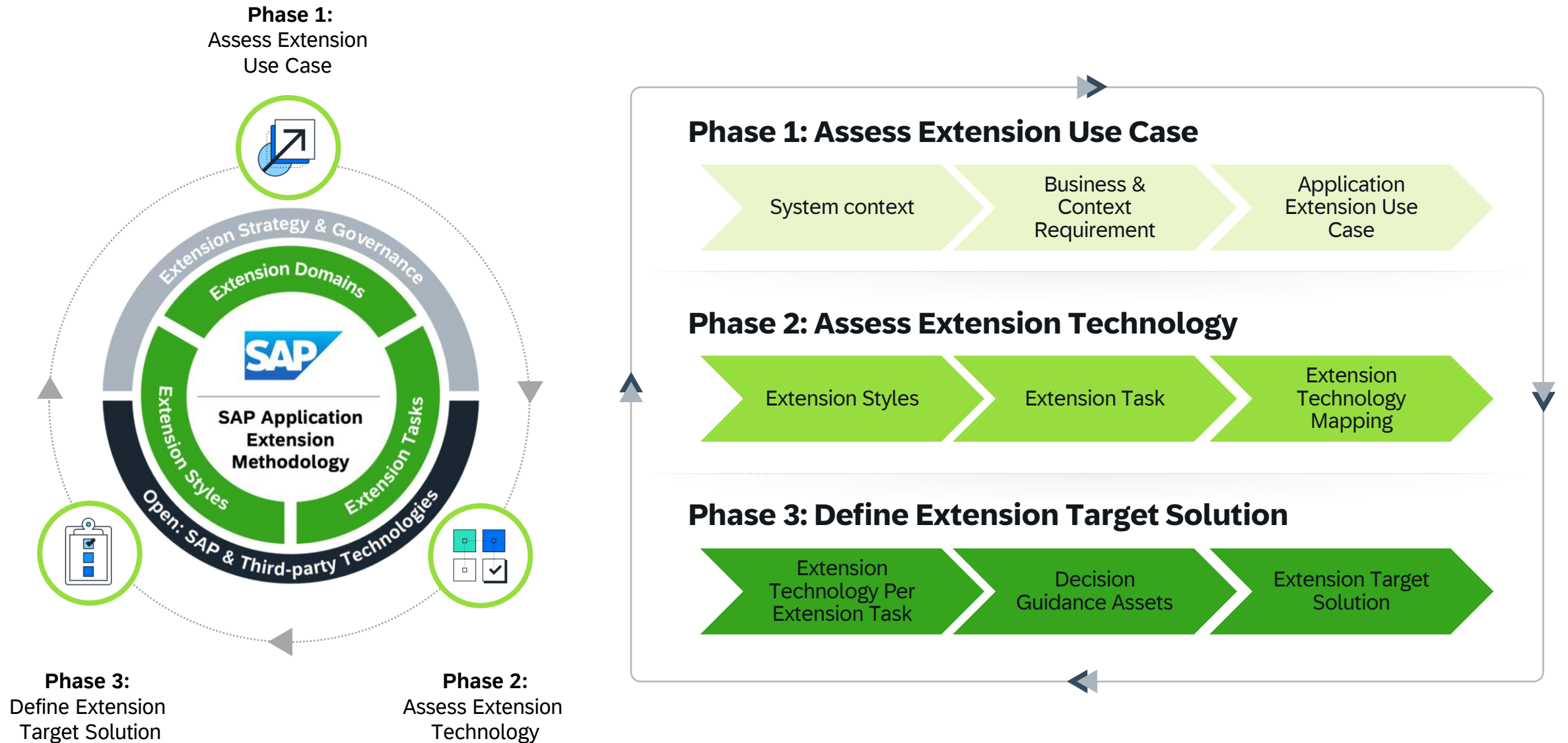


1. Discover APIs on [SAP Business Accelerator Hub](#)
2. Dive into the [released objects](#) in your [system](#)  
Property filter:  
USE\_IN\_CLOUD\_DEVELOPMENT
3. Look for successor objects in your [system](#)  
Property filter:  
HAS\_CLOUD\_DVLP\_MNT\_SUCCESSOR
4. Utilize [repository](#) of released objects
5. Request APIs for [public](#) / [private](#) cloud

# SAP S/4HANA transformations and clean core



# SAP Application Extension Methodology



# Project specific guidelines

## Examples based on SAP Application Extension Methodology

**P03: Create custom UI**

Phase 3: Define Extension Target Solution

**ILLUSTRATIVE**

Code	Extension Domain	Technical Building Block	Explanation
Core	Core	SAP Key-User In-App Extensibility: Generated UI based on custom business object	Usage only for CSO-based extensions, comparable to Fiori Elements deployed on S/4
Core	Core	SAP Fiori Elements deployed on S/4HANA	Default for all core extensions with business users
Core	Core	SAPUI5 Freestyle deployed on S/4HANA	Only if Fiori Elements not suitable
Side-by-Side	Side-by-Side	SAP Fiori Elements deployed on BTP	Default for all side-by-side extensions
Side-by-Side	Side-by-Side	SAPUI5 Freestyle deployed on BTP	Only if Fiori Elements not suitable
Side-by-Side	Side-by-Side	SAP Launchpad Service (BTP)	Recommended Access/Collection for Side-by-Side UIs
Side-by-Side	Side-by-Side	SAP Task Center	Recommended UI Framework for approval UIs
Side-by-Side	Side-by-Side	SAP AppGyver (No-Code)	Recommended Framework for no-code use cases
Core	Core	SAP Classic Dynpro & SAP WebDynpro ABAP	Only usable in case of temporary extensions based on "classic" technology

