

WELCOME



SAP Cloud Platform: Get Started Building Your Intelligent Enterprise

Uncover and understand how SAP Cloud Platform is being used today for cloud-to-cloud, cloud-to-ground, and hybrid scenarios to build your Intelligent Enterprise.

Agenda

| | |
|-----------------|---|
| 8:00a – 8:15a | Welcome & Introductions |
| 8:15a – 9:00a | Overview of SAP Cloud Platform |
| 9:00a – 10:00a | Deliver next-gen, integrated scenarios across the Intelligent Suite |
| 10:00a – 10:15a | Break |
| 10:15a – 12:00p | Hands-on : Extend SAP C/4HANA with mobile extensions and integrations |
| 12:00p – 1:00p | Lunch |
| 1:00p – 3:00p | Hands-on : Extend SAP S/4HANA Cloud using the application programming model for SAP Cloud Platform |
| 3:00p – 3:15p | Break |
| 3:15p – 5:00p | Hands-on : Create dashboards with SAP Analytics Cloud based on SAP HANA as a service |
| 5:00p – 5:30p | Meet the experts |



October 1, 2018

Who we are



Christoph Liebig

Head, Product Management
SAP Cloud Platform



Matthias Allgaier

Office of the CTO
Integration



Matt Carrier

Product Management
SAP Cloud Platform Mobile Services



Jeff Gebo

Product Management
SAP Cloud Platform



Colin Kraczkowsky

Product Management
SAP Cloud Platform



Jennifer Cha

Product Management
SAP Cloud Platform



Manju Venkatesh

Product Management
SAP Cloud Platform



Sabrina Dick

Product Management
SAP Cloud Platform

Getting to know you

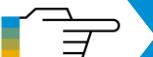
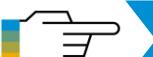
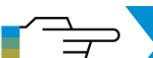
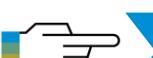
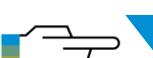
- Raise your hand if you have ever used SAP Cloud Platform.
- What part of the business are you in : IT? Development? HR? Finance? Management?
- What are you hoping to get out of today's seminar?
- Please raise your hand if you did not bring a laptop and mobile device.

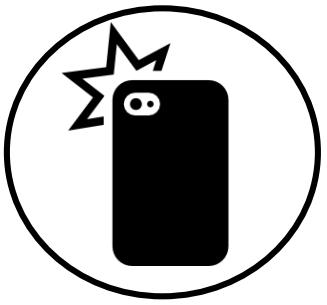


Your SAP Cloud Platform learning map @ TechEd



Where you can go after this

-  **CNA114** How-to Develop Smart Business Applications: Options and Guidance
-  **CNA118** SAP Cloud Platform: Overview of the Extension Platform for SAP Solutions
-  **CNA123** Innovate on SAP Cloud Platform Using the New Adoption Experience
-  **CNA217** Extend Processes with SAP SuccessFactors HCM Suite and SAP Cloud Platform
-  **CNA378** Build and Integrate SAP Cloud for Customer Solution Extensions on SAP Cloud
-  **CNA462** Develop UIs for Microservices-Based Applications on SAP Cloud Platform
-  **CNA837** Strategy and Road Map: Integration and Extensibility for SAP Sales Cloud
-  **LT132** Succeed in Hybrid Cloud Landscapes
-  **OPP816** SAP Cloud Platform: Road Map and Big Picture



Welcome back from the break!

Introducing the SAP Cloud Platform Discovery Center

What is it?

Start implementation Missions

...based on proven use cases

...with project boards and access to expertise.

The SAP Cloud Platform Discovery Center is a web-based platform designed to help users start, implement, and drive outcomes for the intelligent enterprise. It features a dashboard with four main mission categories:

- Got Started:** Helps users select and launch their first mission.
- App Missions:** Run new app initiatives for better outcomes in your live of business.
- Platform Missions:** Apply new platform capabilities and develop with best practices.
- Learning Missions:** Get familiarized with the mission and capabilities of the intelligent enterprise.

Below the dashboard, there are sections for "Showing 23 Missions out of 27" and "SAP SuccessFactors Extensions for HR Professionals". The HR extensions board includes sections such as GET MOTIVATED, LEARN THE TECH, START A PROJECT, STAY INFORMED, and USING THIS BOARD.

Try it today!



OR GO TO

bit.ly/adopt-scp-teched18

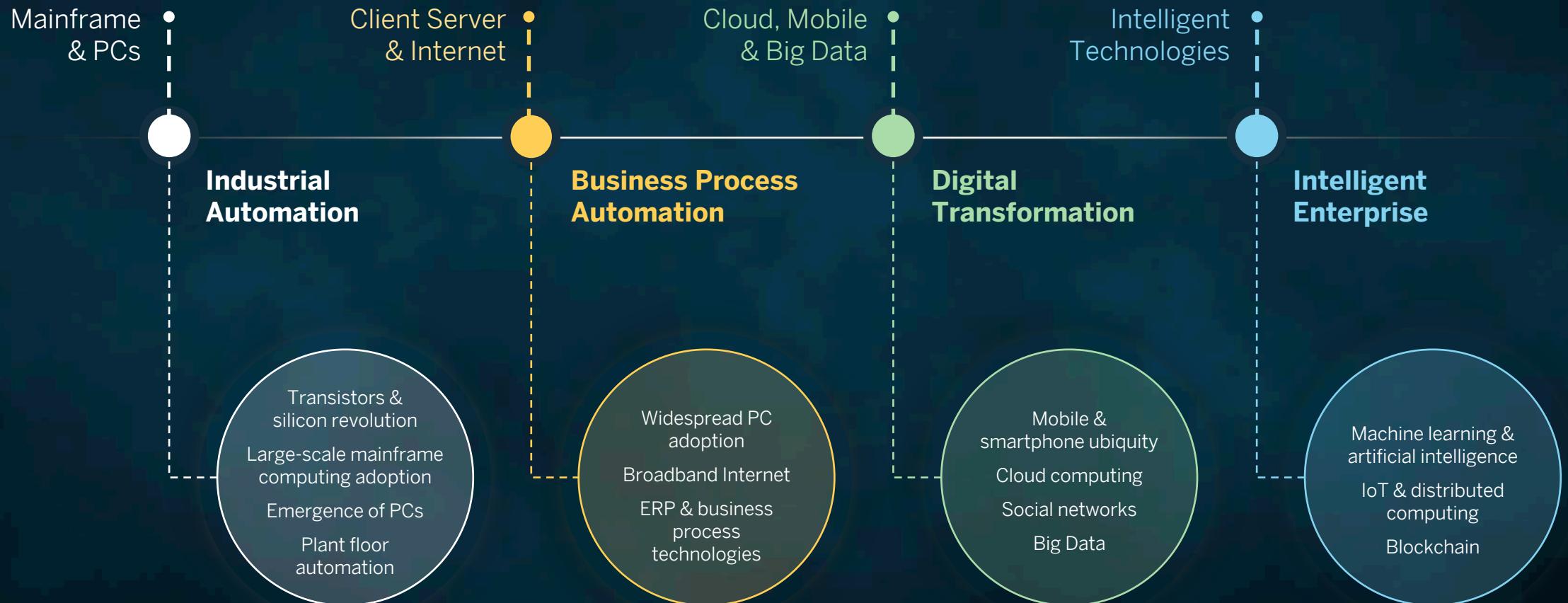
SAP Cloud Platform

Vision & big picture

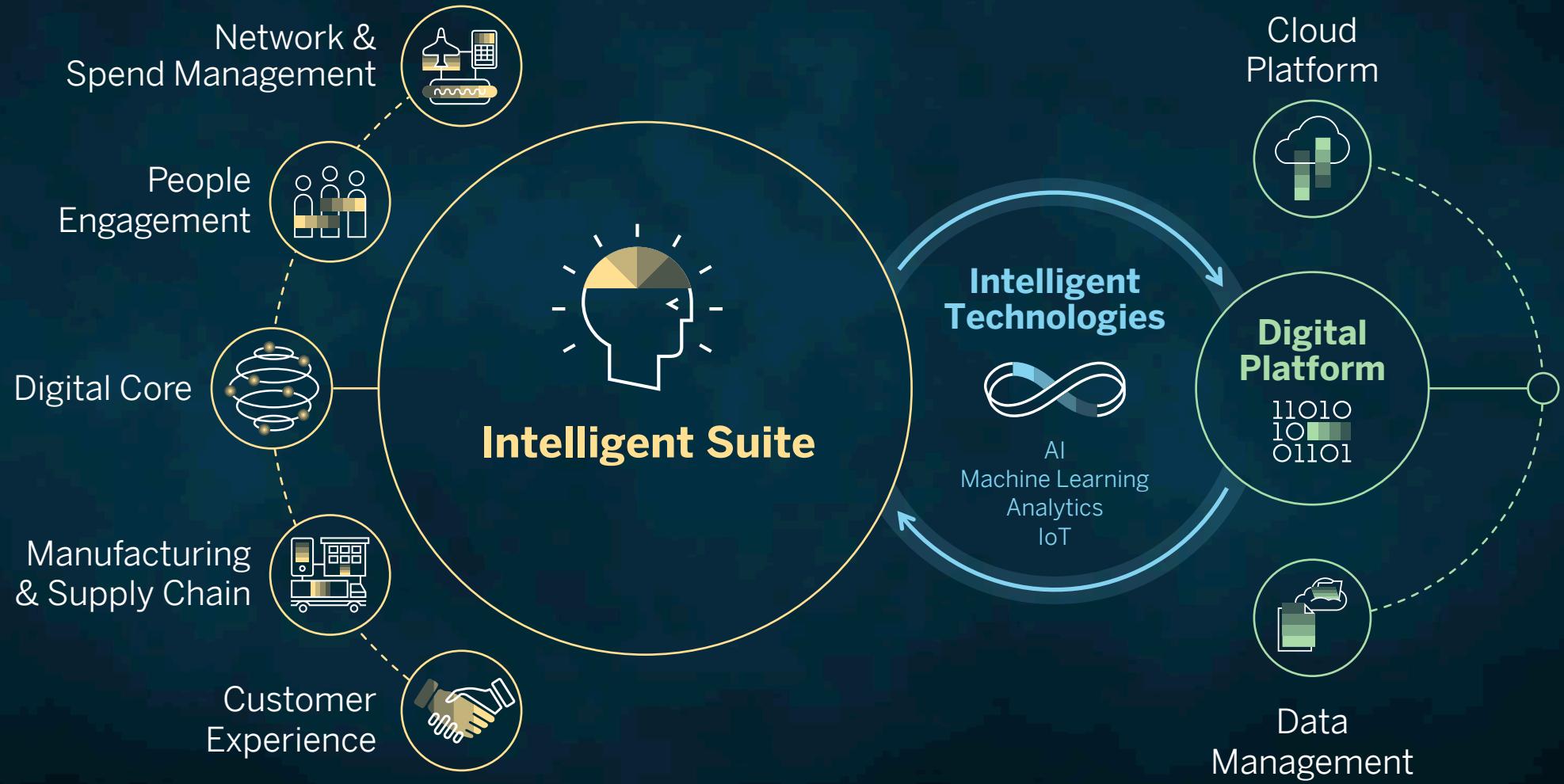
Christoph Liebig

Head of Strategy & Product Management, SAP Cloud Platform

The digital era is evolving into the intelligence era

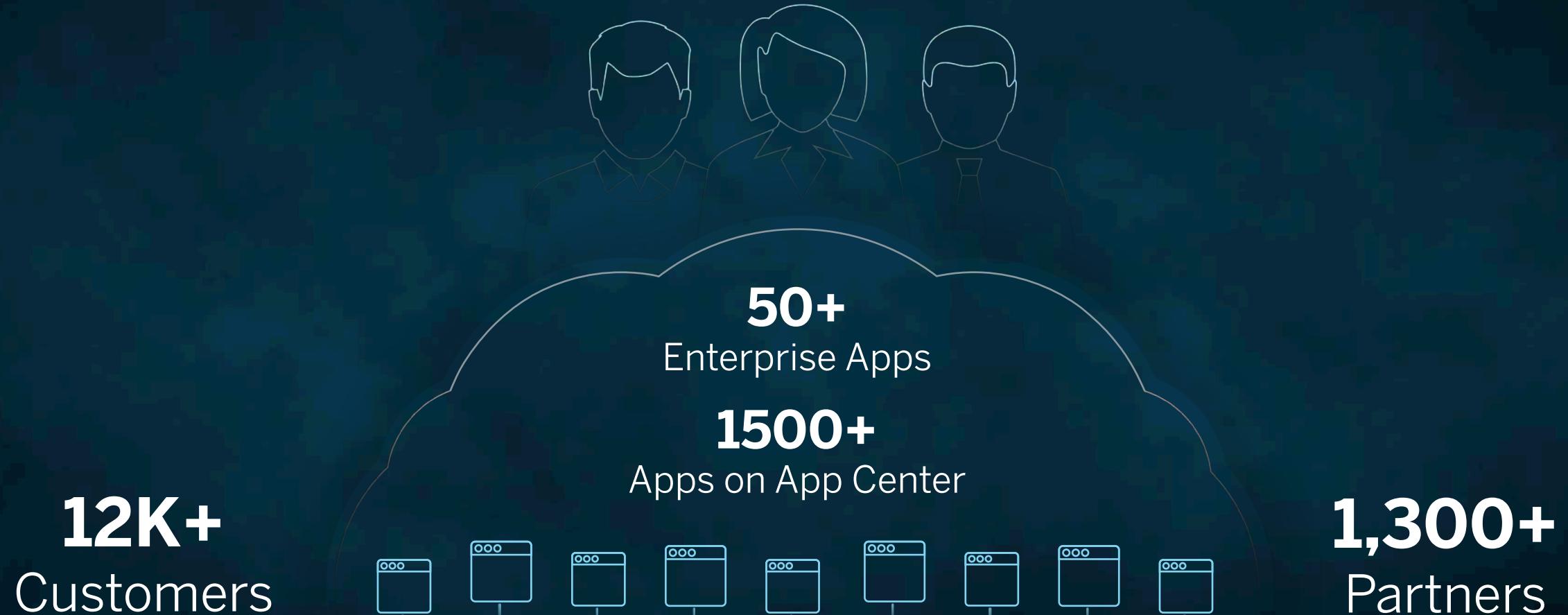


The Intelligent Enterprise



SAP Cloud Platform

Smarten your journey to the Digital Enterprise



SAP Cloud Platform in Action

Ruralco

ExxonMobil



WATERWATCH
COOPERATIVE



EXPERIENCE
People & Data

**BUSINESS
AGILITY**

BUILD
Differentiating
Digital Apps

EXTEND
Cloud &
On-Premise Apps

INTEGRATE
Apps, Data & Processes

SAP Cloud Platform

Multi-cloud





RAINFOREST
CONNECTION



Results are amazing, way beyond expectations. Predictive for us makes it possible to show up even before illegal loggers make it in. This is a huge step in fighting deforestation!

Topher White
CEO / Founder
Rainforest Connection



INTEGRATE



Identify illegal logging at outset and notify agencies to help stop illegal logging of rainforests.

SAP Cloud Platform

SAP Cloud Platform in Action

Ruralco

ExxonMobil



WATERWATCH
COOPERATIVE



EXPERIENCE

People & Data

BUSINESS AGILITY

EXTEND

Cloud &
On-Premise Apps

BUILD

Differentiating
Digital Apps

INTEGRATE

Apps, Data & Processes

SAP Cloud Platform

Multi-cloud



BUILD



Reduce yield loss due to crop diseases by 40%
and usage of pesticides by 20%

SAP Cloud Platform

WATERWATCH COOPERATIVE

SAP Innovation Awards 2018 WINNER

Our Crop Disease Alert app monitors a crop's growing conditions and the overall environment to detect any change that might cause a specific disease. Farmers are then immediately alerted via smartphone of any potential threat. It is the GPS for farmers.

Ad Bastiaansen
Chairman Waterwatch Cooperative

SAP Cloud Platform in Action

Ruralco

ExxonMobil



WATERWATCH
COOPERATIVE



EXPERIENCE
People & Data

**BUSINESS
AGILITY**

BUILD
Differentiating
Digital Apps

EXTEND
Cloud &
On-Premise Apps

INTEGRATE
Apps, Data & Processes

SAP Cloud Platform

Multi-cloud



EXTEND

ExxonMobil



I have **no doubt**
that we will look back and
wonder how we ever
conducted S&D without
this type of tool.

Margaret Mattix
Talent Management
Manager



Maximize employee development, enable
strategic staffing and increase collaboration.

SAP Cloud Platform

SAP Cloud Platform in Action

Ruralco

ExxonMobil



EXTEND

Cloud &
On-Premise Apps

BUSINESS AGILITY

INTEGRATE

Apps, Data & Processes

BUILD

Differentiating
Digital Apps

SAP Cloud Platform

Multi-cloud



Google Cloud

Ruralco



Moving forward we are going to have mobile devices which will enable us to do complete stocktakes in half the time, improve our inventory management and make us more reliable!

Daniel Thompson
Merchandise Manager

EXPERIENCE

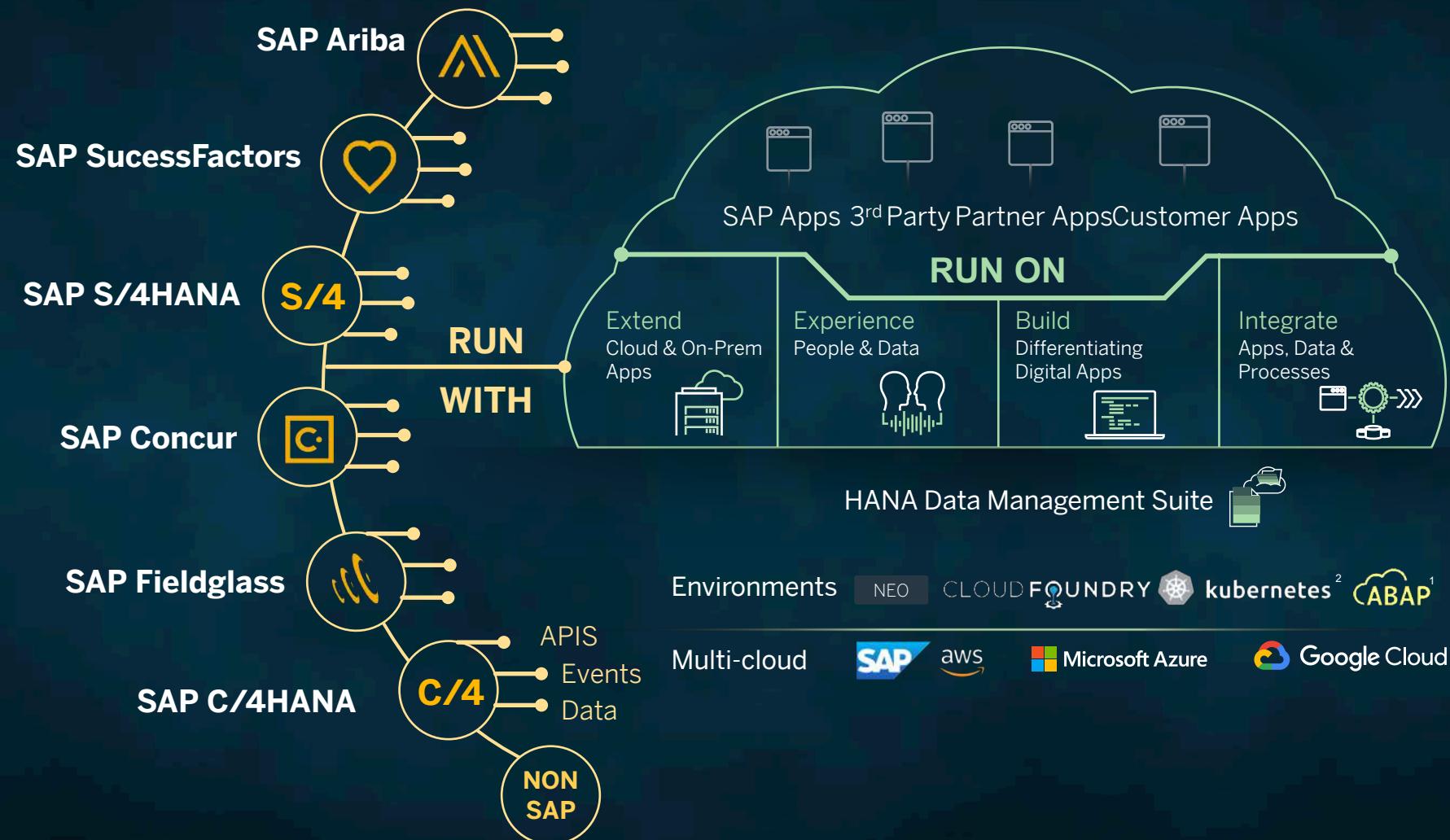


Speed of stocktaking increased by over 400%
Stocktake accuracy approaching 100%

SAP Cloud Platform

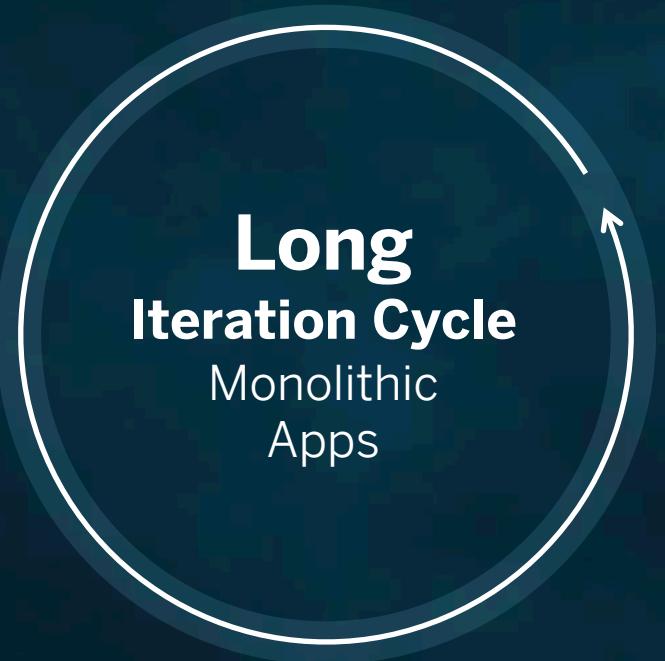
End-to-end
processes

Unboxing „Digital Platform“



1) BETA , 2) planned innovations / future direction

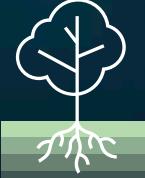
Business Agility



Idea



Minimum
viable product



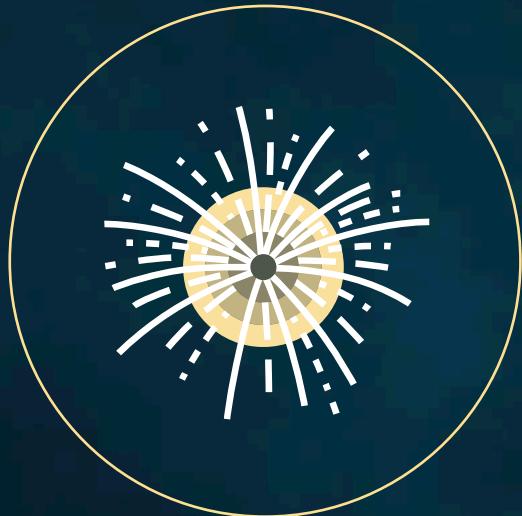
Continuous
Innovation



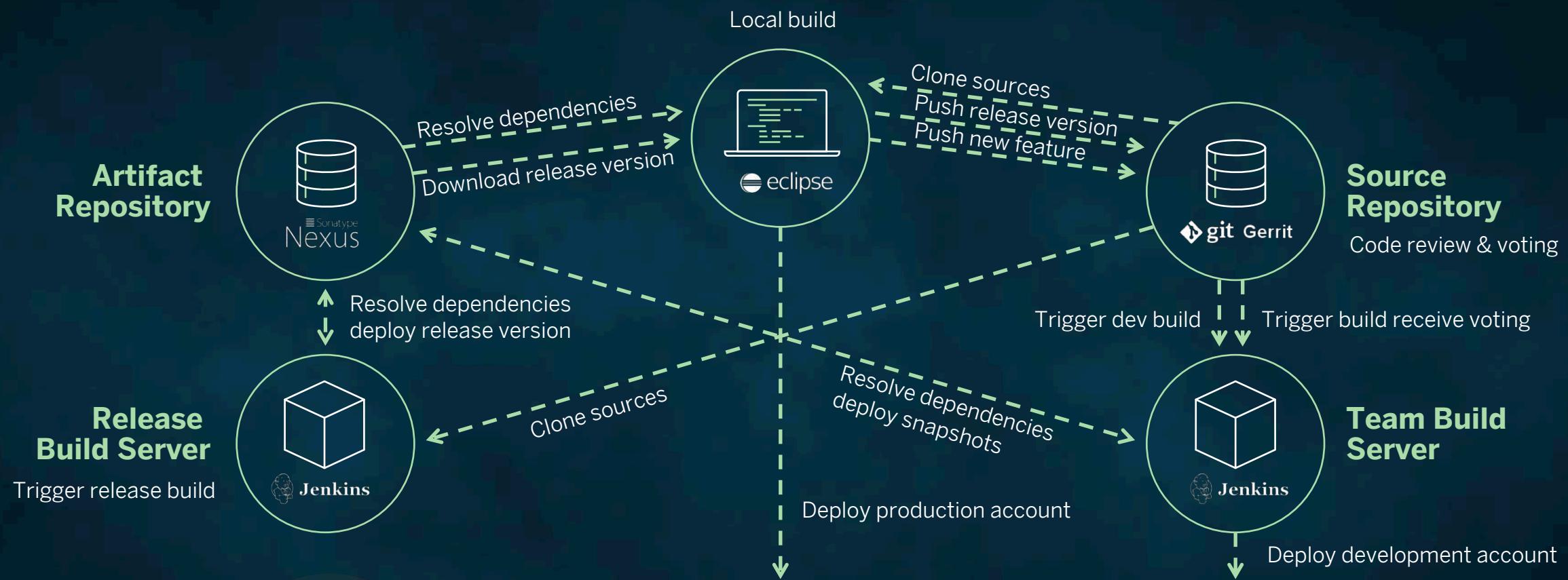
Development > < Operations

“A feature a day...”
- Development team

“Never touch a running system!”
- Operations team



Continuous Delivery & Integration



SAP Cloud Platform

Continuous Integration (CI) Best Practices with SAP http://bit.ly/sapcp_ci

Infuse technology into business processes

Design Led Innovation



Solution Ideation
& Vision



Rapid
Prototyping



Integration
Blueprint



Business Case
Development

Development Operations



Idea



Minimum
viable product



Continuous
Innovation

BREAKTHROUGH
RESULTS

SAP Cloud Platform – Innovation for your Business

Design Led Innovation



Solution Ideation
& Vision



Rapid
Prototyping



Integration
Blueprint



Business Case
Development

SAP BUILD is a complete set of cloud-based prototyping, user feedback learning tools to design and build your enterprise application



Easily import the Build prototype code to SAP Web IDE and use it as a starting point for your full-blown app

SAP Web IDE is an extensible, web-based integrated development tool that simplifies end-to-end SAP Fiori, SAPUI5 and full-stack business application development

Development Operations



Idea



Minimum
viable product

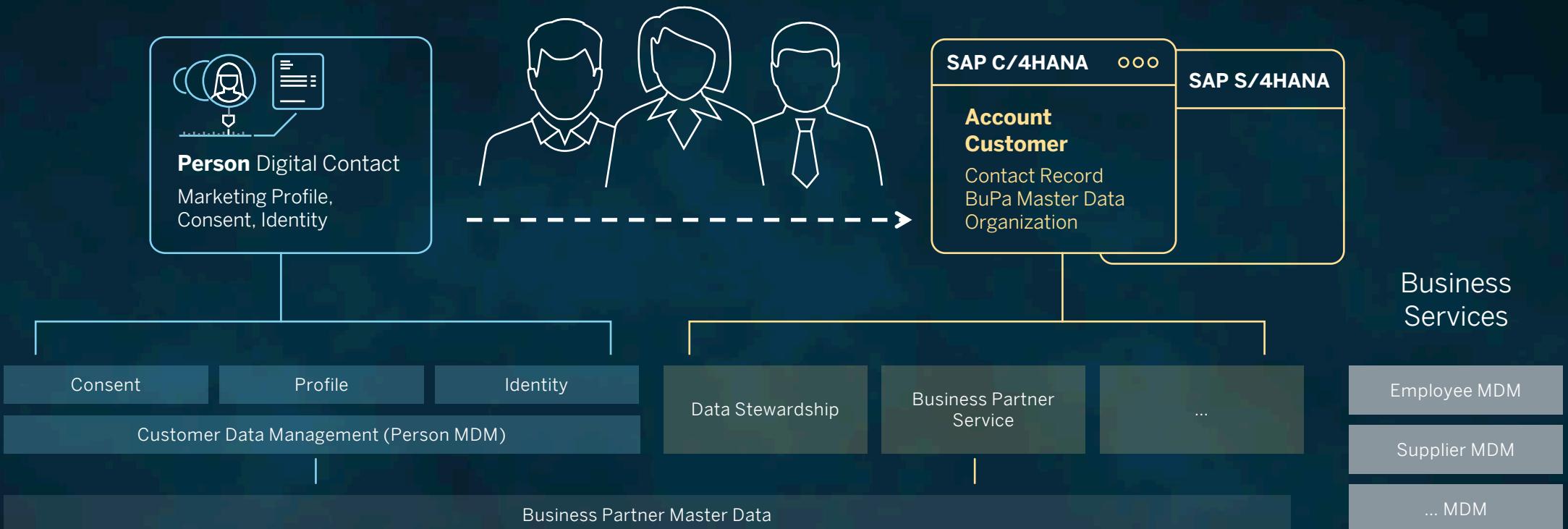


Continuous
Innovation



Business Service (1)

Master Data as a Service



SAP Cloud Platform

Business Service (2)

SAP Watch List Screening – Ensure your compliance

Call the screening Business Service from any other SAP or Non-SAP application

Benefit from a continuously updated sanctioned-party list



On-premise
e.g.: Master Data Governance, S/4, etc.



