ASUG
Americas' SAP Users' Group

Extending SAP Ariba Solutions
with SAP Cloud Platform

Ryad Semichi, Director SAP Cloud Platform Global Go To Market, SAP

ASUG84295

About the Speaker

Ryad Semichi

- Director, SAP Cloud Platform (SCP)

- Extensibility focus areas : **SAP Ariba**, DSC and S/4.

- 20+ years SAP experience, working with Ariba since 2013, joined the SCP GTM team in 2017.
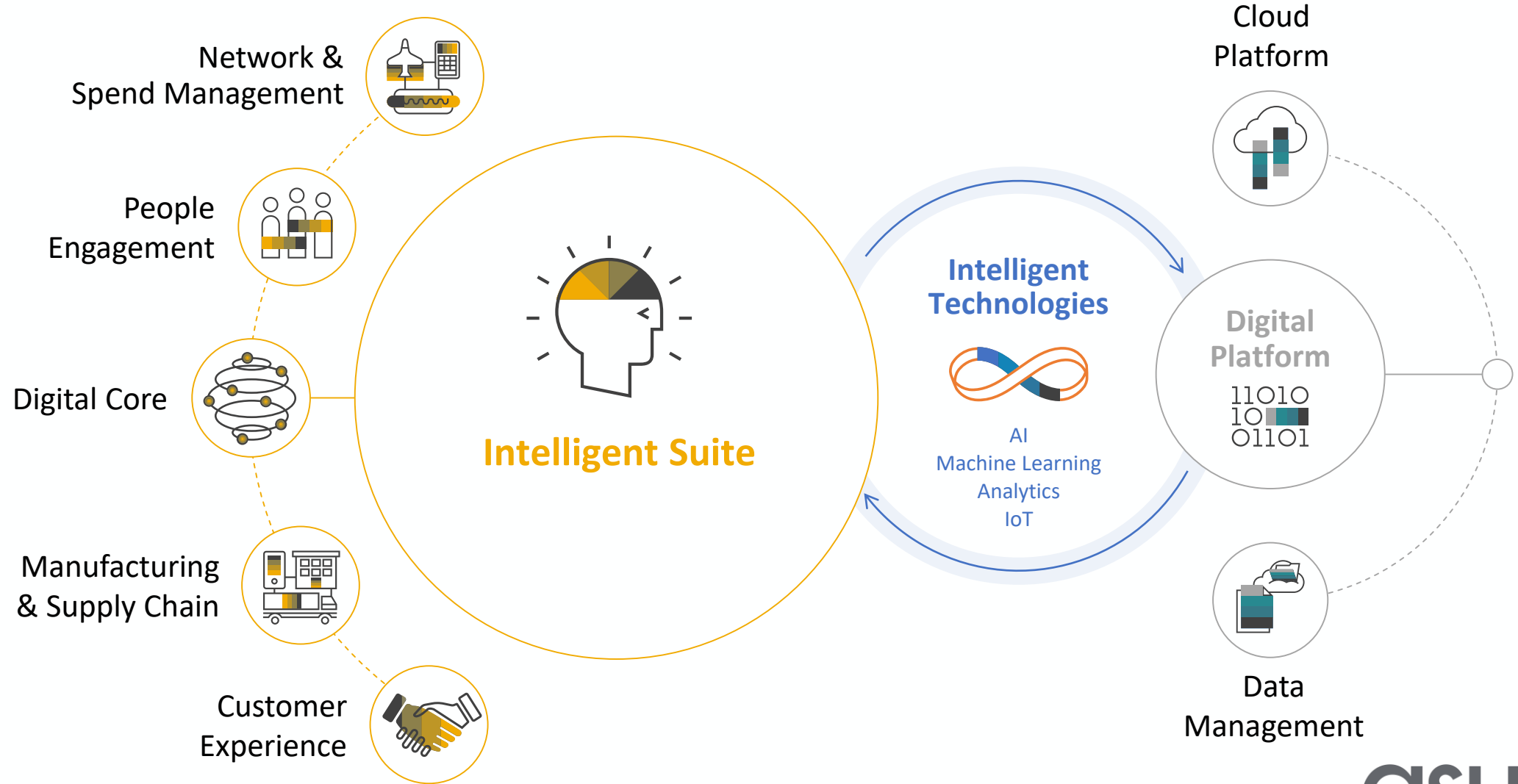
Key Outcomes/Objectives

1. Benefits of a Business Platform. Why SCP?

2. Why extend Ariba with SCP?

3. Big picture: you need to secure every step of your Digital Transformation journey.

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Agenda

- SCP is the Business platform of the Intelligent Enterprise.
- Source to Pay and Ariba specific capabilities
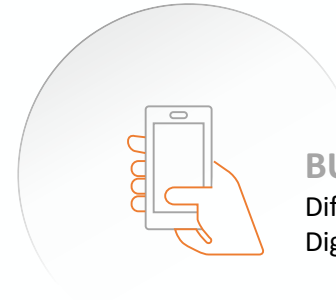- How to build Ariba Extensions on SCP

The Intelligent Enterprise

SAP Cloud Platform
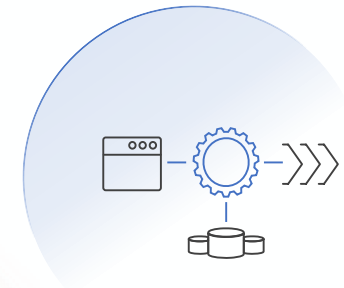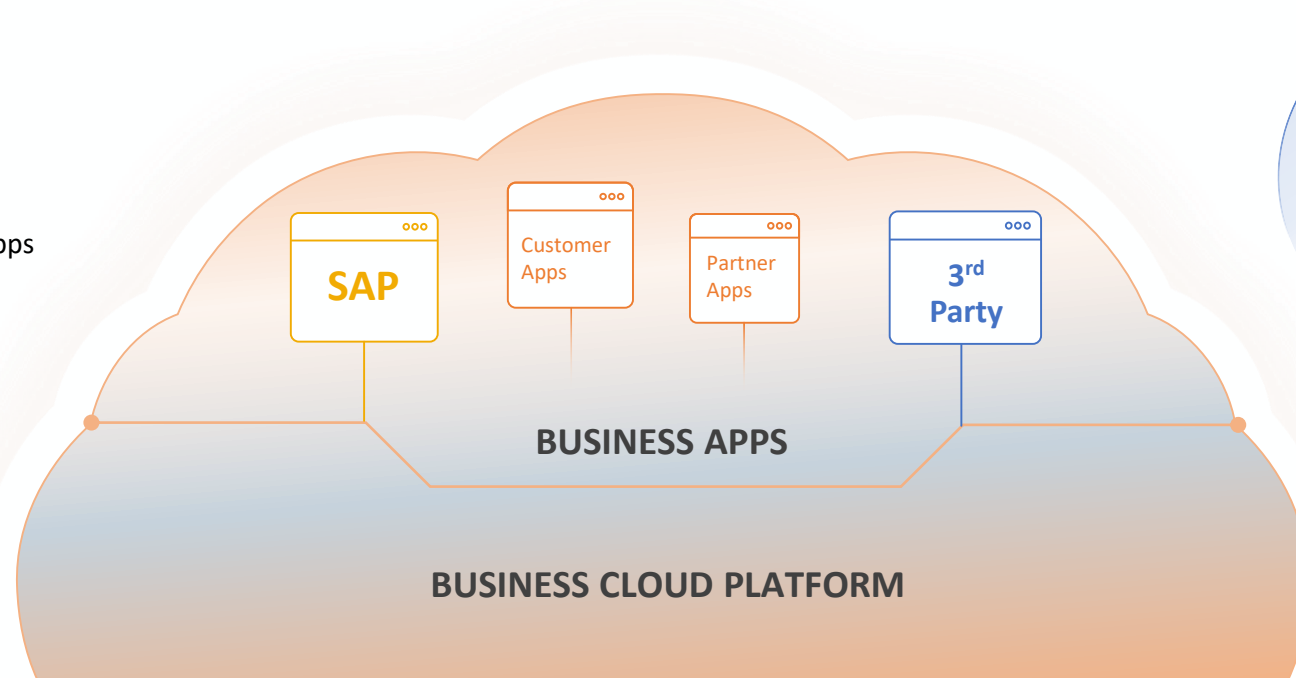
EXPERIENCE
People & Data

