

# SAP Cloud Platform Integration Suite SAP's Integration Platform as a Service

Tushar Pradhan, SAP May 9<sup>th</sup>, 2019

**PUBLIC** 



## **Agenda**

Integration Platform-as-a-Service Offering on SAP Cloud Platform Overview

Integration

Rich Connectivity with Open Connectors

APIs: API Management and API Business Hub

Links for Further Information

# Integration as a Service Offering

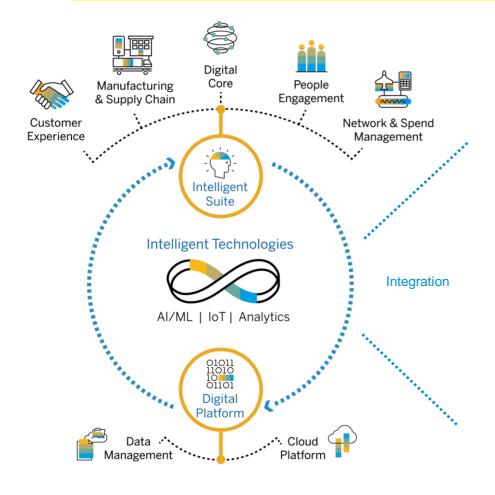
**SAP Cloud Platform Suite** 

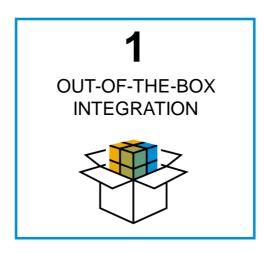


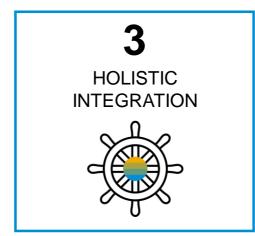
# SAP's integration strategy for the Intelligent Enterprise

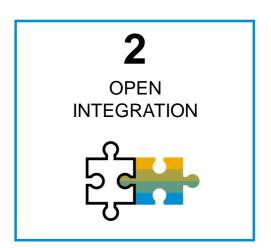
Key principles

"Digital Platform - to facilitate the collection, connection, and orchestration of data as well as the integration and extension of processes in our Integrated Applications".