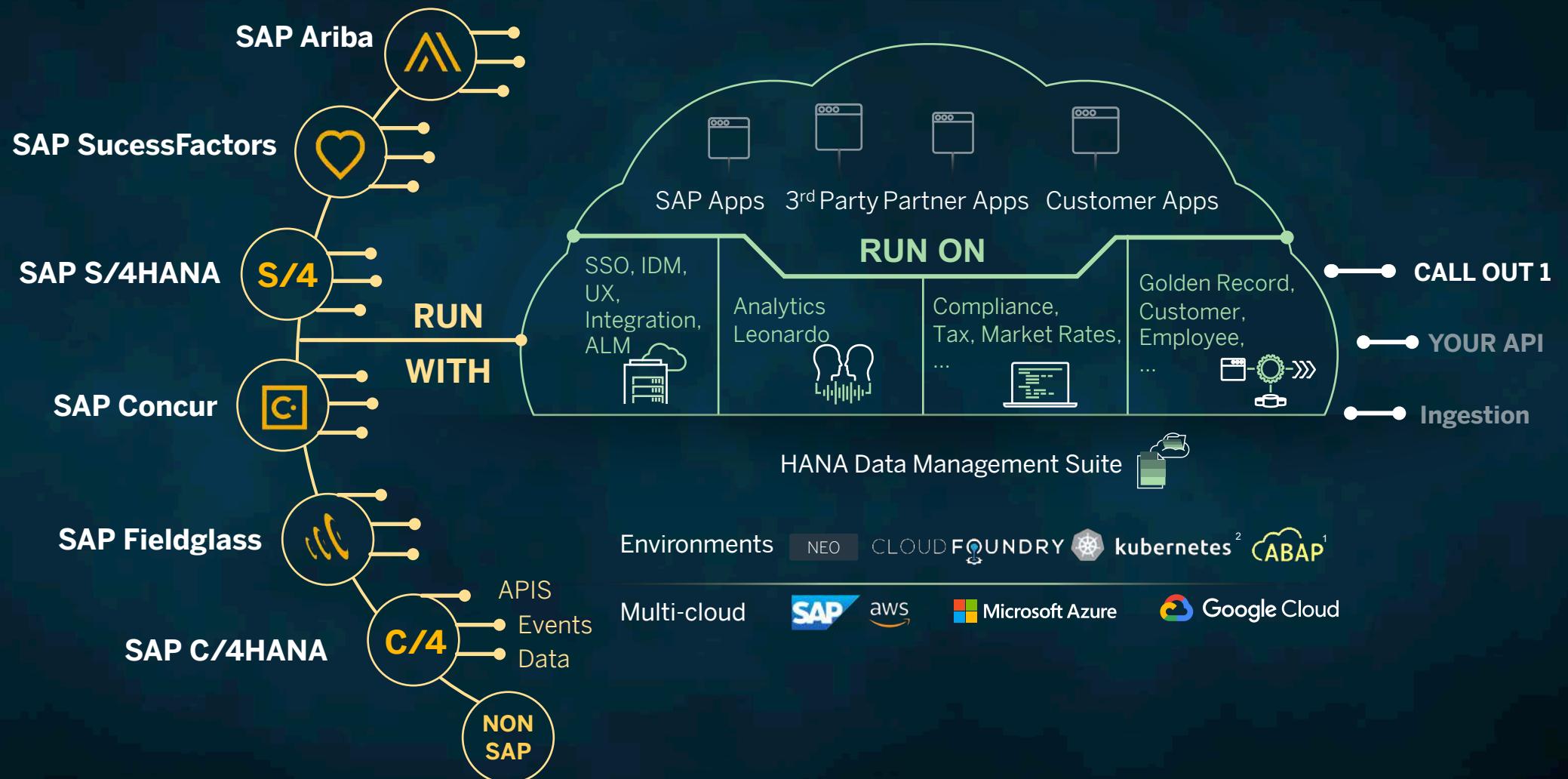
Cloud edition
Other Cloud systems from SAP



Non-SAP
On-premise or Cloud systems
e.g.: Master Data Governance, S/4, etc.

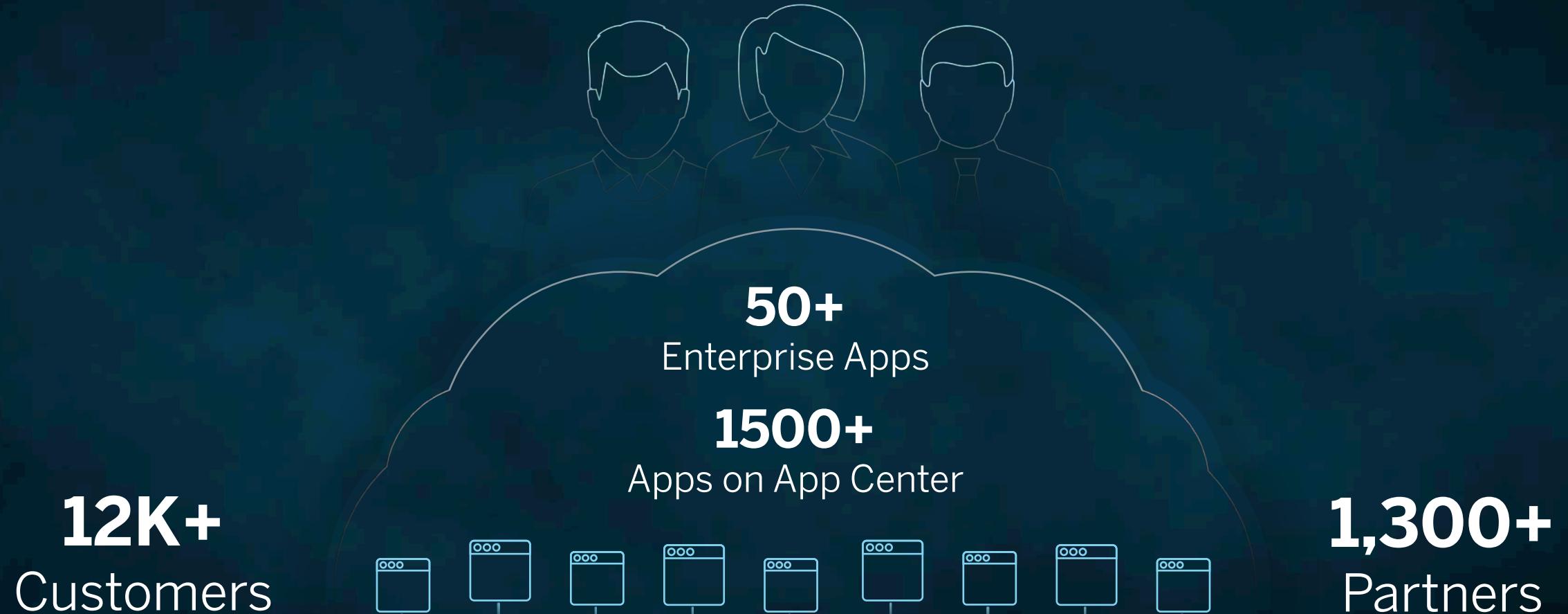
End-to-end
processes

„Digital Platform“ enables Business Agility

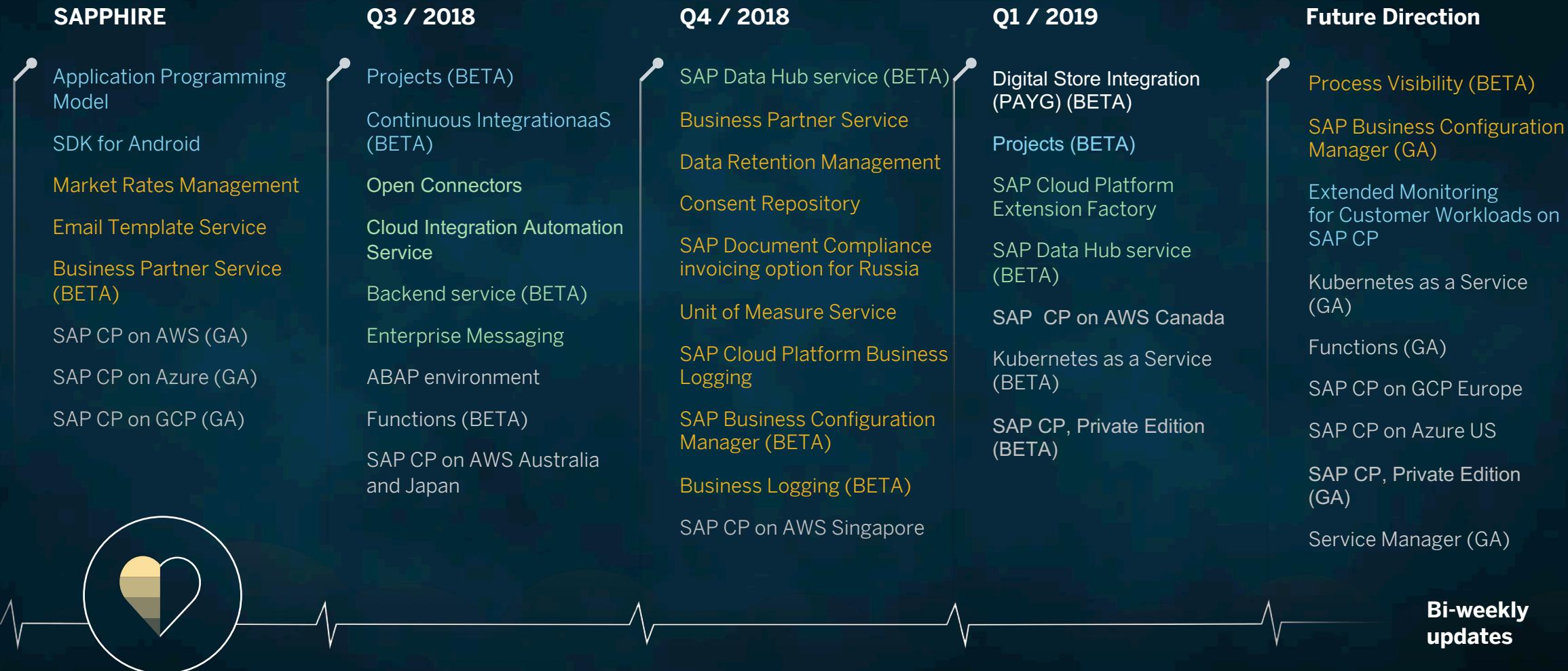


SAP Cloud Platform

Smarten your journey to the Digital Enterprise



What's Next in SAP Cloud Platform?



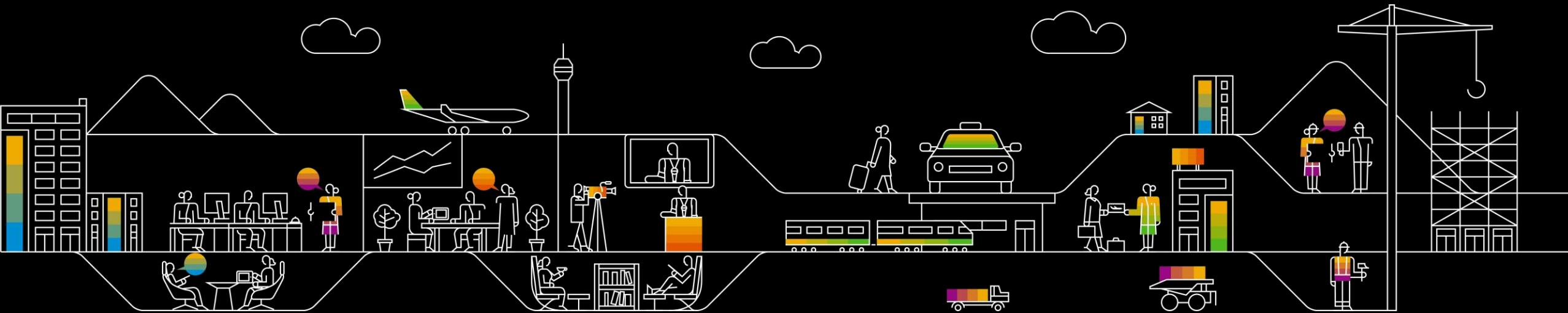
SAP Cloud Platform



Thank you

Christoph Liebig

Head of Strategy & Product Management,
SAP Cloud Platform



Deliver next-gen, integrated scenarios across the Intelligent Suite

Matthias Allgaier, SAP
TechED Las Vegas ASUG presentation

PUBLIC

Agenda

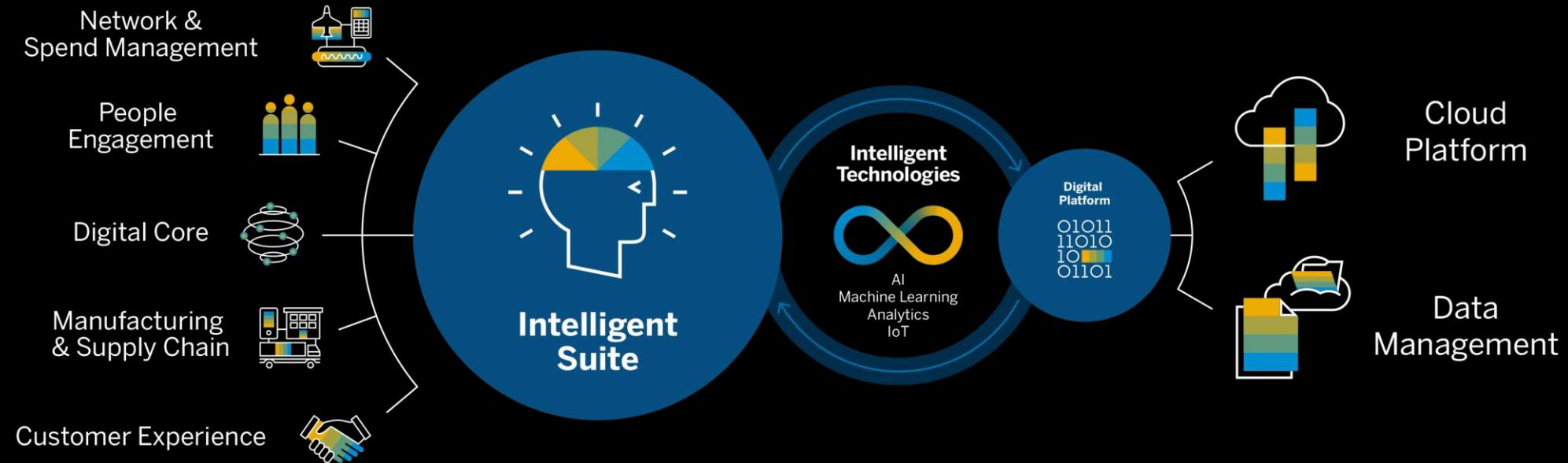
SAP Intelligent Enterprise Framework

SAP Integration Strategy

Wrap up

Q & A

Deliver the Intelligent Enterprise



Result: The Intelligent Enterprise Accelerates Value Creation

Capabilities



Visibility

the ability to collect and connect data that was previously siloed and recognize unseen patterns



Focus

the ability to simulate the impact of potential options and direct scarce resources to the areas of maximum impact



Agility

the ability to respond faster to changes in the marketplace or the business and pivot business processes towards the right customer outcomes

Outcomes



Do more with less and empower employees

through process automation and freeing up people to do more meaningful work



Deliver best-in-class customer experience

by anticipating and proactively responding to end-customer needs



Invent new business models and revenue streams

by monetizing data-driven capabilities and applying core competencies in new ways

Intelligent Suite: Focused delivery along top scenarios

| Scenario |  Lead-to-Cash |  Total Workforce Management |  Design-to-Operate |  Procure-to-Pay |
|------------|---|---|---|---|
| Cluster | Customer Experience | People | Manufacturing & Digital Supply Chain | Spend Management |
| Components | <ul style="list-style-type: none">• SAP C/4HANA (incl. Callidus)• SAP S/4HANA Cloud• Digital Supply Chain | <ul style="list-style-type: none">• SAP Fieldglass• SAP SuccessFactors• SAP S/4HANA Cloud• SAP Analytics Cloud | <ul style="list-style-type: none">• SAP Product Lifecycle Management• SAP Ariba• Asset Management• SAP Leonardo IoT• SAP S/4HANA Cloud• SAP SuccessFactors | <ul style="list-style-type: none">• SAP Ariba (incl. Marketplace)• SAP S/4HANA Cloud |

Agenda

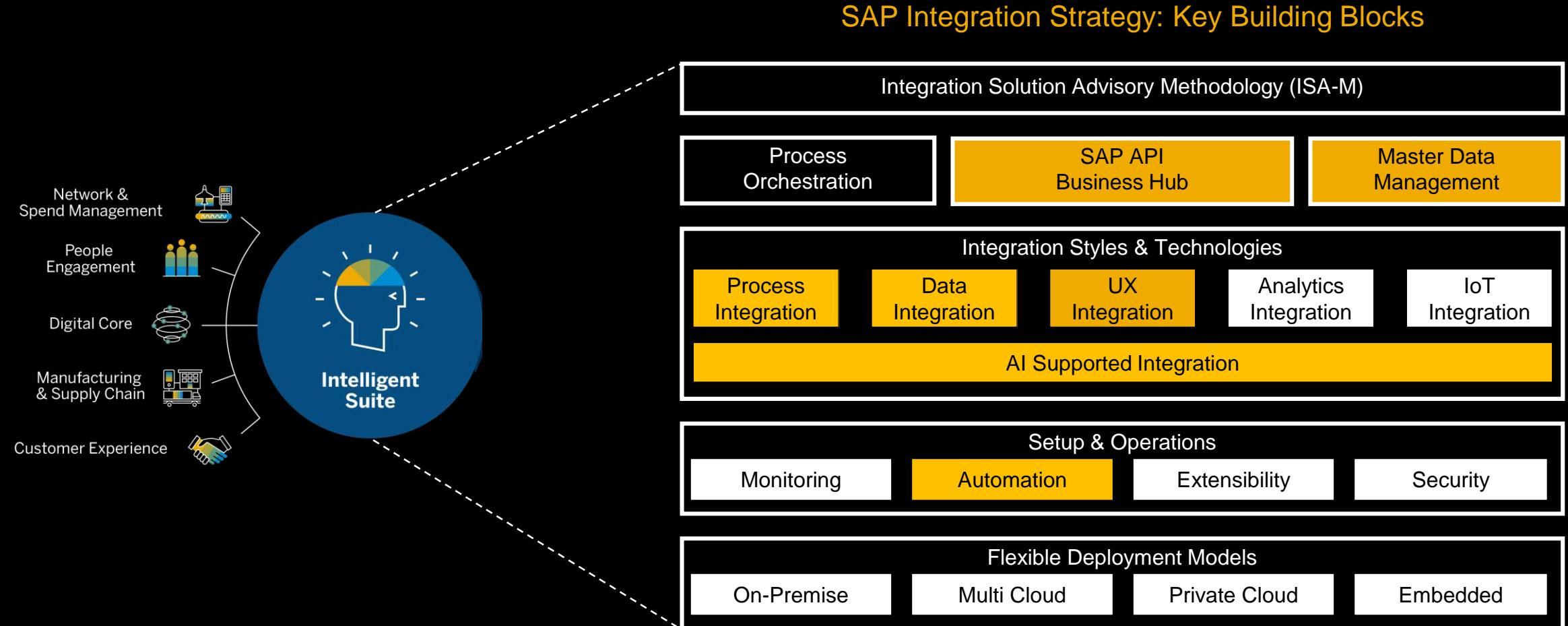
SAP Intelligent Enterprise Framework

SAP Integration Strategy

Wrap up

Q & A

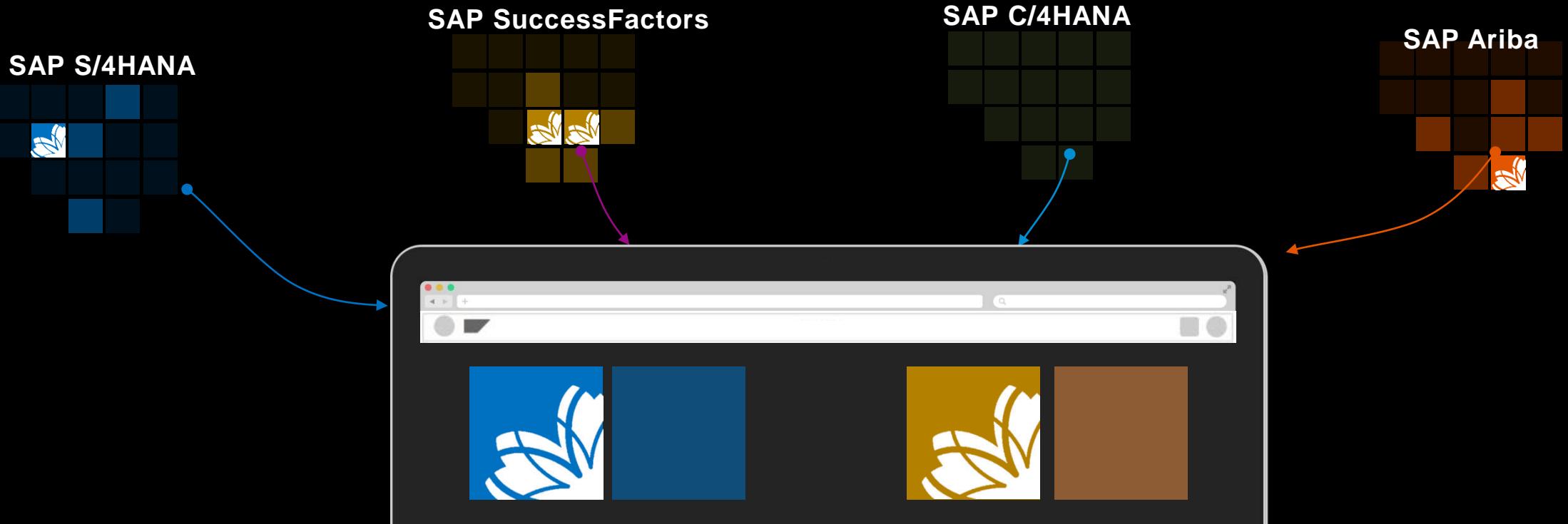
SAP's Integration Strategy is a Key Enabler for the Intelligent Suite



Consistent user experience across the Intelligent Suite

UX Integration

Single entry point for SAP applications using a central SAP Fiori Launchpad and Single Sign On



