APIs, Prepackaged Integration Content and more

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Agenda
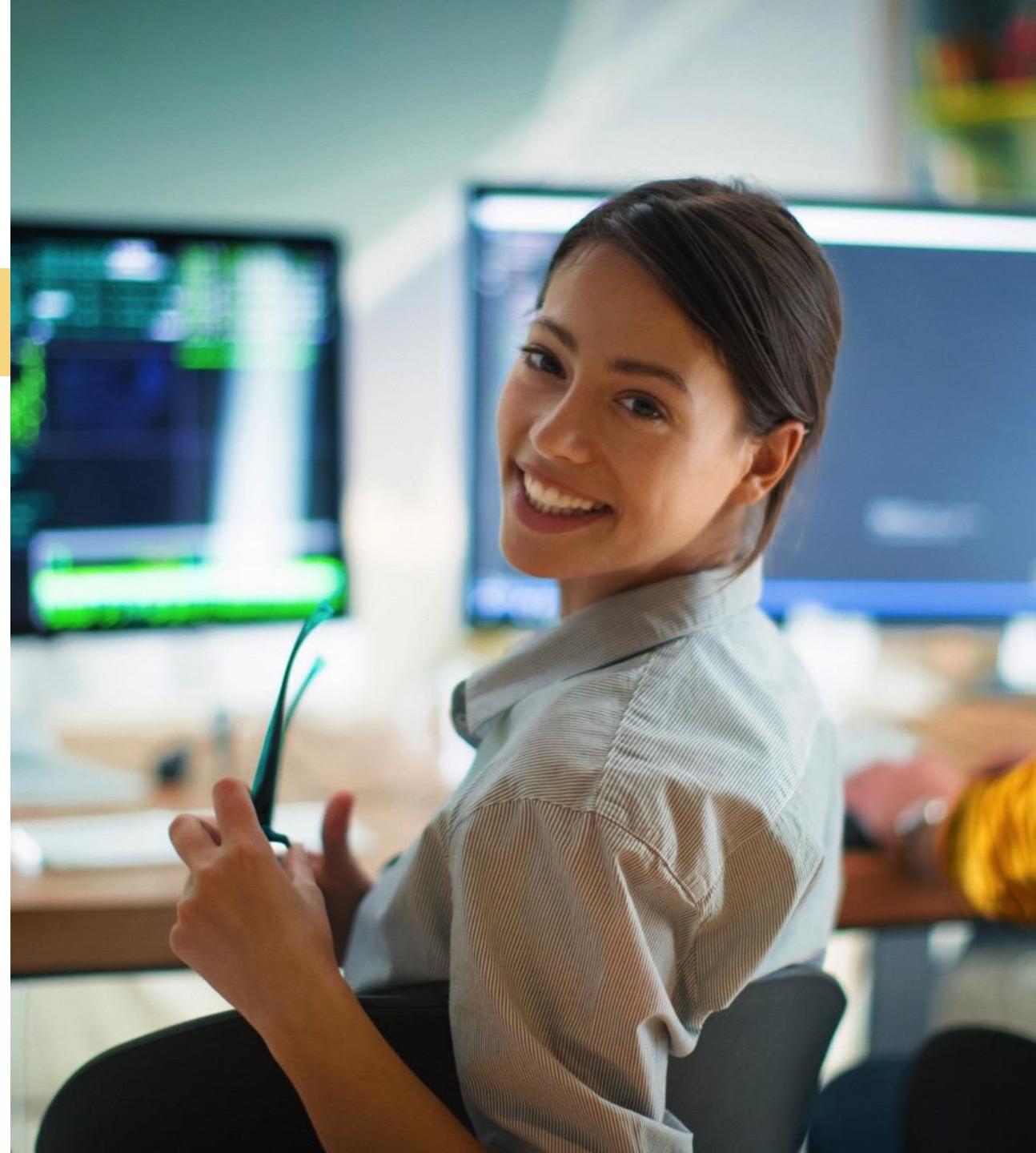
The Intelligent Enterprise

Integrated end-to-end business processes for the entire value chain

X DATA

Seamless Customer & Employee Experience

Intelligent Enterprise

Front Office

Sales

Marketing

Service & Support

Back Office

Finance

Spend Management

HR

Manufacturing & Supply Chain

O DATA

Lead to Cash

Source to Pay

Total Workforce Management

Design to Operate
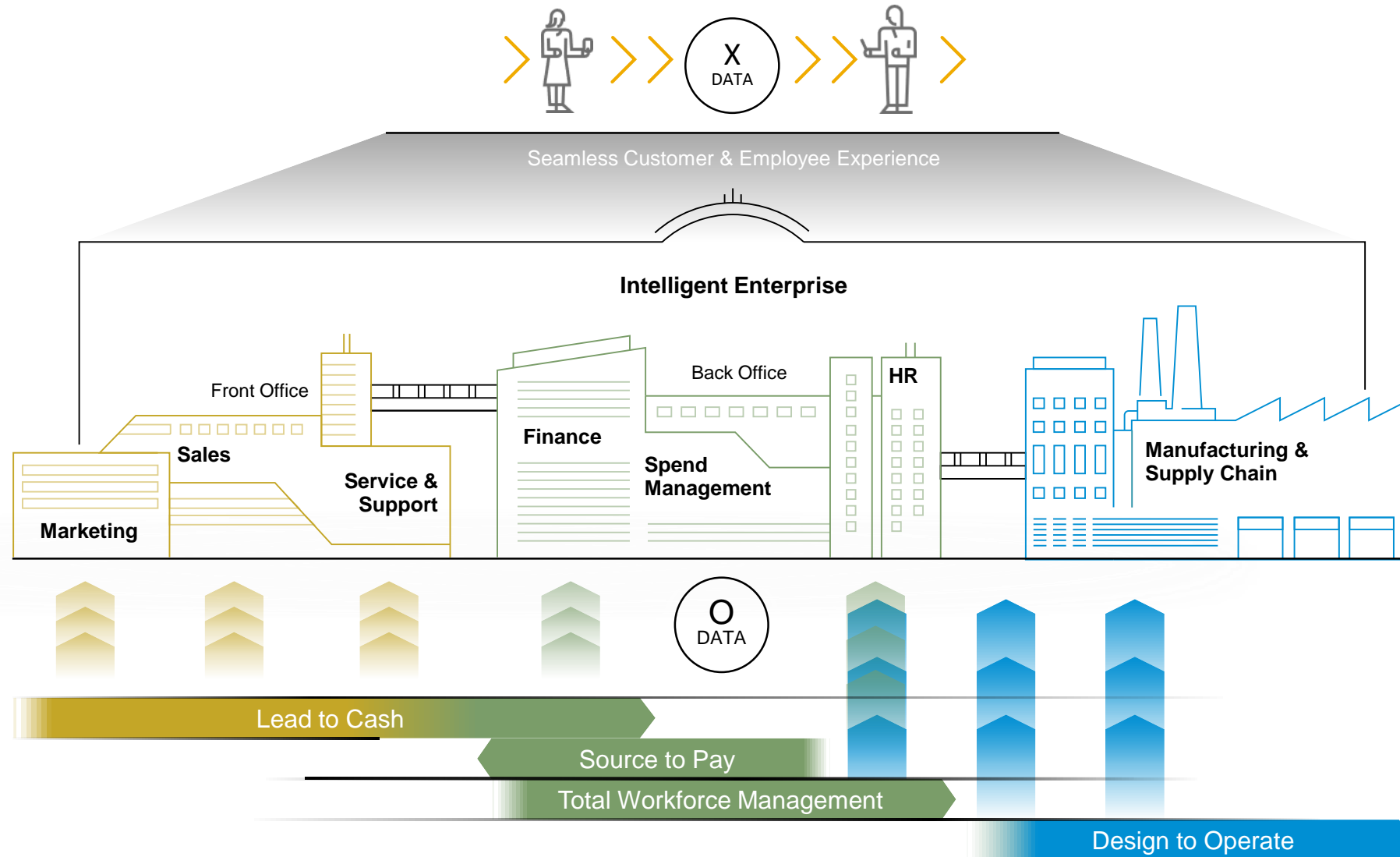
SAP integration DNA for the Intelligent Suite