90

**A01: Add business logic/pre-fill/validate fields before/within/after existing business process**

Phase 3: Define Extension Target Solution

**ILLUSTRATIVE**

Code	Extension Domain	Technical Building Block	Explanation
Core	Core	Developer Extensibility: „BAdI“ implementation	Developer extensibility preferred due to better Developer Experience (e.g. debugging)
Core	Core	SAP Key-User In-App Extensibility: Custom Logic App (BAdIs)	
Core	Core	SAP Classic ABAP BAdIs (SE16/SE19)	Necessity to check / request API for S/4 cloud, still better than classic exits
Core	Core	SAP Classic: SMOO/CMOD (Customer exits)	Approval needed due to loss of "cloud readiness"
Core	Core	SAP Classic: User Exits	Approval needed due to loss of "cloud readiness"
Core	Core	SAP Classic: Modification	Special approval needed, still better than "clone"

90

**D03: Add custom field to existing business object**

Phase 3: Define Extension Target Solution

**ILLUSTRATIVE**

Code	Extension Domain	Technical Building Block	Explanation
Core	Core	SAP Key-User In-App Extensibility: Custom Fields App	
Core	Core	SAP Classic: Customizing Include (CI_*)	Only if no suitable business context in Key User Tools available; Necessity to check / request API for S/4 cloud; manual addition to APIs&UIs needed
Core	Core	SAP Classic: Append Structure	Only if no suitable business context in Key User Tools available; Necessity to check / request API for S/4 cloud; manual addition to APIs&UIs needed
Core	Core	SAP Classic: Extension Includes	
Core	Core	SAP Classic: Table modification	

90

Code	Explanation
	Recommended Solution in future landscape
	Restricted allowance in general, should only be considered if no "green" aspect can be used (e.g. no BAdI available, no released API-View available etc.) Decision can be taken on Architect Level
	Only allowed with special approval from Architecture Council.
	Generally prohibited in future landscape

# Decouple extensions from standard

## Main Aspects:

- ✦ Extensions should be **avoided** when possible
- ✦ Create **decoupled Extensions**, i.e. in a way that they would work in the cloud (3-Tier Model) by setting up a **strong governance**
- ✦ **Custom extensions** do not break an upgrade and **upgrades** do not break an extension\* - separate extensions by leveraging released APIs
- ✦ Leverage the full capabilities of extensibility **on the stack** as well as side-by-side **with SAP BTP**
- ✦ Create **technical debts** only as informed decision

Keep **competitiveness** while **reducing complexity**.

1

Business Processes

**Decouple extensions** from standard.

2

Extensibility

Control data according to **latest standards**.

3

Data

Keep the landscape **reliable and flexible**.

4

Integration

Keep the operations **effective and efficient**.

5

Operations

# Extend SAP S/4HANA in the cloud and on-premise with ABAP based extensions

## SAP S/4HANA Extensions

(cloud, private cloud, and on-premise)

- Guidelines for extension project managers, key users, and ABAP developers
- Learn how to choose, implement, and use the extensibility options correctly
- Move from classic custom ABAP extensions to an SAP S/4HANA extensibility model for future-proof extensions



To access scan this code or click [here](#).



PUBLIC

### Extend SAP S/4HANA in the cloud and on premise with ABAP based extensions

Guidelines for extension project managers, key users, and ABAP developers



VERSION 2.0 / MAY 2023

SAP Cloud rules, the use of an ATC baseline is...  
usage of ABAP Cloud can be found in the blog post [https://blogs.sap.com/2023/05/23/cockpit-supports-you-to-adopt-abap-cloud/](#)

is given in the table below.

ON-STACK	STRUCTURING
ment model is used... s are created in language... Development... are enforced by syntax... ry IDE... emplate... VELOPER_5.	Software component with... language version ABAP for... Cloud Development.
created in language... AP... ill be released for Cloud... asable in tier 1... re enforced via the ATC... model IDE... emplate... VELOPER_5 and add the... ndard ABAP via	New packages in HOME or... own software component for... classic ABAP if a namespace... is used.
s are created in language... AP... AP Cloud rules are... empted from ABAP... a base line	Packages in HOME or... existing software component... for classic ABAP.

nt objects in a software component for classic ABAP...  
quired (→ Figure 5.5).

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nd services are developed in the modern, Eclipse-...  
efficient development flow, and a rich feature set for...  
ich SAP Fiori-based toolset for key users for creating...  
ports, KPIs and analytical stories...  
nd [SAP S/4HANA embedded analytics – User Roles](#)

is based on CDS. Based on an opt-in approach, the...  
tensibility use cases depending on the specific data...  
abilities for dedicated extension points, enabling a...  
al data model and line extensions.

odels...  
it can be extended individually using predefined...  
ou can use extension points to make your own...  
ered SAP content.

#### EXTENSIBILITY TASK

##### Extensibility Enablement:

dd annotations and extension include...  
ructures to the original dimension to enable...  
ata model extensions like fields or...  
sociations.

##### Extension Development:

23/52

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# SAP Build Apps

Zoom level: 100%

## New Purchase

Customer Number:

Customer Name:

Title

Available  
Reward  
Points

Title

Total  
Redeemed  
Points

Title

Total  
Purchase  
Value

Select Product

Select option

Label

Type here...

Button

Dropdown Field 1

< Home page New Purchase

## New Purchase

Customer Number: 1200547

Customer Name: Tom Brown

16

Available  
Reward  
Point

2271

Total  
Redeemed

23172

Total  
Purchase

Tom Brown has successfully  
earned 50 points!

OK

Select

MZ-Ph

Purchase Value

500

Add Points!