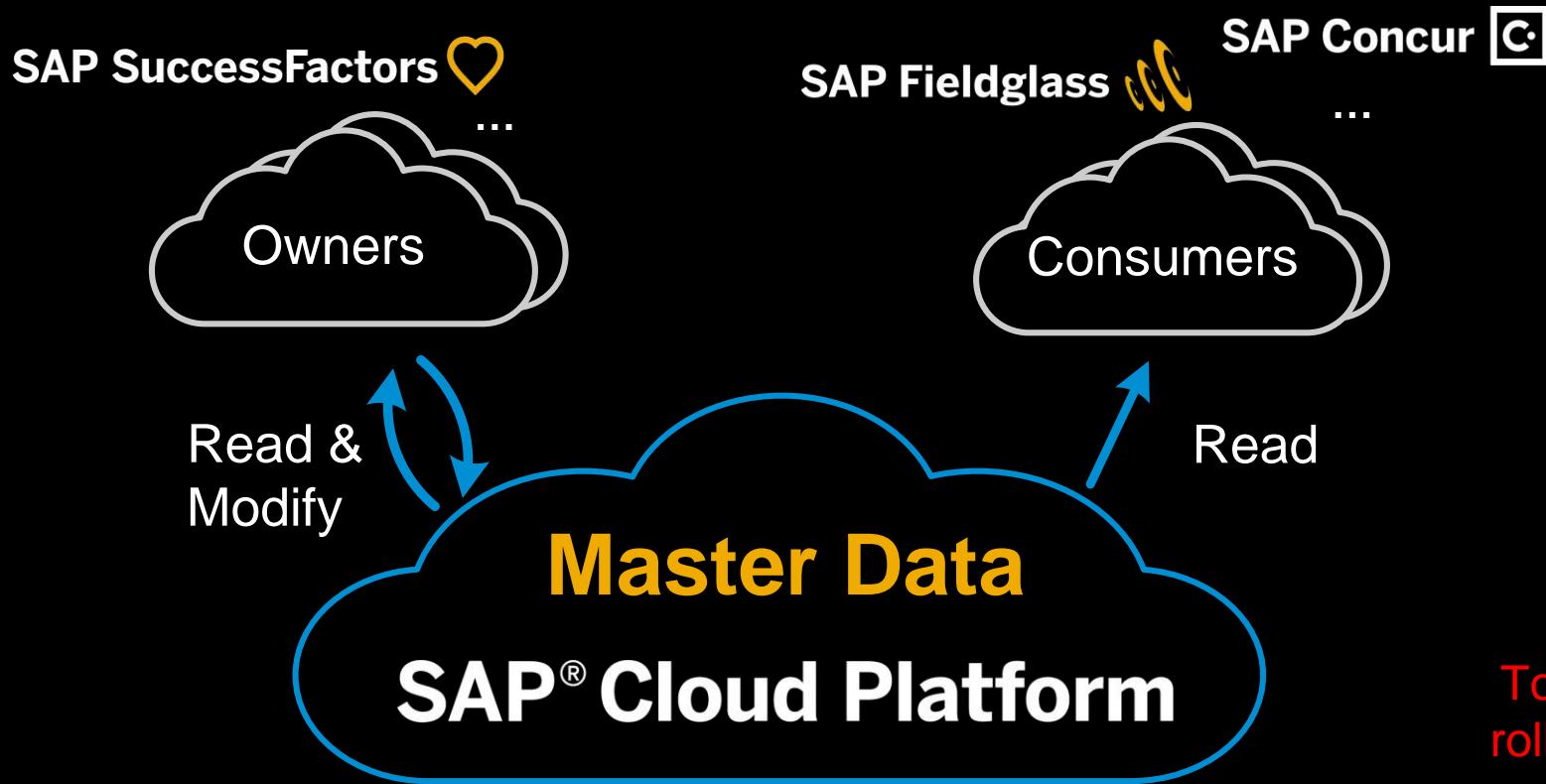
- Single access to all authorized applications
- Allow app-to-app navigation
- Complementary integration capabilities like search and central inbox

Demo: UX
Integration

Central master data services on SAP Cloud Platform

Master Data Management

The Master Data Services provide a central access point to master data per tenant across business applications and avoid master data islands



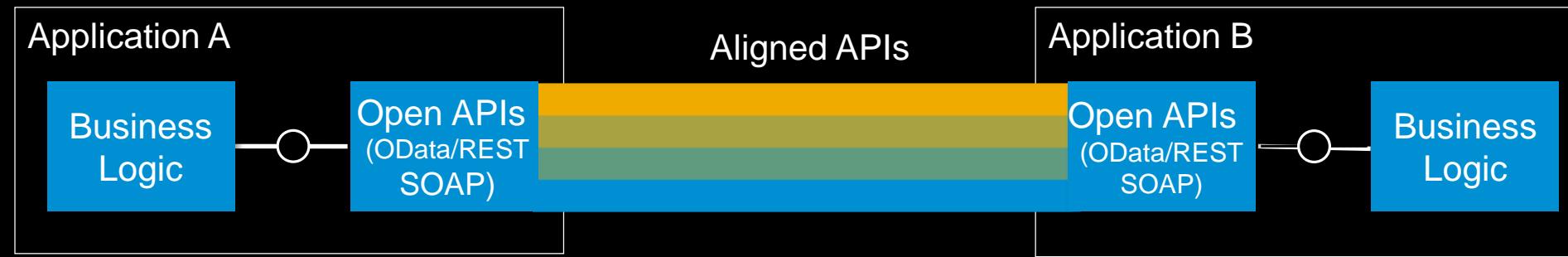
- Clear ownership of master data
- API based re-use services on SAP Cloud Platform
- Direct consumption of master data services by SAP applications

To be replaced with official rollout one slider from MDM colleagues once ready

SAP Vision*: Open & aligned APIs, choice of integration

Process
Integration

Aligned SAP APIs for true out-of-the box integration



Choice of integration options

- a) Direct integration
 - ✓ Simple landscape

- b) Mediated integration
 - ✓ Governance
 - ✓ Extensions



SAP Cloud Platform Integration



SAP Process Orchestration**

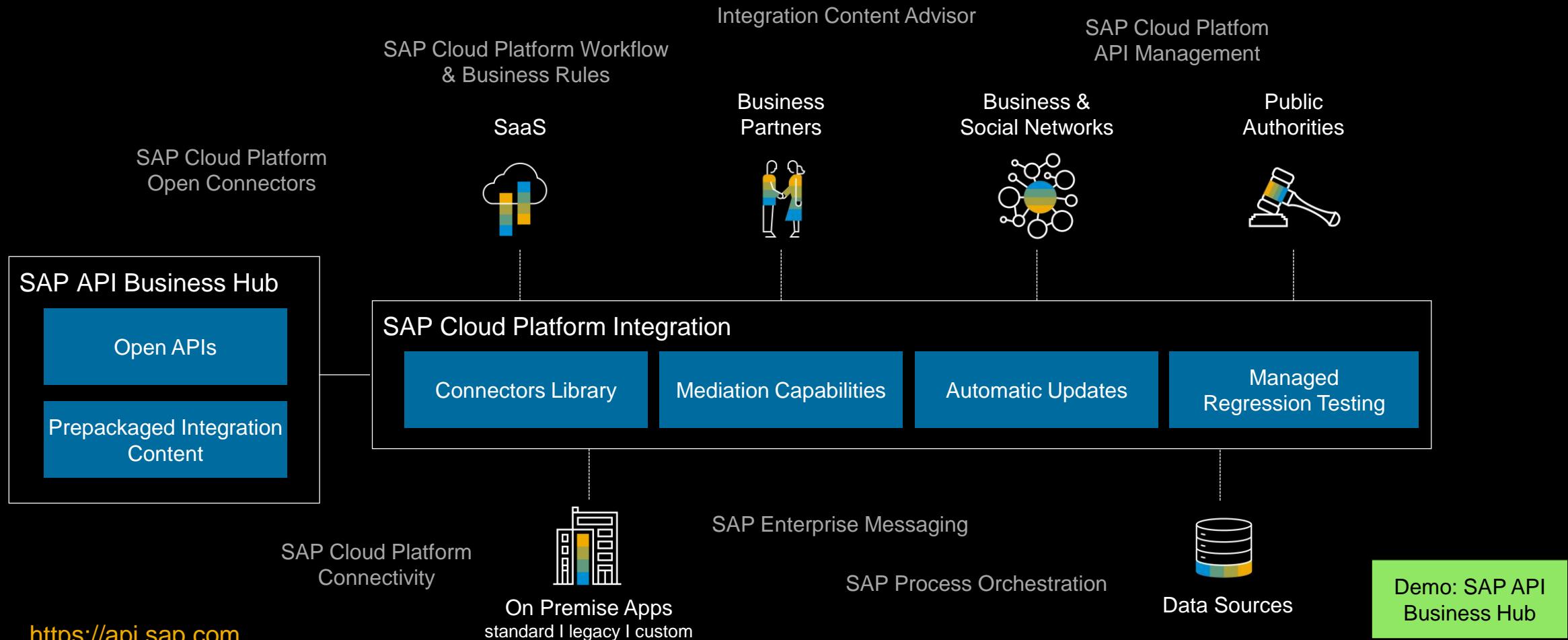
*Will be stepwise applied to new scenarios

**Embedded SAP Cloud Platform Integration runtime from release 7.5

SAP's IPaaS for cloud and hybrid integration

Process
Integration

SAP Cloud Platform Integration to run end-to-end processes across both SAP and Non-SAP

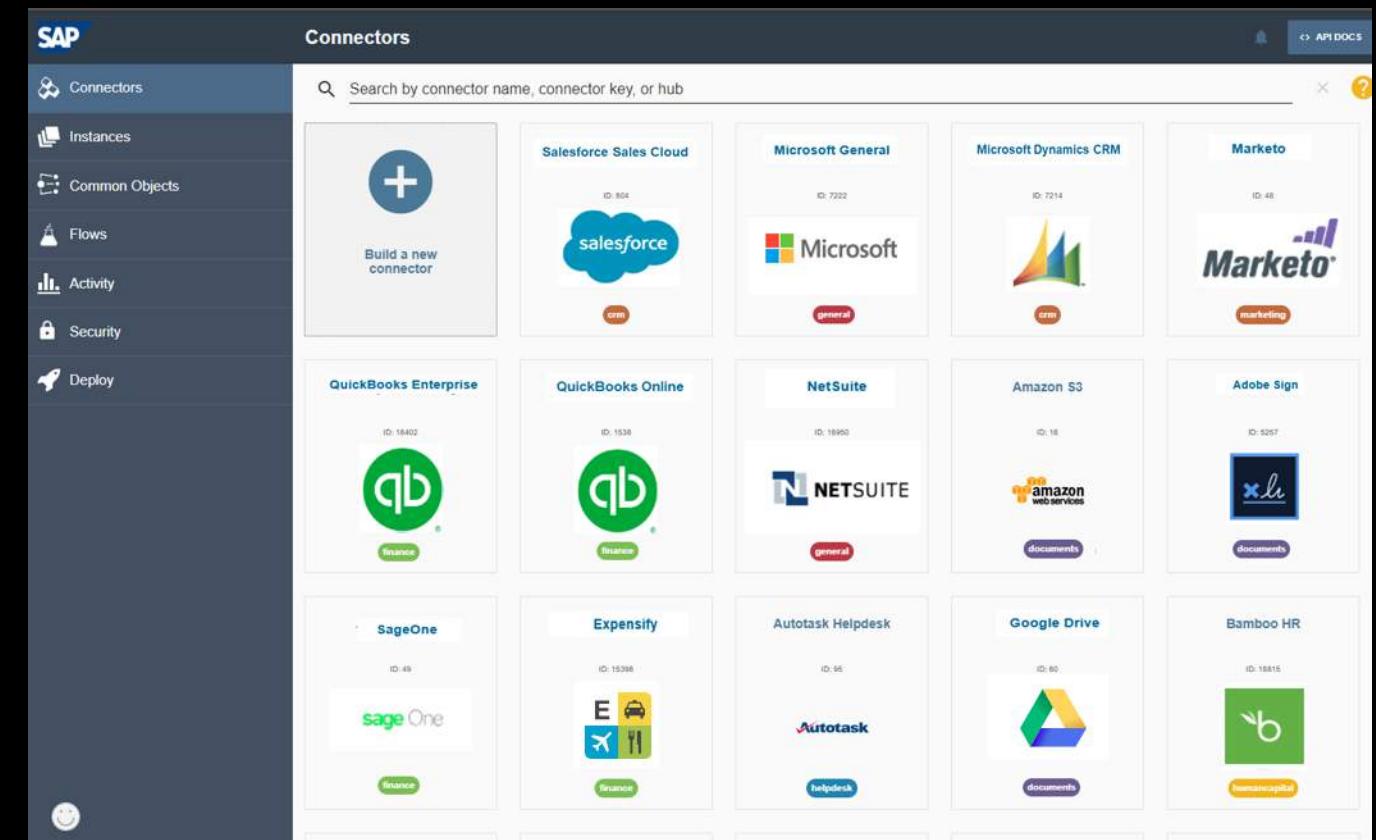


Accelerated integration of Non-SAP applications

Process
Integration

SAP Cloud Platform Open Connectors* providing feature rich, pre-built connectors to over 150 non-SAP cloud or on-premise applications

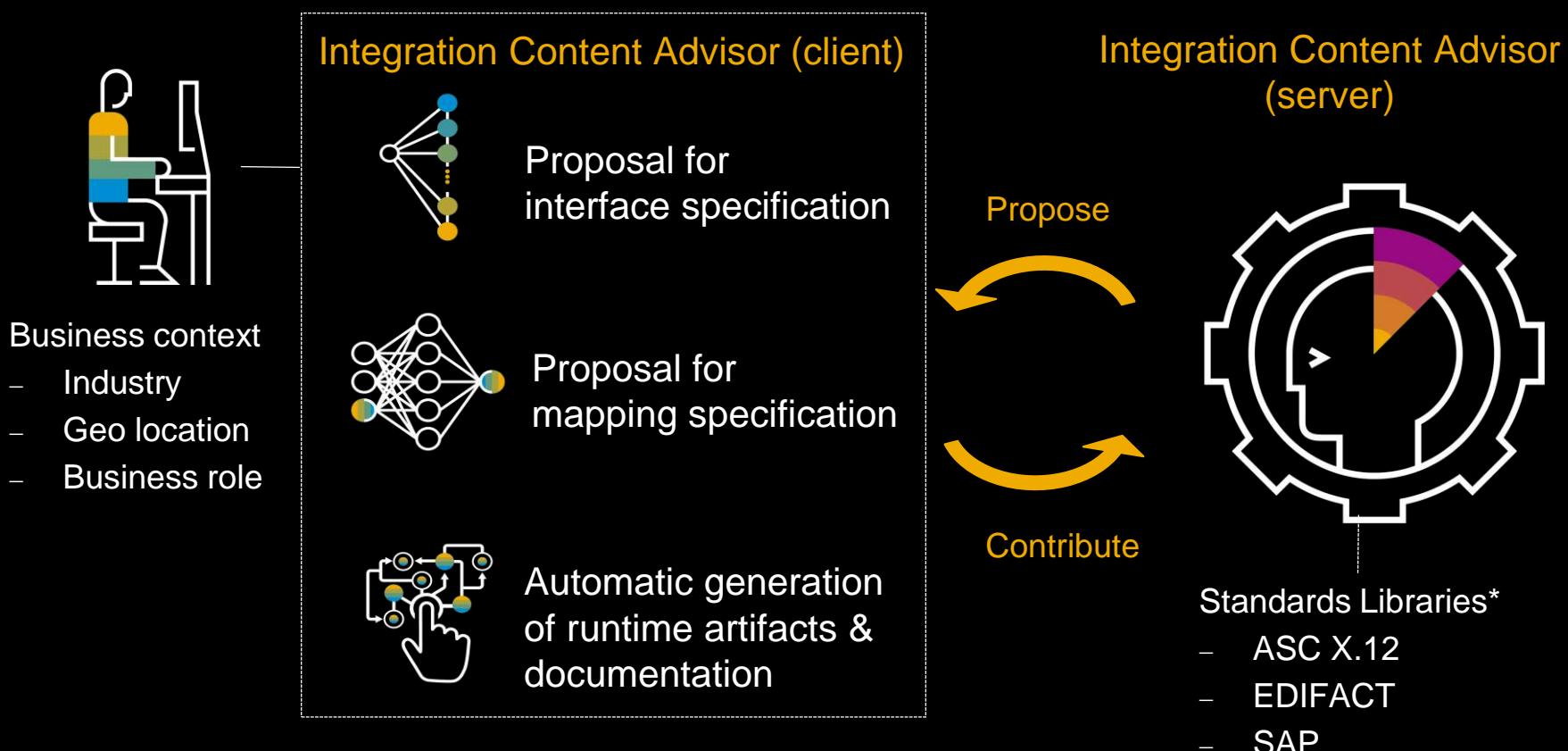
- Out of the box connectivity to 3rd Party APIs via harmonized RESTful APIs
- Develop and map canonical data model to extend pre-build connectors
- Easily build API composition across connectors
- Built-in API documentation in Open API Spec



AI supported integration: Machine learning meets crowd sourcing

AI-Supported
Integration

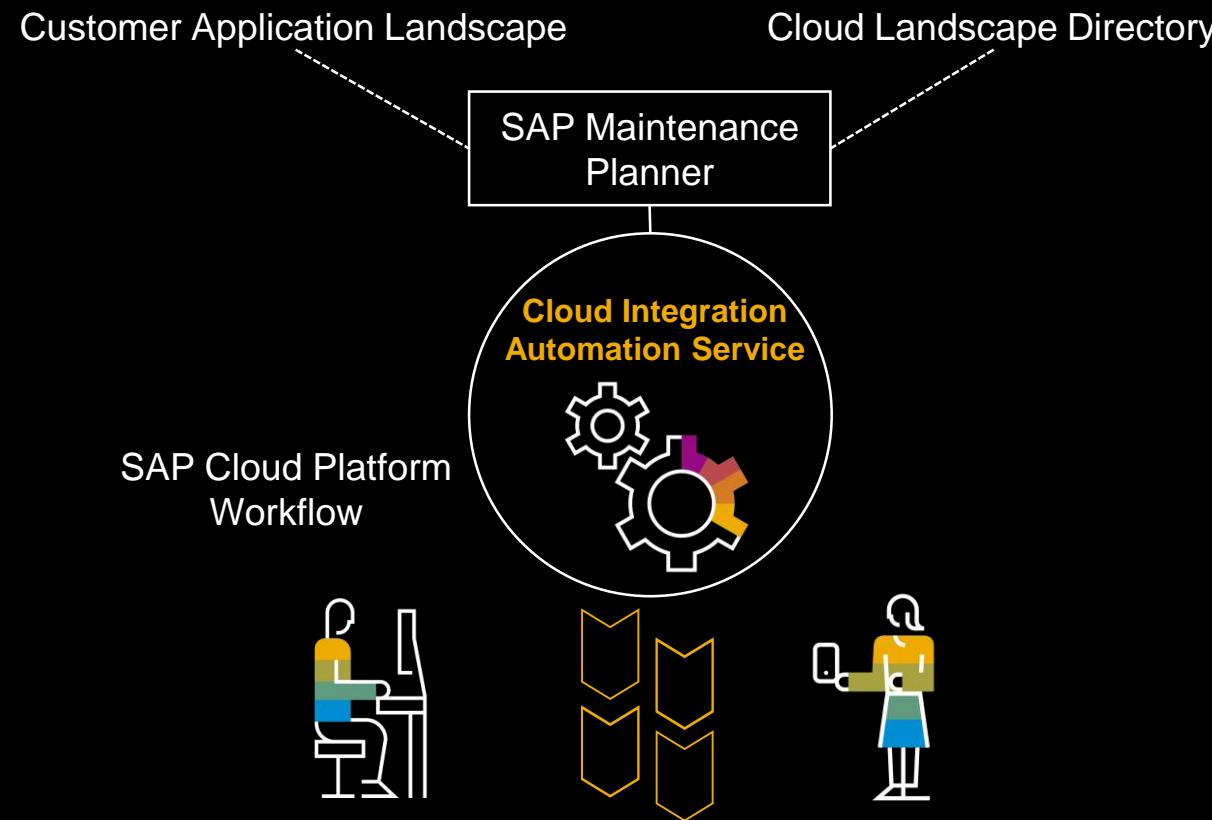
Integration content advisor for SAP Cloud Platform Integration is an intelligent proposal service leveraging machine learning and crowd sourcing to automate integration at higher quality



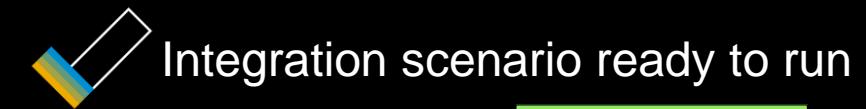
Demo: Integration
Content Advisor

Automating integration configuration end-to-end

Cloud Integration Automation Service allows you to automate the integration configuration, simplify the parameterization and orchestrate the scenario integration



1. Choose integration scenario and systems/tenants
2. Generate workflow for integration configuration
3. Assign tasks to the responsible admins and is processed



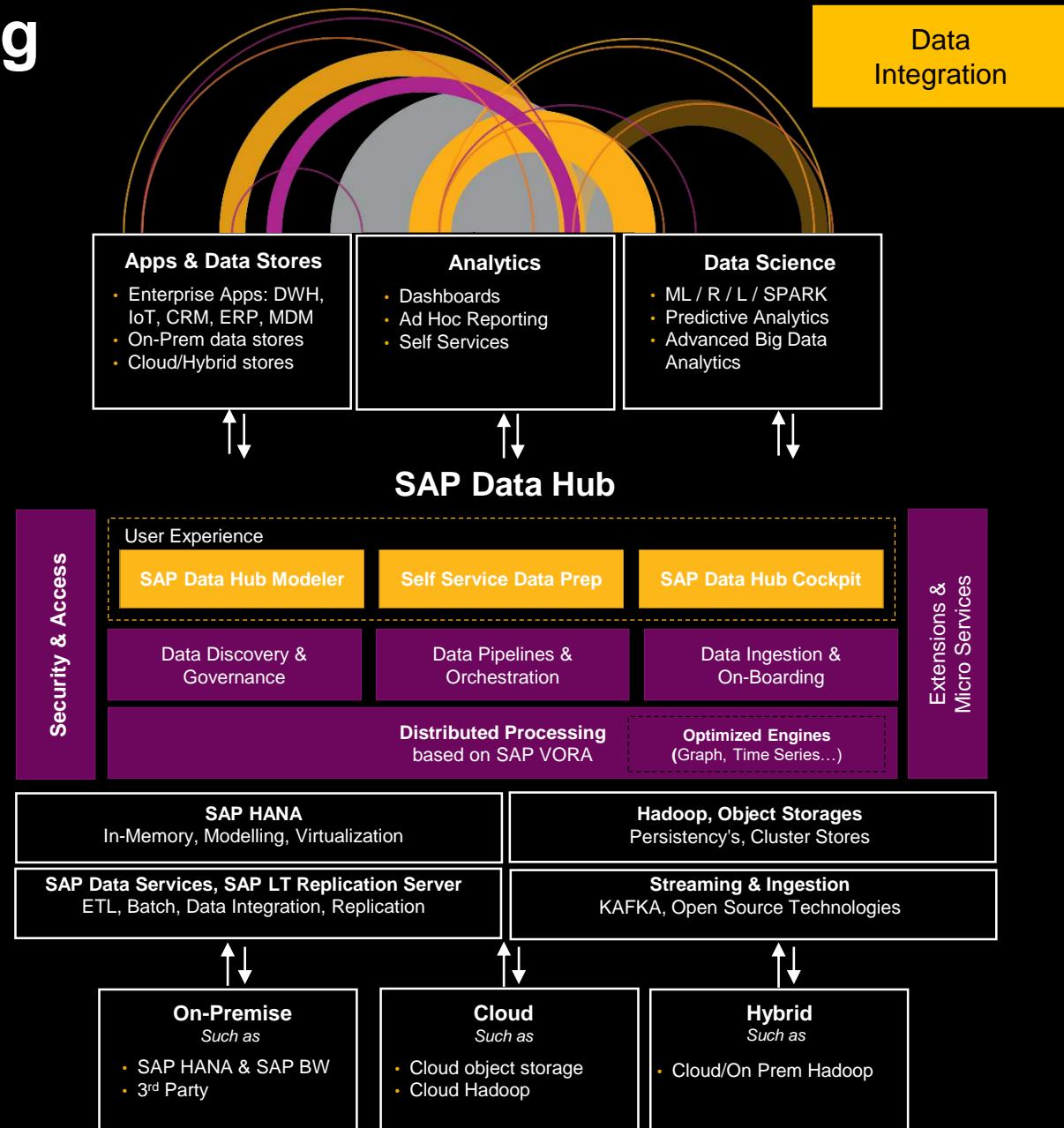
Unifying data sharing & pipelining

SAP Data Hub

Define data driven processes across complex enterprise landscapes

- Access on-premises, cloud, or hybrid data sources – SAP or non-SAP (Amazon, Hadoop)
- Leverage robust enterprise integration capabilities
- Connect easily to SAP data management and application solutions as data sources
- Connect to SAP and non-SAP applications and analytic solutions as endpoints

Demo: SAP Data Hub



Agenda

SAP Intelligent Enterprise Framework

SAP Integration Strategy

Wrap up

Q & A

SAP Integration DNA for the Intelligent Suite

Summary: Key Differentiators

1

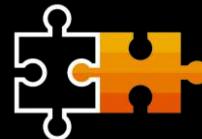
OUT-OF-THE-BOX
INTEGRATION



SAP provides integrated E2E business processes including plug-and play integrations enabled by a standardized application- and technology portfolio.

2

OPEN
INTEGRATION



SAP provides exhaustive third party integration capabilities supported by its partner ecosystem. Public API's allow any type of custom extensions.

3

HOLISTIC
INTEGRATION



SAP covers all flavors of integration (Process, B2B, Data, UX, Analytics, IoT). A methodology helps customers to shape their integration strategy.

4

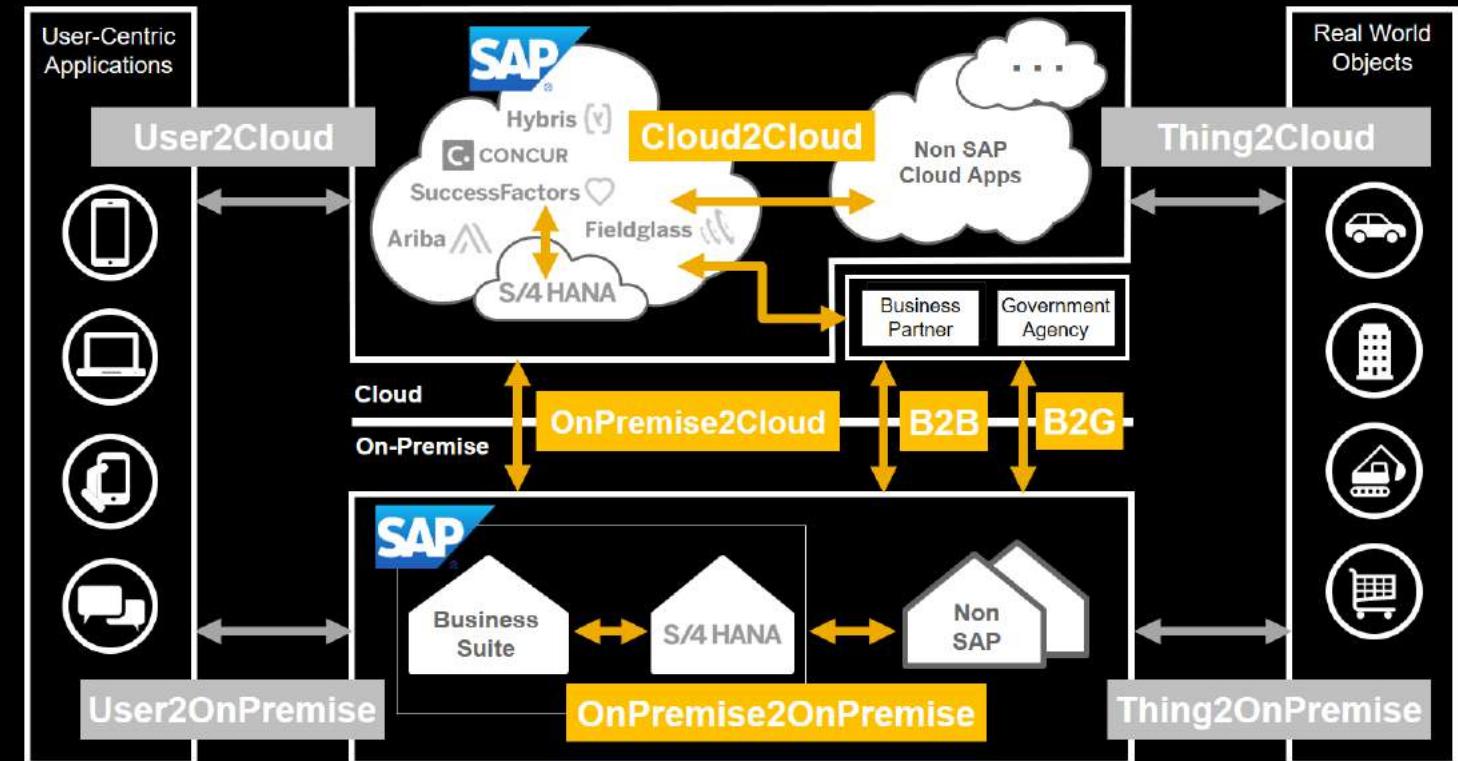
AI-SUPPORTED
INTEGRATION



SAP is investing into simplification of the E2E integration experience. AI techniques will be embedded into next generation services.