Consistent adoption of technology guidelines* along key scenarios to form an Intelligent Suite
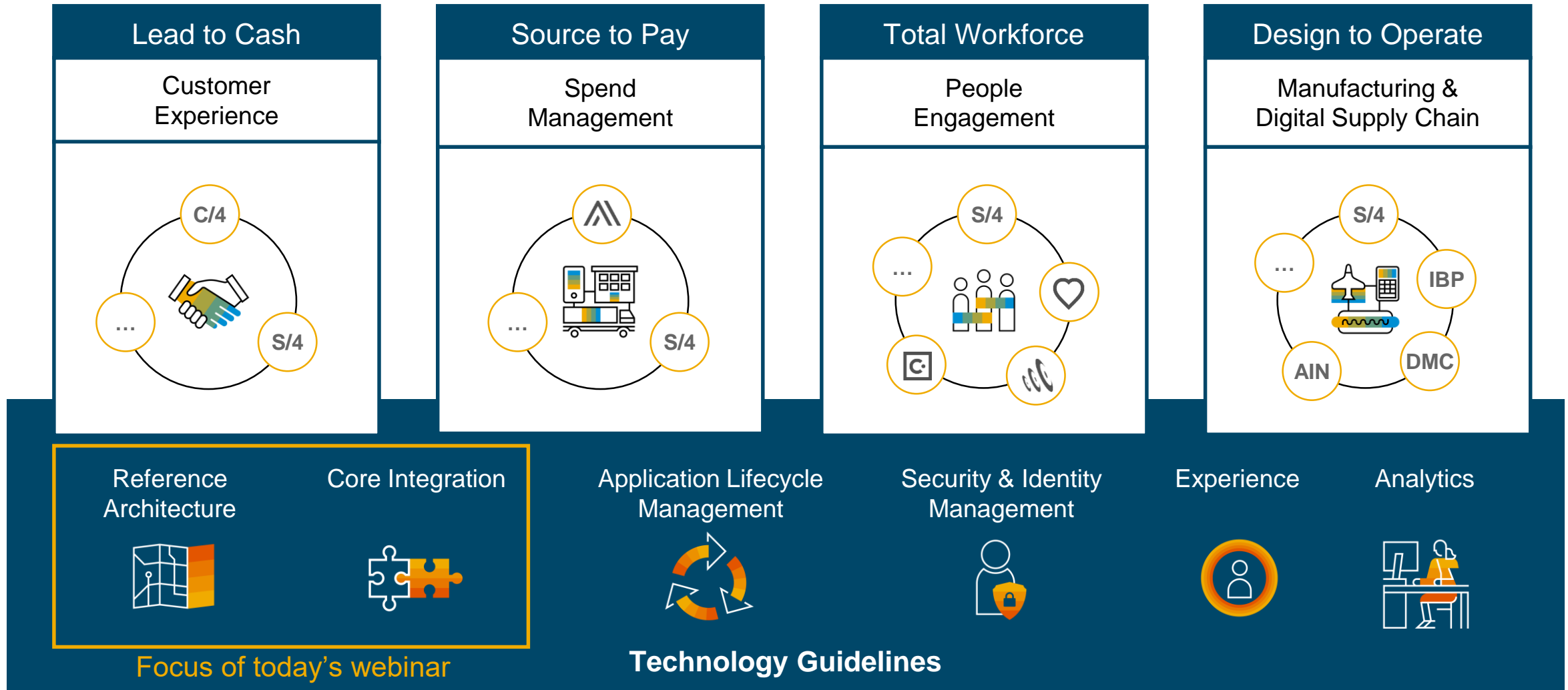
Lead to Cash
Customer Experience
C/4 … S/4

Source to Pay
Spend Management
S/4 …

Total Workforce
People Engagement
S/4 …

Design to Operate
Manufacturing & Digital Supply Chain
S/4 … IBP AIN DMC

Reference Architecture

Core Integration

Application Lifecycle Management

Security & Identity Management

Experience

Analytics

Focus of today's webinar

Technology Guidelines

* Technology guidelines describe technology standards used within SAP to form a consistent Intelligent Suite   5