BUILD
Differentiating
Digital Apps

EXTEND
Cloud &
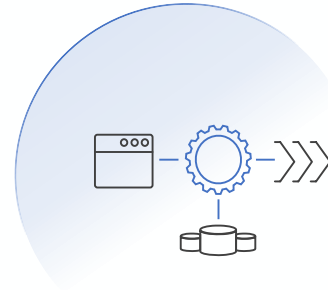On-Prem Apps

INTEGRATE
Apps, Data
& Processes

SAP

Customer
Apps

Partner
Apps

3rd Party

BUSINESS APPS

BUSINESS CLOUD PLATFORM

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SAP Cloud Platform

EXTEND
Cloud &
On-Prem Apps

EXPERIENCE
People & Data

BUILD
Differentiating
Digital Apps

INTEGRATE
Apps, Data
& Processes

SAP

Customer Apps

Partner Apps

3rd Party

BUSINESS APPS

17+
Data centers 7x24

10K+
Managed databases
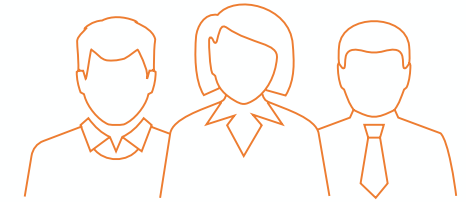
12000+	Customers
+230%	Increase over last 2 years
1,300+	Partners with
1,500+	Apps on SAP App Center
14k	Developers use API Hub
5k	Integration customers
365k	Trial accounts
60k	Live Virtual Machines
Biweekly	Zero downtime releases
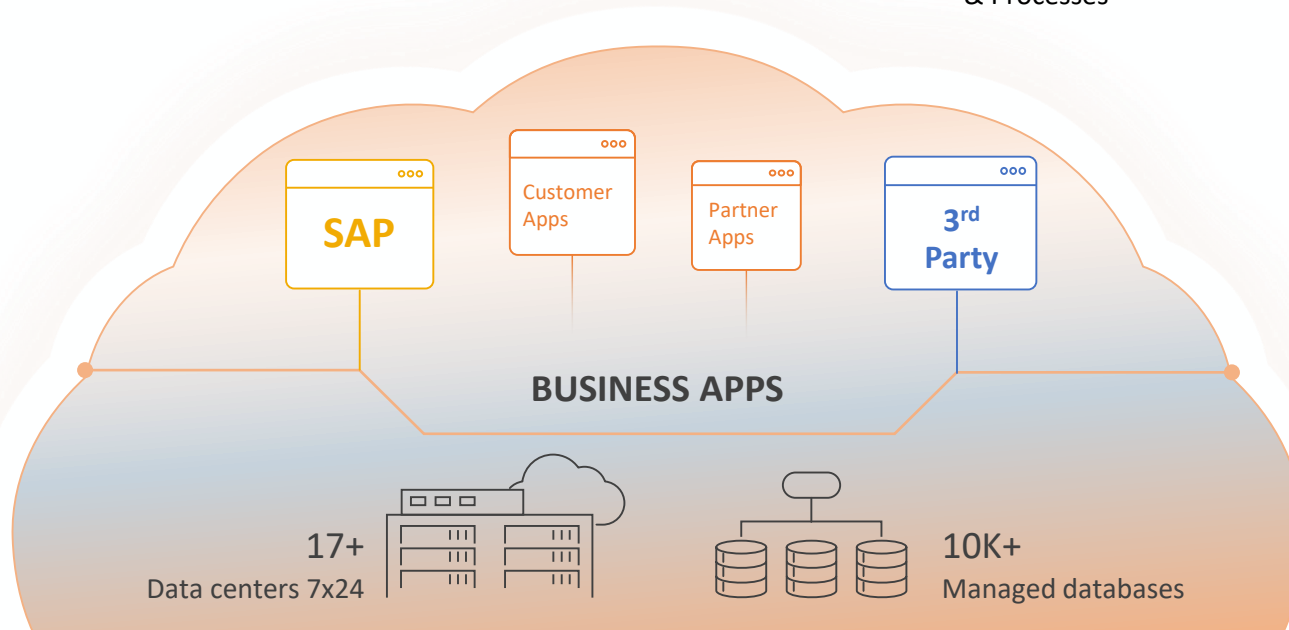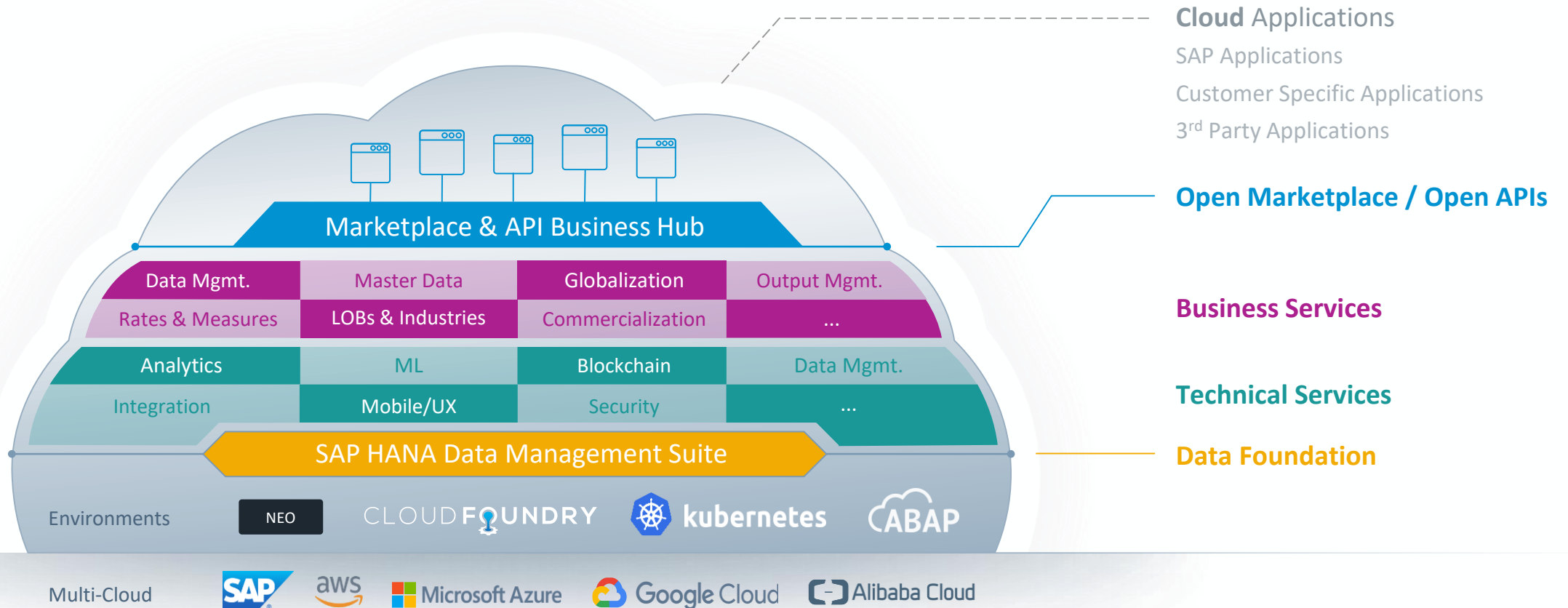
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SAP Cloud Platform