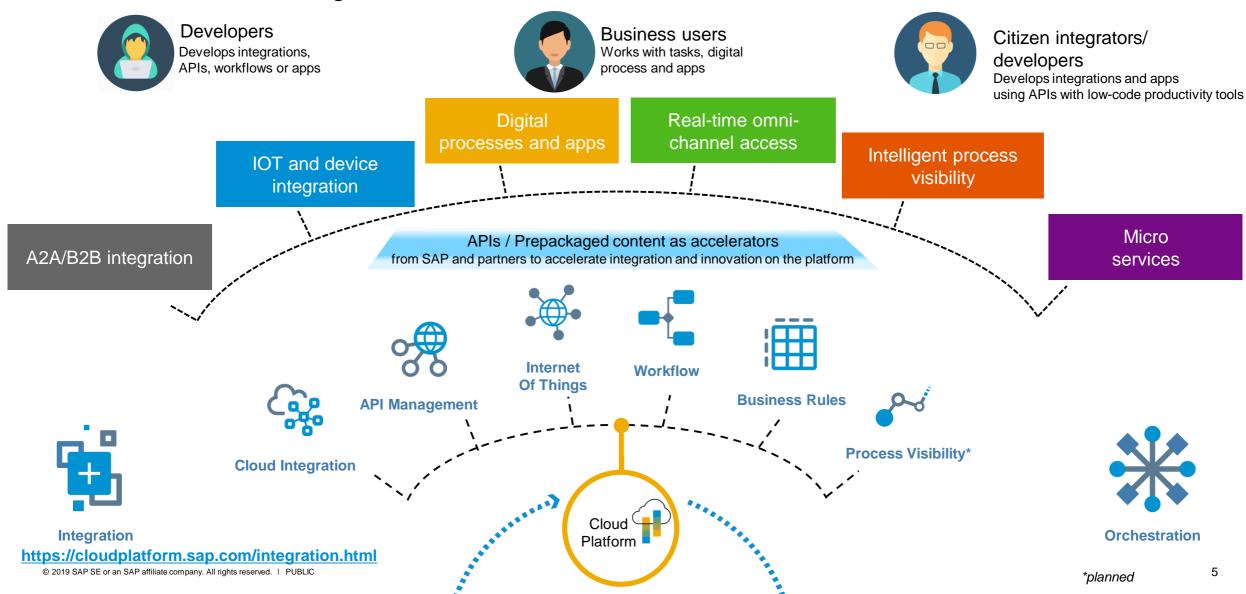






## **Integration & Orchestration services in SAP Cloud Platform**

SAP Cloud Platform Integration Suite



# **SAP Cloud Platform Integration Suite**

## A modular iPaaS to connect the intelligent enterprise



## Developers/Experts

Develop integrations, APIs, workflows, or apps



#### **Business Users**

Works with tasks, digital process, and apps



### Citizen Integrators/ Developers

Develops integrations and apps using APIs with low-code productivity tools

**People** 

### A2A Integration

Hire to retire, lead to cash, procure to pay

# **B2B/B2G**Integration

Real-time data sharing

#### Omni-Channel Access with APIs

# Digital Processes and Apps

# **Event-Driven**Sense and Respond

(IoT, events, actions)

#### Eco-systems and Marketplaces

Agile Data Grids and Micro services

# .. Scenarios

Customer job-to-be-done

#### **SAP API Business Hub**

APIs / events / pre-packaged integrations as accelerators from SAP and partners to accelerate integration and innovation on the platform



- Cloud Integration
- Integration Content Advisor
- Connectivity Service
- Smart Data Integration



- API Management
- Open Connectors
- API/Microservices
   Development
   in Cloud Foundry
   (serverless)



- IOT Foundation (device | digital twin | SAP Edge Services)
- SAP HANA DBaaS (inmemory data grid)
- Complex Event Processing



- Workflow, Business Rules and Inbox
- Blockchain and Distributed Ledgers



- Enterprise Messaging
- Streaming Analytics
- Function-aaS\*
- Enterprise BaaS\*

## Services

Modular and open platform

# **SAP Cloud Platform Integration Suite**

a modular iPaaS to connect the Intelligent Enterprise



Seamlessly integrate anything, anywhere (A2A/B2B/B2G) in real time



Expose your data and processes as APIs and manage their end to end life cycle



Automate business processes and enterprise decisions



Support event-driven integrations with messaging and functions



Accelerate implementation and maintenance of A2A/B2B/B2G scenarios using machine learning



Develop, customize and operate IoT business applications in the cloud



Jump start integration projects with APIs, packaged integration content and adapters



Accelerate connectivity to thirdparty applications

## How do we simplify integrations?



Out-of-box<br/>Integrations

900+ prepackaged integrations



# Simple **Semantic APIs**

800+ APIs from SAP and partners



# **open connectors** for hub-based integrations

175+ connectors to 3<sup>rd</sup> party apps



Machine learning to simplify integrations

Integration Content Advisor



Cloud-deployment and pay-as-you-go

Cloud-native architectures, Cloud credits



# **Multicloud** deployment offering

SAP | hyperscale laaS | Private cloud

8

## **CIO Guides for Integration**

## Two Complementary Guides





### **CIO Guide I:**

SAP Vision for Integrating SAP Applications in Cloud and Hybrid

Describes SAP's long term vision for integration – published in 2017

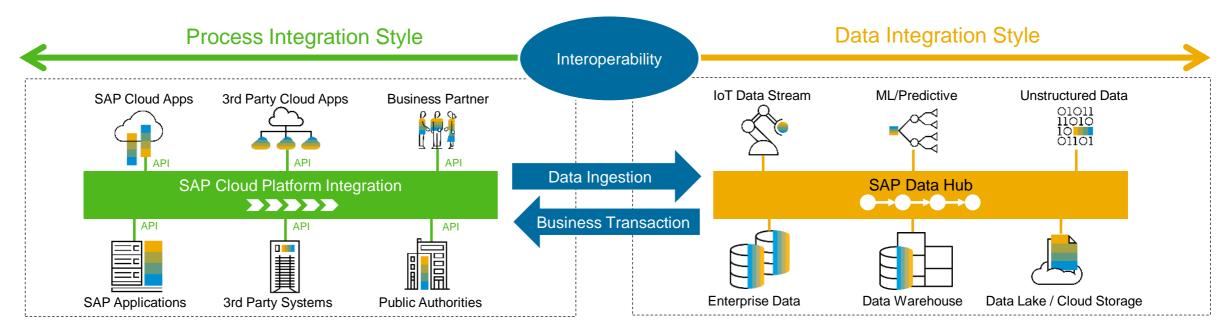
- Integration Challenges and Use Cases
- API Alignment
- Technology Guidance for Process Integration
- Technology Guidance for Data Integration