Agenda

Integration Strategy in context of the Intelligent Enterprise

API Strategy

SAP Graph

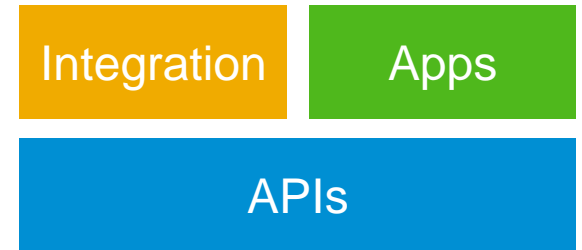Pre-Packaged Integration Content

Business Scenarios

Summary

Q&A
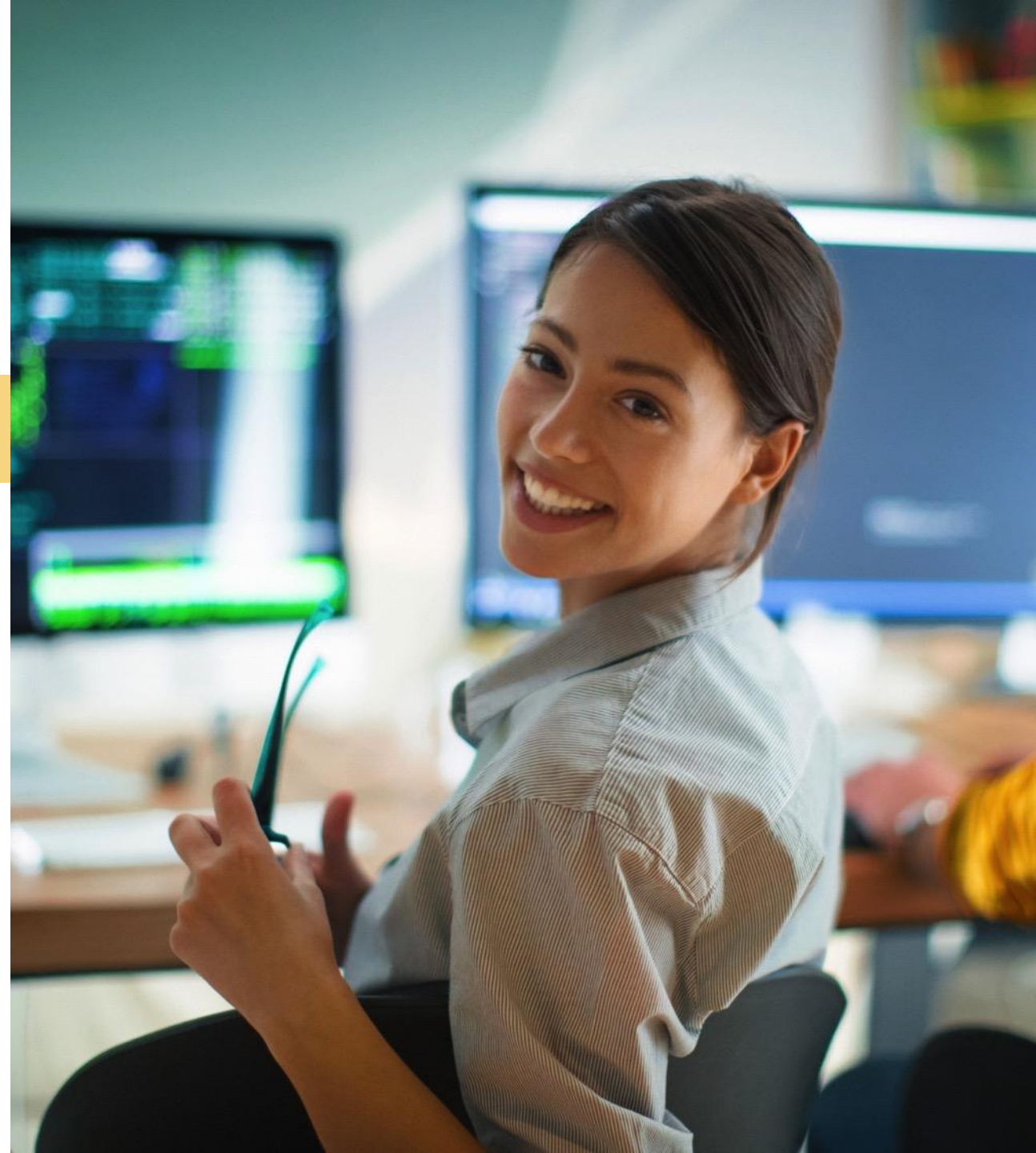
APIs – What are they all about?
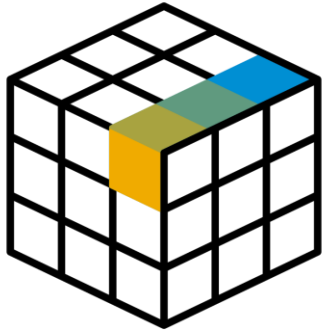
Application Programming Interfaces
= building blocks for digital business

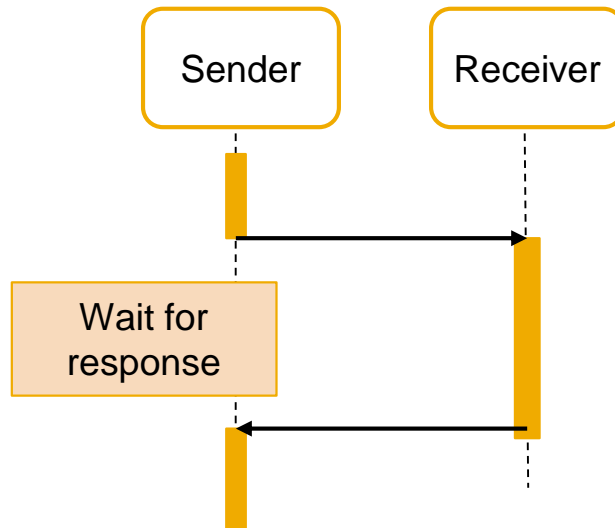| Integration	Apps
APIs	

Unlock your data   Empower users with self-services   Connect and innovate

APIs used for Integration Scenarios

Communication types

Synchronous

Sender → Receiver

Wait for response

Asynchronous

Sender → Receiver

Continue working

Get response (optional)
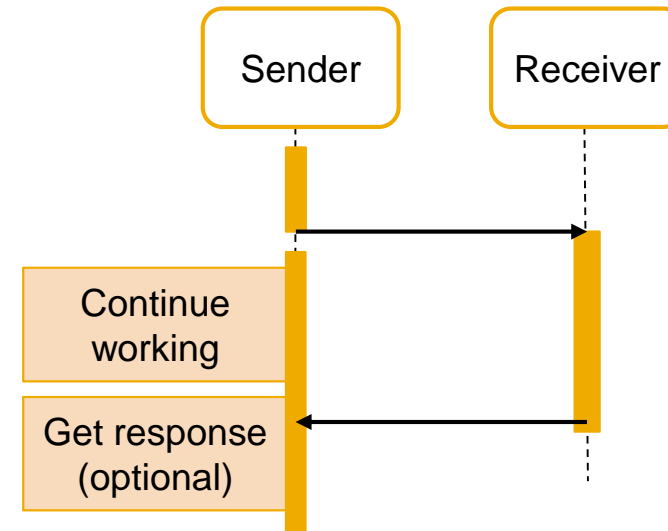
Use Cases:

User Experience Integration	Process Integration	Data Integration

Process Integration	Data Integration	Business Partner Integration

Direction: Harmonized APIs and aligned domain models
To simplify SAP-to-SAP Integration

https://api.sap.com
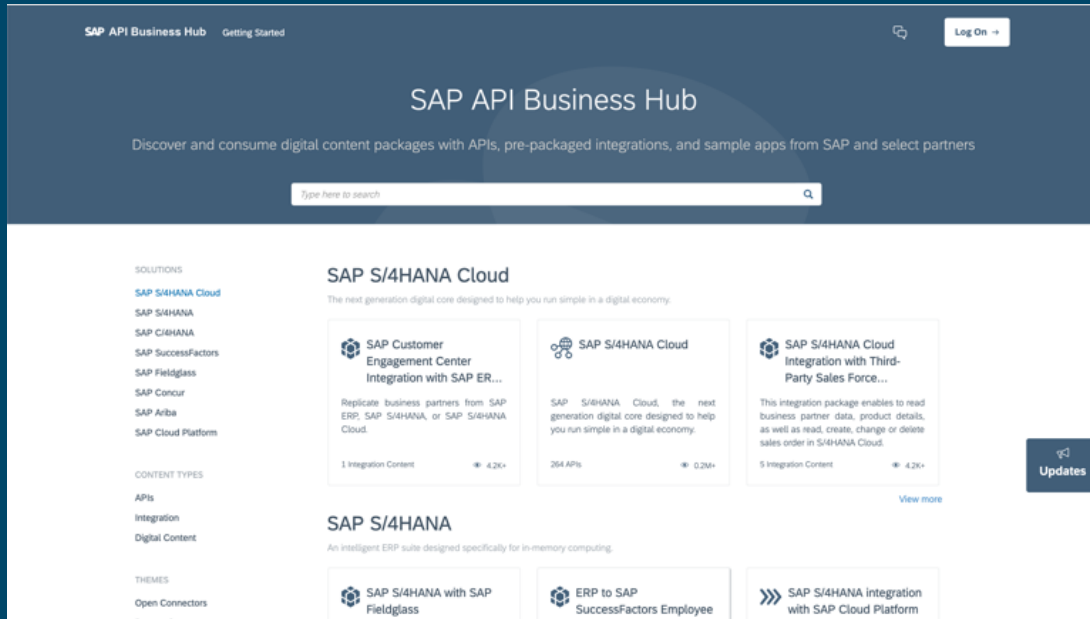
Objective

- Simplify SAP-2-SAP integrations for the Intelligent Suite by aligned domain models and common integration patterns

Approach

- Semantic alignment of domain models across SAP applications will result in aligned APIs in SAP API Business Hub

- Central master data services on SAP Cloud Platform to simplify the synchronization of master data across SAP applications

- Simplified, pre-packaged integrations based on standardized integration patterns

SAP Application Programming Interface Strategy

Focus on public web APIs

REST-based APIs

- Representational State Transfer (REST) protocol
- Designed to provide standard access via HTTP(S) through operations such as GET, POST, DELETE
- Synchronous request with response

OData APIs

- Open Data Protocol (OData) is a special family of REST-based APIs
- Preferred over REST when OData providers are already available in an application environment
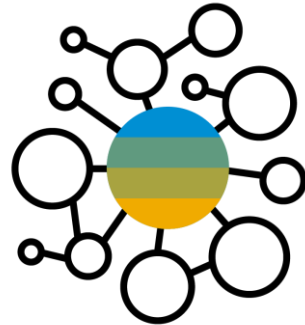
Advanced API qualities on selected REST & OData APIs.

SOAP APIs

- Simple Object Access Protocol (SOAP) is a protocol for exchanging information in distributed environments
- Preferred protocol for asynchronous messaging (error handling)

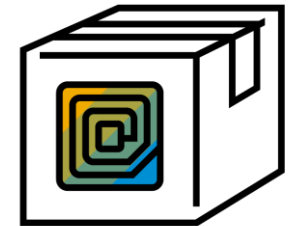# Open APIs can support more use cases

Real-Time API Integrations
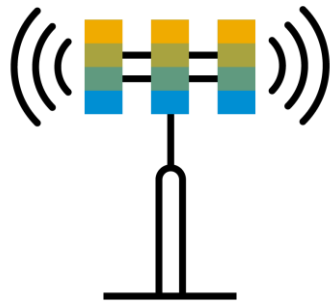
Enterprise Microservices

Enterprise Digital Apps
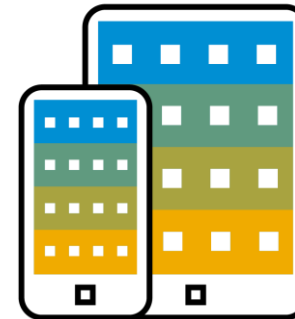
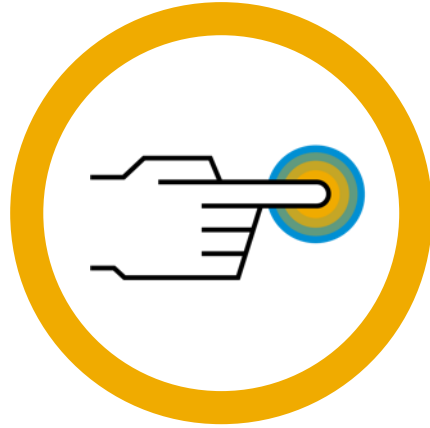**API Products/ Monetization**

SAP API Business Hub

Search, discover, experience, and consume APIs

Catalog

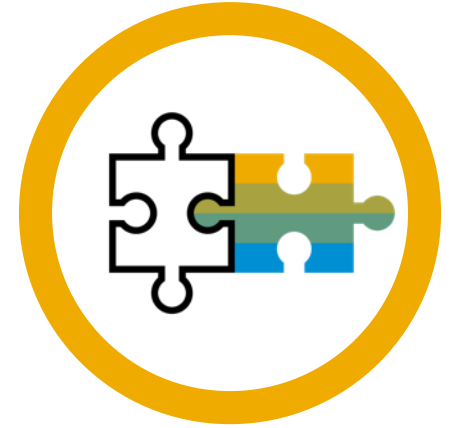Central place for APIs from SAP and its partners

API Sandbox

One click-test experience for developers via API Sandbox

Pre-packaged accelarators

Integration packages to integrate APIs

Easy Consumption

Integration with developer IDE and code generations

https://api.sap.com

Alignment of APIs: Syntax and business semantics
Direction for the Intelligent Enterprise*

Technical harmonization of APIs across SAP apps of the Intelligent Suite with

- a well-defined signature (payload)
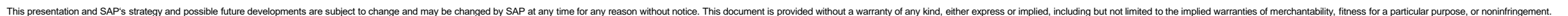- a common security model
- Orchestration patterns

+ Semantical harmonization through domain model alignment across SAP applications

*Will be applied stepwise to new scenarios

*

Central master data services

Future direction: Intelligent sharing of master data in the cloud

Source: DSAG

Semantically aligned data models will provide
the foundation for the Intelligent Suite