CIO Guides for Integration

Two Complementary Guides for Enterprise Architects



Download

<https://www.sap.com/documents/2017/05/eebd96bd-b97c-0010-82c7-eda71af511fa.html>

<https://www.sap.com/documents/2018/06/de3238a0-077d-0010-87a3-c30de2ffd8ff.html>

SAP Vision for Integrating SAP Applications in Cloud and Hybrid Environments

Published in 2017

- Describes SAP's long term Vision for Integration
- API Alignment
- Process Integration Guidance
- Data Integration Guidance



Integration Strategy at SAP

**SAP Vision for Integrating SAP® Applications
in Cloud and Hybrid Environments: CIO Guide**



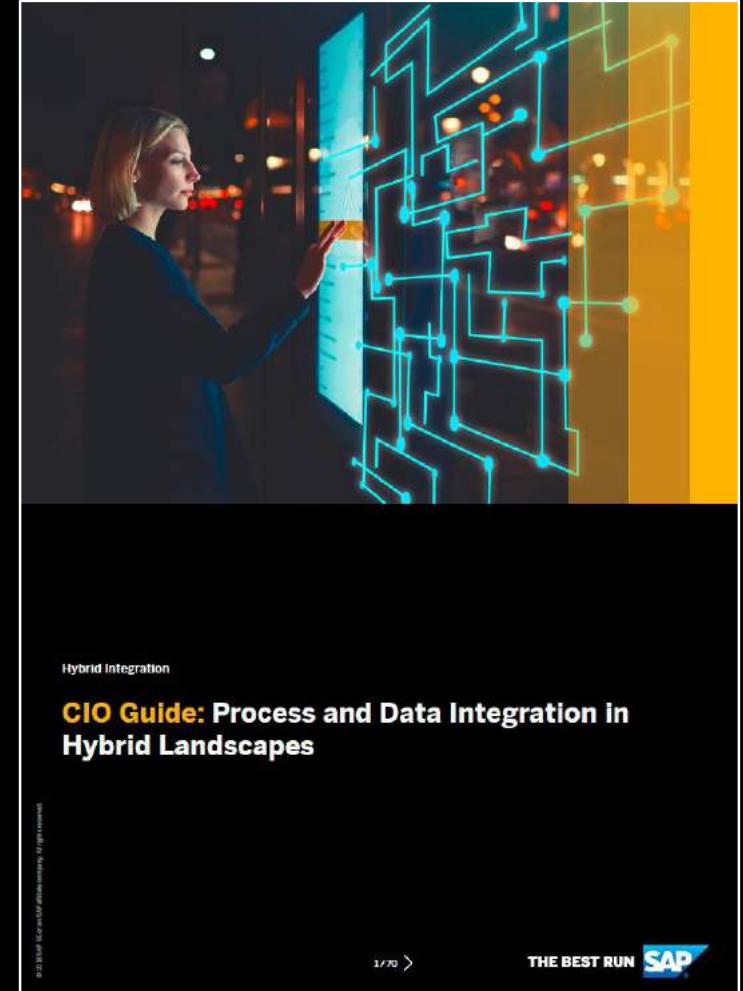
Run Simple

1 / 38

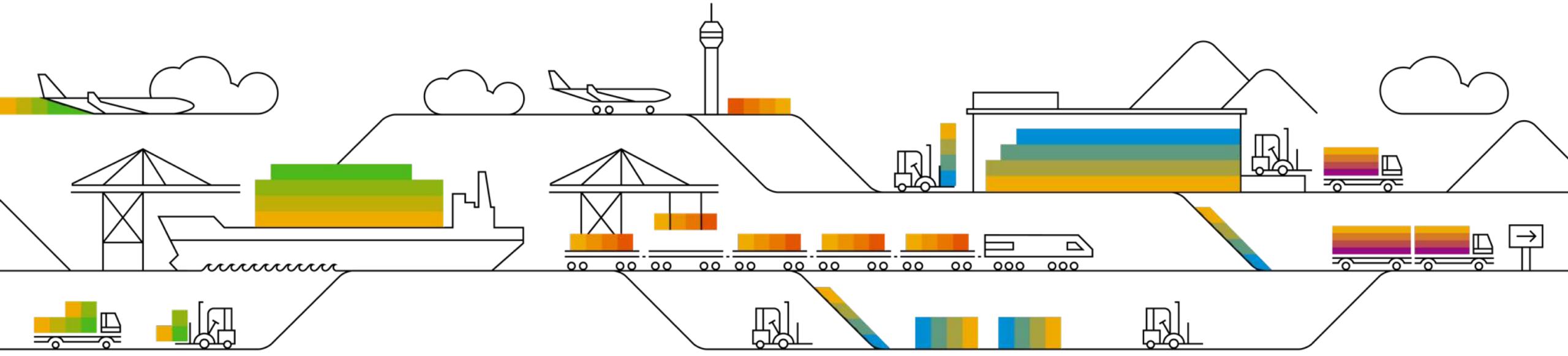
Process and Data Integration in Hybrid Landscapes

Published in June 2018

- Additional guidance based on existing technology portfolio
- Integration Solution Advisory Methodology (ISA-M)
- Refined Guidance for Process and Data Integration
- B2B Integration
- Integration Automation
- SAP S/4 HANA Transition Guidance Describes SAP's long term Vision for Integration



<https://www.sap.com/documents/2018/06/de3238a0-077d-0010-87a3-c30de2ffd8ff.html>



Mobile extensions and integrations for the Intelligent Enterprise

Matt Carrier, SAP
TechED Las Vegas ASUG presentation

PUBLIC

SAP Mobile Cards Additional learning

Mobile Interactive Tutorials:

<https://www.sap.com/developer/tutorial-navigator/mobile-interactive-tutorials/content2go.html>

Mobile Cards on SAP Blogs

<https://blogs.sap.com/author/mark.wright5/>

<https://people.sap.com/matt.carrier#overview>

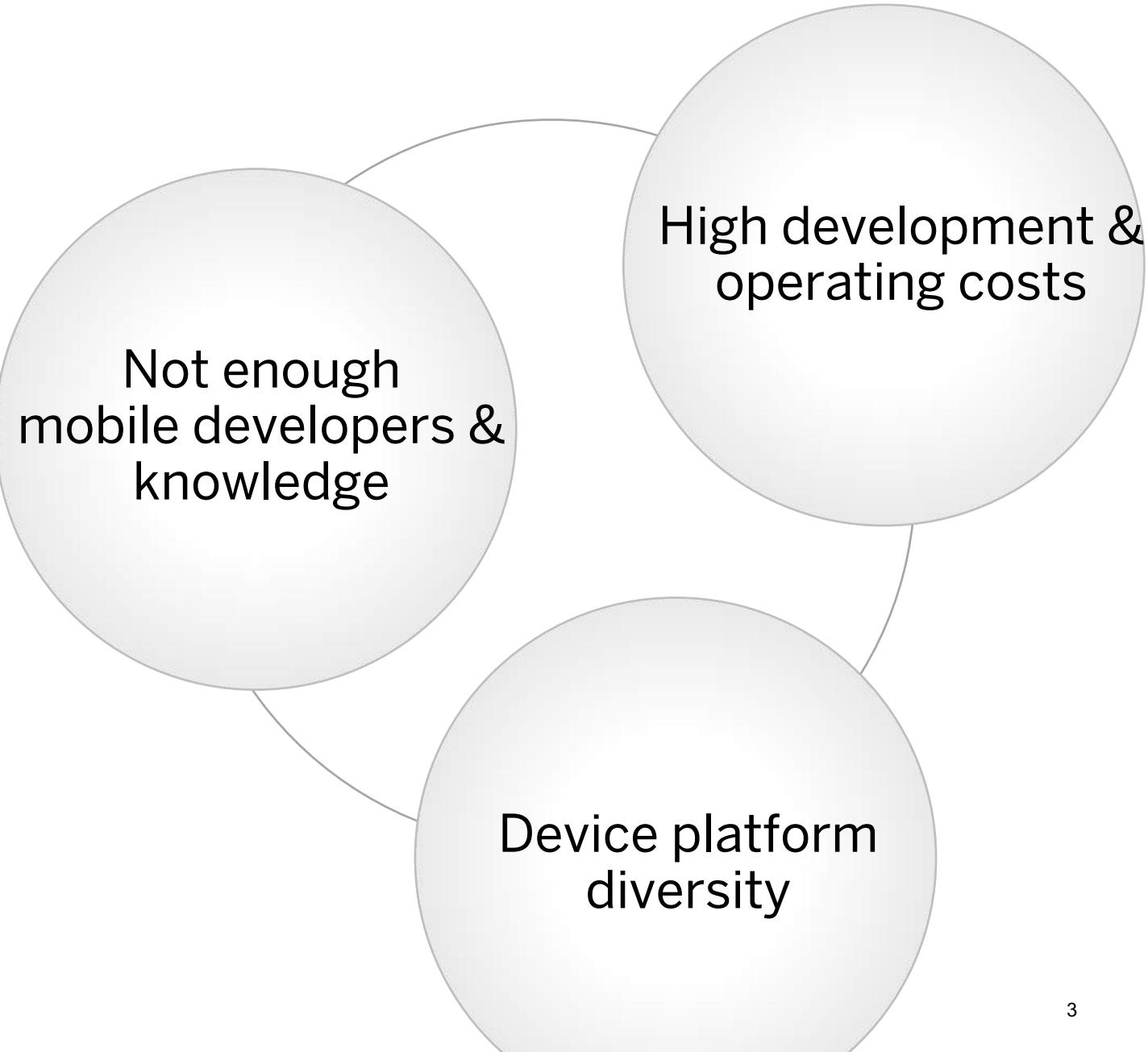
<https://blogs.sap.com/2018/06/21/take-your-sap-my-inbox-mobile-with-sap-mobile-cards/>

<https://blogs.sap.com/2018/05/24/mobilize-your-s4h-inbox-with-sap-mobile-cards-a-little-e2e-scenario/>

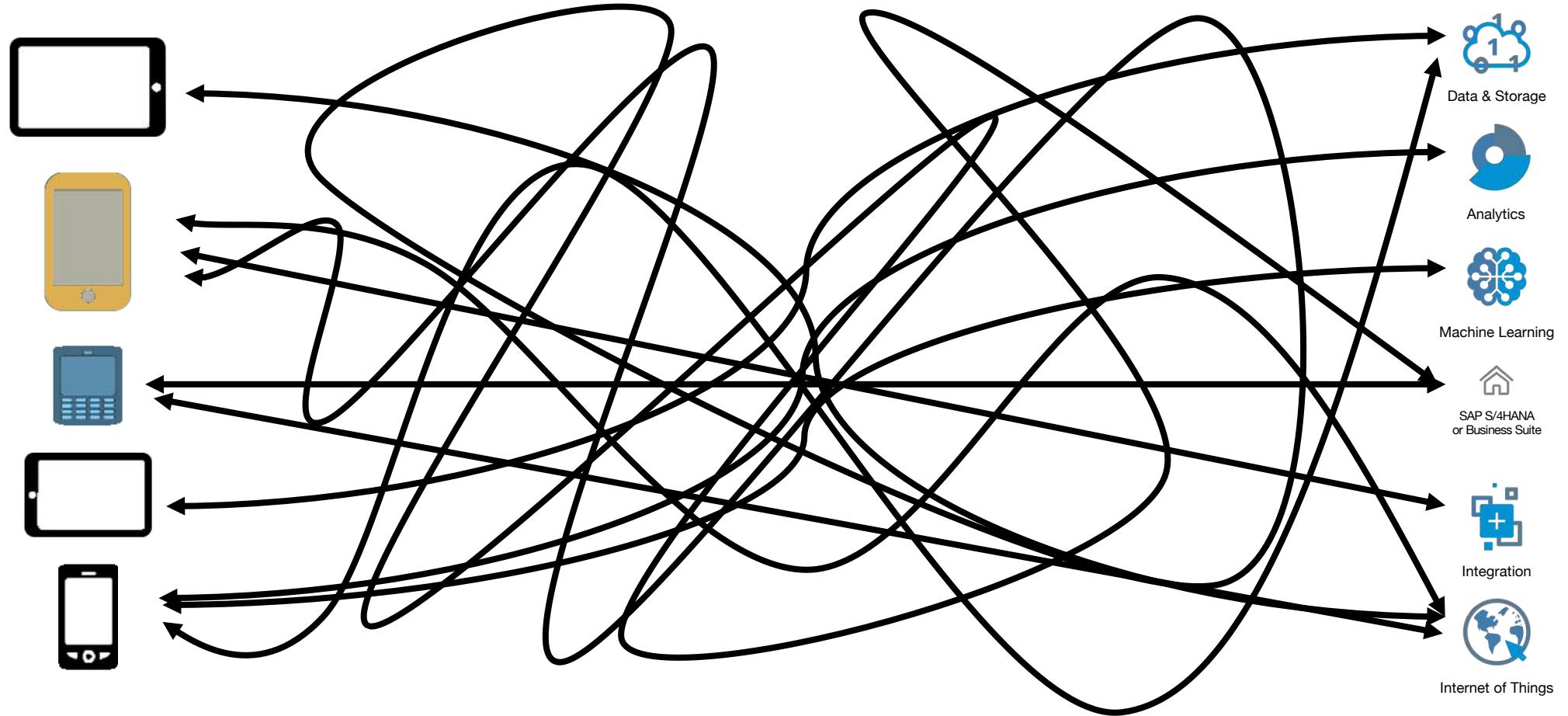
Cloud Platform Discovery Center: > Platform Missions > Mobile

<https://platformx-ad17b8dc3.dispatcher.hana.ondemand.com/#/missions/platformmissions/mobile>

Challenges of meeting **growing enterprise mobile apps demand**



Mobility at Enterprise Scale



Mobile is the face of Digital

A major disruptive technology

Top disruptive technologies are...

Cloud 58%,

**Mobility &
Collaboration 54%**

Data 52 %¹

The heart of digital transformation

As the term digital transformation gains steam, it's important to remember that **mobile** is at the heart of the movement.²

A primary business platform

More than **50%** of companies expect to use mobile as their **primary business platform** within three years.³

¹ 10 amazing statistics about digital transformation, CDO Conclave, 2018

² Mobile is at the forefront of digital transformation trends, Craig Mathias, Farpoint Group, 2018

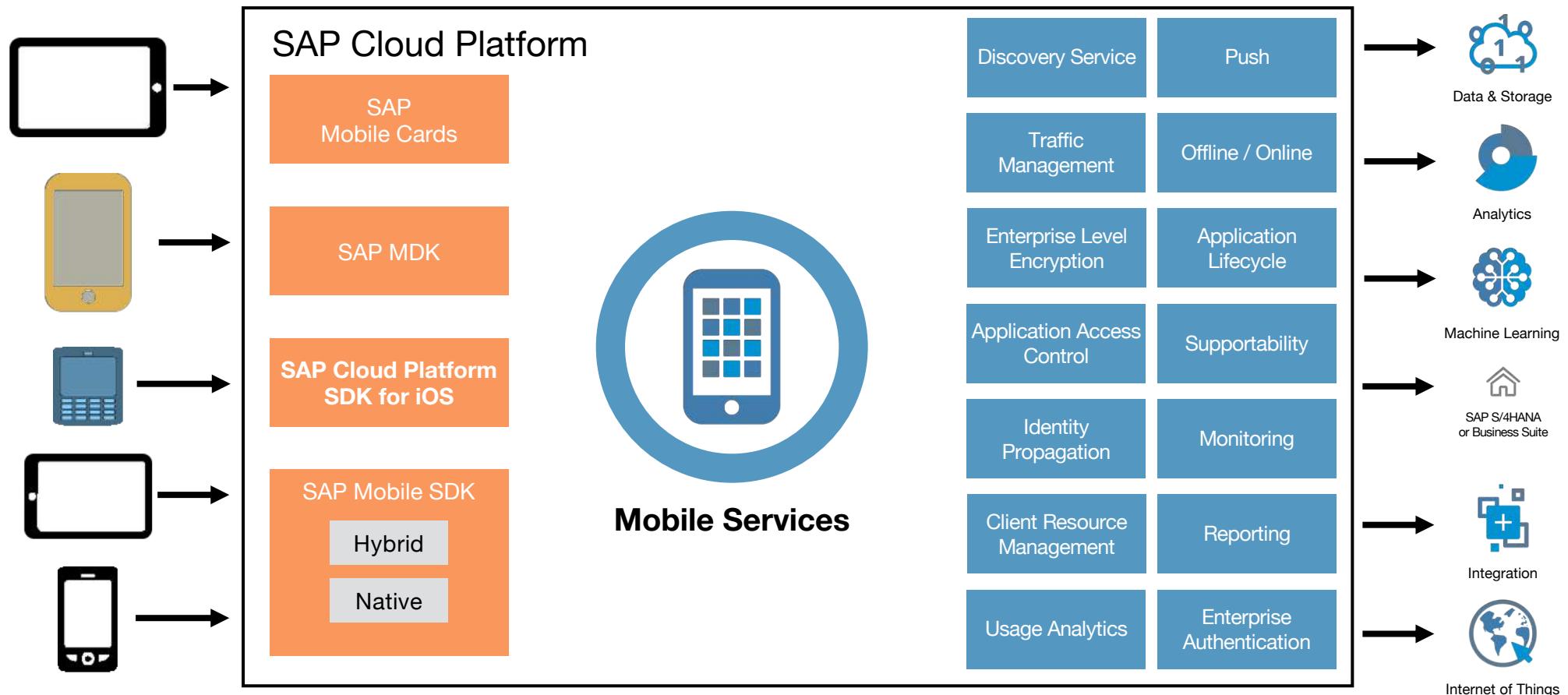
³ Mobile first strategy for digital, Sandeep Raut, 2016



SAP Cloud Platform Mobile Services

Why do I need it?

Mobility at Enterprise Scale



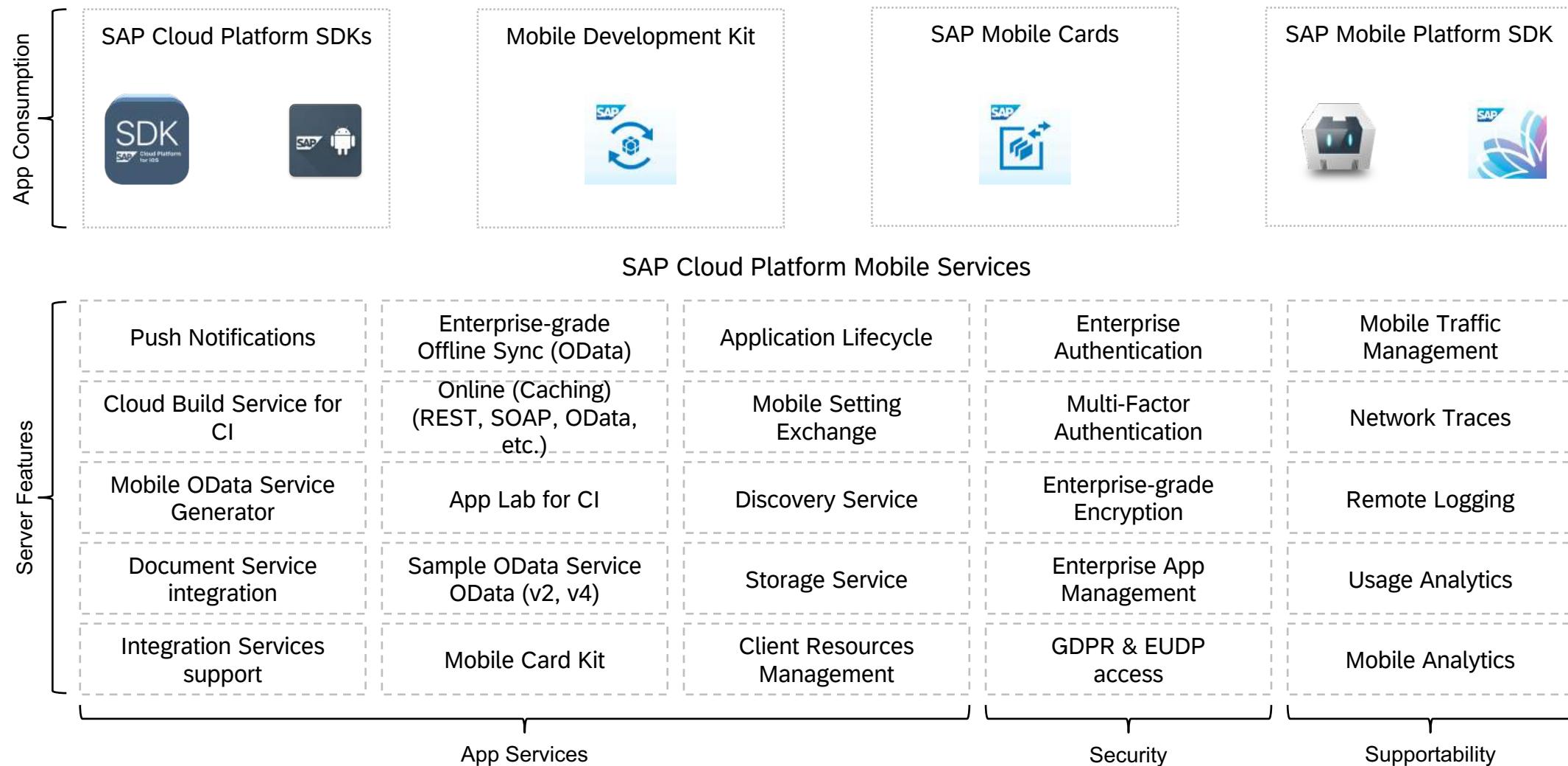


SAP Cloud Platform Mobile Services

How do I use it?

SAP Cloud Platform Mobile Services

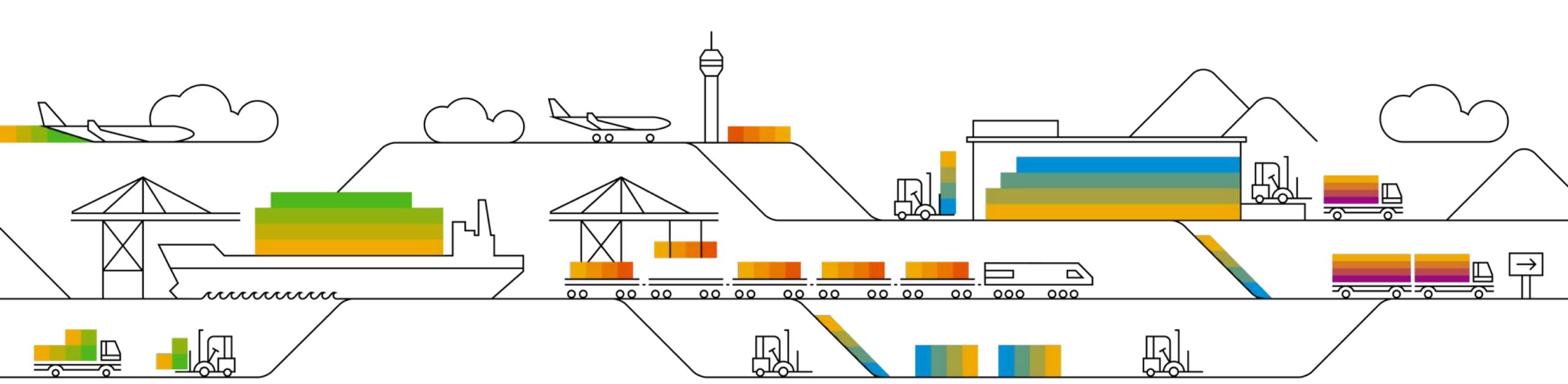
Feature Overview



SAP Cloud Platform Mobile Services

How to find the best approach

| | Native | Mobile Development Kit | Mobile Cards | Mobile Web |
|------------------------|---|---|---|--|
| Pros | <ul style="list-style-type: none">▪ Native look and feel▪ Best performance▪ Instant access to device specific innovations | <ul style="list-style-type: none">▪ Native look and feel▪ Visual development approach simplifies development▪ Simplified app development lifecycle▪ Enforces UX consistency | <ul style="list-style-type: none">▪ Simple wallet style UX▪ No coding required for SAP Fiori Elements UI | <ul style="list-style-type: none">▪ OS agnostic▪ Lower costs than native▪ Large device compatibility |
| Good For | <ul style="list-style-type: none">▪ Apps that require the best mobile UX and performance▪ Offline apps▪ Apps that require native frameworks▪ Example: Field sales, self service, consumer apps | <ul style="list-style-type: none">▪ Apps that require the best mobile UX▪ Functionally complex apps▪ Offline apps▪ Apps that require significant and frequent customization▪ Example: Field service, asset maintenance apps | <ul style="list-style-type: none">▪ Functionally simple apps▪ Example: Fact sheets, approval apps | <ul style="list-style-type: none">▪ Functionally simple apps▪ Apps that do not require native features of offline▪ Example: Workflow and approval apps |
| Required Skills | <ul style="list-style-type: none">▪ Xcode/Swift and Android Studio/Java skills | <ul style="list-style-type: none">▪ Mobile Development kit skills | <ul style="list-style-type: none">▪ HTML5, CSS skills | <ul style="list-style-type: none">▪ JavaScript skills▪ SAP Web IDE, UI5, Apache Cordova |