# Thank you.

Contact information:



**Fabian Sölker**

SAP Deutschland SE & Co. KG

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Germany

E: [fabian.soelker@sap.com](mailto:fabian.soelker@sap.com)



## **Control the Data according to latest standards (Data Dimension):**

**How deploying a holistic data strategy (master data, configuration data, transaction data, data volume and data sizes) will help built trust, reliability and insights with the business**



**Daniel  
Mesics,**

Daniel Mesics, Senior  
Technology Consultant

# Addressing a clean core is an ongoing strategic activity

## 1. Extensibility

Keep the **extensions** clean

## 2. Data

Keep the **data** lean

## 3. Integrations

Keep the **landscape** reliable

## 4. Processes

Keep the **processes** flexible

## 5. Operations

Keep the **operations** effective and efficient

A **clean core** is a system that is as close to standard as possible, while running cloud-compliant extensions and integrations.

It allows you to **adapt your system** to changing business requirements and to **adopt new capabilities**.

# Keep the data clean

## 1. Extensibility

Keep the **extensions** clean

## 2. Data

Keep the **data** lean

## 3. Integrations

Keep the **landscape** reliable

## 4. Processes

Keep the **processes** flexible

## 5. Operations

Keep the **operations** effective and efficient

## Data quality

Configuration, master, and transactional data

## Data privacy compliance

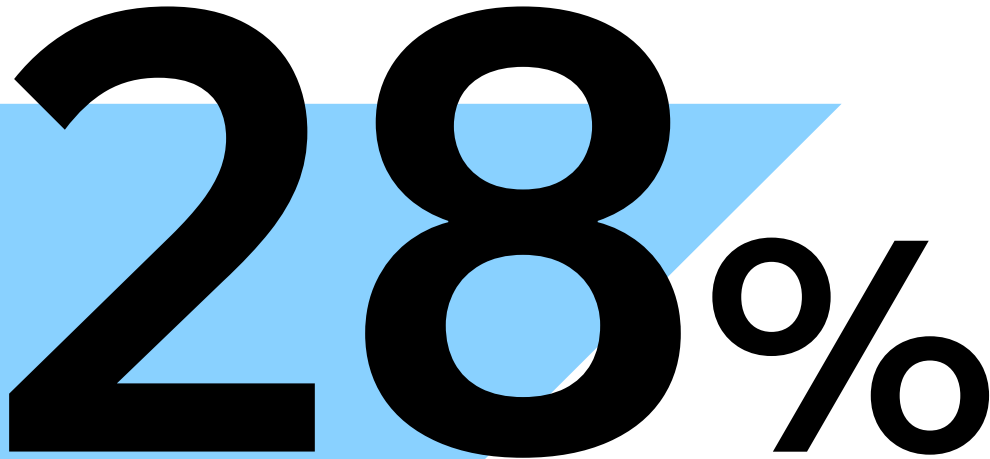
Store and process personal master data only with justifiable purposes

## Data volume efficiency

Master and transactional data

# Data Quality

# Master Data Quality



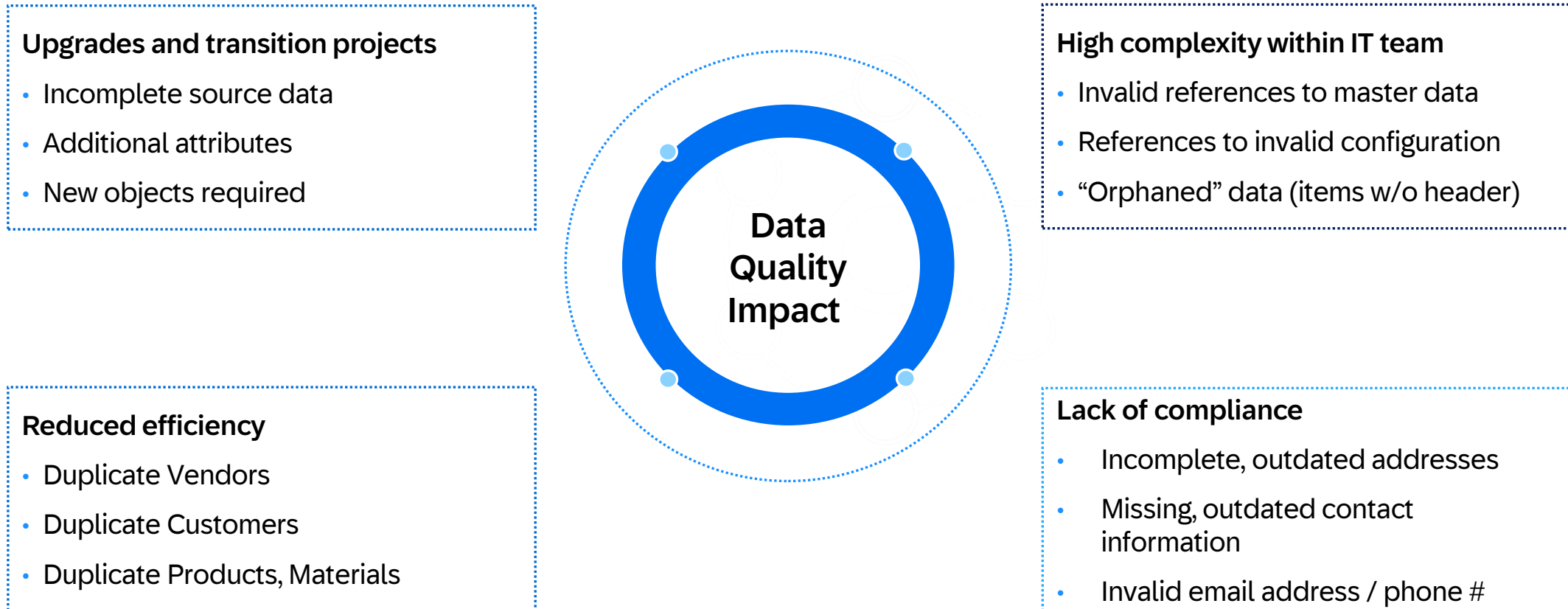
28%

of scanned **master data objects** contain errors and issues towards consistency, completeness and conformity in customer ERP and S/4HANA applications\*