The BIG Picture

Quote	Delivery time & real-time pricing	Sales order	Delivery	Delivery status	Billing & revenue booked

SAP SuccessFactors

SAP S/4HANA Cloud

SAP C/4HANA

SAP Fieldglass

SAP Concur

SAP Ariba

Business Partner

Product

Sales Order

RUN WITH

INTEGRATE

SAP

Customer Apps

Partner Apps

3rd Party

RUN ON

UNIFIED DIGITAL PLATFORM

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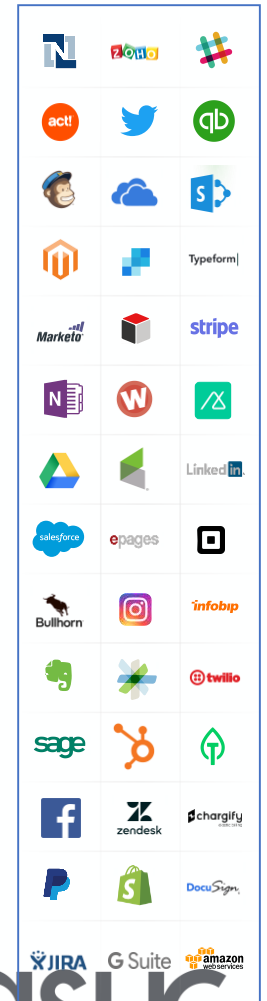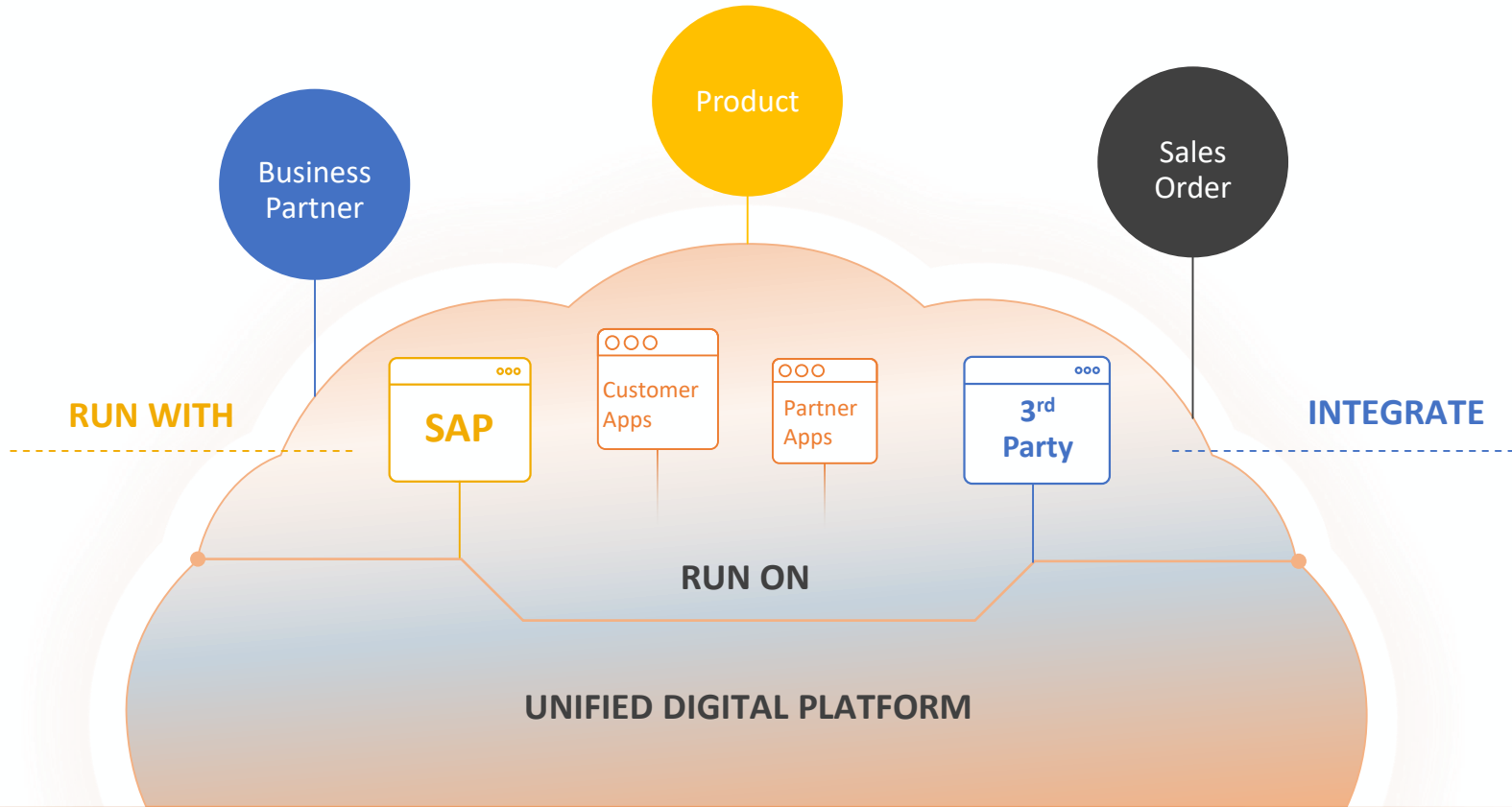
SAP Cloud Platform in Action