SAP Mobile Cards

Mobile extensions and integrations for the Intelligent Enterprise

PUBLIC

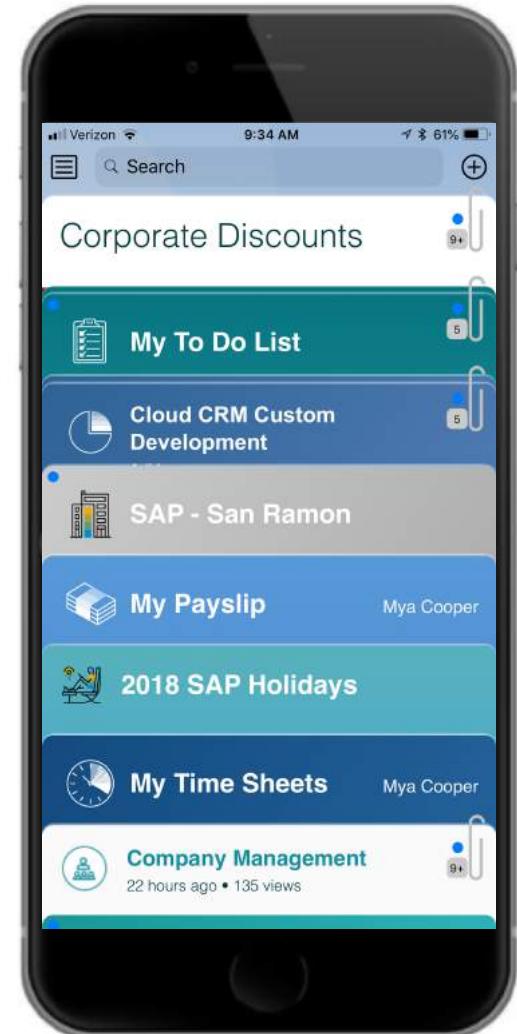
SAP Mobile Card kit – a feature of Mobile Services

With Mobile Services customers have access to a microapp platform to publish data into a consumer grade, “wallet” or “passbook” style app

- Creates cards that work across iOS, Android and WeChat
- Targets simple 1-2 screen apps & lean workflows.
- Reduces training by leveraging an easy to use Wallet-style app
- Simplifies app management with content updates handled automatically

Example Use Cases:

- Simple approvals - purchase orders, leave requests, deal approval
- Company news & alerts, facility information, sales promotions
- KPIs like charts, inventory levels, order exceptions
- My timesheets, vacation accrued, pay slip details

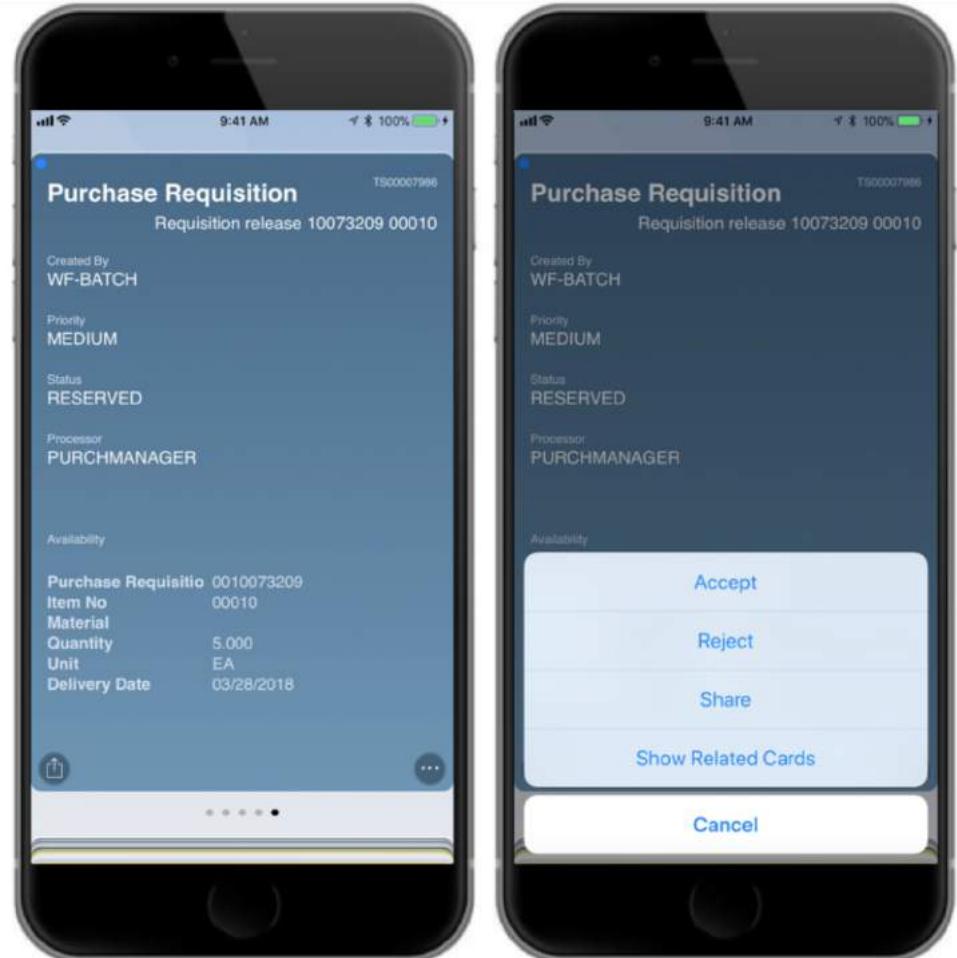


Introducing the SAP Mobile Cards app

Provides instant content, context, and availability

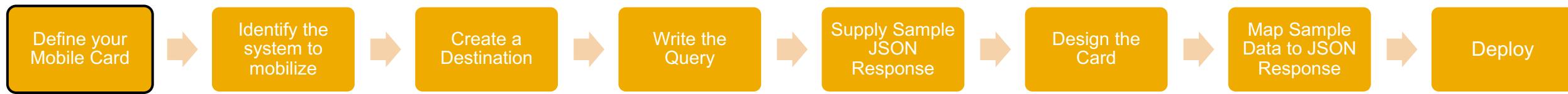
User actions:

- Get push notifications about cards and take action
- Approve or reject workflows
- Make phone calls from card information
- Send iMessages or emails to card contacts
- Open addresses in maps
- Deep link to another app or URL in context of card
- Share cards with others
- Notify and action cards via the Today screen

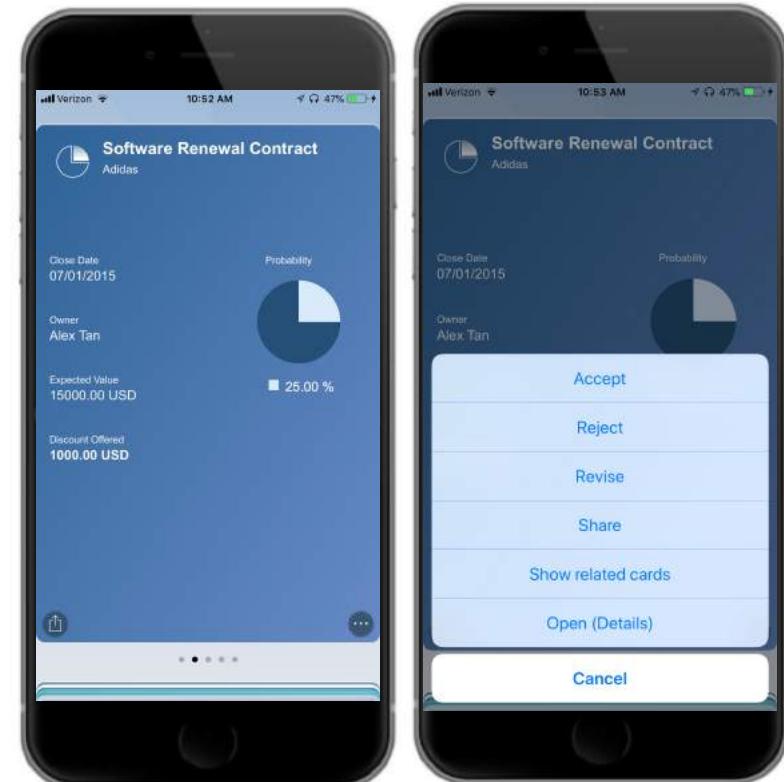


SAP Mobile Cards

Add mobility to any business process with custom cards

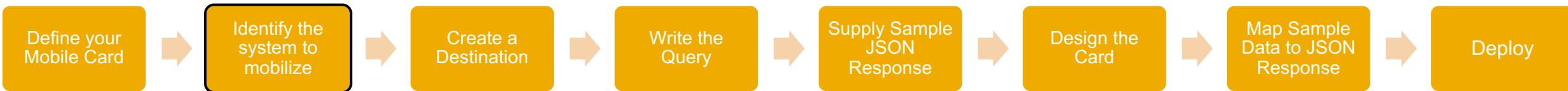


- Does the use case fit 1-2 screens?
- Where is the data coming from?
- Is it a static message or announcement?
- Is it a workflow?
- Will it allow for Card actions for the user?



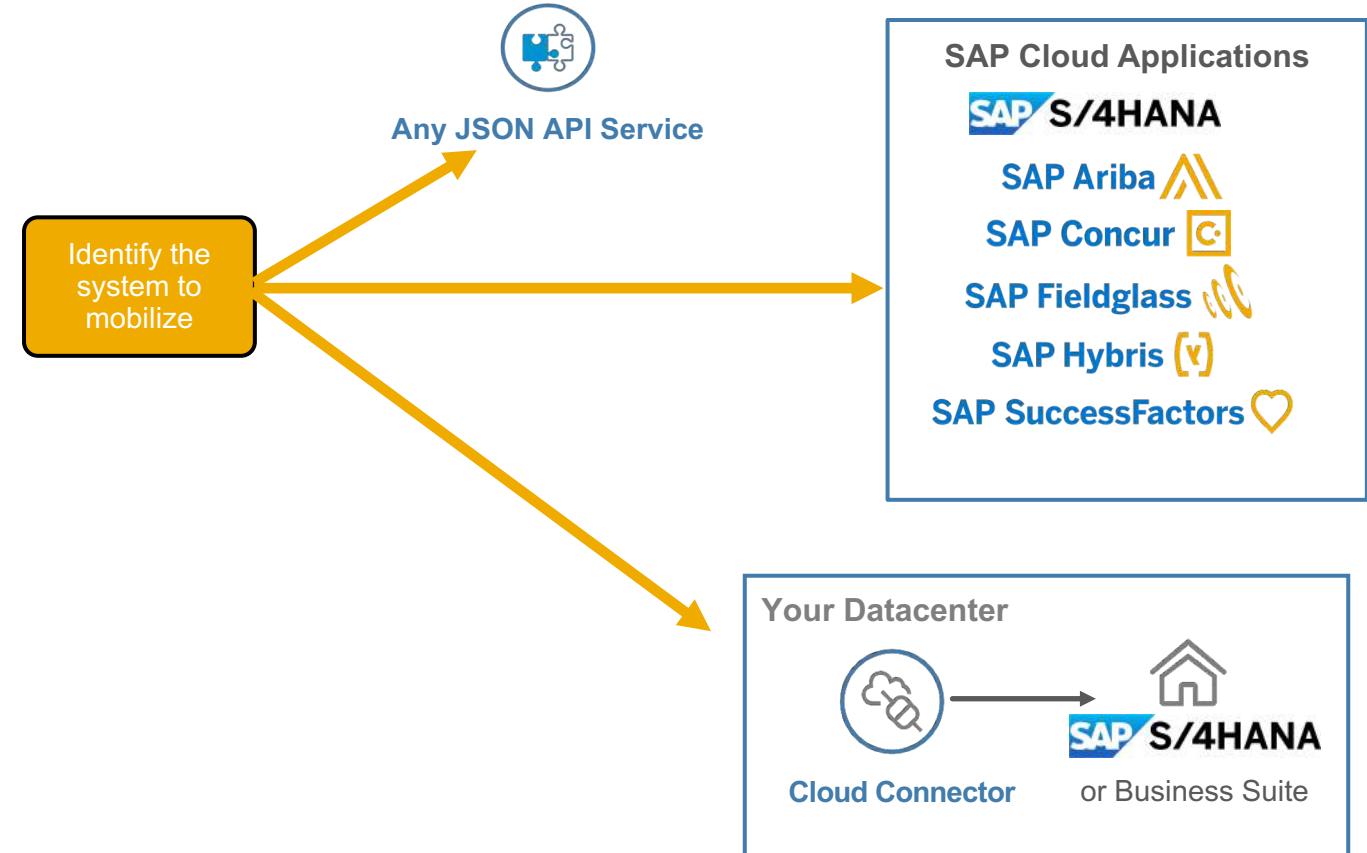
SAP Mobile Cards

Add mobility to any business process with custom cards



SAP Mobile Cards can mobilize any ODATA or REST accessible system that returns a JSON response.

SAP Mobile Cards push and notification capabilities make it great for creating static content too. For example, a company event, or a benefits enrollment reminder.



SAP Mobile Cards

Add mobility to any business process with custom cards

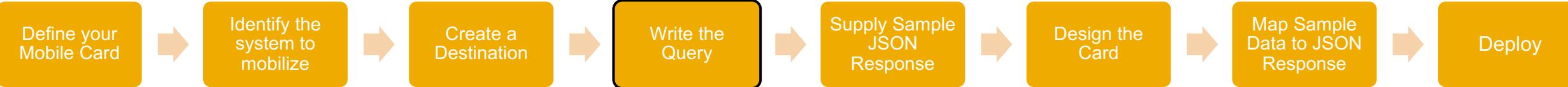


Destinations define how your Mobile Card will connect to and authenticate your users to the remote system

| Name | Platform Destination Name | URL | Proxy Type | SSO Mechanism/Authentication | Actions |
|------------------------------|---------------------------|---|------------|--------------------------------|---------|
| Type: Mobile Destination | | | | | |
| AppLAB | Not Applicable | https://service-app-catalog-mobile-team-purple-testing-i825495.cfapps.sap.hana.ondemand.com | Internet | No Authentication | Ping |
| AribaBuyerProxy | Not Applicable | https://aribabuyerproxyi825259trial.hanatrial.ondemand.com/AribaBuyerProxy | Internet | Basic Authentication | Ping |
| AutoInstanceCardDemo | Not Applicable | https://hcpms-i825259trial.hanatrial.ondemand.com | Internet | Basic Authentication | Ping |
| BuiltIOContentStack | Not Applicable | https://cdn.contentstack.io | Internet | No Authentication | Ping |
| com.sap.content2go | Not Applicable | https://hcpms-i825259trial.hanatrial.ondemand.com | Internet | No Authentication | Ping |
| com.sap.edm.sampleservice | Not Applicable | https://hcpms-i825259trial.hanatrial.ondemand.com/SampleServices/ESPM.svc | Internet | Application-to-Application SSO | Ping |
| com.sap.edm.sampleservice.v2 | Not Applicable | https://hcpms-i825259trial.hanatrial.ondemand.com/mobileservices/original/hcpms/ESPM.svc/v2 | Internet | Application-to-Application SSO | Ping |

SAP Mobile Cards

Add mobility to any business process with custom cards



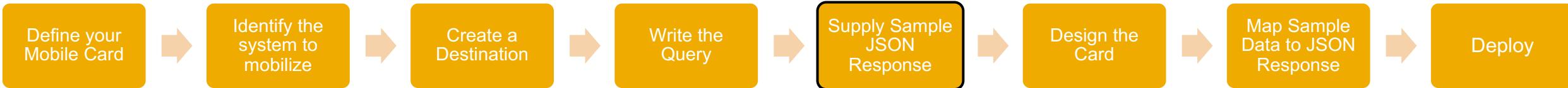
Using a tool of your choice, write a query for your REST/ODATA service to retrieve a single result set in a JSON format.

The screenshot shows the Postman application interface. The top navigation bar includes 'New', 'Import', 'Runner', and 'My Workspace'. The main area shows a 'Collections' sidebar with items like AppCorner, ContentStack, demo, ESS, ESPM Sample Service, Example, Inbox, Playground, and Postman Echo. A 'GET' request is being made to the URL [https://hcpcms-i825259trial.hanatrial.ondemand.com/SampleServices/ESPM.svc/Customers?format=json&\\$top=1](https://hcpcms-i825259trial.hanatrial.ondemand.com/SampleServices/ESPM.svc/Customers?format=json&$top=1). The 'Body' tab displays the JSON response:

```
1 - { "d": { "results": [ 2 - { "id": "https://hcpcms-i825259trial.hanatrial.ondemand.com:443/SampleServices/ESPM.svc/Customers('100000000')", 3 - "url": "https://hcpcms-i825259trial.hanatrial.ondemand.com:443/SampleServices/ESPM.svc/Customers('100000000')", 4 - "type": "ESPM.Customer" }, 5 - "City": "Antioch, Illinois", 6 - "Country": "US", 7 - "CustomerId": "100000000", 8 - "DateOfBirth": "/Date(315532800000)/", 9 - "EmailAddress": "sue.bay@telco.info", 10 - "FirstName": "Sue", 11 - "HouseNumber": "143", 12 - "LastName": "Bay", 13 - "PhoneNumber": "1029384759", 14 - "PostalCode": "60002", 15 - "Street": "Spring Garden Street", 16 - "UpdatedTimestamp": "/Date(1490944596506)/* 17 - ] } 18 - "delta": "https://hcpcms-i825259trial.hanatrial.ondemand.com:443/SampleServices/ESPM.svc/Customers?deltatoken=2018-07-24T17:17:03" 19 - } 20 - } 21 - } 22 - } 23 - } 24 - } 25 - } 26 - }
```

SAP Mobile Cards

Add mobility to any business process with custom cards



Paste the JSON response data from your query in the supplied Sample Data area.

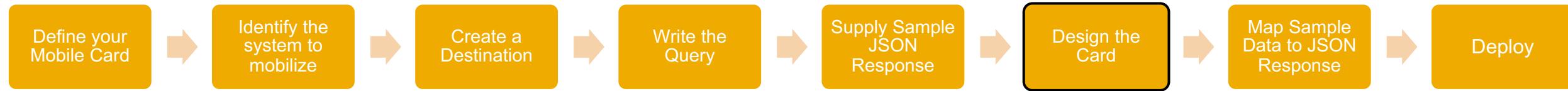
This data will be used to ensure the correct data results are being mapped into the Mobile Card as we continue creating it.

The screenshot shows the SAP Mobile Cards interface with the 'Mobile Service for Development and Operations' header. On the left, a sidebar menu includes 'Home', 'Mobile Applications' (selected), 'Native/Hybrid', 'SAP Mobile Cards' (selected), 'Features', 'Destinations', 'Analytics', and 'Settings'. The main content area has tabs for 'Info', 'Sample Data' (selected), 'Assets', 'Editor', 'Data Mapping', 'Actions', 'Header', and 'Notifications'. Under 'Data Source', there is a 'JSON File:' input field and a 'Browse...' button. To the right, the 'Data' section displays a JSON object with numbered lines:

```
1 - {  
2 -   "d": {  
3 -     "__metadata": {  
4 -       "id": "https://hcamps-1825259trial.hanatrial.ondemand.com:443/  
5 -         /SampleServices/ESPM.svc/Customers('10000000')",  
6 -       "url": "https://hcamps-1825259trial.hanatrial.ondemand.com:443/  
7 -         /SampleServices/ESPM.svc/Customers('10000000')",  
8 -       "type": "ESPM.Customer"  
9 -     },  
10 -    "City": "Antioch, Illinois",  
11 -    "Country": "US",  
12 -    "CustomerId": "10000000",  
13 -    "DateOfBirth": "\\\\Date(315532800000)\\\\",  
14 -    "EmailAddress": "sue.bay@itelo.info",  
15 -    "FirstName": "Sue",  
16 -    "HouseNumber": "143",  
17 -    "LastName": "Bay",  
18 -    "PhoneNumber": "1029384759",  
19 -    "PostalCode": "60002",  
20 -    "Street": "Spring Garden Street",  
21 -    "UpdatedTimestamp": "\\\\Date(1490944596506)\\\\"  
22 -  }  
23 - }
```

SAP Mobile Cards

Add mobility to any business process with custom cards



Card creators can leverage and modify example card templates or build their own using our simple HTML editor.

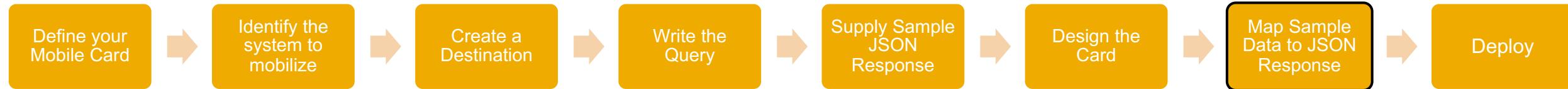
The screenshot shows the SAP Mobile Service interface for creating a mobile card. On the left is a sidebar with navigation links: Home, Mobile Applications (Native/Hybrid, SAP Mobile Cards selected), Features, Destinations, Analytics, and Settings. The main area has a title 'Mobile Service for Development and Operations' and 'SAP Mobile Cards / Sample Service Customers'. It displays a card titled 'Sample Service Customers' with a gear icon. Below the title are buttons: Save, Reset, Delete, Export, Lock. A tab bar includes Info, Sample Data, Assets, Editor (selected), Data Mapping, Actions, Header, and Notifications. To the right of the tabs is a 'Source Code' section with a code editor containing the following HTML:

```
<HTML> goes here.  
Use {{handlebars}} within  
the HTML to identify the  
data fields you will map  
into the Mobile Card.
```

The code editor shows line numbers from 1 to 23. To the right of the code editor is a 'Template Preview' window showing a card template with a yellow header containing a user icon and the word 'Customer'. The main body of the card contains the text: 'Primary Contact: {{FirstName}} {{LastName}}', 'Primary Contact Phone: {{PhoneNumber}}', and 'Primary email: {{EmailAddress}}'. At the bottom right of the preview window is a link 'Flip to Back'.

SAP Mobile Cards

Add mobility to any business process with custom cards



Items identified within our editor with {{ }} are shown within the Data Mapping area and the drop down pulls data from the Sample Data response provided.

The screenshot shows the SAP Mobile Service interface for developing mobile cards. On the left, a sidebar navigation includes Home, Mobile Applications (Native/Hybrid, SAP Mobile Cards selected), Features, Destinations, Analytics, and Settings. The main content area is titled "Mobile Service for Development and Operations" and "SAP Mobile Cards / Sample Service Customers". It shows a "Sample Service Customers" card configuration. The "Data Mapping" tab is active, showing fields for "Front" mapping:

| Field | Mapping |
|--------------|----------------|
| CustomerId | d.CustomerId |
| FirstName | d.FirstName |
| LastName | d.LastName |
| PhoneNumber | d.PhoneNumber |
| EmailAddress | d.EmailAddress |

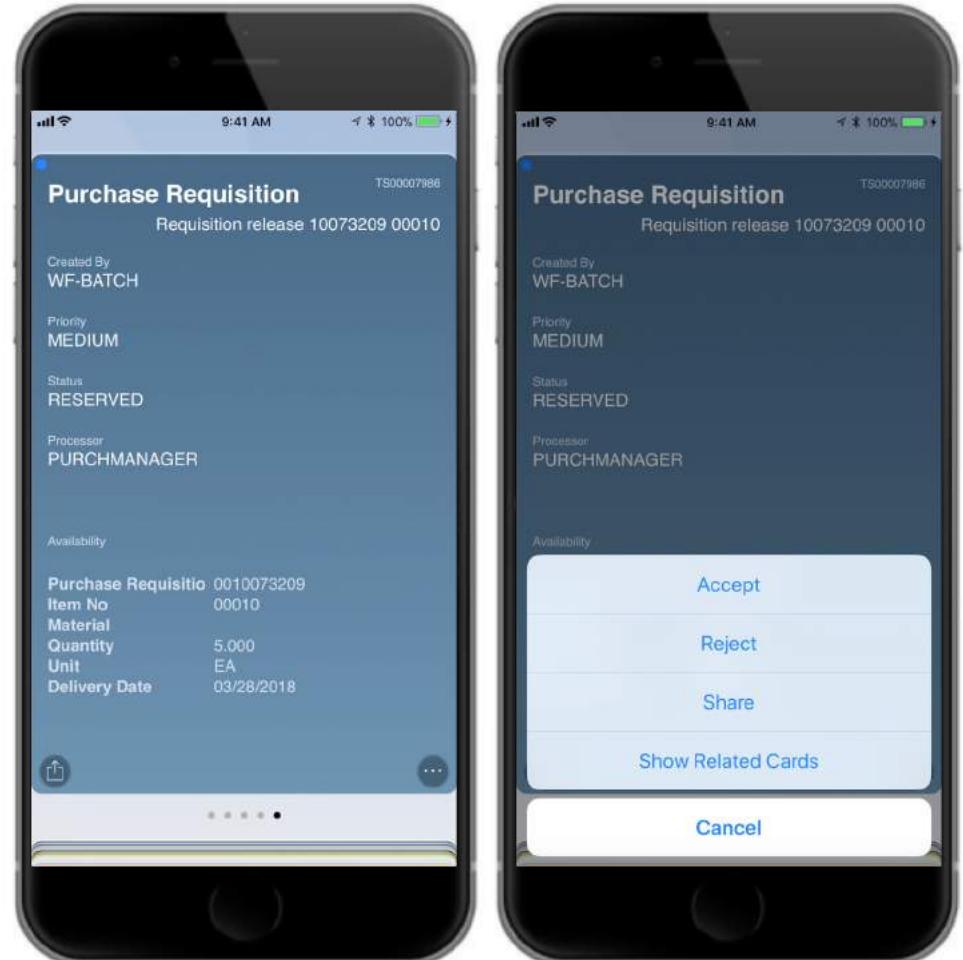
To the right, a "Card Preview" window displays a sample card for a customer named Sue Bay with the ID 100000000. The card includes fields for Primary Contact, Primary Contact Phone, and Primary email.