\*average number calculated based on 50+ Data Quality services delivered world wide



# Implications of Data Quality



# How do you define clean data?



## **Accuracy**

Reflects the reality of the business



## **Completeness**

Supports business operations and decision-making



## **Consistency**

Consistent to minimize confusion, errors, and inefficiencies



## **Timeliness**

No outdated information that could affect business-critical processes



## **Validity**

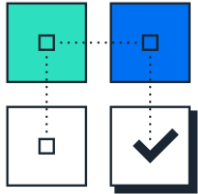
Conforms with defined standards and business rules



## **Uniqueness**

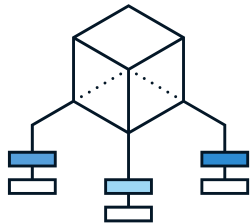
Data offers a concise and clear view of the information

# How to get and keep data clean?



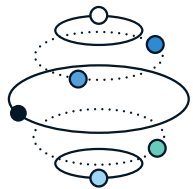
## **SAP Data Quality Improvement Service – Simplify, improve and boost data quality**

- Analyze data from multiple source systems including legacy and non-SAP systems
- Flexible adaption of rules and analysis of data
- Out of the box rules based on years of consulting experience
- End-to-end support for data extraction, analysis and results



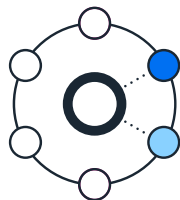
## **SAP One Domain Model (ODM) - Unifying semantics to define business objects**

- Standardizes how SAP expresses business semantics and relationships between business objects in APIs
- Aligned domain models enable consistent APIs and reduce dependencies
- Lower integration efforts due to aligned objects across products



## **SAP Master Data Integration – Unifying data distribution across solutions**

- Ensures the consistency and integrity of master data across various SAP and non-SAP applications
- Acts as a central hub for the distribution and synchronization of master data, such as customer, product, and vendor information
- Consolidation, data quality control, and central governance in combination with SAP Master Data Governance

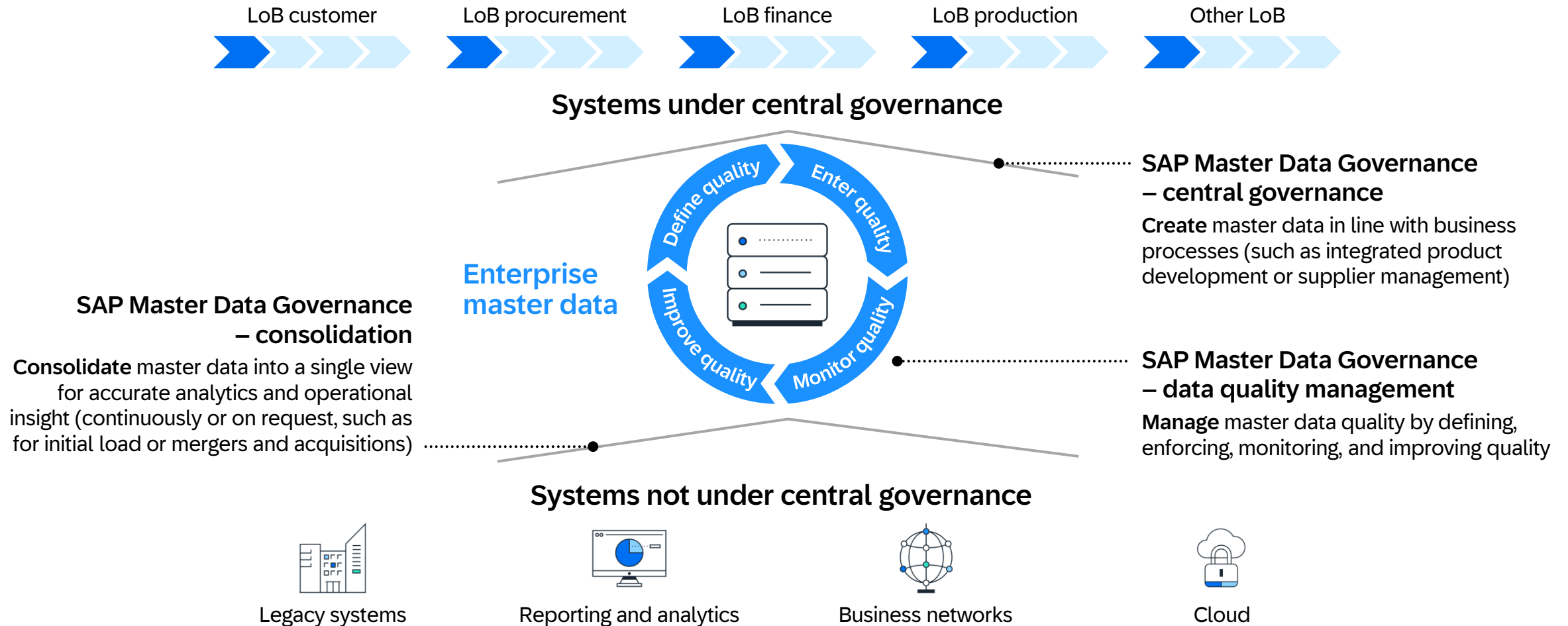


## **SAP Master Data Governance – Enforcing data quality**

- Consolidate master data into a single view for accurate analytics and operational insight
- Create master data inline with business processes (integrated product development, supplier management)
- Manage master data quality by defining, enforcing, monitoring and improving data quality