RUN ON

Extend
Cloud & On-Prem Apps

Experience
People & Data

Build
Differentiating Digital Apps

Integrate
Apps, Data & Processes

SAP S/4HANA Cloud — S/4

SAP C/4HANA — C/4

SAP SucessFactors

SAP Fieldglass

SAP Concur

SAP Ariba

SAP

Customer Apps

Partner Apps

3rd Party

APPLICATIONS

Environments — NEO · CLOUD FOUNDRY · kubernetes · ABAP

Multi-Cloud — SAP · aws · Microsoft Azure · Google Cloud · Alibaba Cloud

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The Intelligent Enterprise is more than ERP

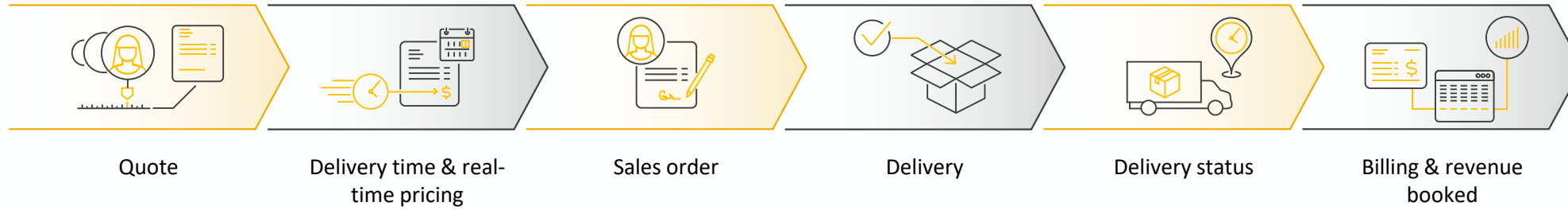SAP S/4HANA Cloud — S/4

SAP C/4HANA — C/4

SucessFactors

SAP Fieldglass

SAP Concur

SAP Ariba

Extend
Cloud &
On-Prem
Apps

Experience
People & Data

Build
Differentiating
Digital Apps

Integrate
Apps, Data &
Processes

SAP

Customer Apps

Partner Apps

New Business Models

3rd Party

SAP | aws | Microsoft Azure | Google Cloud | Alibaba Cloud
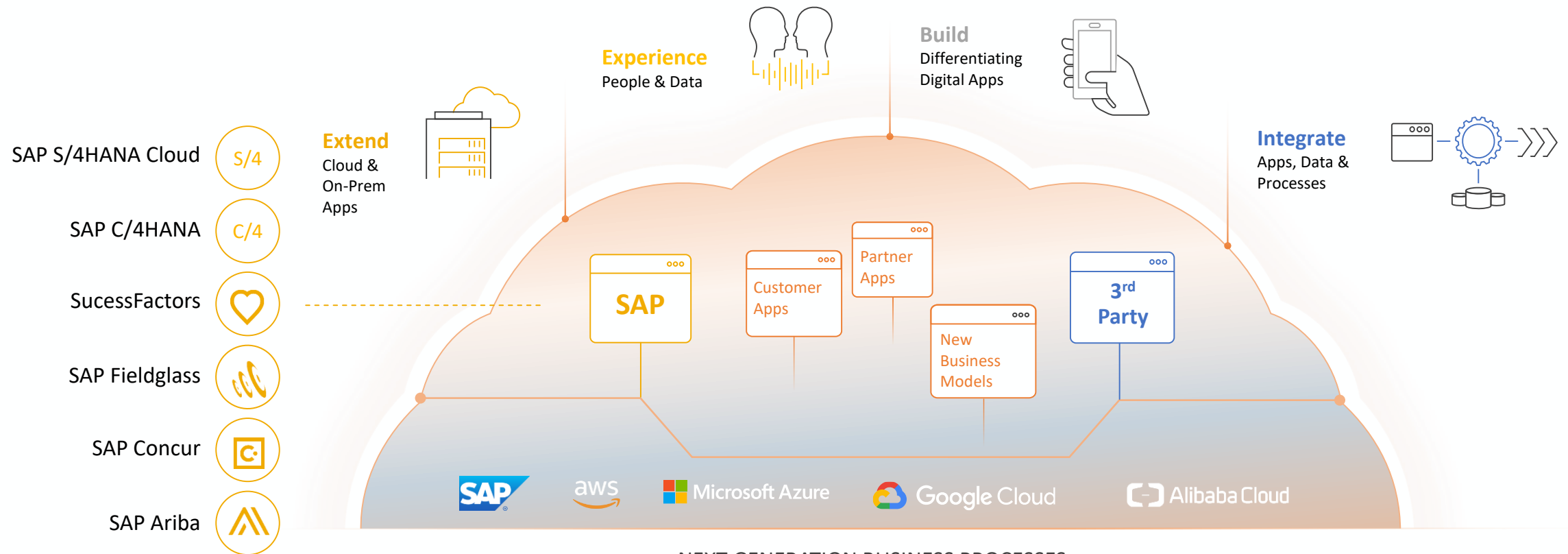
NEXT GENERATION BUSINESS PROCESSES
Embedded Intelligence | Harmonized Experience | Unified Integration | Flexible Extension

EFFICIENCY   SPEED OF INNOVATION   AGILITY

DATA

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Intelligent Suite

SAP Fieldglass Contingent Workforce Management

SAP Concur Travel

SAP SuccessFactors Learning

SAP Fieldglass Services Procurement

SAP Ariba Pay

SAP Concur Expense

SAP Ariba Catalog

SAP Ariba Supplier Risk

SAP Ariba Strategic Sourcing

SAP Supplier Collaboration

SAP Ariba Buying & Invoicing

SAP SuccessFactors Performance & Goals

SAP SuccessFactors Employee Central

SAP Business ByDesign

SAP S/4 HANA Finance

SAP Business Planning & Consolidation

SAP Predictive Maintenance & Service

SAP Manufacturing Execution

SAP Asset Intelligence Network

SAP Extended Warehouse Management

SAP Commerce Cloud

SAP Customer Data Cloud

SAP Service Cloud

SAP Concur

SAP Ariba

SAP Fieldglass

SAP SucessFactors

SAP S/4HANA Cloud — S/4

SAP Digital Manufacturing — DM

SAP IntePlanninggrated Business — IBP

SAP C/4HANA — C/4

Network & Spend Management

People Engagement

Digital Core

Manufacturing & Supply Chain

Customer Experience

Intelligent Suite

Deliver Intelligence Across Value Chains and Lines of Business

The Intelligent Suite will retain the modularity and flexibility of independent solutions while delivering a unified experience enabled by a standardized integration approach.