Intelligent Suite

SAP Concur SAP SuccessFactors SAP S/4HANA®

SAP Ariba SAP Fieldglass SAP® C/4HANA

Future Direction

ONE Master Data Service

SAP Cloud Platform

On-Premise SAP Master Data Governance

SAP S/4HANA

SAP Business Suite

...
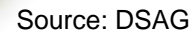
Example: SAP Cloud Platform Master Data for workforce
Concept and definition

SAP Cloud Platform Master Data for workforce provides a subset of Employee Master Data for integration which is commonly required by (primarily non-HRIS) applications, such as SAP S/4HANA, SAP Fieldglass, SAP Concur and other (non-HRIS) future SAP Cloud Platform applications.
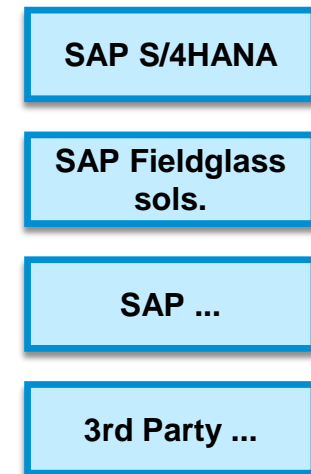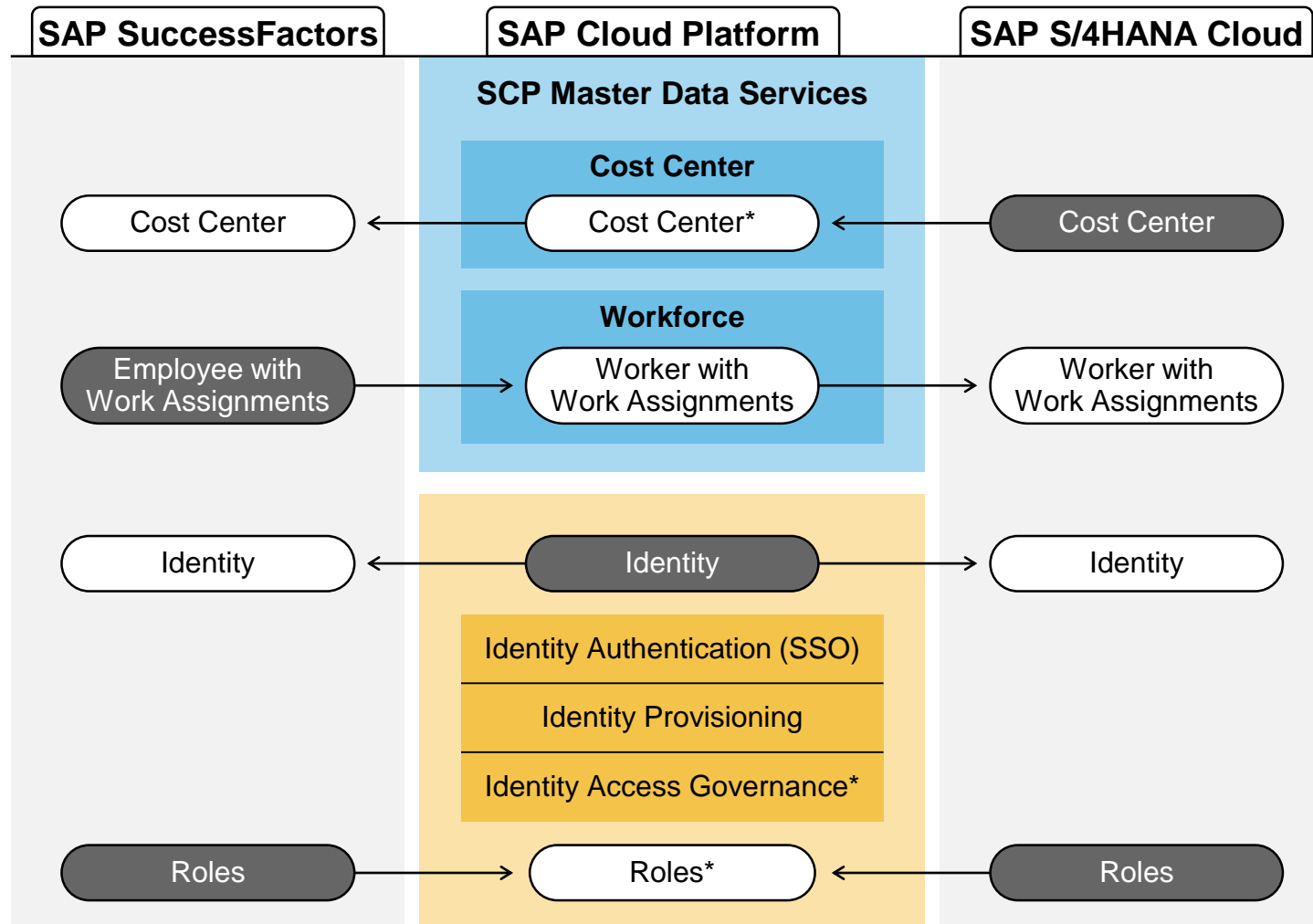
Master data owner

Modular service repository

Master data consumer

Employee Central [1]

SAP SuccessFactors ♡

Master data services

Workforce	Bus. partners
Products	...

SAP Cloud Platform

SAP S/4HANA

SAP Fieldglass sols.

SAP ...
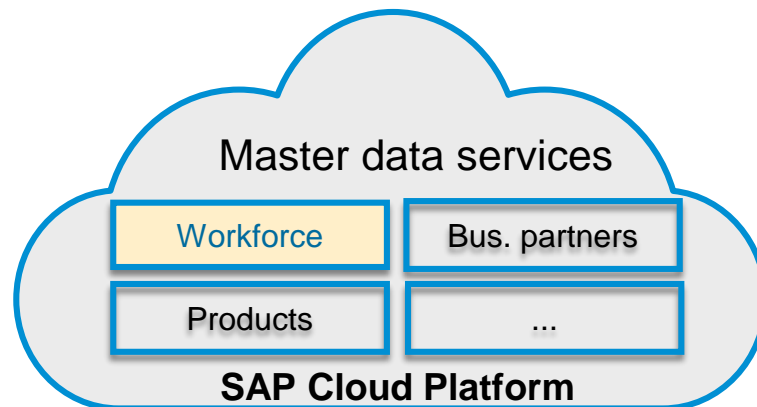
3rd Party ...