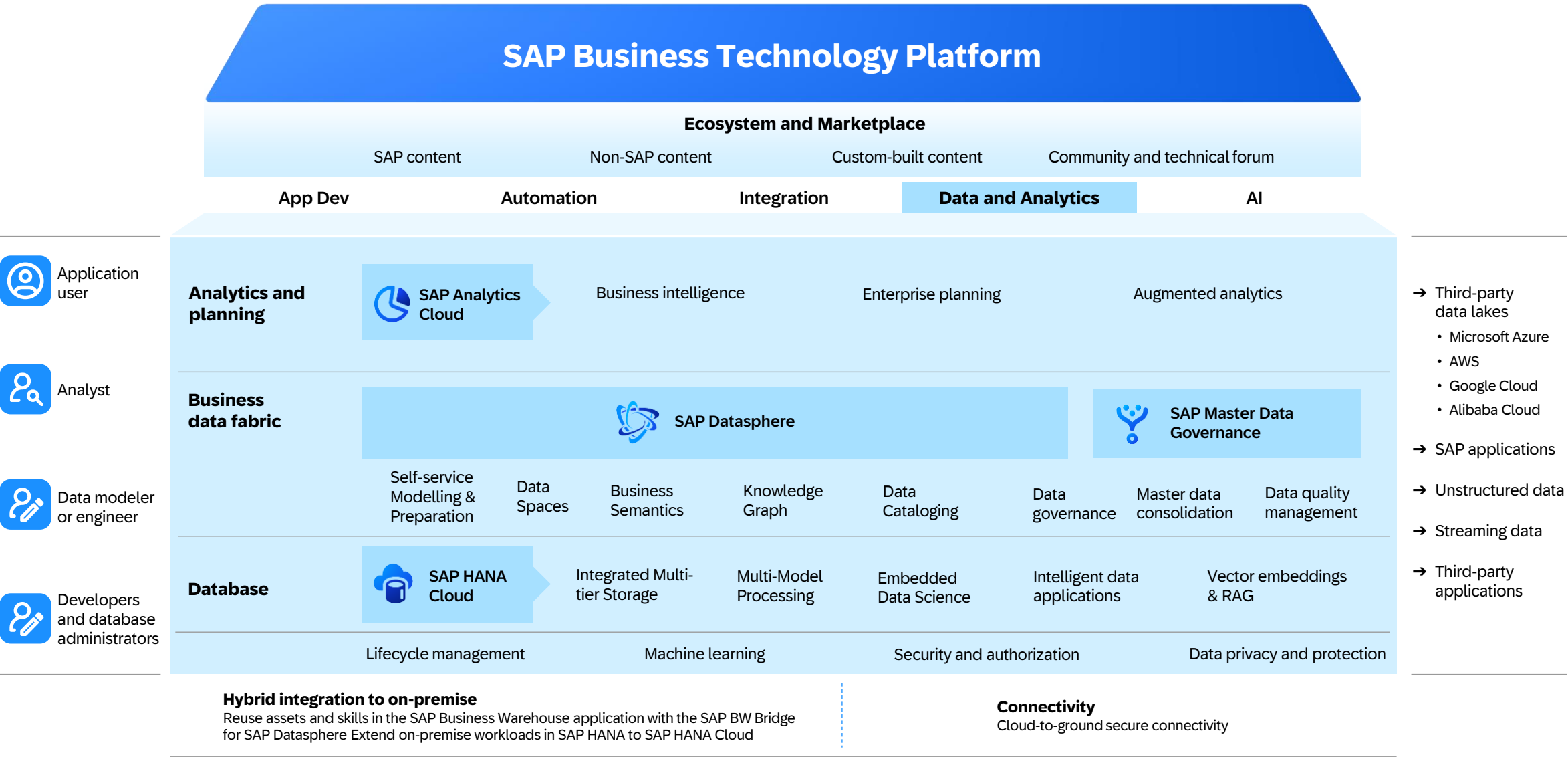
# Typical approaches to master data management

## Central governance and distribution or decentralized ownership and consolidation



All typical approaches are supported: central governance with distribution, decentralized ownership with consolidation, data quality monitoring with remediation

# Data and analytics with SAP BTP



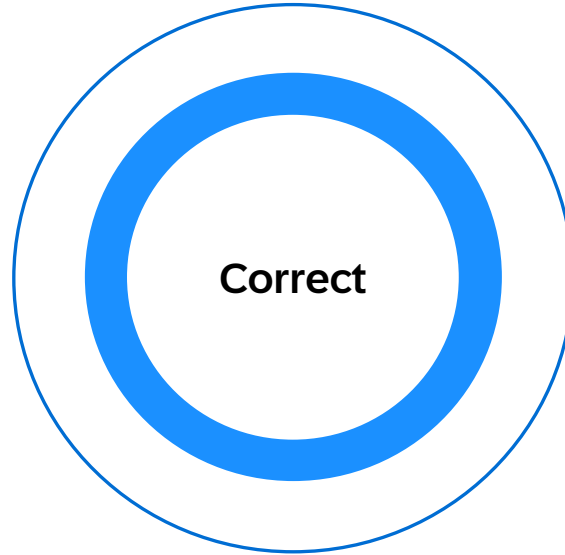
# Data Privacy Compliance

# Relevance of Data Privacy Compliance

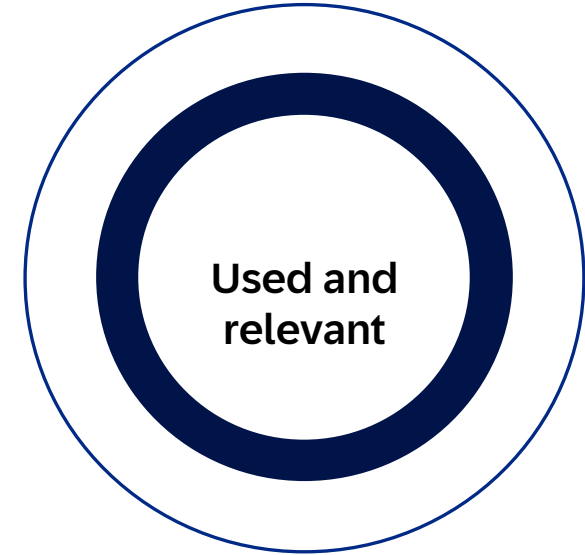
Clean data is



Comprehensive, including all necessary information required for its intended purpose without omissions