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Services with SAP Cloud Platform

https://cloudplatform.sap.com/capabilities.html

Collaboration
- ✓ Jam
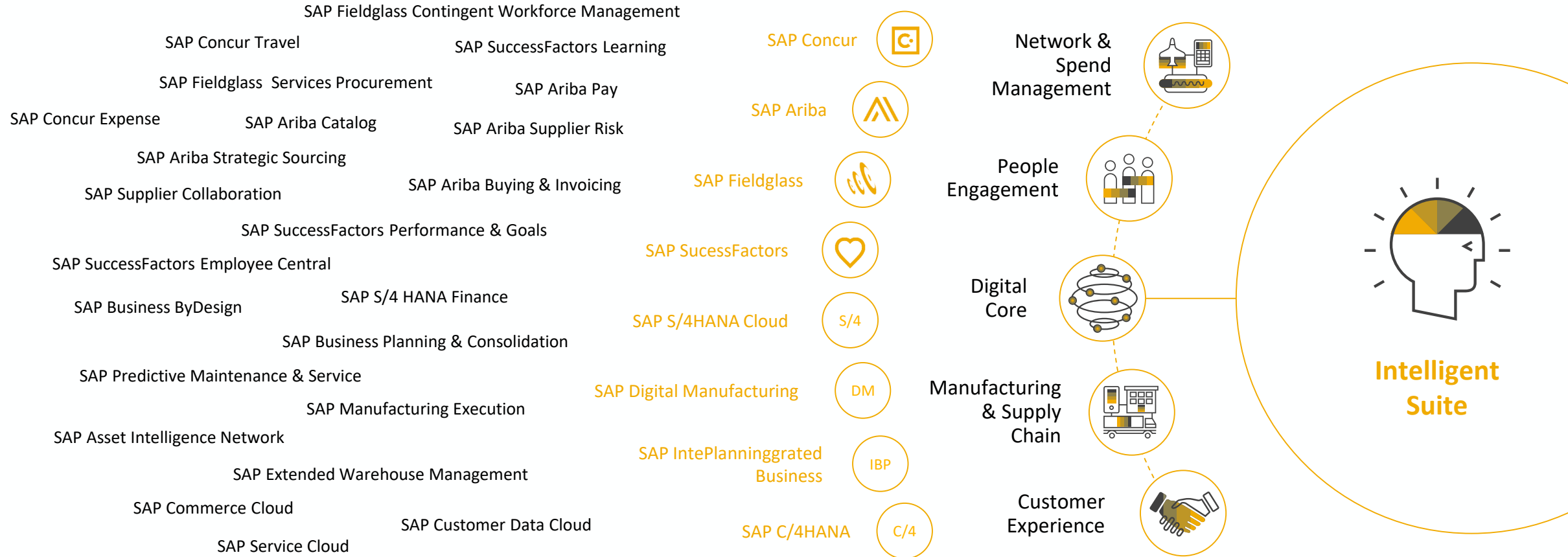- ✓ Gamification
- ✓ Document center

User experience
- ✓ Build
- ✓ Fiori Cloud
- ✓ Portal
- ✓ Adobe Form
- ✓ Theme Designer

Integration
- ✓ Integration (DI, PI)
- ✓ Workflow
- ✓ Business Rules
- ✓ API Management
- ✓ Enterprise Messaging
- ✓ Cloud Connector
- ✓ Agile Data Preparation
- ✓ OData Provisioning
- ✓ RabbitMQ

IoT
- ✓ IoT
- ✓ Streaming Analytics
- ✓ Remote Data Sync
- ✓ IOT Application Enablement

Analytics
- ✓ Predictive
- ✓ Streaming Analytics
- ✓ Advanced analytics with SAP HANA
- ✓ SAP Analytics Cloud
- ✓ Agile Data Preparation

Machine learning
- ✓ Image Processing
- ✓ Natural Language Processing
- ✓ Tabular and Time-Series Processing

Security
- ✓ Cloud App Security
- ✓ Identity Authentication
- ✓ Identity Provisioning
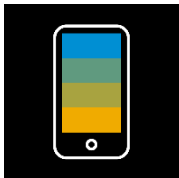
Mobile
- ✓ SDK for iOS
- ✓ Mobile Development and Operations
- ✓ Mobile App and Device Management
- ✓ Mobile service for SAP Fiori

Data and storage
- ✓ HANA
- ✓ Big Data - Hadoop
- ✓ ASE
- ✓ Document Service
- ✓ PostgreSQL
- ✓ MongoDB
- ✓ Object Store (S3)
- ✓ Redis
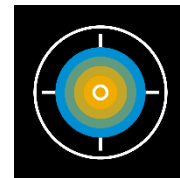
Business services
- ✓ Hybris as a Service
- ✓ Localization Hub, tax service

DevOps
- ✓ Web IDE
- ✓ Monitoring Service
- ✓ Translation Hub

Runtimes and container
- ✓ Cloud Foundry services
- ✓ Virtual Machines
- ✓ Programming Models (Java, XSJS, HTML5, nodeJS, XSC/XSA)
- ✓ Use your favorite language (Buildpacks)