SAP Mobile Cards for the SAP My Inbox

Make business decisions without being tied to your desk

Employees can easily access workflows from their mobile device

- Automatic synchronization of My Inbox tasks to your device
- Use pre-defined card templates for workflow tasks or create your own
- Take decisions (e.g. Approve or Reject)
- Access detailed task information
- Work in offline mode and synchronize later
- Get notified on new tasks



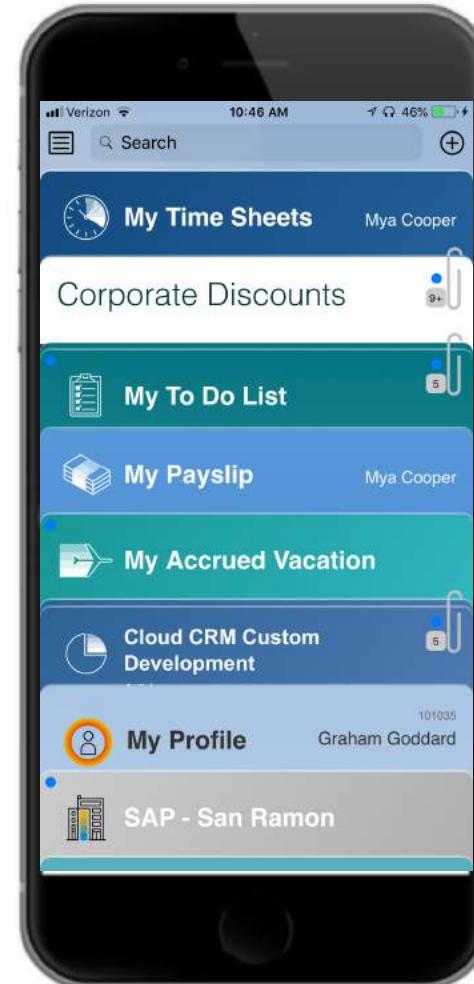
SAP Mobile Cards for SuccessFactors

Prebuilt cards complement the SuccessFactors mobile app

- Frequently visited HR data delivered as mobile cards
- Targets simple 1-2 screen apps & lean workflows
- Provides instant and offline access to data
- Built with SuccessFactors APIs and are customizable
- Cards are presented as fully functional and easily brandable
- Custom cards are easy to create to extend HCM to mobile

• Pre-built Cards for SuccessFactors

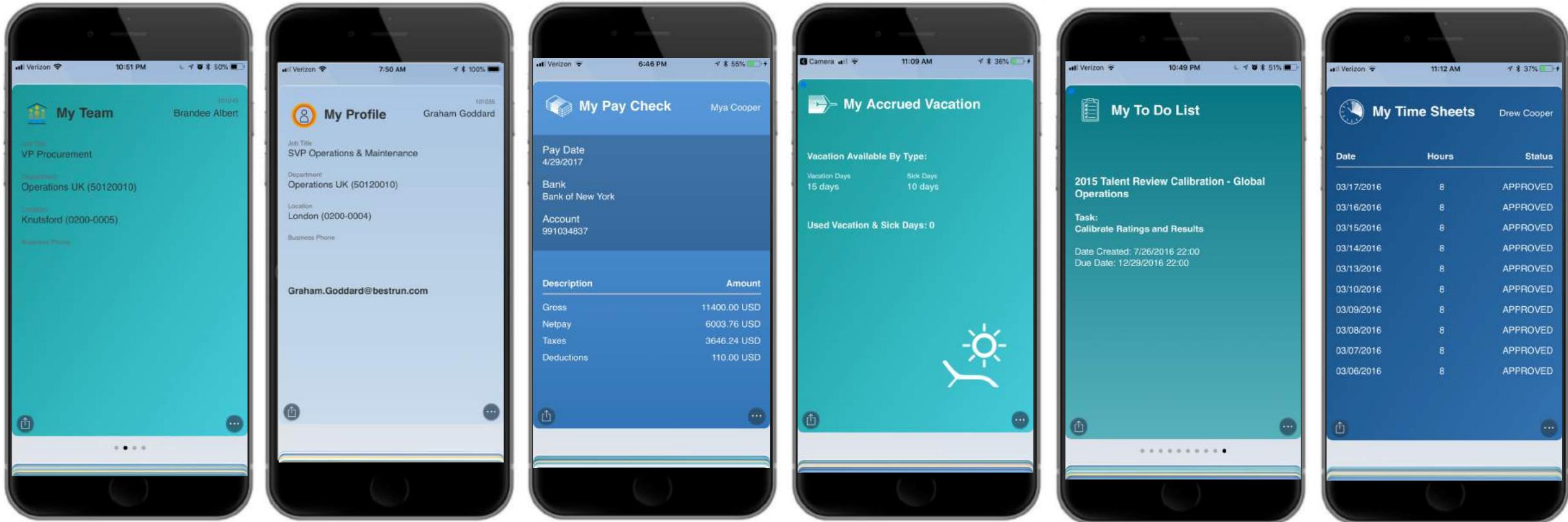
- My Vacation
- My Time Sheets
- My To Do
- My Pay Check
- My Profile
- My Direct Reports



SAP SuccessFactors 

SuccessFactors & Mobile Cards Templates

SAP SuccessFactors ❤



Customizable

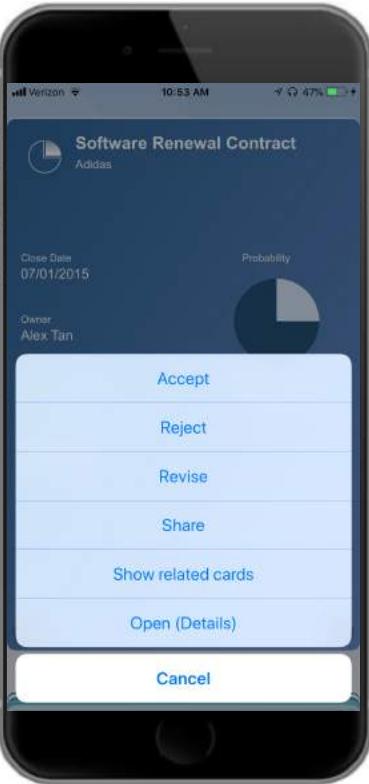
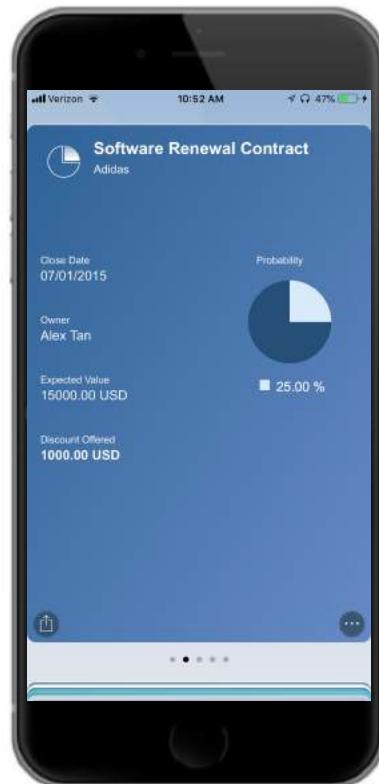
Brandable

Always Up to Date

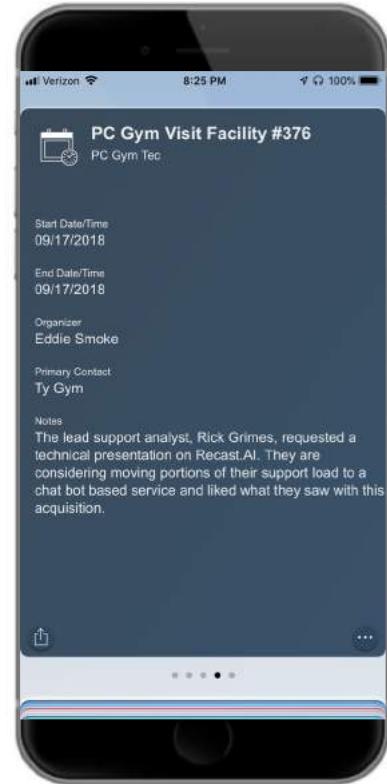
Available Offline

SAP Mobile Cards for C/4HANA

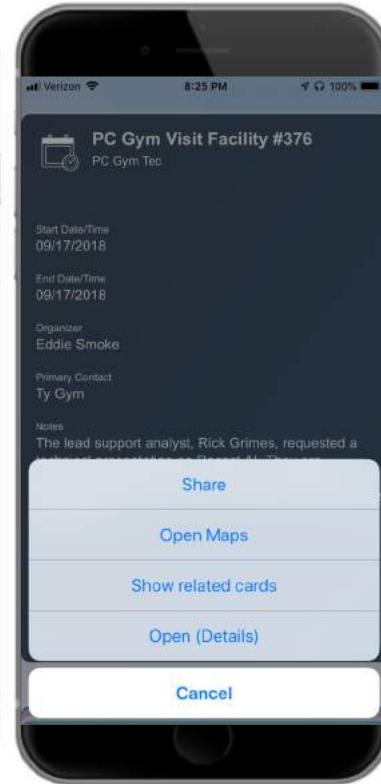
Employees can access and action Cloud for Customer data from their mobile.



Sales Manager Deal Approval

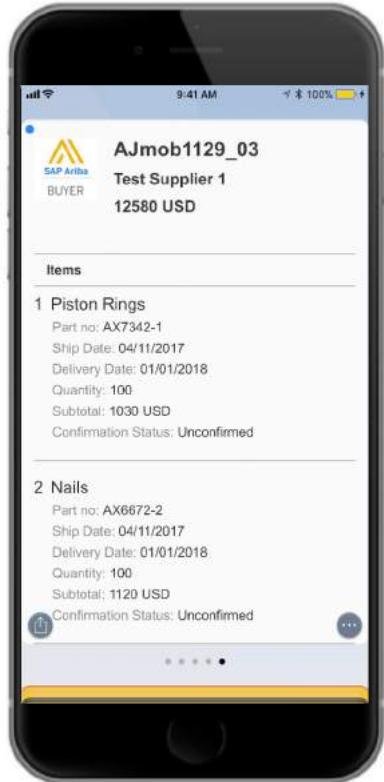


Upcoming Customer Visits

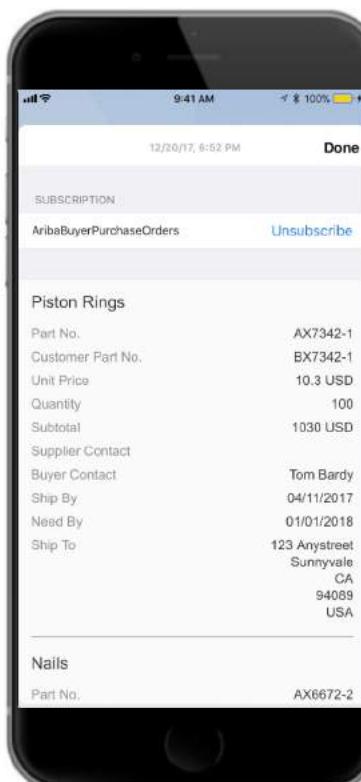


SAP Mobile Cards for Ariba & Concur

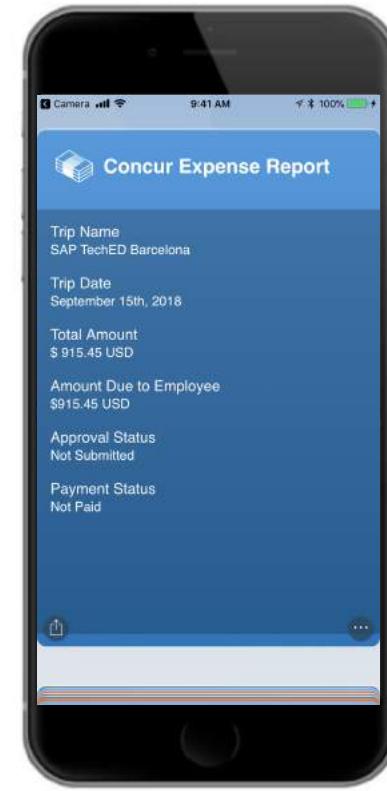
Employees can access and action Ariba and Concur information from their mobile



My Purchase Orders



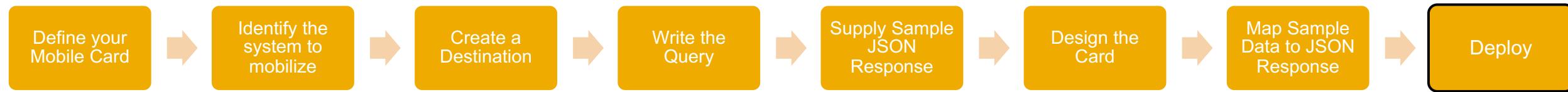
My Purchase Order Exceptions



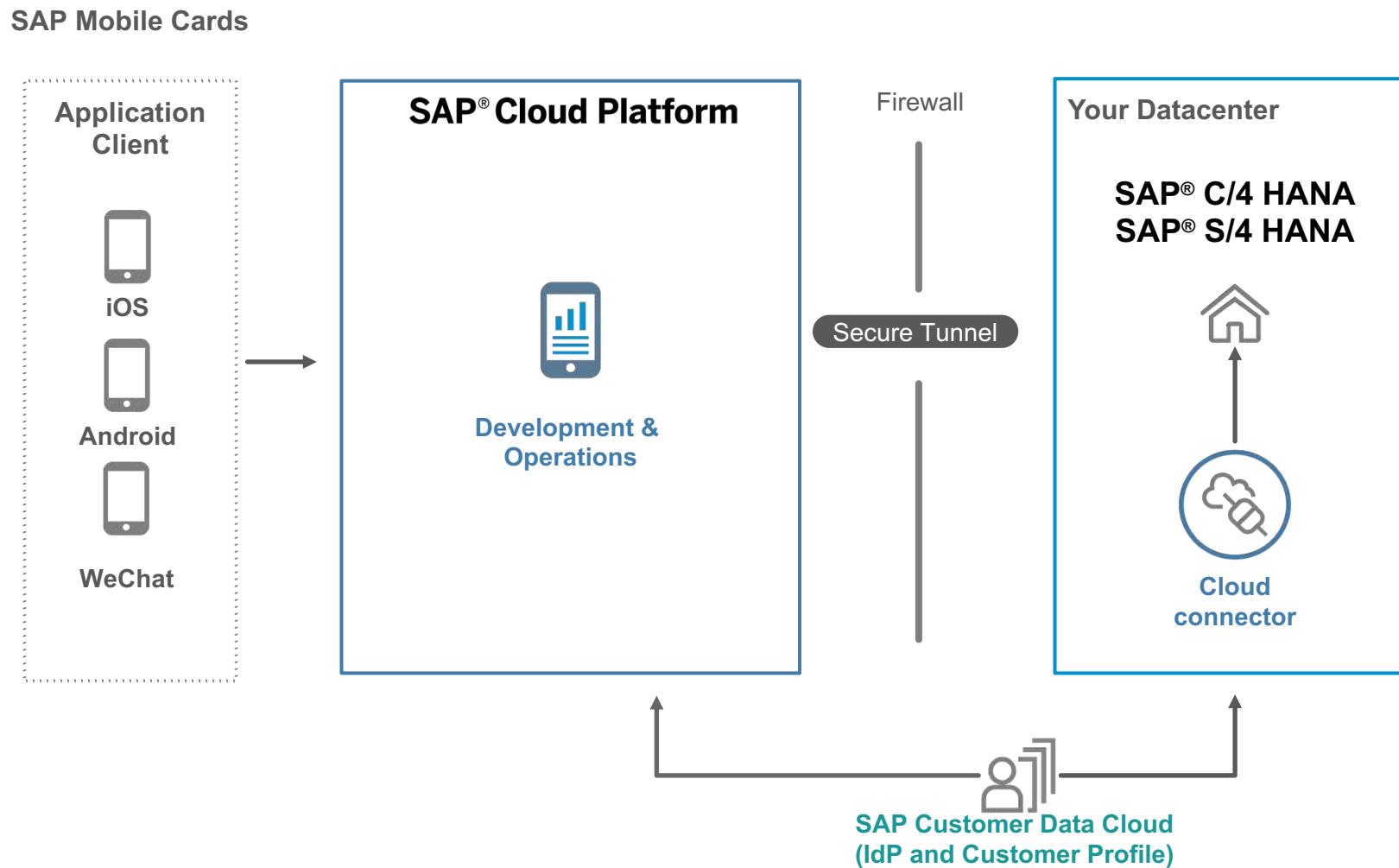
My Concur Travel Expenses

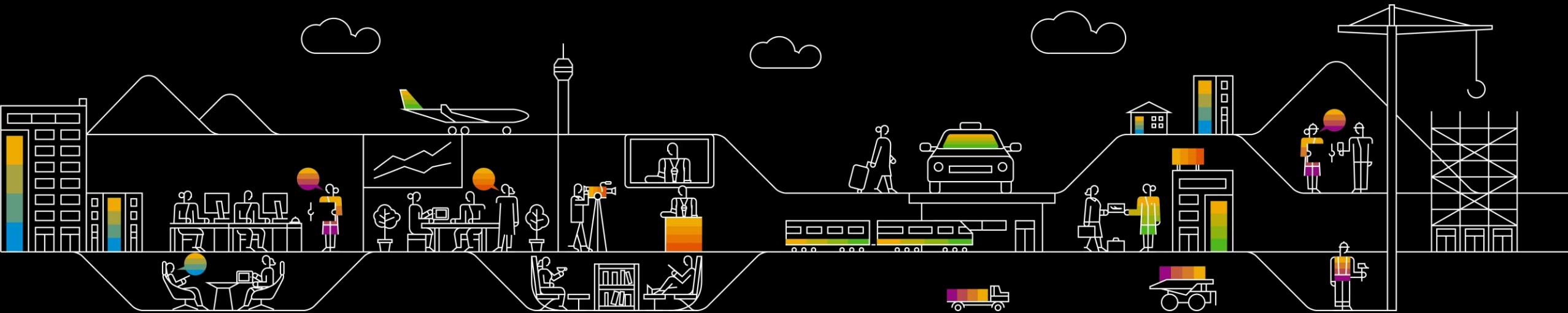
SAP Mobile Cards

Deploy your custom card



SAP Cloud Platform Mobile Services Architecture





Extend SAP S/4HANA Cloud using the application programming model for SAP Cloud Platform

Jeff Gebo, Manju Venkatesh, Jennifer Cha, Colin Kraczkowsky, SAP
TechED Las Vegas ASUG presentation

PUBLIC

Extend the digital core of S/4HANA Cloud

With the SAP Web IDE and the Application Programming Model you now have one place to do all of your extension development. From UI to Business Logic to Database, you can now do it all in the SAP Web IDE and build and deploy to SAP Cloud Platform.

In this hands on session, you will use SAP Cloud Platform and SAP Web IDE to extend the S/4HANA Cloud core process by:

- Create a project using the Application Programming Model
 - Create the business logic service with Java
 - Develop the front-end application that showcases the extension of S/4AHNA Cloud core process
- Use the S/4HANA Cloud SDK to connect to S/4HANA APIs

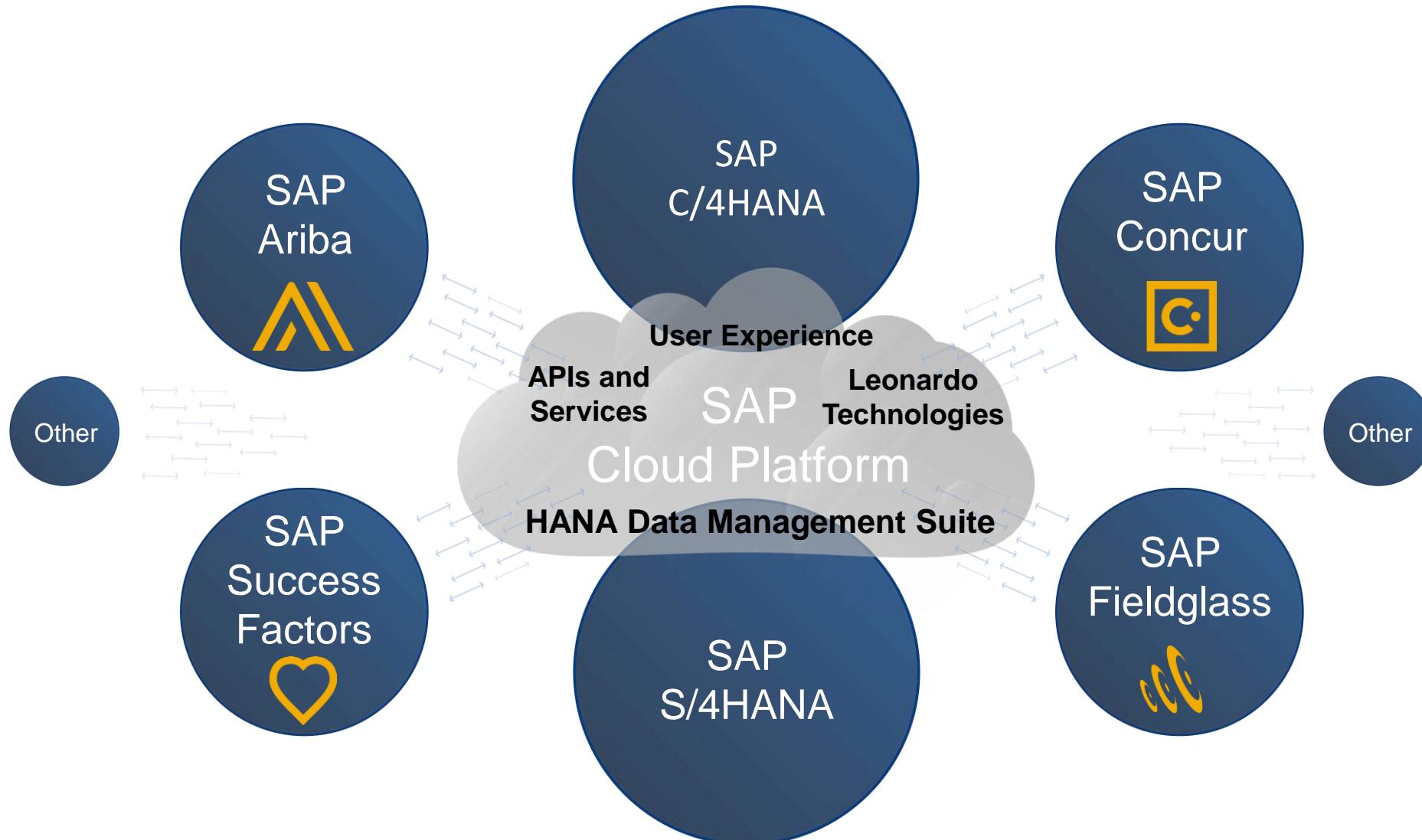


*"... SAP Cloud Platform is in the center.
Everything what we do now;
how we connect applications,
how we connect other applications,
how we present services we have in the system
for the use in applications or
in Leonardo or outside SAP
will go through the SAP Cloud Platform."*

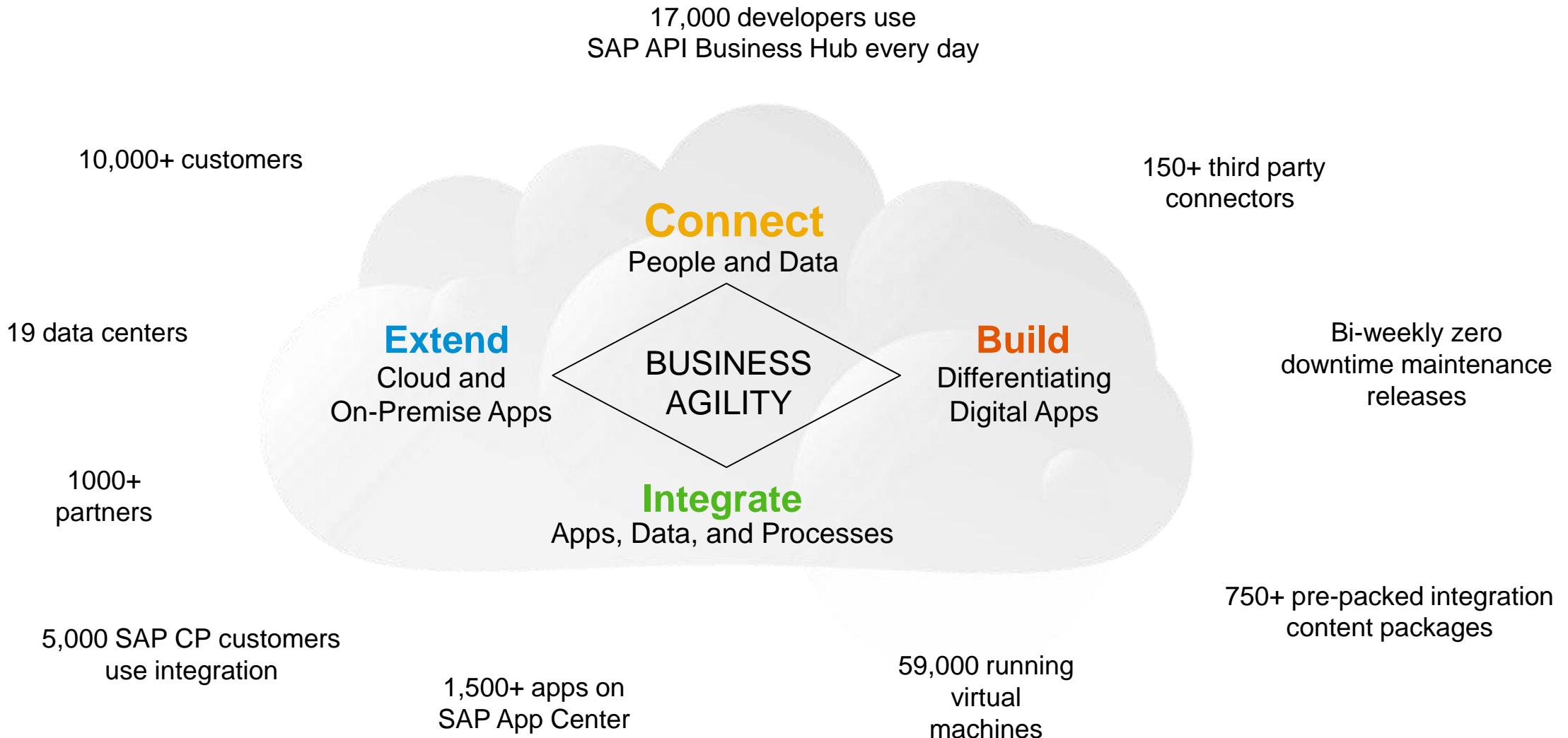


Prof. Dr. h.c. mult. Hasso Plattner
Chairman of the Supervisory Board, SAP

The Intelligent Enterprise Is More Than ERP



Power the Intelligent Enterprise



SAP Cloud Platform Extensibility

Supporting the Intelligent Enterprise

SAP® Cloud Platform



Digital Platform

Data Management | SAP App Center | Adoption Center | Eco-System



Intelligent Technologies

Applied Intelligence | Machine Learning | Analytics | IoT | Business Services and more...