Accurate and free from errors to ensure reliability and trustworthiness



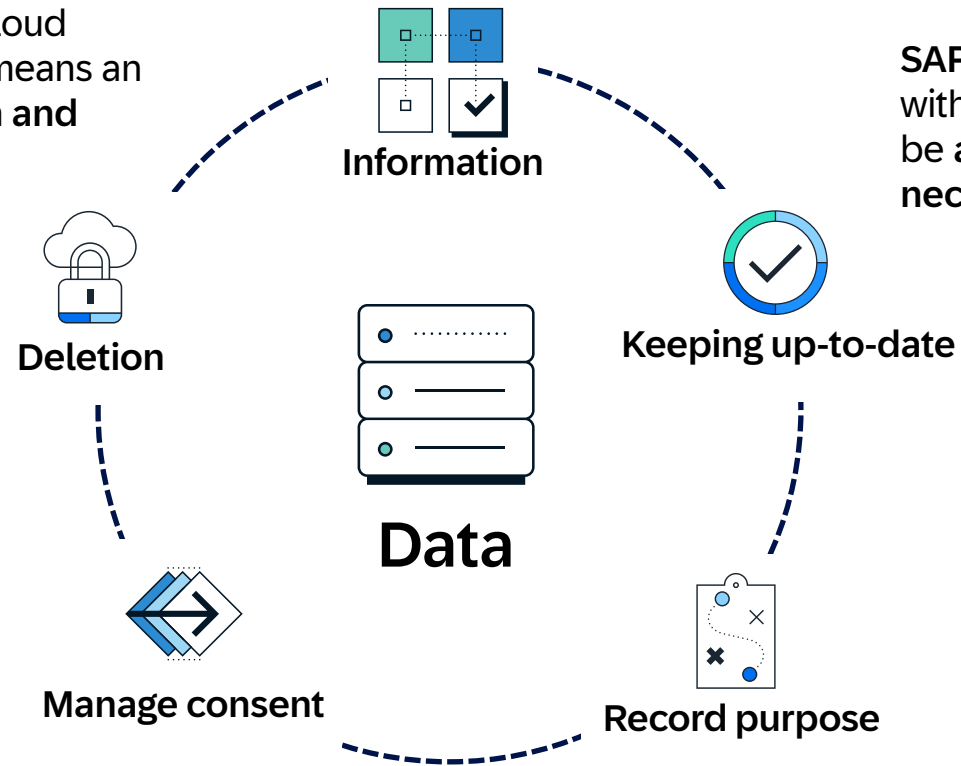
Pertinent and actively utilized in accordance with its intended purposes, avoiding unnecessary or extraneous information

**Only compliant data is clean data**



# Data Privacy Compliance in Practice

Clean core means, up-to-date, transparent, unmodified, consistent, efficient and cloud compliant. In the data dimension this means an **ongoing effort to keep the data clean and compliant**.

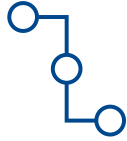


**SAP offers technical solutions to comply with regulatory requirements, which need to be aligned with business inputs and necessities.**

It's essential to respect user rights, collect only data required for operational needs, and maintain transparency about data usage.

# Data Privacy Compliance

## Data Protection and Privacy Analysis Service



Identify where personal data is processed

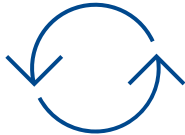


Support residence and retention period definitions



Insights on purpose and identifying archiving objects

## SAP Information Lifecycle Management



Automate data protection processes



Ensure only data with purpose is stored



Support data archiving and destruction

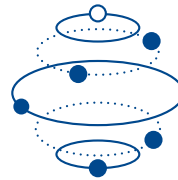


Enable compliant data management

## SAP Data Privacy Integration



Data protection for SAP BTP apps



Flexible and scalable framework



Implement easily with reuse architecture

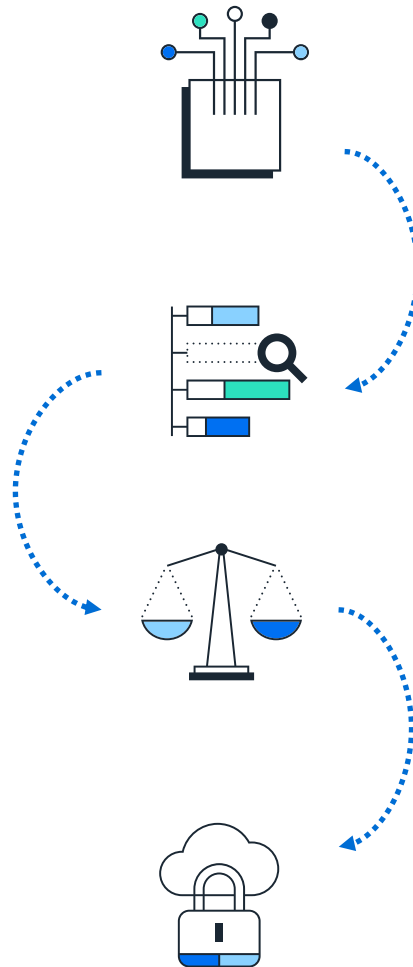
# SAP ILM – Lifecycle of data

## Data Object (ILM Object)

Data (both **structured data** and **unstructured data**) are grouped according to business process and technical logic into data object

## Retention regulations

Regional legal entities regulate the data retention period for auditing and other legal purposes



## Data usage

Status concept indicates the usage of data, for example “open”; “in process”; “completed” ...