## **CIO Guide II: Process and Data Integration in Hybrid Landscapes**

Provides refined guidance based on existing technology portfolio – published SAPPHIRE 2018

- SAP API Strategy
- Integration Solution Advisory Methodology (ISA-M)
- Refined Technology Guidance for Process and Data Integration
- B2B Integration
- Integration Automation
- SAP S/4HANA Transition Guidance

## Technology Guidance



#### **Key Use Cases and Characteristics**

- Chaining of distributed business processes
- A2A / B2B, B2G / Master Data Synchronization
- API focused (synch., async., business events)\*
- Message-based processing (mapping, routing, monitoring)
- Transactional Integrity (reliable messaging and error handling)
- Pre-packaged integration content for SAP/Non-SAP scenarios

#### **Key Use Cases and Characteristics**

- Pipelining and orchestration of big data in complex landscapes
- Big Data Warehousing, IoT Ingestion, EIM (e.g. batch, streaming)
- Data focused (table/view, storages, processing, libraries)\*
- Distributed data processing & server less computing
- High frequent event processing (e.g. via Kafka)
- Advanced data transformations & processing (e.g. ML, Predictive, Code)

<sup>\*</sup> Also table access possible by CPI (like CPI-DS) and API level access possible by SAP Data Hub, but not key focus 10

# Why multicloud?



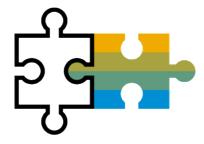
Flexibly choose cloud-provider that best meets your requirements



Effortlessly enter new regions & markets meeting local compliance and regulations



Reduce vendor-lock with applications deployable on different providers



Integrate with cloud-provider specific services & your existing cloud assets



Centrally access multicloud deployments within one cockpit



Benefit from single contractual partner for help and support

# Integration

**SAP Cloud Platform Integration Suite** 



# **SAP Cloud Platform Integration**



Seamlessly connects cloud applications with other SAP and non-SAP cloud and on-premises apps to eliminate data silos and make digital access simple, secure, and scalable.

### Integrating hybrid and cloud application

- Intuitive web interface with built-in templates
- Supporting A2A and B2B/B2G scenarios with focus on non-SAP

### **Cloud technology**

- Strong security focus and infrastructure availability
- Access via public OData APIs

### Integration content advisor

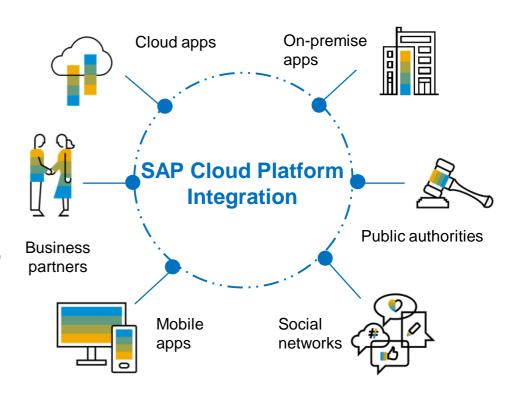
- Crowdsourcing capabilities for creating and maintaining integration content
- Designed to accelerate every interface implementation, to learn continuously, and to reduce efforts by 60% or more

### Prepackaged content to accelerate integration projects

Extension of pre-delivered content to include custom requirements

### **Ecosystem**

- Ability to integrate with business networks
- Open to partners for developing integration content and adapters