✓ ABAP in SCP*

Intelligent Technologies

SAP Core Applications
Leonardo embedded

SAP Intelligent
Cash Management

SAP Service Ticket
Intelligence

SAP Brand
Intelligence

SAP Customer
Retention

SAP Resume
Matching

SAP Global
Track & Trace

SAP Predictive
Engineering Insights

SAP Vehicle
Insights

SAP Manufacturing
Execution

SAP Asset
Intelligence Network

SAP Predictive Maintenance & Service

SAP Leonardo

AI/ML | IoT | Analytics | Digital Boardroom

Predictive Analytics Library	Blockchain-as-a-Service
ML Foundation	IoT Foundation
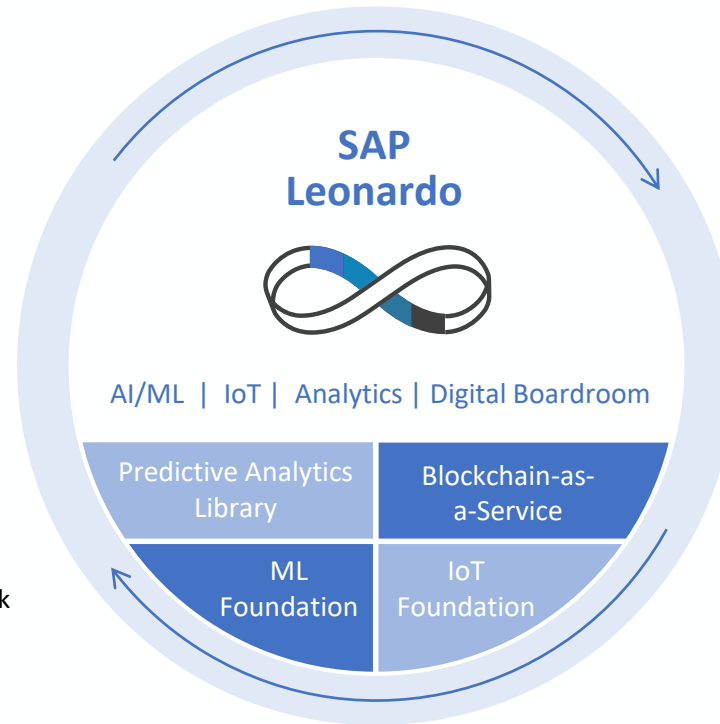
Industry Accelerators
Industry-led Design Thinking Methodology

Solution Ideation & Vision → Rapid Prototyping → Integration Blueprint → Business Case Development
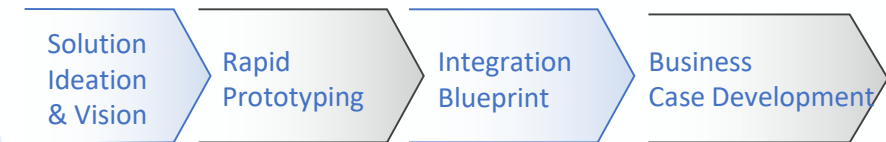
Discrete Manufacturing
Logistics & Spare Parts

Discrete Manufacturing
Service & Assets

Chemicals
Spare Parts

Chemicals
Service & Assets

Utilities
Service & Assets

Consumer Products
Assets & Logistics

Travel & Transport
Logistics

Retail
Assets & Logistics

SAP Leonardo Everywhere

Drive rapid and continuous innovation with SAP Leonardo – combines intelligent technologies and services.

Source to Pay

Design › Source › Contract › Forecast › Commit › Request › Order › Make › Receive › Manage › Pay

SAP Ariba _and_ other solutions will be needed to cover all requirements:

SAP S/4 HANA + Integrated Business Planning + SAP Digital Manufacturing + SAP Fieldglass + SAP Concur + SAP Leonardo + SAP Analytics Cloud + SAP Sourcing Simulation and Optimization + **Non-SAP**...

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SAP ARIBA SOURCE-TO-SETTLE PORTFOLIO

SUPPLIERS — ORDER TO CASH

ARIBA NETWORK

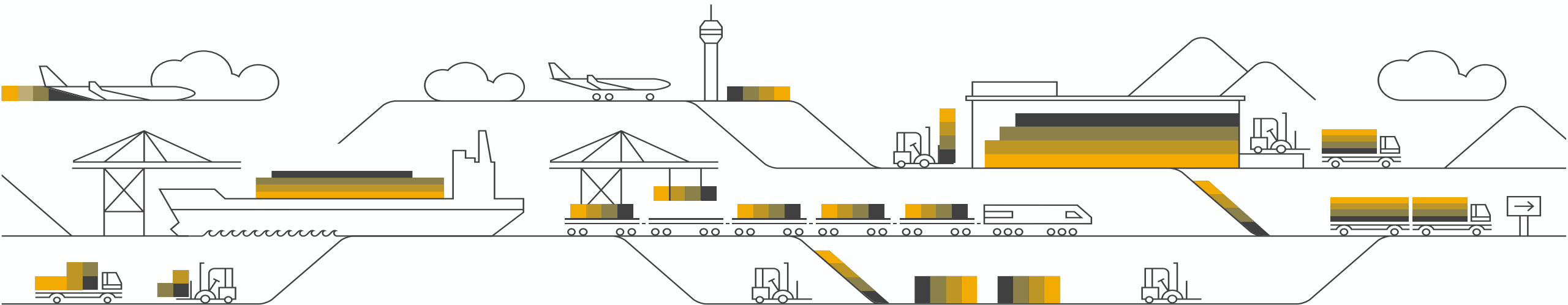| OPEN PLATFORM	SOURCE				PLAN		PROCURE		PAY		CUSTOMER VALUE SERVICES
	SLP and Risk	**Spend Visibility**	**Collaborative Sourcing**	**Contract Management**	**Forecast and Scheduling**	**Inventory Collaboration**	**Procurement**	**Order Execution**	**Invoice**	**Cash Management**	
	Registration and On-Boarding	Spend Classification	Supplier Discover	Award to Contract	Forecast sharing	Inventory Visibility	Material and Services	Mobile Ordering	PO Flip	Terms Management	
	Diversity and Green Certs	Category Management	Strategic Sourcing	Workflow	Forecast Commit	Consignment Collaboration	Catalogs	Confirmations	Invoice Automation	DPO Extension	
	Risk Management	Enrichment Services	Reverse Auctions	Authoring	Exception Management	Supplier Managed Inventory (SMI)	Spot Buy	Advanced Ship Notice	Intelligent Invoicing	Early Pay Discounts	
	Surveys	Market Intelligence	Knowledge Repository	Repository	Scheduling Agreements	Quality Collaboration	Robust Approval Workflows	Goods Receiving	Service Entry Sheets	Supply Chain Financing	
	Scorecards	D&B Insight	Optimization	Lifecycle Notifications	Releases		Guided Buying	Rate Card Management	ERS	Receivables Fin	
	Performance	Spend Analytics	Article Pricing	Redlining			Workbench	Returns	Tax Service	Electronic Payment	
			Lead Time	E-Signatures			Request Quotes				

BUYERS — SOURCE TO SETTLE

SAP ARIBA SOURCE-TO-SETTLE VALUE LEVERS

SUPPLIERS — ORDER TO CASH

OPEN PLATFORM

ARIBA NETWORK

SOURCE	PLAN	PROCURE	PAY

CUSTOMER VALUE SERVICES

SOURCE
- **4-15%** average Unit Price Reduction
- **$20M** contract leakage per $1 billion of spend

PLAN
- **4-12%** lower days in Inventory
- **5-15%** Inventory write-offs
- **13 - 36%** lower rev loss due to stock-outs

PROCURE
- **4-15%** average Unit Price Reduction
- **$20M** contract leakage per $1 billion of spend

PAY
- **$1-2M** savings per $1 billion of target

40-50% operating cost reduction **(Process Efficiency)**

BUYERS — SOURCE TO SETTLE

The Art of the possible

Configuration

- Modify a behavior of an existing feature **using predefined, out-of-the-box settings**