## Data destruction

When the retention regulations have been fulfilled, data (both **structured data** and **unstructured data**) must be destroyed

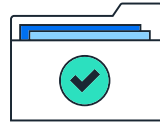
# SAP ILM – Archiving and Data Destruction



Data in DB



ILM Rule Engine



ILM Enabled Archive



ADK Destruction

## ILM Enabled Archive

With ILM functionality, ADK (archive file) will be created considering the retention policy

ADK file can be destroyed according to the retention time



Direct Data Destruction

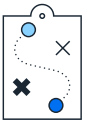
## Direct Data Destruction

With ILM functionality, data from the data base can be destroyed according to the retention time

# SAP DPI – Managing data lifecycle on SAP Business Technology Platform

## Retention Management capabilities:

- Delete personal data based on residence and retention rules
- Right to be forgotten



### Manage Business Purposes

- Configuration of residence and retention rules
- Definition of reference date
- Activation/deactivation of rules



### Delete Data Subjects Information

Delete selected data subjects

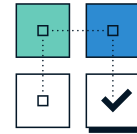


### Manage Data Archiving

Creation and execution of data archiving runs

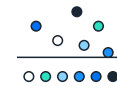
## Information Access capabilities:

- Identifying and exporting personal data
- Right of information and right to portability



### Manage Personal Data

- Display personal data
- View and export personal master and transactional data
- Multiple formats to export are available



### Manage Personal Data Requests

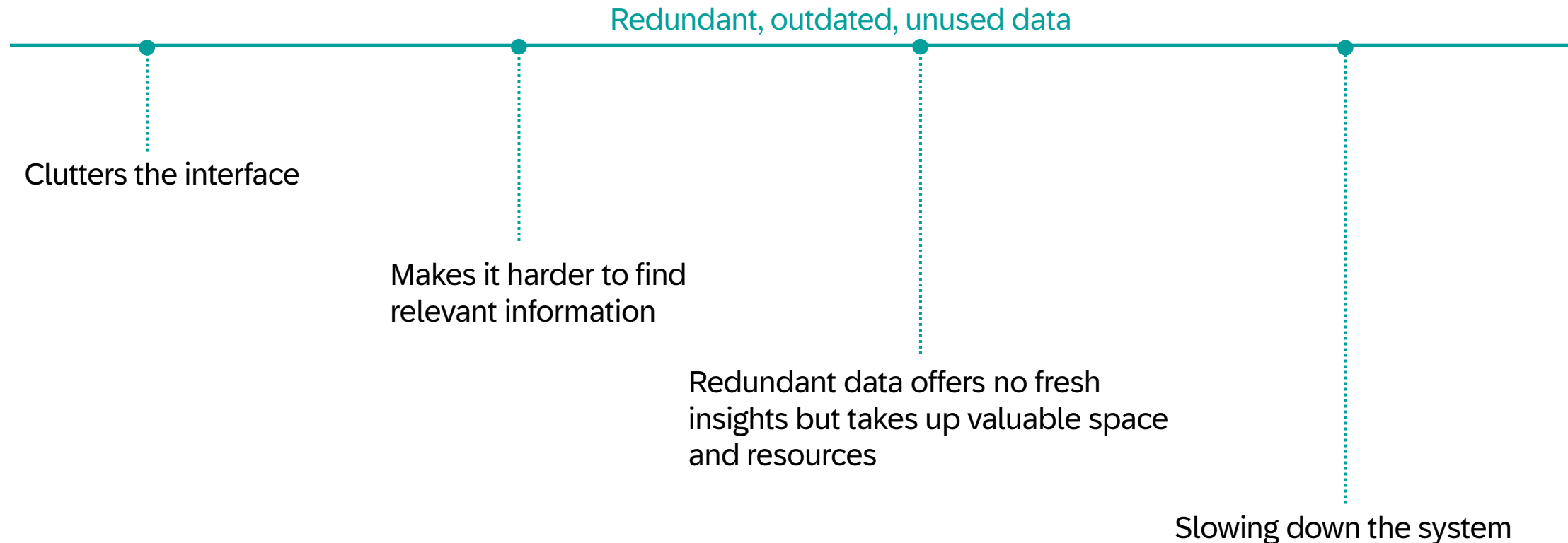
- View and manage requests
- Central component to view deletion -and change requests

# Data Volume Efficiency

# Relevance of Data Volume Efficiency

Data Volume Efficiency is essential in **maintaining the usefulness and relevance** of the database. Therefore, it's imperative to routinely delete data beyond its useful life (expired purpose and retention period) from the system.