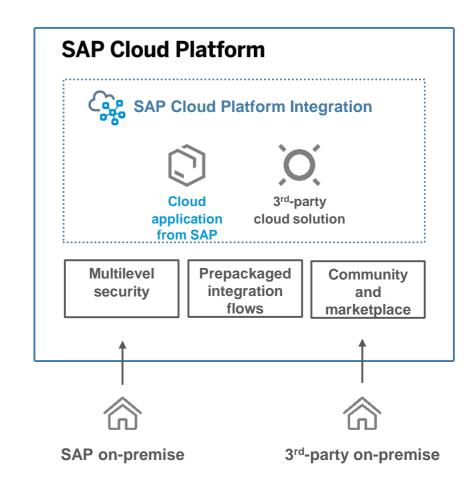


## **SAP Cloud Platform Cloud Integration**

Seamlessly connects cloud applications with other cloud and on-premises applications

#### **Product Innovations**

- Adding and enhancing connectivity options with focus on Non-SAP integration (e.g. AS4, JDBC for DBs in Neo, OData V4)
- SAP Cloud Platform Open Connectors to simplify connectivity to 175+
   3rd party applications
- 900+ predefined integration flows and value mappings, thereof ~50% include Non-SAP integration
- Increased developer productivity: API based integration flow generation, version migration, integration flow copy, auto-save, adapter configuration copy
- Transport of integration content: CTS+, Cloud Transport Service, export / import
- OData APIs for Integration Flows, e. g. update, deploy
- Availability on AWS (restricted beta)
- Self-service of SAP Cloud Platform Integration tenants for consumption-based license model
- Activating Enterprise Messaging Capabilities for any cloud integration license; includes AS2, JMS, XI (with JMS queues) adapters
- Regression tests of customer integration flows

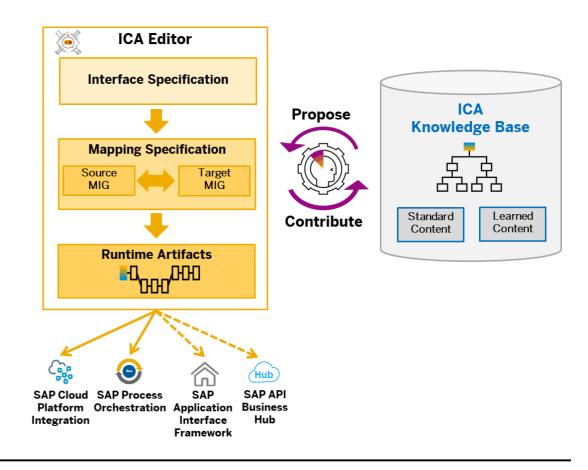


## **Machine learning to simplify integrations**

Integration content advisor for SAP Cloud Platform Integration (ICA)

## Intelligent content management system

- Central integration knowledge base for integration wherein all crowdsource based learnings from interface customizations and mappings are stored
  - SAP meta models of APIs
  - International standards
- Proposal service via machine learning & crowd sourcing
- Automatic generation of
  - Documentation
  - Runtime artifacts
  - Validation rules
- Community collaboration for creating and maintaining tailored integration interfaces and mappings



ICA is designed to accelerate every interface implementation, to learn continuously and to reduce efforts by 60% or more.

# Rich Connectivity with Open Connectors

**SAP Cloud Platform Suite** 



Simplify connectivity to 175+ 3rd party applications

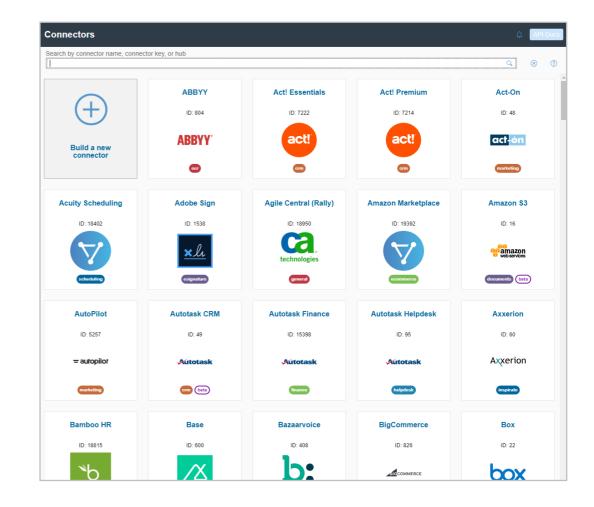


- Feature rich connectors to 175+ non-SAP applications
- Select connectors you need and authenticate via the providers
- Build your own connector with Connector builder with normalized features including authentication, pagination, errors and search