1. Other core HR systems (SAP or 3rd party) are possible.

Executing the strategy

Hire-to-Retire: Key Master Data Integration with ONE SAP Data Model

SAP SuccessFactors

SAP Cloud Platform

SAP S/4HANA Cloud

SCP Master Data Services

Cost Center

Cost Center ← Cost Center* ← Cost Center

Workforce

Employee with Work Assignments → Worker with Work Assignments → Worker with Work Assignments

Identity ← Identity → Identity

Identity Authentication (SSO)

Identity Provisioning

Identity Access Governance*

Roles → Roles* ← Roles

*Roadmap topics (subject to change)

Agenda

Integration Strategy in context of the Intelligent Enterprise

API Strategy

SAP Graph

Pre-Packaged Integration Content

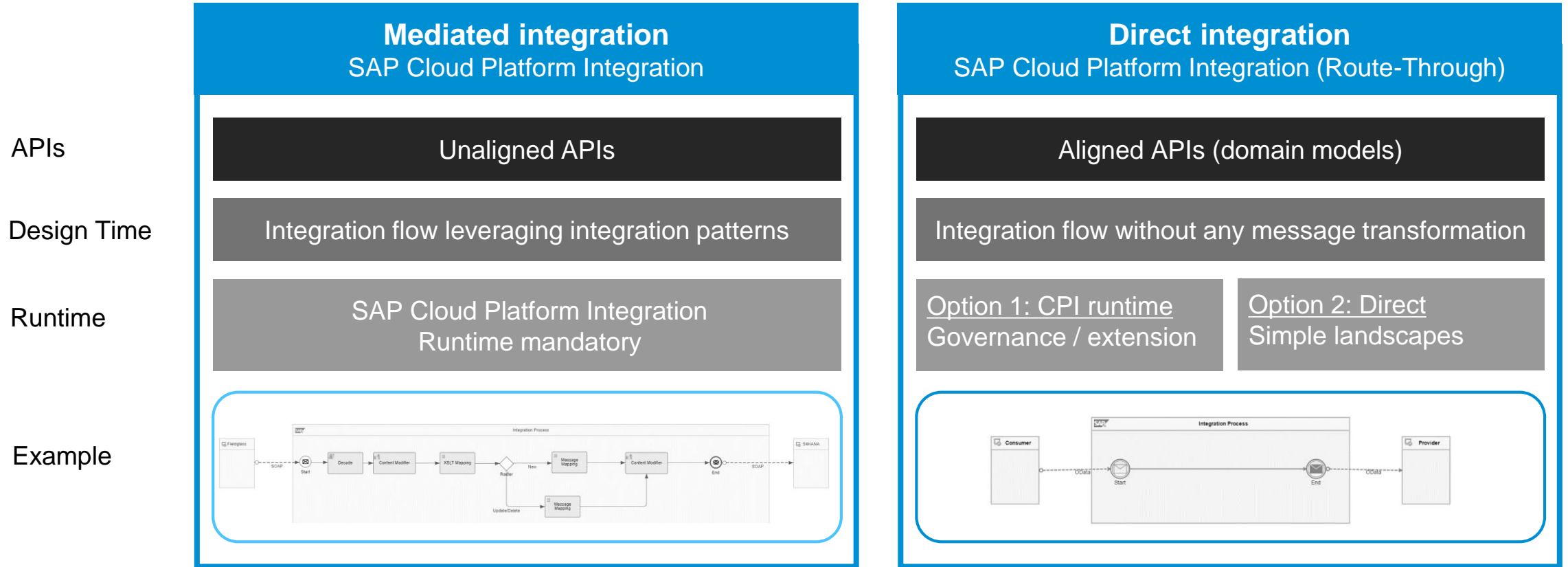Business Scenarios

Summary

Q&A
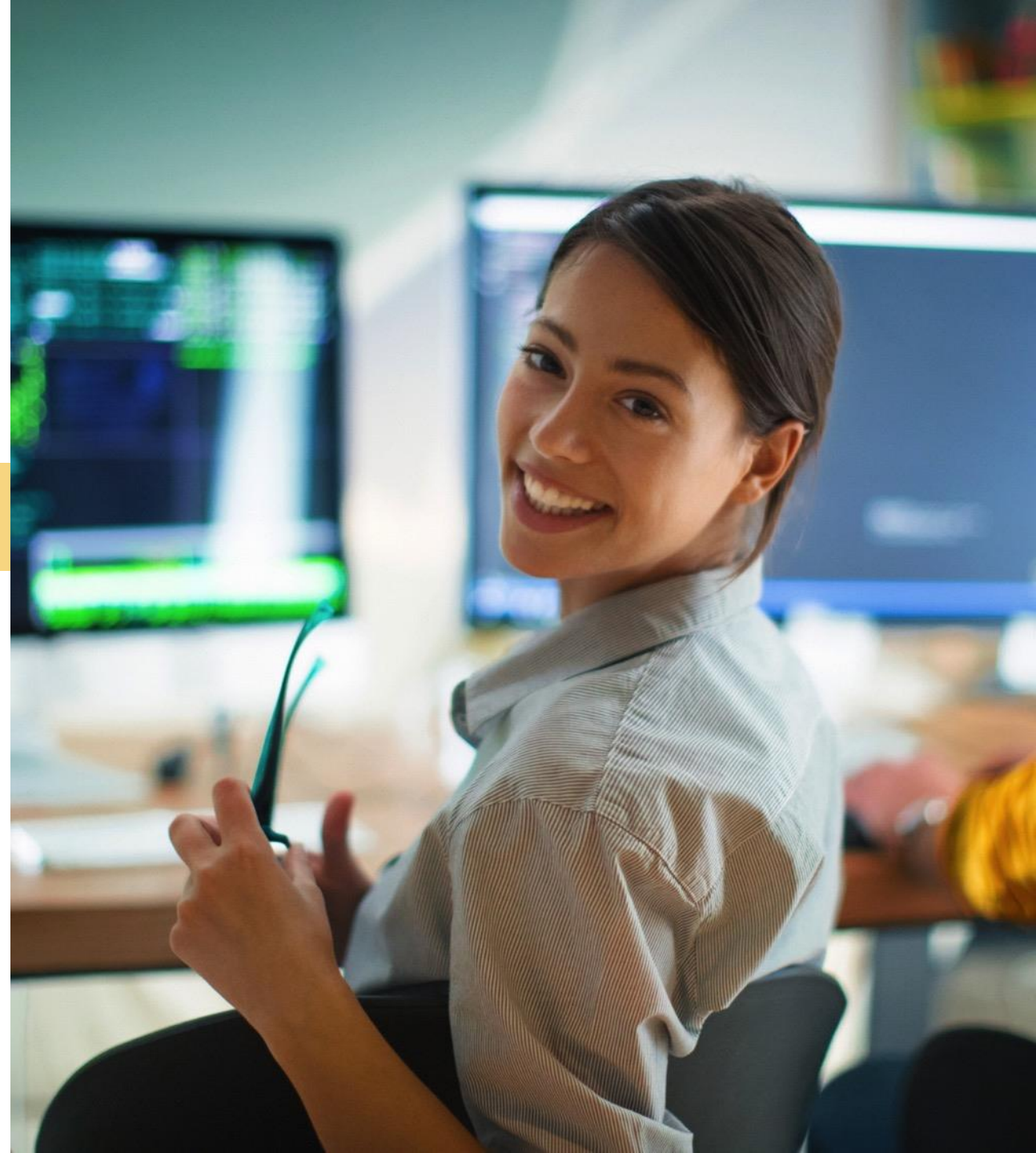
SAP Graph

- SAP Graph is a unified and simplified API layer across the SAP portfolio

- No prior SAP expertise is needed to get started with SAP Graph

- Provides a central hub to get instant access to all relevant data

https://graph.sap
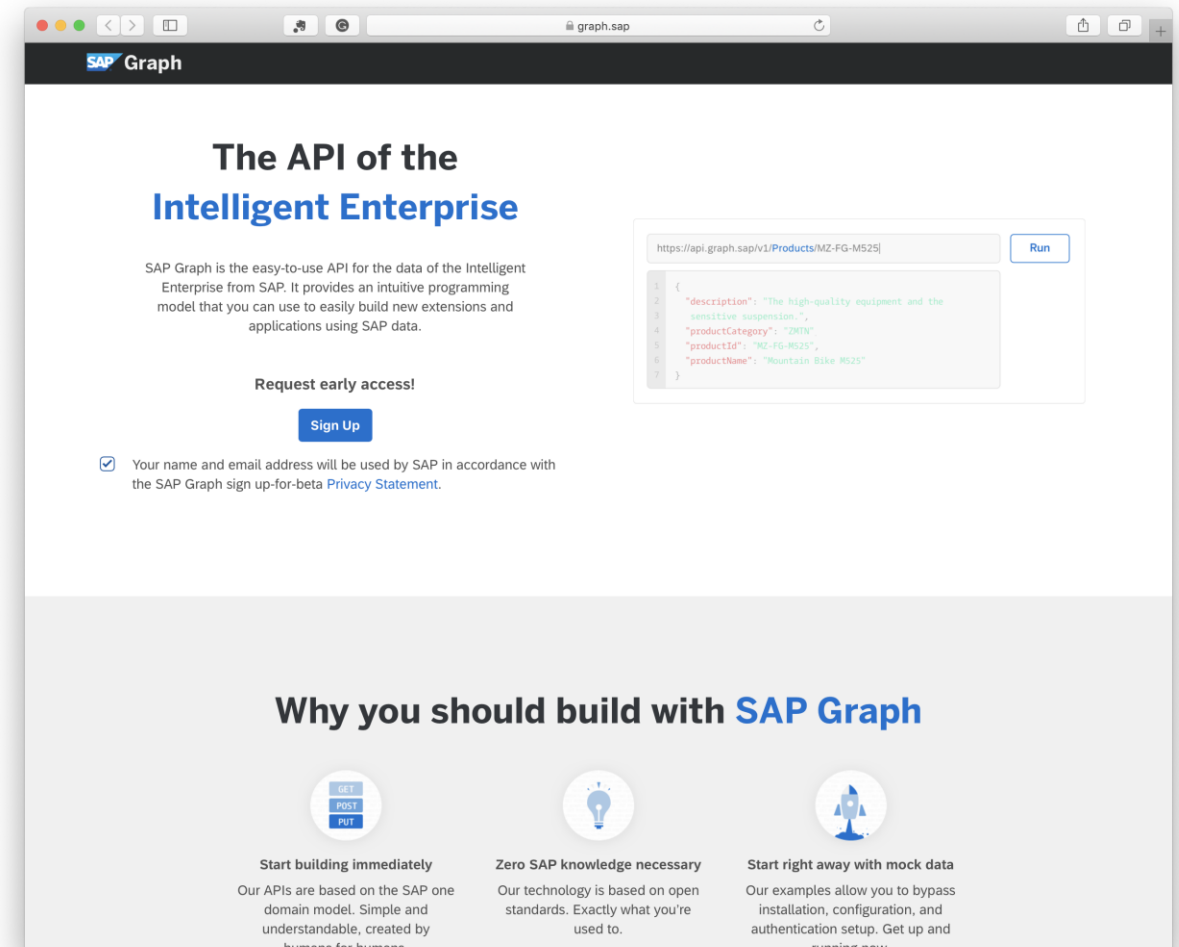
Harmonization

One API Schema

One AuthN

One Protocol

Stable Model

Underlying system APIs

api.graph.sap/v1/Customers/:Id

Unified Authentication Scheme

REST (ODATA v4)