**Data redundancy and unused data** pose severe **efficiency concerns**.





# Data Volume Efficiency

Data volume efficiency part of the data lifecycle:

- **Create** - Prevent duplicates

- **Read**

- **Update**

- **Delete** - Remove outdated data

- Ensure standard housekeeping is done according to SAP's recommendation
- Benefits: Reduces storage costs and improves data quality

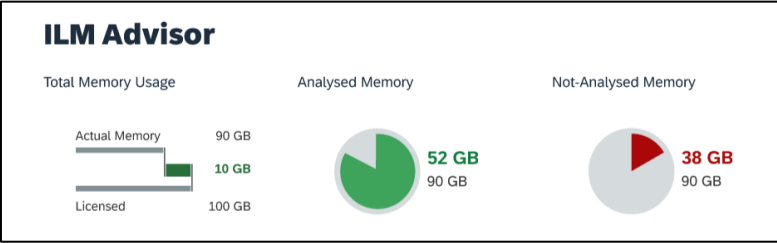
- Regularly delete data in line with retention policies
- Use automated tools for data deletion and archiving
- Benefits: Frees up storage capacity and maintains database performance



## For Data Volume Efficiency (from creation until end of life)

1. Establish a continuous process to manage data effectively
2. Define a validation rule framework, approval process, and automated distribution framework for newly created, changed, or deleted data records (e.g. via SAP MDI / SAP MDG)
3. Define continuous data monitoring to ensure ongoing data integrity and efficiency
4. Implement archiving, deletion, or data tiering processes to optimize database performance and storage utilization (e.g. via SAP ILM / SAP DPI)

# ILM Advisor – Overview



Total Memory Usage <b>Memory Usage Statistics</b> Growth Statistics				
Memory Usage Per ILM Object				
ILM Object	ILM Object Description	Memory Used	Residence Time(in Months)	Time Based Potencial
BC_SBAL	Application Log	12 GB	— 12 +	5.32 GB
AIF_ME	ILM object for the AIF Messages	5 GB	— 14 +	3.56 GB
BC_SAL	Security Audit Log	3 GB	— 15 +	2.67 GB
FI_DOCUMNT		8 GB	— 13 +	7.56 GB
FQM_FLOW	ILM Object for FQM Flow Data	11 GB	— 19 +	8.35 GB
MM_MATBEL	Materials Management: Material Documen	7 GB	— 16 +	4.71 GB
MM_EKKO	Purchasing Documents	3 GB	— 18 +	2.21 GB
SD_VBRK	Billing Documents	1 GB	— 14 +	0.77 GB
SD_VBAK	Sales Documents	2 GB	— 12 +	1.67 GB

## SAP ILM Advisor

Available as part of SAP S/4HANA Cloud solution that offers capabilities to monitor, analyse the memory consumption by applications and the related SAP Information Lifecycle Management objects

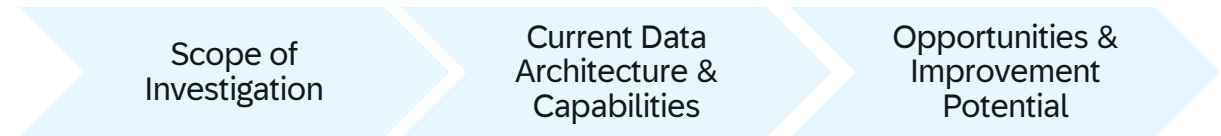
### Further functionalities:

- Analyzes and displays the memory consumed by business data and the related ILM-enabled archiving objects
- Provides transparency on the potential for data reduction of your biggest data consumers for ILM-enabled archiving objects
- Provides insights into the age of data created by business processes
- Provides history and details of the memory consumed by ILM-enabled archiving objects
- Provides an overview of the effect and success of your ILM data archiving activities

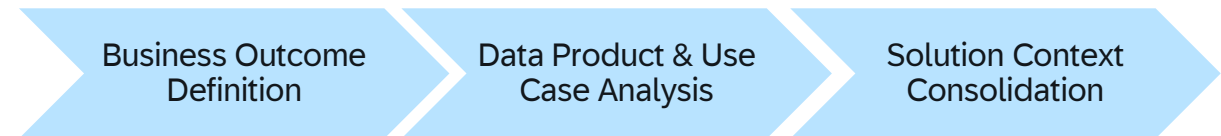
# SAP Data and Analytics Advisory Methodology

A framework providing best practices and tools for data management and analytics, helping organizations develop data strategies and maximize data value

## Phase I: Scoping & Baseline Analysis



## Phase II: Business Outcomes & Solution Requirements



## Phase III: Capability Map & Solution Architecture

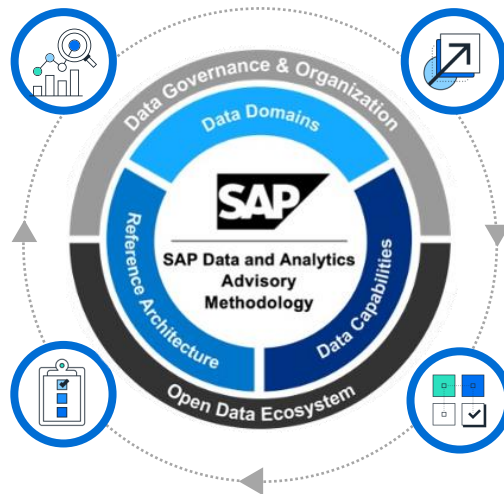


## Phase IV: Data Governance & Roadmaps



**Phase I:**  
Scoping & Baseline  
Analysis

**Phase II:**  
Business Outcomes & Solution  
Requirements



**Phase IV:**  
Data Governance &  
Roadmaps

**Phase III:**  
Capability Map & Solution  
Architecture

# Control data **quality**, data **volume** and data **privacy**

## Main Aspects:

- ✿ Modern (configuration, master and transactional) data quality requirements are accuracy, completeness, consistency, timeliness, validity and uniqueness
- ✿ Data volume needs to be controlled in order to optimize memory and disk consumption i.e. data should not contain outdated, unused or redundant information
- ✿ Personal master data must only be stored with justifiable purposes

Keep **competitiveness** while **reducing complexity**

1

Business Processes

**Decouple extensions** from standard.

2

Extensibility

Control data **quality**, data **volume** and data **privacy**

3

Data

Keep the landscape **reliable and flexible**

4

Integration

Keep the **operations** effective and efficient

5

Operations

# Thank you.

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# Thank you.