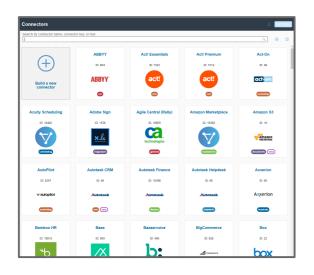
### **BENEFITS**

- Easily connect to top SaaS applications in use
- Open RESTful APIs and JSON data format embeddable easily within any product
- Power your business agility incorporating real time data from non-SAP applications





## Accelerate connectivity to third-party applications





### **Pre-built Connectors**

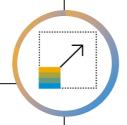
Out of the box connectivity to non SAP applications.

- Feature rich connectors to 150+ non-SAP applications.
- Easily connect to top SaaS application in use
- Built-in interactive API documentation in Open API Spec



### Canonical data model to extend connectors

- Create consistent data model based on your integration needs
- Pre-built common resources that can be easily extended



 $\circ$ 

### **Formulas**

Easily build API compositions across connectors

- Build a single template that you can reuse with different connectors and values
- Wrap multiple operations in a single request

High Level Architecture









# SAP Cloud **Platform** Open **Connectors**



#### **Common Resources**

Canonical data model to extend pre-build connectors



#### Formula

Easily build API composition across connectors



Feature rich, out of the box connectivity to over 175 non SAP cloud applications



Normalized Authentication



Harmonized **Errors** 



Bulk **Operations** 



Non SAP applications























Mail....











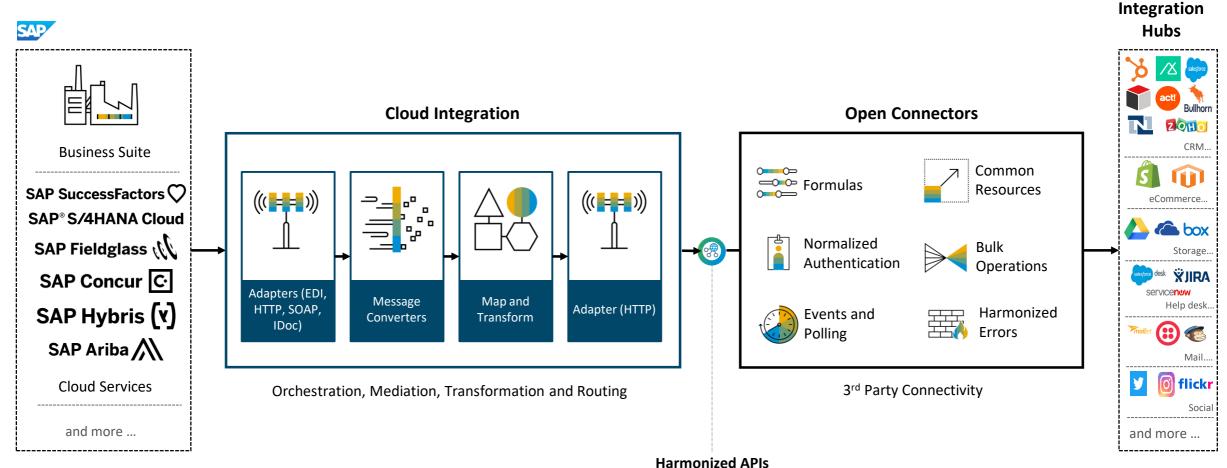




Help desk..