- Does not need any additional coding or designing of UI pages
  - A toggle, parameters, or settings on a configuration page

- Backward-compatible and safe

Customization

- Use existing functionality to create new capabilities **inside** the application

- Does not require coding, but may require
  - Designing UI pages, creating new fields, creating new flows

- Backward-compatible and safe
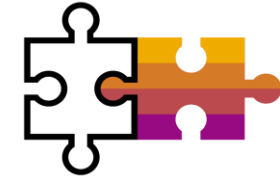
Extensibility

- Supplement SAP Ariba solutions to add capabilities **outside** of the application

- Most likely will require some development
  - Leverage Ariba delivered APIs

- Backward-compatible and safe

Ex: SUPPLY CHAIN BUSINESS COLLABORATIONS — **PLAN**

Buyer side (left):

- Forecast — 1
- SMI SA
- Demand / Inventory / Min-Max Levels — 2
- Goods Receipt Notice
- Return PO
- Return Ship Notice
- Goods Return Posting
- Consignment PO
- Consignment Withdrawals
- Subcontracting PO
- Component Ship Notice
- Component Inventory Overview — 10
- Scheduling Agreement Release (LPA/LP and with item categories 'K'/'L')
- Transport Request
- Quality Notification Request
- Quality Inspection Request
- Quality Review Document — 3

SAP
ORACLE
INFOR
IBM Business Partner
maximo
JD EDWARDS
LAWSON

Center:

Buyer — Network — Supplier

26 Collaborations

- Order
- Forecast
- Quality
- Inventory

*additionally Procurement Collab.

10 Procure   13 Pay

Supplier side (right):
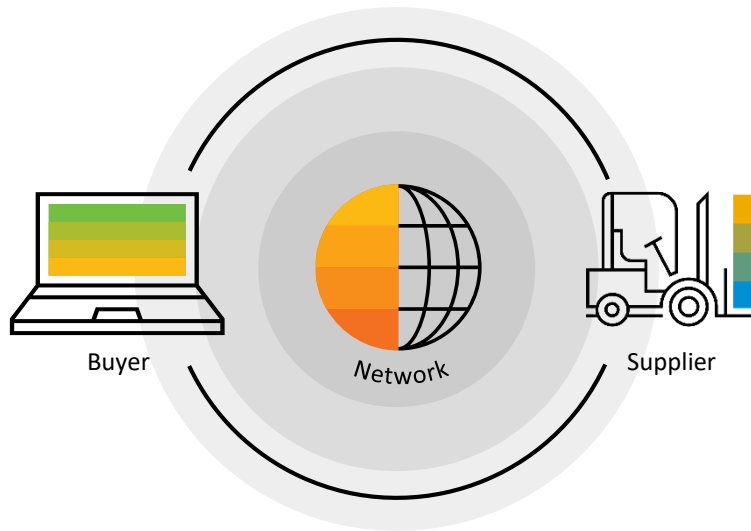
- Forecast Commit
- Supplier Forecast — 3
- Supply Upside
- Planned repl. notification — 1
- Advance Ship Notice
- Goods Receipt
- Component receipt
- Component Consumption — 4
- Manufacturing Visibility
- Transport Confirmation
- Quality Notification Response
- Quality Inspection Response — 2

Online Supplier

SAP
ORACLE
INFOR
IBM Business Partner
maximo
JD EDWARDS
LAWSON

Simplified integration experience with SAP Ariba solutions

SAP/non-SAP cloud app

SAP

SAP S/4HANA
On-premise edition

ORACLE

INFOR

PeopleSoft.

JD EDWARDS

LAWSON

Other ERPs

Request / Response

Individual request to augment business process or get one-time information from/to another system

API

Master and transaction data

Data synchronized between 2 systems

Cloud Integration Gateway

buyer

network

supplier

SAP Ariba

SAP ARIBA — STANDARD INTEGRATIONS — 200+

Ariba Applications

Sourcing

Master — 20

Sourcing and Contracts
Purchasing organization
Purchasing groups
Company code
Payment Terms
Plants
Incoterms
Material Master
Material Master/Plant
Material Groups

Product Sourcing
Purchase Info Record
Manufacturer Part Number

Supplier Management
SLP outbound (pass-through)
SLP inbound (pass-through)

Sourcing – Retail
Article Master
Characteristics
Profile (Class)
Merchandise Category
Display Set
Article/Site
Generic Article Variant

Transaction — 4

Sourcing
RFQ to Quote request
Sourcing Award to PO
Sourcing Award to Outline Agreement

Contracts
Contract Workspace to Outline Agreement

Procurement

Master — 38

Buying and Invoicing
Account categories
Assets
Asset Class
Company codes
Cost centers
Cost center languages
ERP commodity codes
General ledger
Internal orders
Plant

Payment terms
Purchase groups
Tax codes
WBS elements
User data
User group mapping
Remittance locations
Supplier data
Supplier location
Contracts

Company code internal order mapping
Company code WBS element mapping
Purchasing organization supplier combo
Account category field status
Plant to purchasing organization
Currency conversion rates
Fund management objects
Purchasing organizations
General ledger languages

Fund
FM derive
Earmarked Fund
Functional Area
Funds Center
Commitment Item
Budget Period
FM Area
Grant

Transaction — 23

Buying and Invoicing
Material PO
Service PO
Change PO
Cancel PO
Close PO
Goods Receipt
Service Entry Sheet
Invoices (Ok-to-Pay)
Expense report
PO status
Change PO status

Asset Shell
Receipt status
Invoice status
Remittances
Catalog
Advance Payment requests
Advance Payments
Cancel Advance Payment
Requisition
Change Requisition
Budget Check
SES Response

85

Ariba Network

Buy side — 37

Commerce Automation
Standard Material PO
Service PO
Change PO
Cancel PO
Order Enquiry request
Order Confirmation
Inbound Ship Notice
Outbound ASN
Outbound Payment Remittance
Inbound Remittance Advice
Remittance Cancellation
Inbound Receipt
Outbound Receipt
Service Entry Sheet
Service Entry Status update
Invoice (incl. Credit Memo)
Invoice status
Carbon copy (CC) invoice
Quote request
Quote message
Payment batch file

Discounting
Inbound Payment proposal
Outbound Payment proposal

Supply Chain Collaboration
Subcontract PO
Multi-Tier Subcontract PO
Consignment PO
Component consumption
Transfer movement (Product Activity)
Order Confirmation Approval

Forecast and SMI
Scheduling Agreement
Forecast Demand (Product Activity)
Inventory Levels (Product Activity)
Product Replenishment

Quality Management
Quality Notification
Quality Inspection Request
Quality Inspection Result
Quality Inspection Decision