Extensibility Foundation

Life cycle mgmt. | Connectivity & Security by default | SDKs | UI Integration



Intelligent Suite

SAP S/4HANA

Digital Core

SAP SuccessFactors

People

SAP C/4HANA

Network & Spend Management

SAP Ariba

Manufacturing & Digital Supply Chain

SAP Cloud Platform Capabilities



Analytics



Blockchain



Collaboration



Commercialization



Data Management



Data Privacy & Security



Developer Experience



Dev / Ops



Document Management



Globalization



Integration



Internet of Things



LoBs & Industries



Master Data



Machine Learning



Mobile



Orchestration



Output Management



Rates & Measures



Runtimes & Containers



User Experience



User Management



Infrastructure



LoBs and Industries – SAP Cloud Platform Extensibility

Enabling the intelligent enterprise

Discover your ability to maximize the value of SAP solutions

Extensibility foundation

- Automated technical enablement*
- Platform foundation for extension development

Intelligence

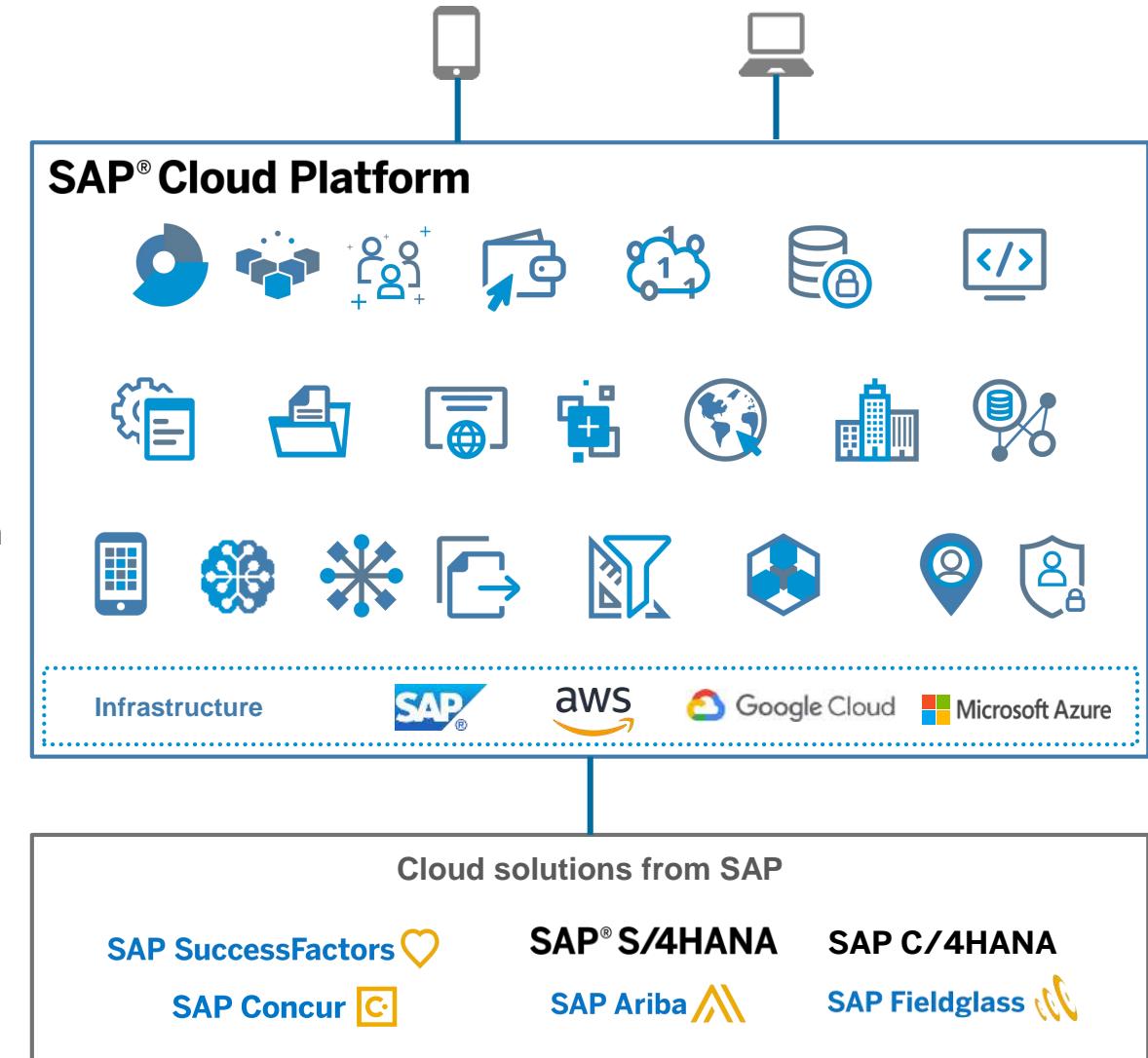
- Use of intelligent models and services such as SAP Leonardo to enrich the line-of-business experience

Commerce

- SAP Store and SAP App Center

Activation

- Digital nurturing and next-gen enablement
- Coaching and guided processes to help ensure success



*Where available

SAP Cloud Platform Extensibility across SAP Cloud Products



Our Goal is to have...

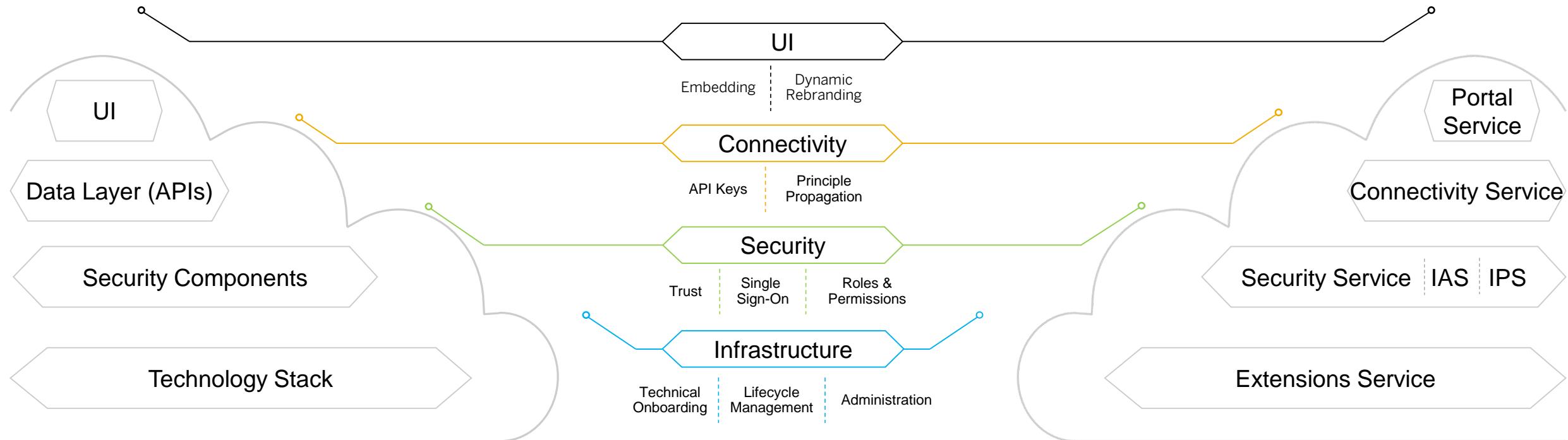
One Product Development Experience

One Product Distribution Experience

One Product Consumption Experience

SAP Cloud Platform Extensibility Integration Layers

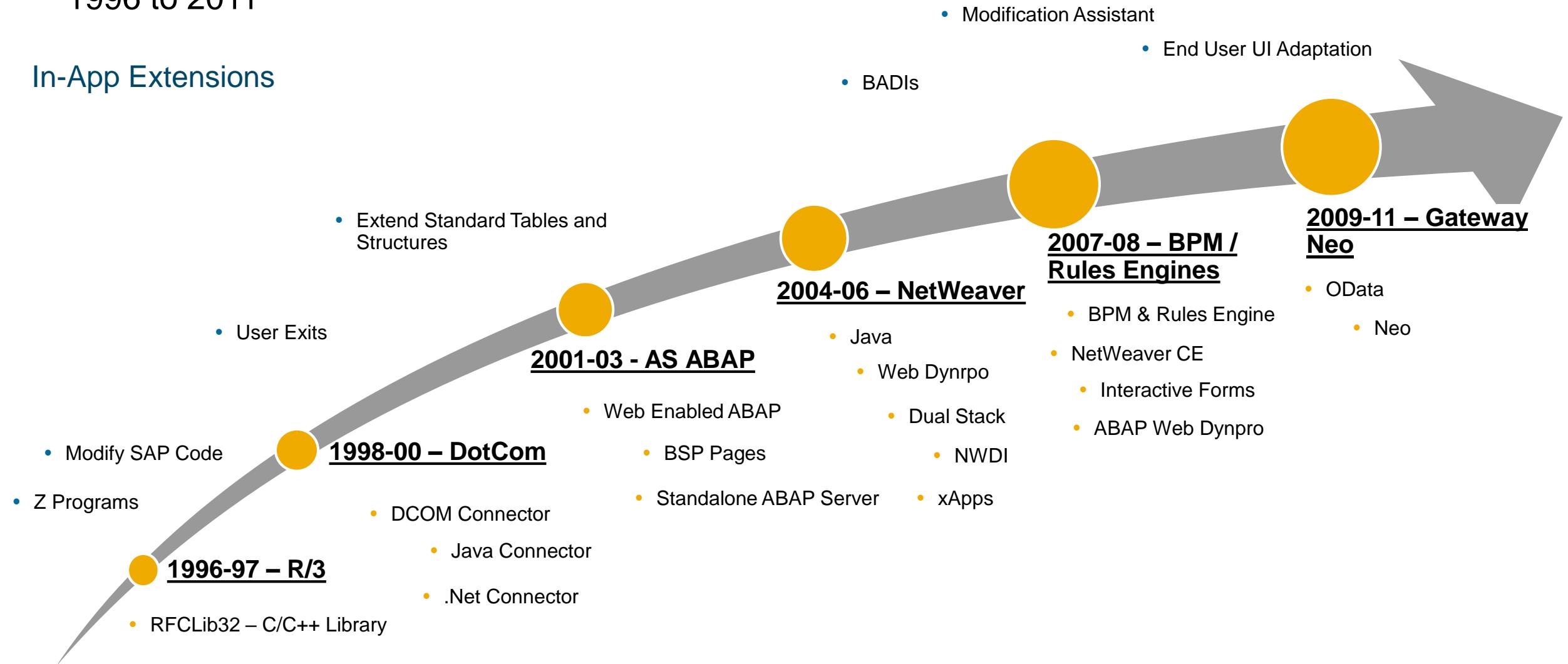
1 : N



History of Extensibility

1996 to 2011

In-App Extensions



History of Extensibility

2012 to Present

In-App Extensions

2012-14 – Mobile

- Mobile Platform
- Neo Commercialized

2005-16 – Cloud Platform

- NetWeaver Moves to the Cloud
 - Fiori
 - Cloud Connector
 - Services
 - Web Dynpro

2017 to Present – MultiCloud

- Cloud Foundry
- Machine Learning
- IoT

Side By Side Extensions

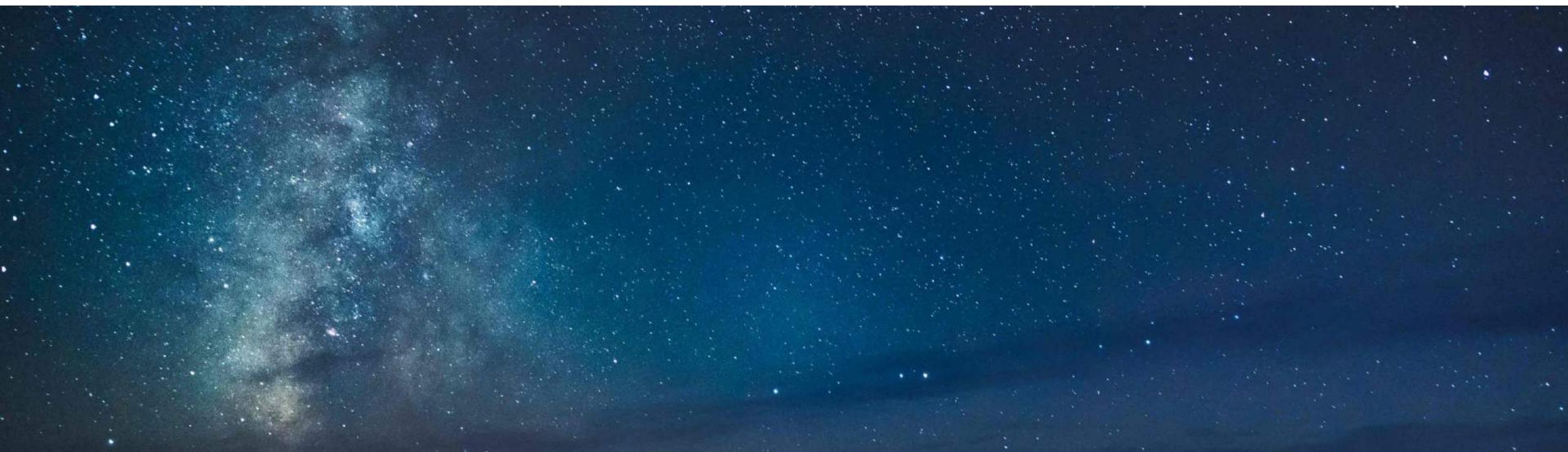
Decision Matrix

| | | SAP S/4HANA Cloud | SAP SuccessFactors | SAP C4C | SAP Ariba |
|-------------|--------------------------------------|--------------------|----------------------------|----------------------------|-----------|
| | Events | X(Business Events) | X (intelligent service) | | |
| UI | UI : Embedding | X | X | X | X |
| | UI: Rebranding | X | X | | X |
| In-App | In-App Extensibility | X | X | X | X |
| API's | OData : API's | X | X | X | |
| | Simple REST : API's | | | | X |
| Security | Security SAML - SSO | X | X | X | X |
| | Principal Propagation(SAP CP to LoB) | X | X | X | X** |
| | API Authentication (Basic/OAuth) | X | X | OAuth | X |
| Others | Security – Delegated authorization | | X | | X |
| | Automated Extension Configuration | | X | 1811* | |
| | Integration packages – Available | X | X | X | X |
| On-boarding | Technical on-boarding | X – Neo Only | X – Neo Only, 1811 for CF* | X – Neo Only, 1902 for CF* | |

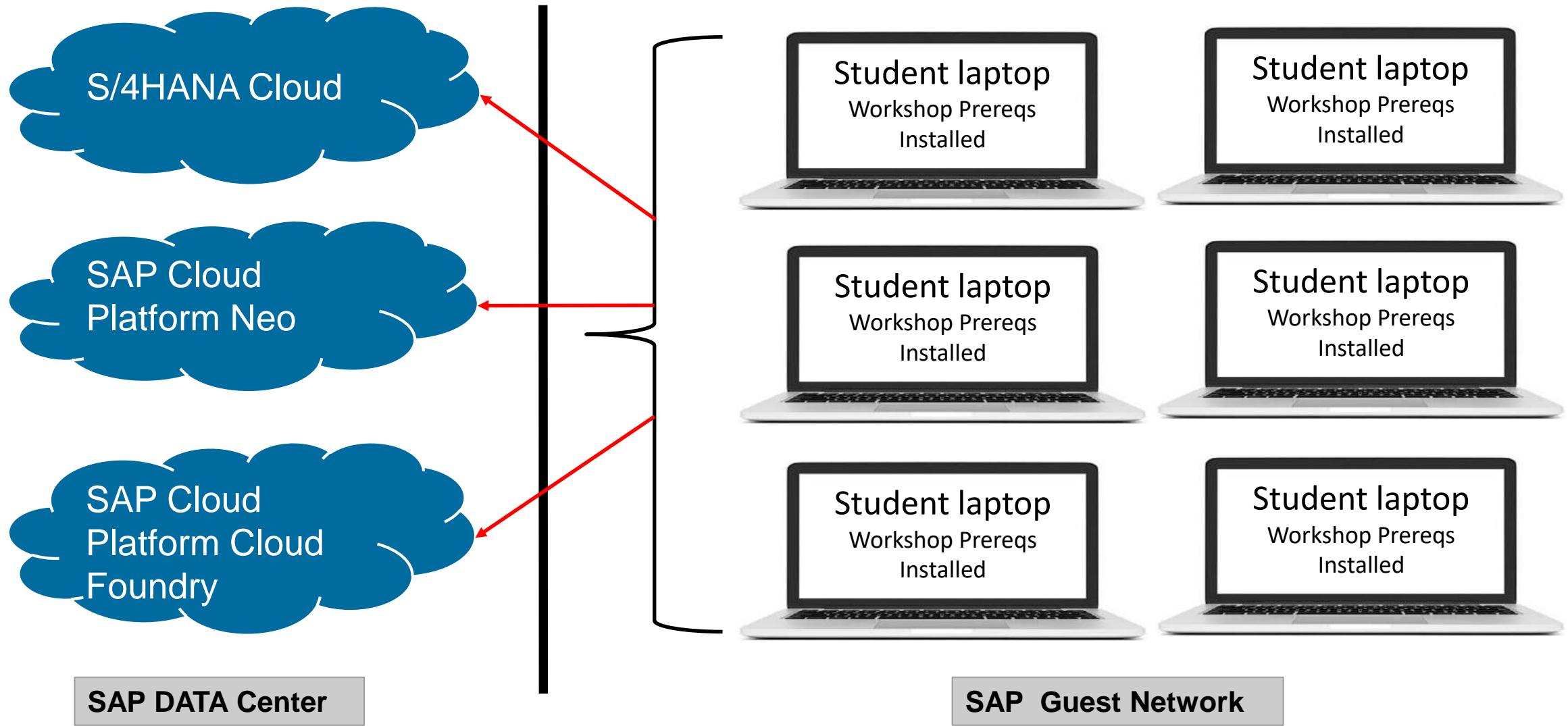
*Subject to Change

**Limited for Suppliers

Context and System Set-up for hands-on



System Set-up for hands-on

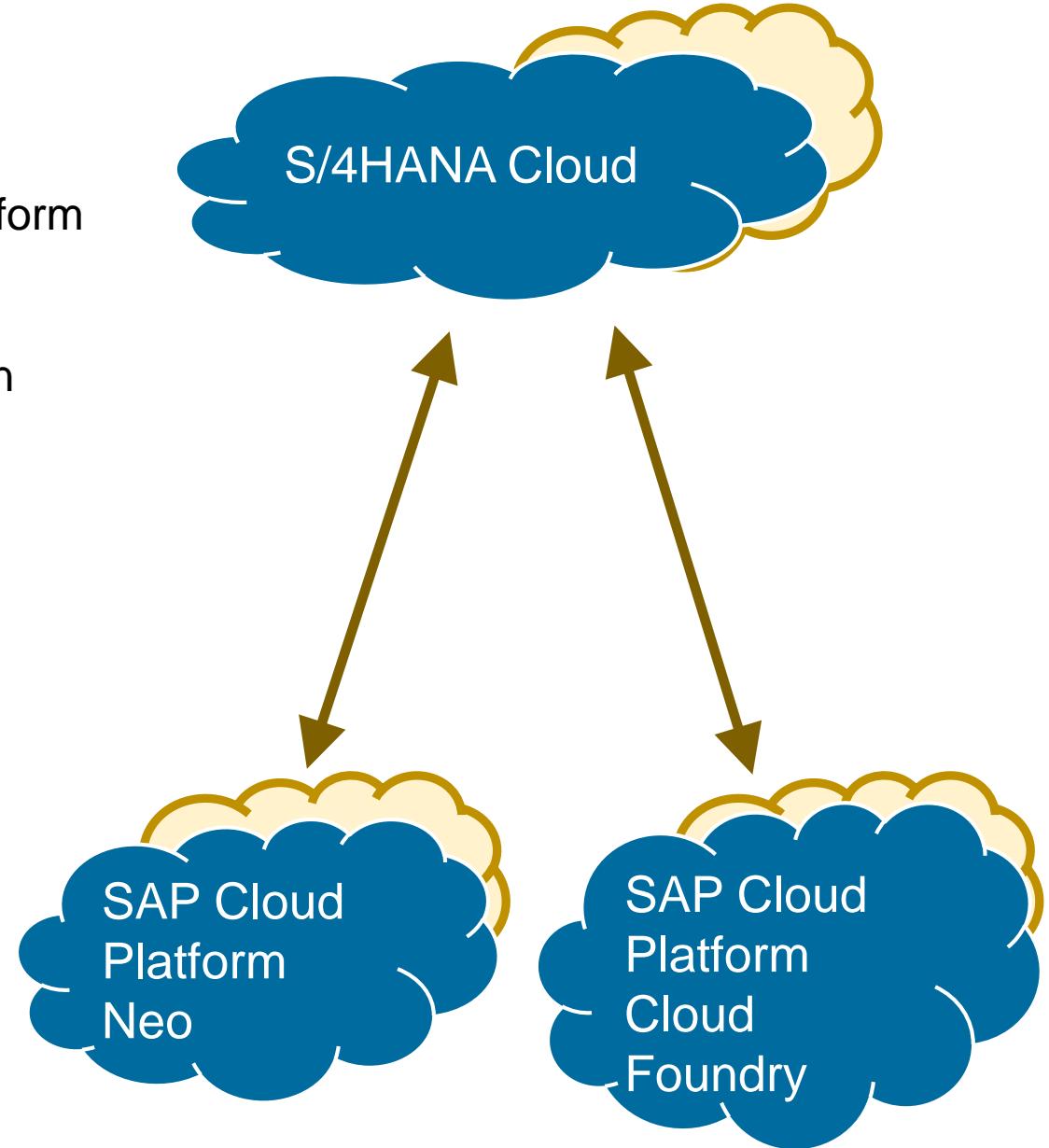


Extend the digital core of S/4HANA Cloud

Step 1: Create service destinations on both SAP Cloud Platform Neo and Cloud Foundry environments

Step 2: Develop a front-end application using the Application Programming Model

Step 3: Enable the front-end application in S/4HANA Cloud Launchpad





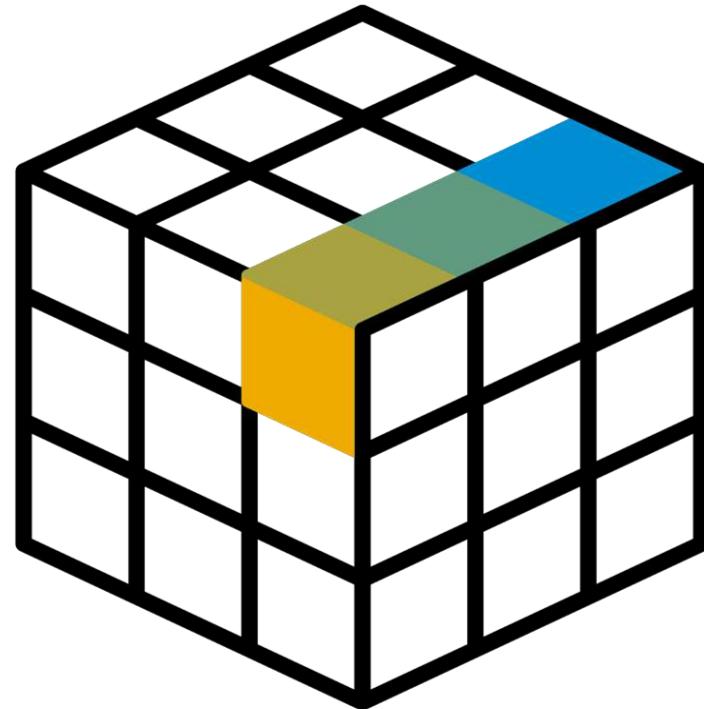
Application Programming Model for SAP Cloud Platform*

Strategy and Product Management, SAP Cloud Platform
October, 2018



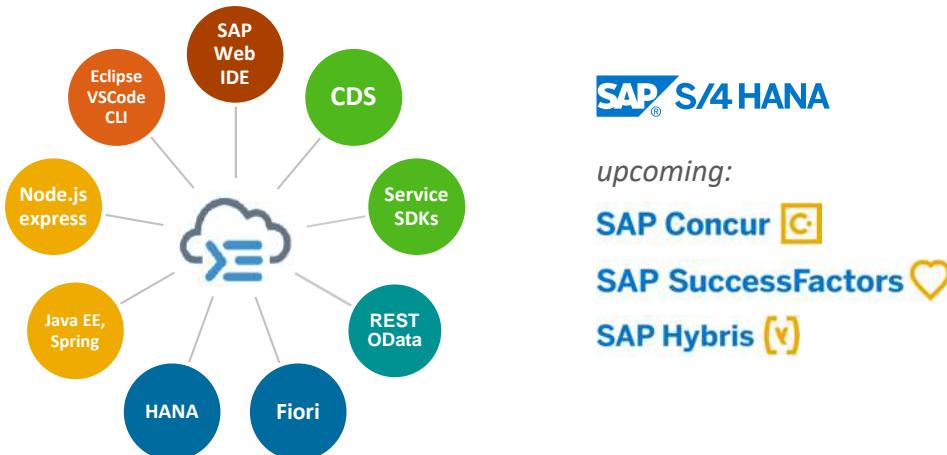
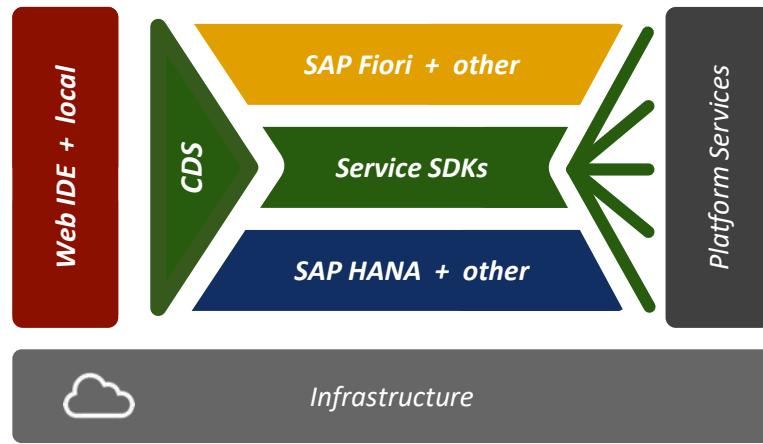
Motivation

- Customers ask for guidance and best practices
- High entry barrier for less tech-savvy developers
- Meet cloud qualities and enterprise qualities
- Focus on business domain logic
- Time to market
- Addressing costs of openness
- Verticalization for different industries
- Customization by SaaS clients





Overview – What is the Application Programming Model for SAP Cloud Platform?



1) The Application Programming Model is a framework comprising of...

- Core Data Services which adds *domain focus* and acts as the *glue* for all below...
- Service SDKs for providing and consuming services in *Java* and *Node.js*
- Cloud-native platform integration w/ common custom handlers and abstraction
- SAP Web IDE w/ tailored tools + *local* tools in *side-by-side* usage on same projects

2) ... with *out-of-the-box support* for...