Social

Hub-based (1→N) Integrations: Simplicity with harmonized APIs



to reduce cost of 3<sup>rd</sup> party integration

Integration Hubs simplifying API-based integration

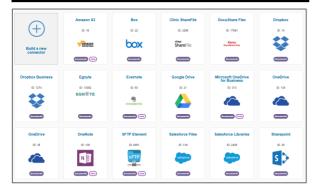


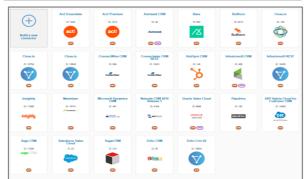




## **Finance**















### **ERP**

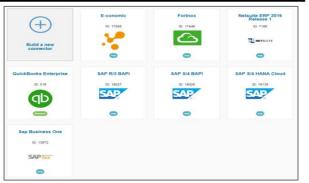


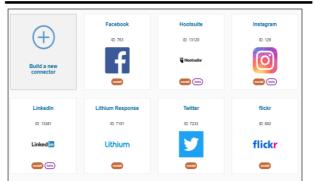
## **Social**



## Messaging









Integration Hubs simplifying API-based Integration



Adobe Sign

ID: 1538

## eSignature



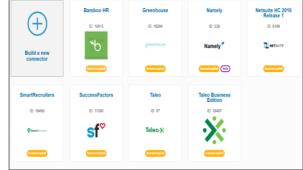


## Collaboration



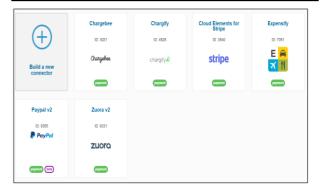


### **HCM**





## **Payments**





## Conferencing





### **Field Service**



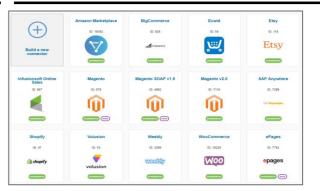


## **Expenses**





### **ECommerce**



## **SAP Cloud Platform Integration**

## Product road map overview

#### **Recent innovations**

#### **Planned Q1/2019<sup>1</sup>**

#### Planned Q2/2019<sup>1</sup>

#### **Planned Q3/2019**<sup>1</sup>

#### **Integration Content**

- Increased developer productivity: Integration flow copy, auto-save, adapter copy
- Public SAP API Business Hub for cloud integration content: <a href="https://api.sap.com/">https://api.sap.com/</a>

#### Connectivity

- Additional connectivity options such as AS4, JDBC (for DBs in Neo), OData V4 (consumption)
- On-premise enablement in SFTP adapter

#### **B2B / B2G Integration**

 ICA runtime generation for SAP Process Orchestration

#### **Further Capabilities**

Restricted beta release in AWS

#### **Integration Content**

 Increased developer productivity, e. g. import of already existing integration flow archive

#### Connectivity

 Additional connectivity options, e. g. JDBC (for on-premise DBs, public cloud), Open Connectors adapter

#### **B2B / B2G Integration**

- XSLT 3.0
- AS4 adapter for PEPPOL
- Elster ERiC adapter

#### **Monitoring and Operations**

- Self-service subscription enablement of SAP Cloud Platform Integration tenants
- Self-service to subscribe for SAP Operations notifications