Sell side — 80

X12 v4010
810
820
204
214
824 (In & Out)
830 (Forecast)
830 (Commit)
832
842 (In & Out)
846 (In & Out)
850
855
856
860
861
862
864
866
866 (MO/PO)
997 (In & Out)

GS1 EANCOM 97
ORDERS
ORDCHG
DESADV
INVOIC
REMADV

GS1 GUSI
MultiShipmentOrder
DespatchAdvice
ReplenishmentProposal
ReplenishmentRequest
ProductForecast
GoodsRequirement
ReceiptAdvice
ComsumptionReport
InventoryActivityorInventory
Status

EDIFACT D01B
ORDERS
ORDCHG
DESADV
INVOIC

EDIFACT D96A
ORDERS
ORDCHG
ORDRSP
INVOIC
DESADV
CONTRL
RECADV
INVRPT
REMADV
DELFOR
DELJIT
APERAK
IFTMIN
IFTSTA

GS1 EANCOM 2002
ORDERS
ORDRSP
ORDCHG
INVOIC
DESADV
REMADV

OAGiS v9.2
ProcessPurchaseOrder (PO)
AcknowledgePurchaseOrder
NotifyShipment
ProcessReceiveDelivery
NotifyPlanningSchedule
NotifyInventoryConsumption
NotifyProductionOrder
NotifyInventoryBalance
ConfirmBOD

PiDX v1.61
OrderRequest
OrderChange
OrderResponse
Invoice
InvoiceResponse
Receipt
ReceiptAcknowledgement
Exception
InvoiceResponseSESR
AdvancedShipNotice

117

Developer Portal

SAP Ariba APIs

- Create and use an external application to obtain **approval, denial, and comments** on PR and invoices generated in an SAP Ariba Procurement solution
- Systematically or by presenting **the approval task** to one or more approvers

Approval API

SAP Ariba Discovery RFX API

- **Publish** SAP Ariba Discovery events to Web sites / marketplaces to increase number of bidders
- **Publish** RFx events from a marketplace on SAP Ariba Discovery

- Enables your application to get **custom forms document information** or data for reporting or sending to an external ERP system.

Custom Forms API

Transaction Monitoring API

- **Monitor** supply chain collaboration transactions across Ariba Network
- High visibility and traceability

- **Enrich processes and documents** (including PO, invoice, ASN, OC, and receipts in Ariba Network with information external to SAP Ariba**)**

Flow Extension API

Operational Reporting Procurement API

- **Retrieve** header, line item, and other details for transactions (such as PR, PO, INV, IR)

- Use **third-party tax data providers to obtain tax calculations** for PO and invoices in the SAP Ariba Buying, SAP Ariba Buying and Invoicing, and SAP Ariba Invoice Management solutions

Tax API

Supplier API

- Access supplier data on a read-only basis for integration to a 3rd-party tool
- Example: get a list of all suppliers with registered/qualified/preferred status for a category, region, and BU

SAP Cloud Platform – extension scenarios

Use Case	Description	API Used
India waybill localization	In India, when goods are transported across state lines, there needs to be a waybill issued by the government that is provided by the transporter.	SAP Ariba APIs – Partner Flow Extension
Public RFx	In some regions, when an organization needs to source, it is required that its sourcing events are made public. Next evolution of the scenario is to enable connectivity through SAP Cloud Platform to enable third-party tendering sites to tender offers.	SAP Ariba API – SAP Ariba Discovery RFX Publication to External Marketplace
Requisition using SAP Ariba and Amazon Alexa	This is a Web application running on SAP Cloud Platform that demonstrates the consumption of a procure-to-pay API for purchasing requisitions using Amazon Alexa virtual assistant. It extends SAP Ariba solutions supporting the procure-to-pay process.	SAP Ariba API – SOAP Web Services to catalog item search, import requisition(s)
Real-time track and trace	This enables real-time track and trace of shipments.	SAP Ariba API – Flow Extension-ASN
Generate barcode based upon ▪ **PO** ▪ **Goods receipt**	This allows the buyer to generate barcodes that would be attached to ASN, allowing the supplier to attach the barcode to the shipment. Once the goods are received, the buyer could just scan the barcode and have it update the GRN, whether that be an ERP system or other.	SAP Ariba API – Flow Extension-ASN
Integration with ServiceNow and unified worklist	This scenario allows a user to create a service catalog request within ServiceNow. Using the SAP Cloud Platform Integration service, this information is used to create the purchase requisition within SAP Ariba.	SAP Ariba API – PR Approval

You are well supported…
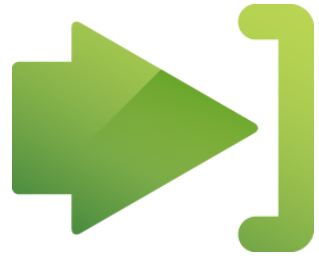
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Find API's

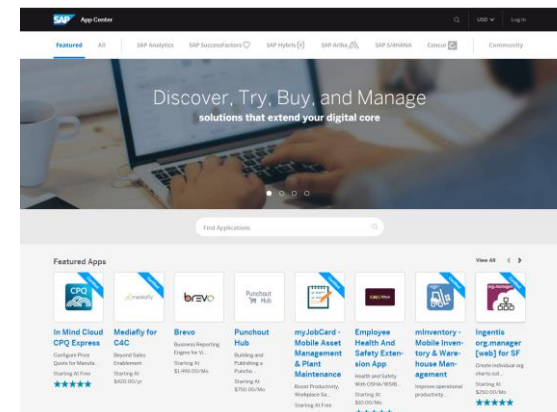Visit [api.sap.com](api.sap.com)

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Visit sapappcenter.com
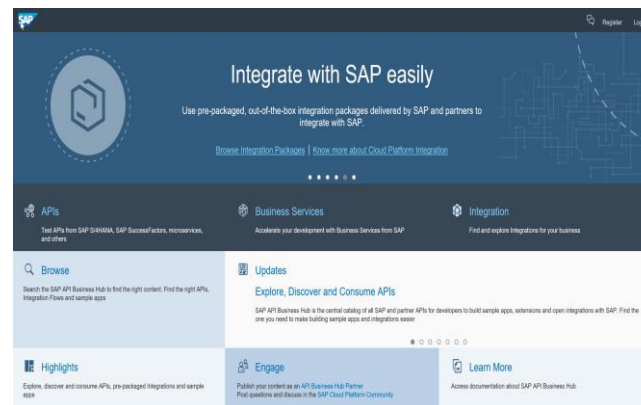
Reach Out!

Contact your SAP Account Executive

Summary

- SCP is the business platform where you extend all LOB applications.

- Best of both worlds: run SAP best practices <u>and</u> extend to your own specific needs in the public cloud on a single data model.

- Partner apps (incl. those developed by your own IT dept) will be more easily deployed and consumed.

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Presentation Materials

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

Q&A

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

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