- SAP Fiori + other UI technologies
- SAP HANA + other DBs
- S/4HANA Extension scenarios

3) ... as *synergy* of SAP technologies + Open Source

→ a consistent end-to-end **programming model** for enterprise services and applications featuring a **full-stack development** experience



Key Benefits

efficient and rapid development

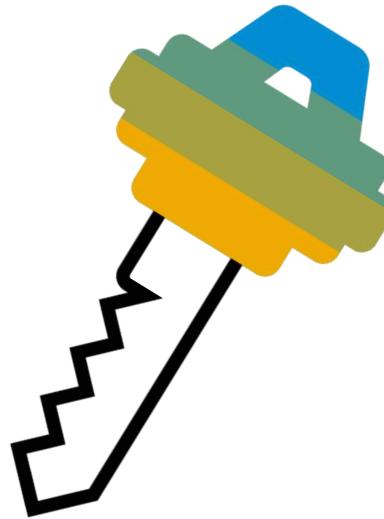


full-stack development from persistence to UI

minimal complexity of models and code



no lock-in to specific language, DB and tools

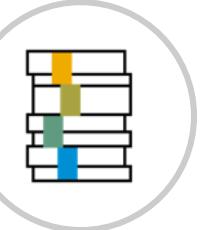


cloud-native platform services integration

1st-class support for S/4HANA extension scenarios

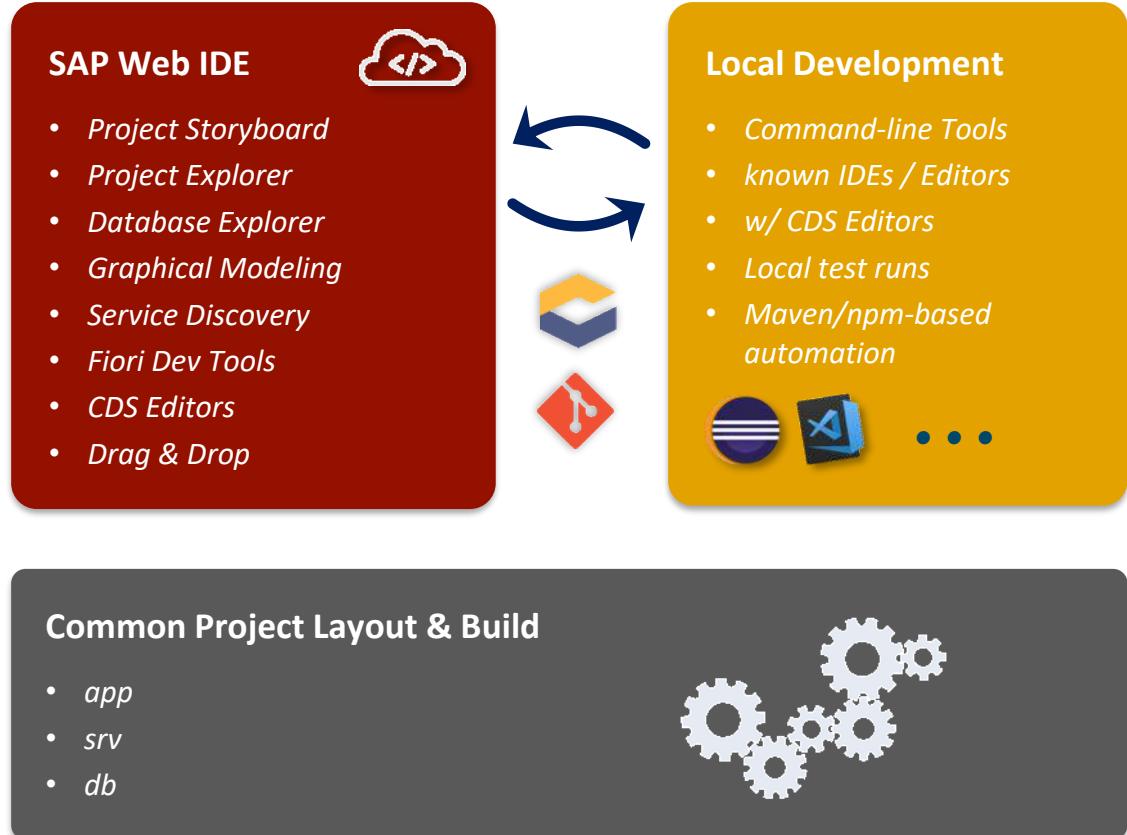


built-in security & other enterprise qualities





Toolset – SAP Web IDE + Local Development



SAP Web IDE provides...

- Jumpstart development without local setup
- Highly integrated development experience
- Easy integration with other services (e.g. S/4)
- Advanced and tailored tools

Local Development supported with...

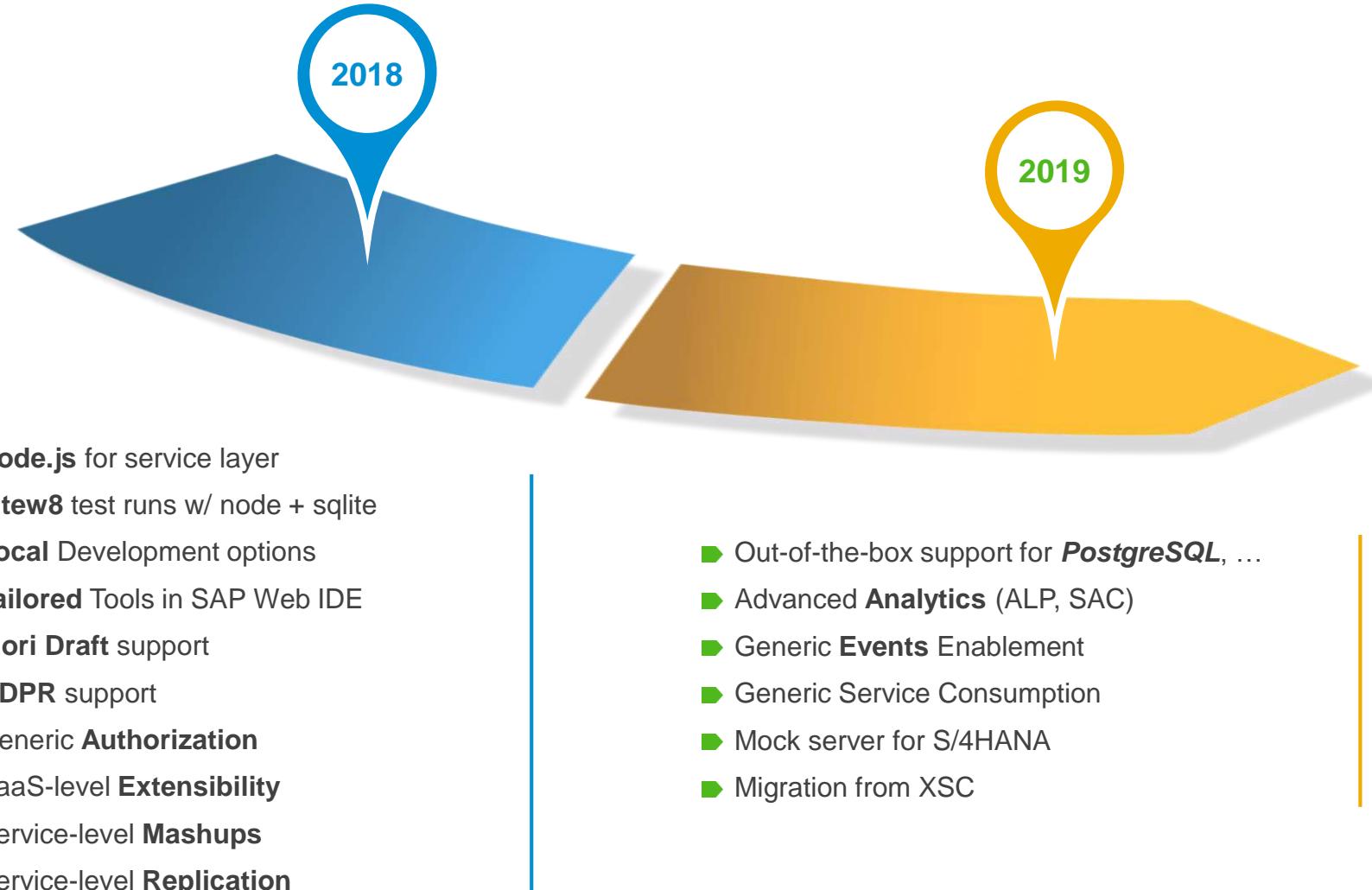
- CDS Editors for vscode and eclipse
- Command-line tools (CLIs)
- Local test runs

Switching between both using

- Shared workspaces in Che6 *
- Shared Git repositories



Roadmap



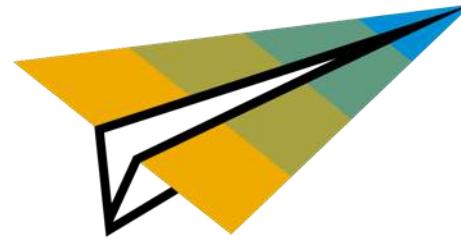
Summary



The **application programming model for SAP Cloud Platform** is SAP's programming model for building enterprise business applications by guiding developers with SAP best practices for full stack development.



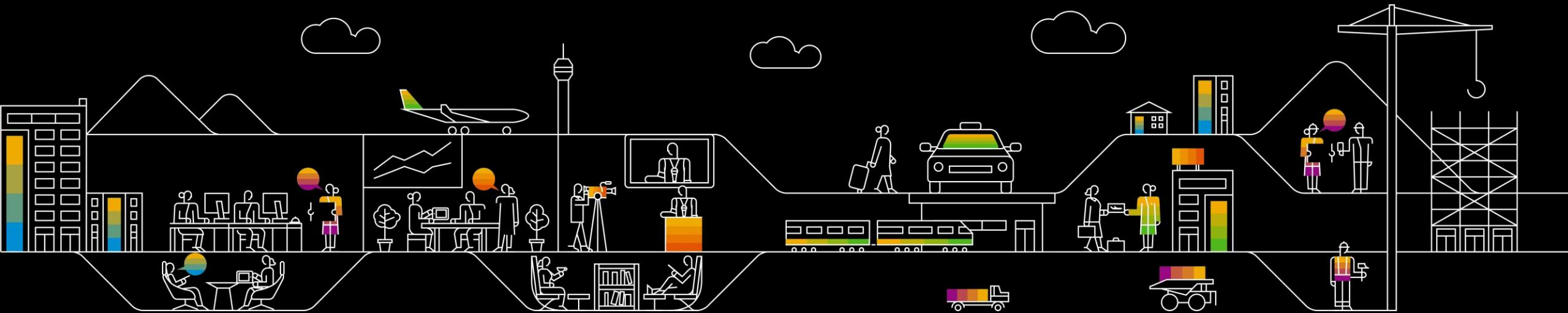
Seamlessly integrates Open Source Software and SAP technologies into one consistent **e2e programming model** and development experience



Light-weight & modular implementation of CDS allowing rapid development of persistency, business logic and UI, tailored for SAP Cloud Platform



Guides developers with by providing a set of enterprise-grade tools, languages and libraries, allowing them to **focus only on their domain logic**



Create dashboards with SAP Analytics Cloud based on SAP HANA as a service

Sabrina Dick, Daniel Funkert, SAP
TechED Las Vegas ASUG presentation

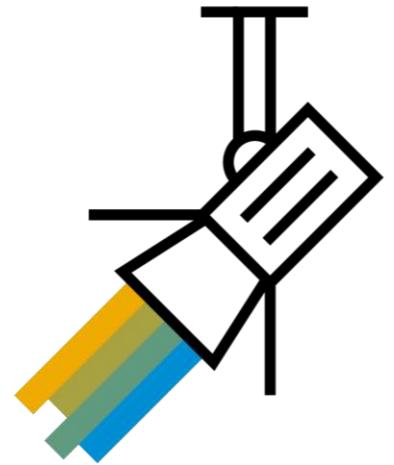
PUBLIC

Agenda

Setting the stage

Summary

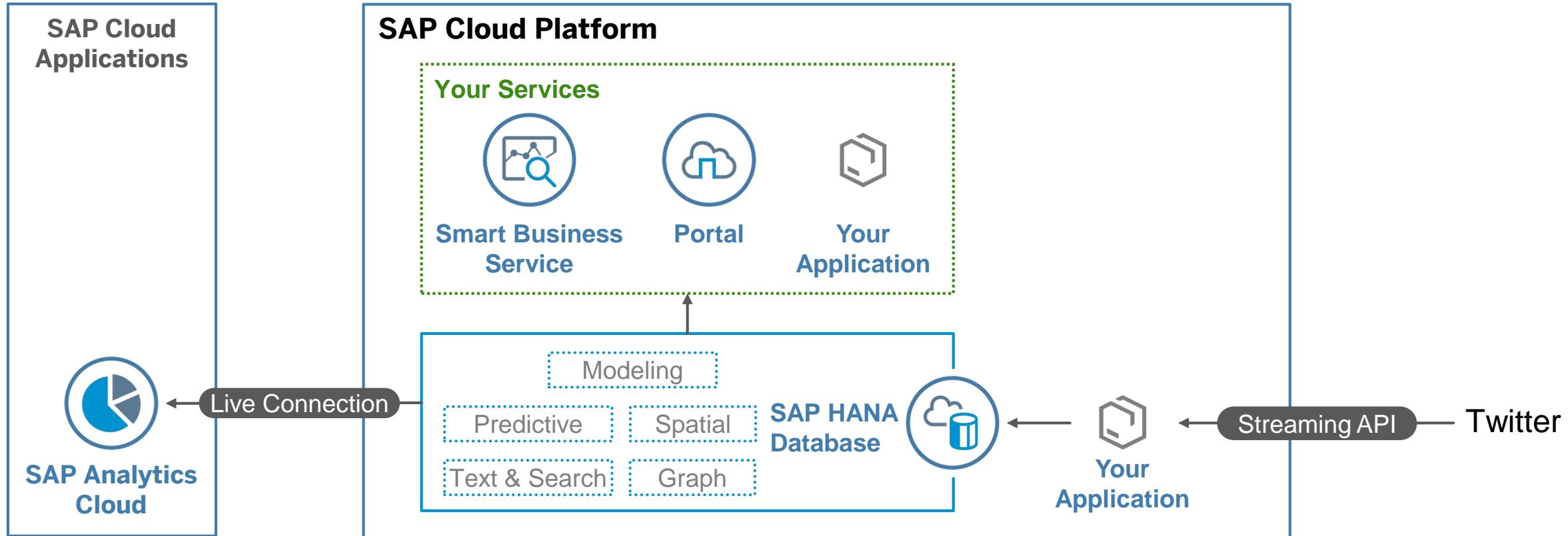
Before you start



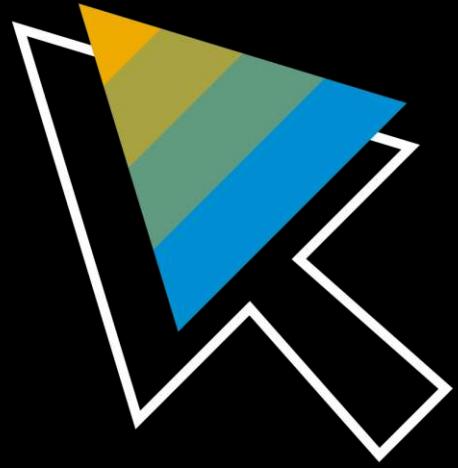
Setting the stage



Use Case



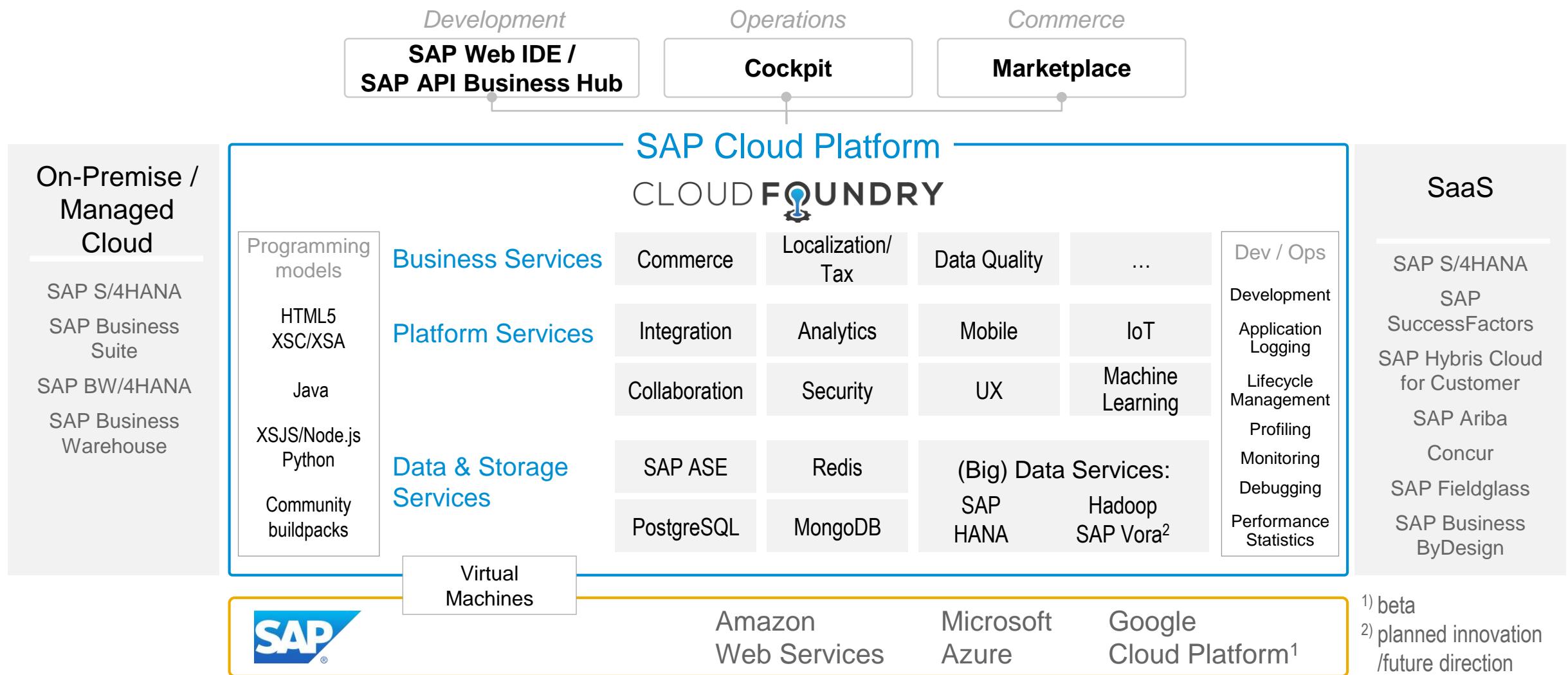
Demo



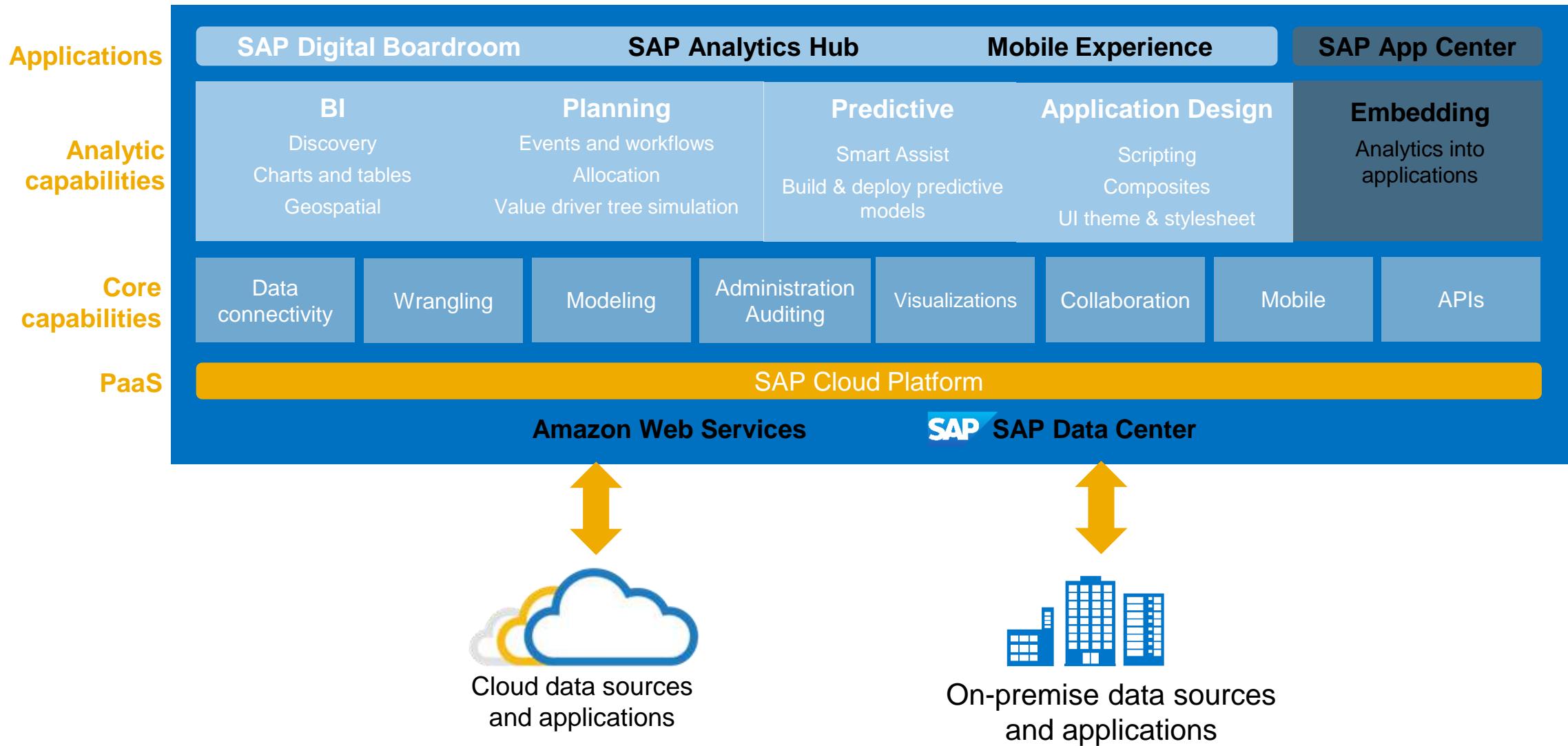
Short demo of the final dashboard

Recap of SAP Cloud Platform Essentials

SAP Cloud Platform architecture



SAP Analytics Cloud Architecture



Summary



SAP Cloud Platform Portal – Integrating Analytic Apps

What you've learned in this course

- 1 SAP Cloud Platform** as the enterprise platform to run your applications and extensions on
- 2** How to gain **additional insights** into data with different analytics features of SAP HANA
- 3** The powerful means available to **visualize data** catering to different target groups

Create your own analytic applications on top of SAP HANA in SAP Cloud Platform today!

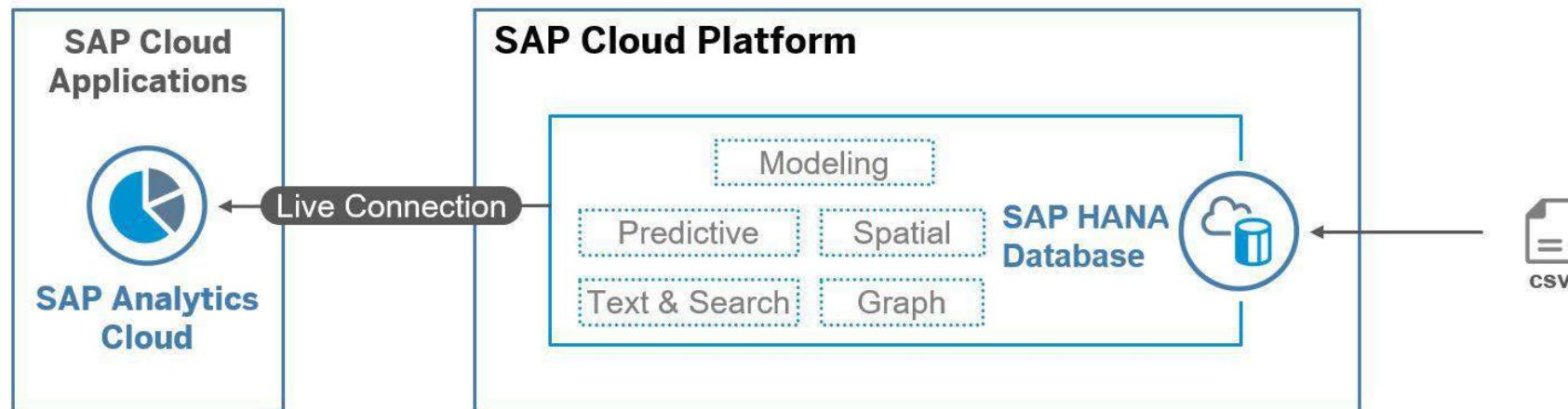
Before you start



Two flavours of one end-to-end scenario

AIN623

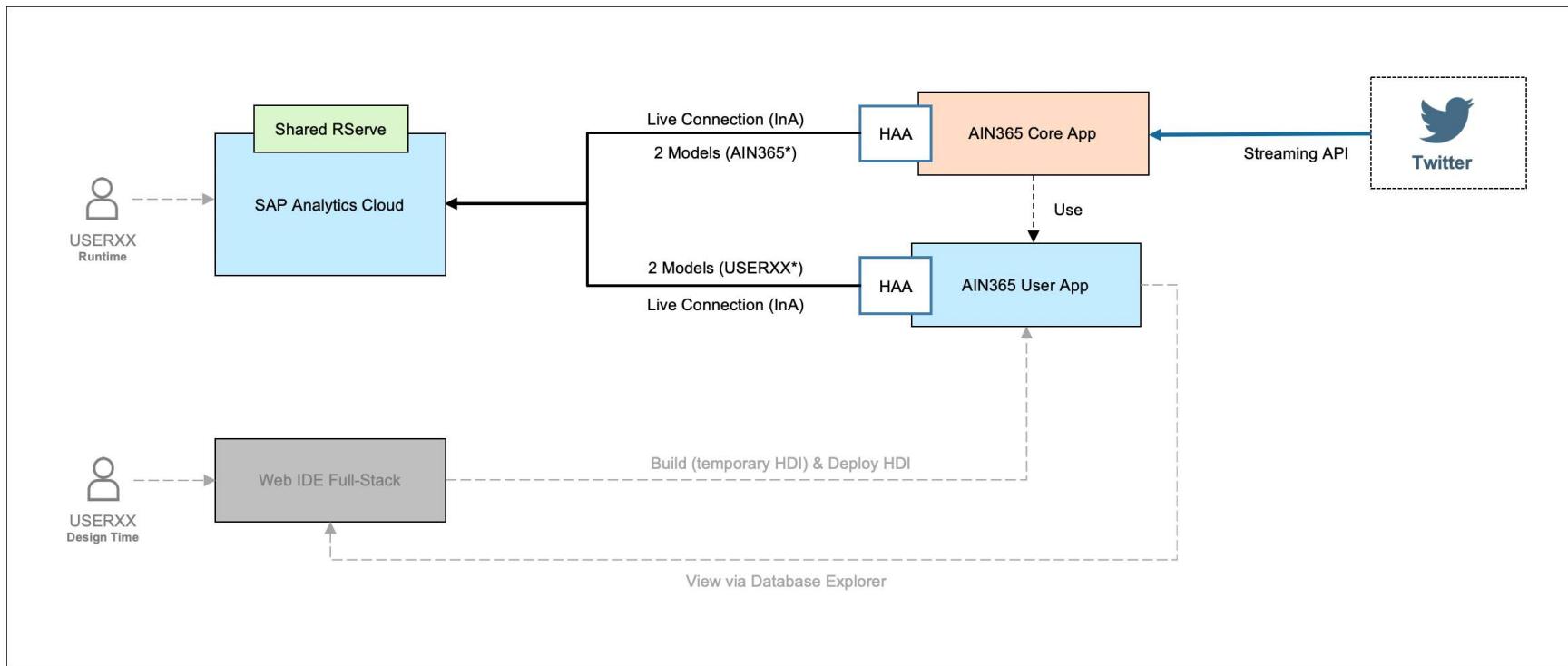
- Use the trial offerings of SAP Cloud Platform and SAP Analytics Cloud
- Use the Neo environment, HANA1 and the Web-based development workbench
- Upload a csv file



Two flavours of one end-to-end scenario

AIN365

- Use the cloud foundry environment, HANA 2 and the Web IDE
- Use the live data coming in from Twitter



Before you start

- Users are handed out from the speakers and can be reused for both exercises.
- Exercise descriptions for the Neo based scenario can be found here:
<https://github.com/SAP/cloud-analytics-end-to-end-sample>
- Exercise descriptions for the cf based scenario can be found here:
<https://github.com/AIN365/ain365-documentation>
- Parameters for these exercises can be found here:
<https://bit.ly/2DKEyfJ>
- **NOTE:** wherever the exercises say USER, use ASUG instead!