#### **Integration Content**

 Increased developer productivity, such as integration flow test, GIT support

#### Connectivity

Additional connectivity options

#### **B2B / B2G Integration**

Additional B2B/B2G capabilities, such as archiving

#### **Monitoring and Operations**

OAuth support for remote OData APIs

#### **Further Capabilities**

Initial, productive release in AWS

#### **Integration Content**

Increased developer productivity

#### **B2B / B2G Integration**

Further connectivity options

#### **Monitoring and Operations**

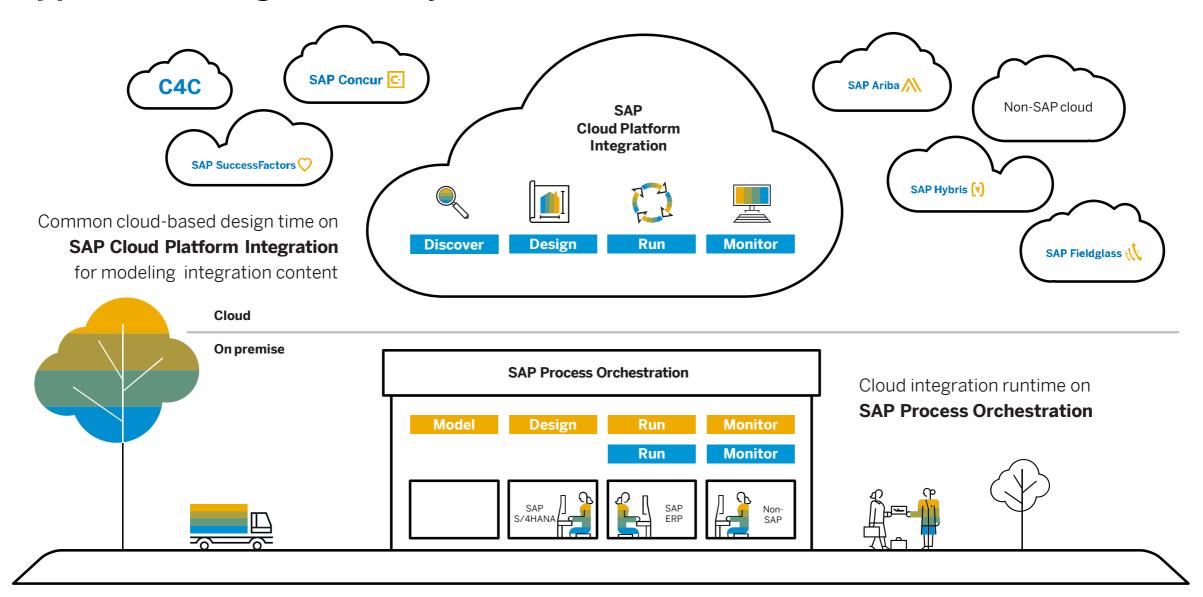
- Enhanced disaster recovery for data center failover
- Authorizations on integration flow level

#### Key capabilities planned beyond Q3

- Additional B2B capabilities such as trading partner management, OFTP, VDA
- Further multi-cloud support incl. private cloud
- Additional certifications, such as ISO 27018

<sup>1.</sup> This is the current state of planning and may be changed by SAP at any time without notice.

# **Application integration in hybrid environments**



# **APIs: API Management and API Business Hub**

**SAP Cloud Platform Integration Suite** 



## SAP API Business Hub: accelerator for digital transformations

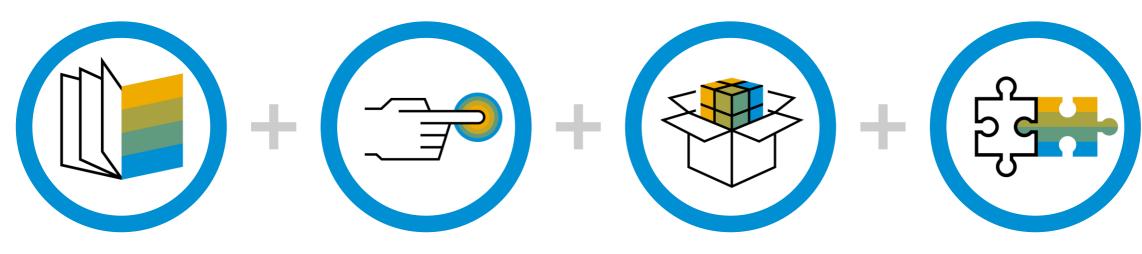
Search, discover, experience, and consume the right **predefined integration packages** from **SAP** and selected partners for your digital transformation projects

SAP API Business Hub in numbers:

31.5K+ registered developers

46.8K Integrations deployed

77M Sandbox API tryouts annually



Catalog

Central place from SAP and its partners

**API** sandbox

One click-test experience for developers

Prepackaged accelerators

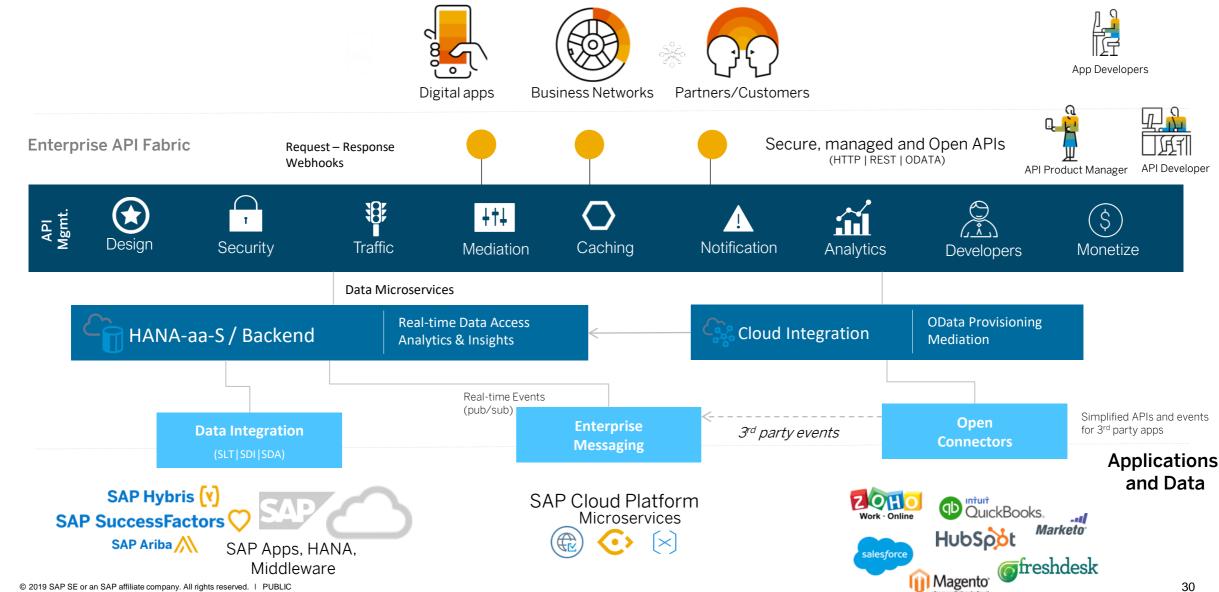
Integration packages

**Easy consumption** 

Integration with developer IDE and code generation

## Agile Digital Access Layer for Omni-Channel Access

**Using SAP Cloud Platform and API Management** 



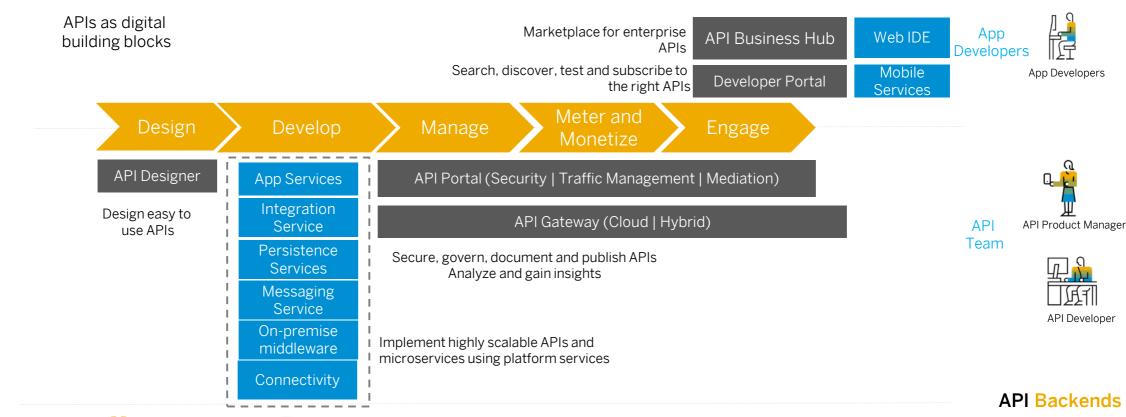
## Full-Lifecycle API Management with SAP

Apps and digital interactions powered by APIs





























# **Summary and Key takeaways**



# Business value delivered with our Integration and Orchestration Portfolio



Seamlessly Integrate anything, anywhere (A2A/B2B) in real time



# API Management

Expose your data and processes as APIs and manage their end to end life cycle



# Workflow Service

Automate business processes using workflow technologies



## **Business** Rules

Manage business logic without development



Accelerate implementation and maintenance of B2B scenarios using machine learning

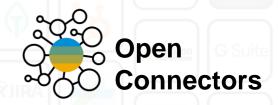


# Internet of Things

Develop, customize and operate IoT business applications in the cloud



Jump start integration projects with APIs, packaged integration content and adapters



Accelerate connectivity to third-party applications

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# **Presentation Materials**

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides

# Q&A

For questions after this session, contact us at [email] and [email].

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# Thank you.

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