Quote

Product

Customer

SalesOrder

Contact

SalesArea

OrgUnit

CostCenter

S/4HANA

SAP Sales Cloud

SAP Commerce Cloud

…
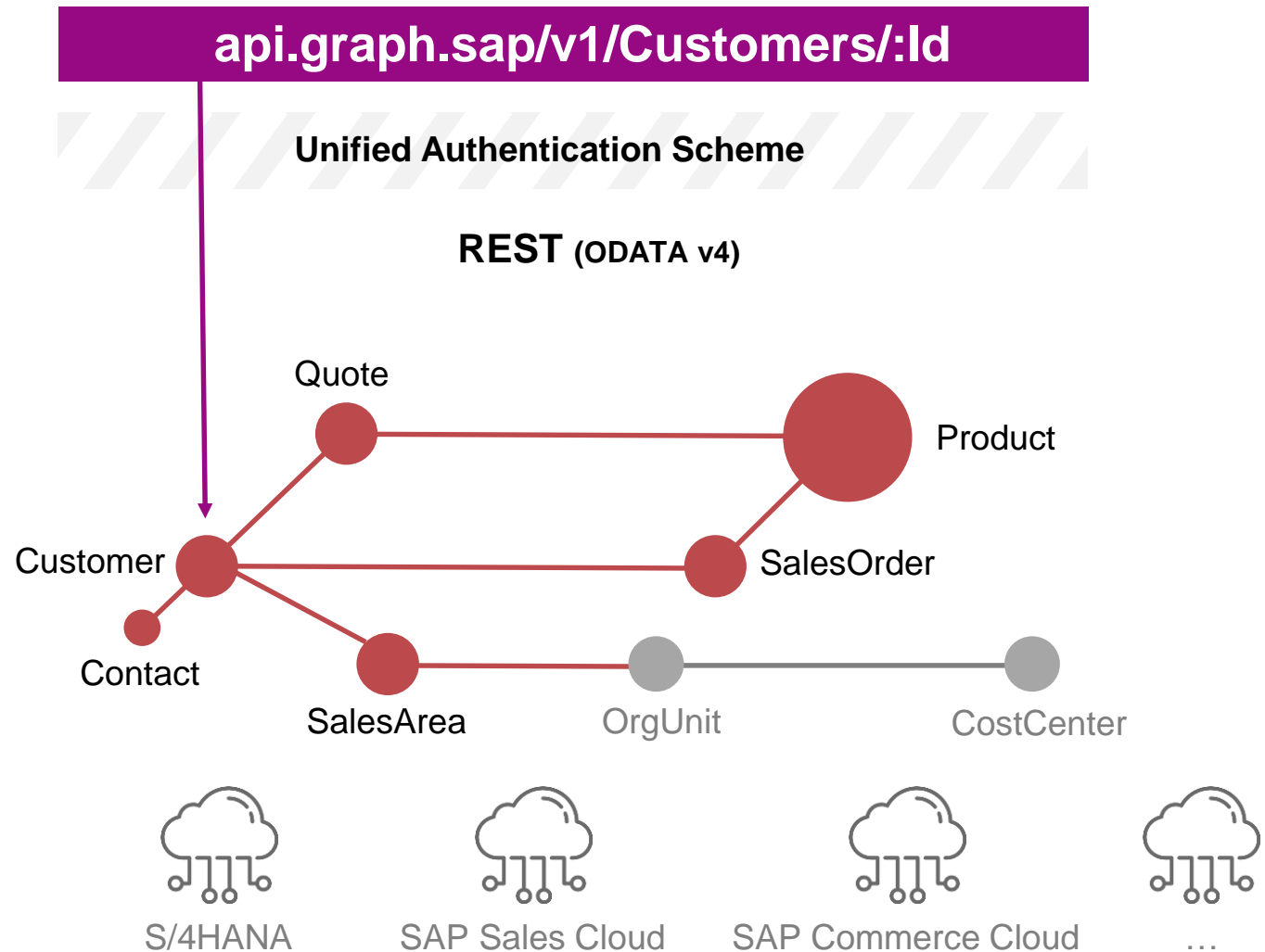
Reach All Developers

SAP API Business Hub

A public repository of **all available APIs** for each SAP product to build extensions and integrations.

SAP API Management

Allow partners and customers to register and **orchestrate APIs** into a harmonized enterprise API layer.

SAP Graph

Allow every developer to build **extensions within minutes** for SAP's Intelligent Enterprise.

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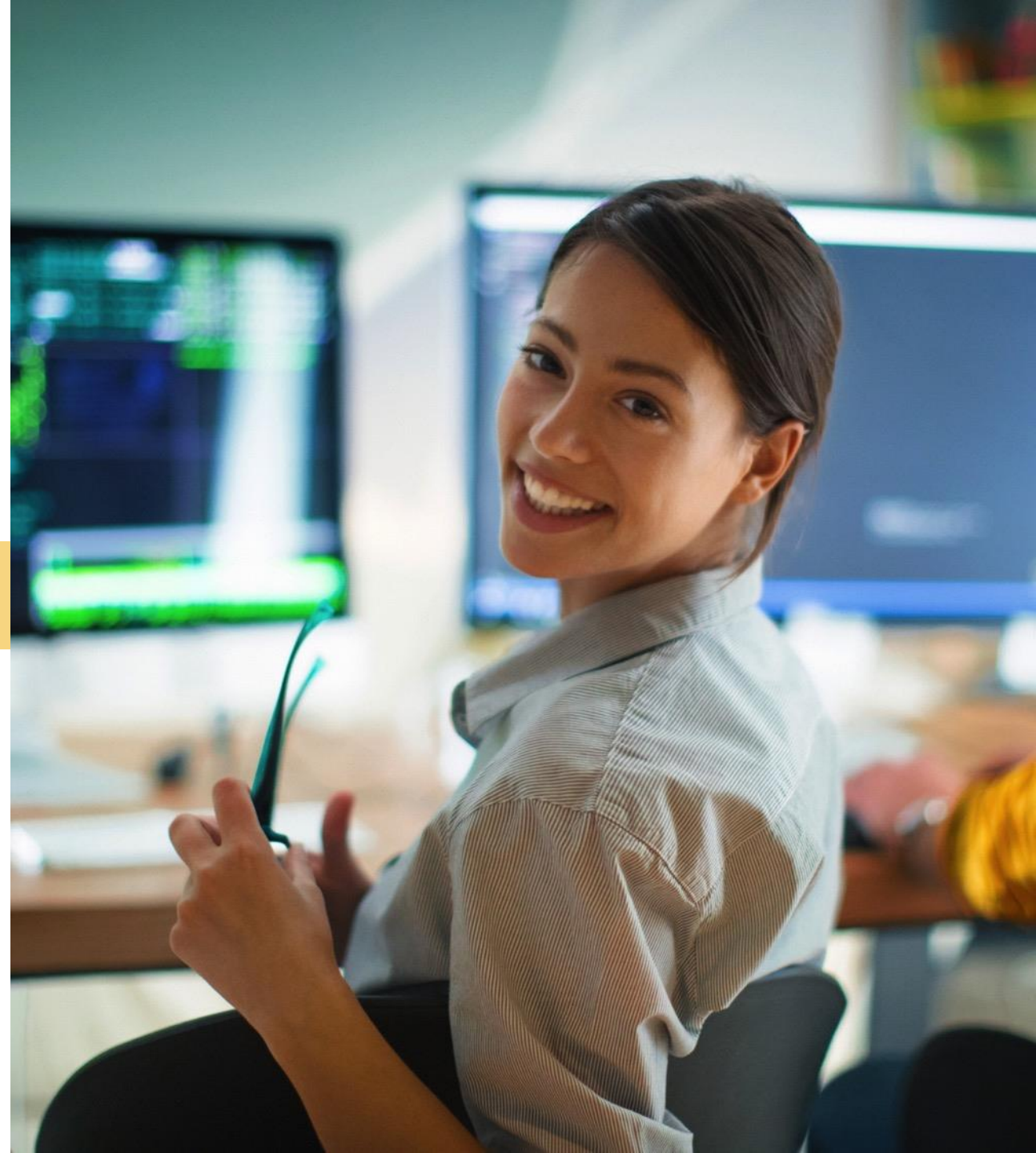
Process integration for the Intelligent Suite
SAP Cloud Platform Integration for cloud and hybrid integration

	Mediated integration SAP Cloud Platform Integration	Direct integration SAP Cloud Platform Integration (Route-Through)	
APIs	Unaligned APIs	Aligned APIs (domain models)	
Design Time	Integration flow leveraging integration patterns	Integration flow without any message transformation	
Runtime	SAP Cloud Platform Integration Runtime mandatory	Option 1: CPI runtime Governance / extension	Option 2: Direct Simple landscapes
Example			

Simplification of integration scenarios

SAP API Business Hub

725+ prepackaged integration flows – from SAP and ecosystem
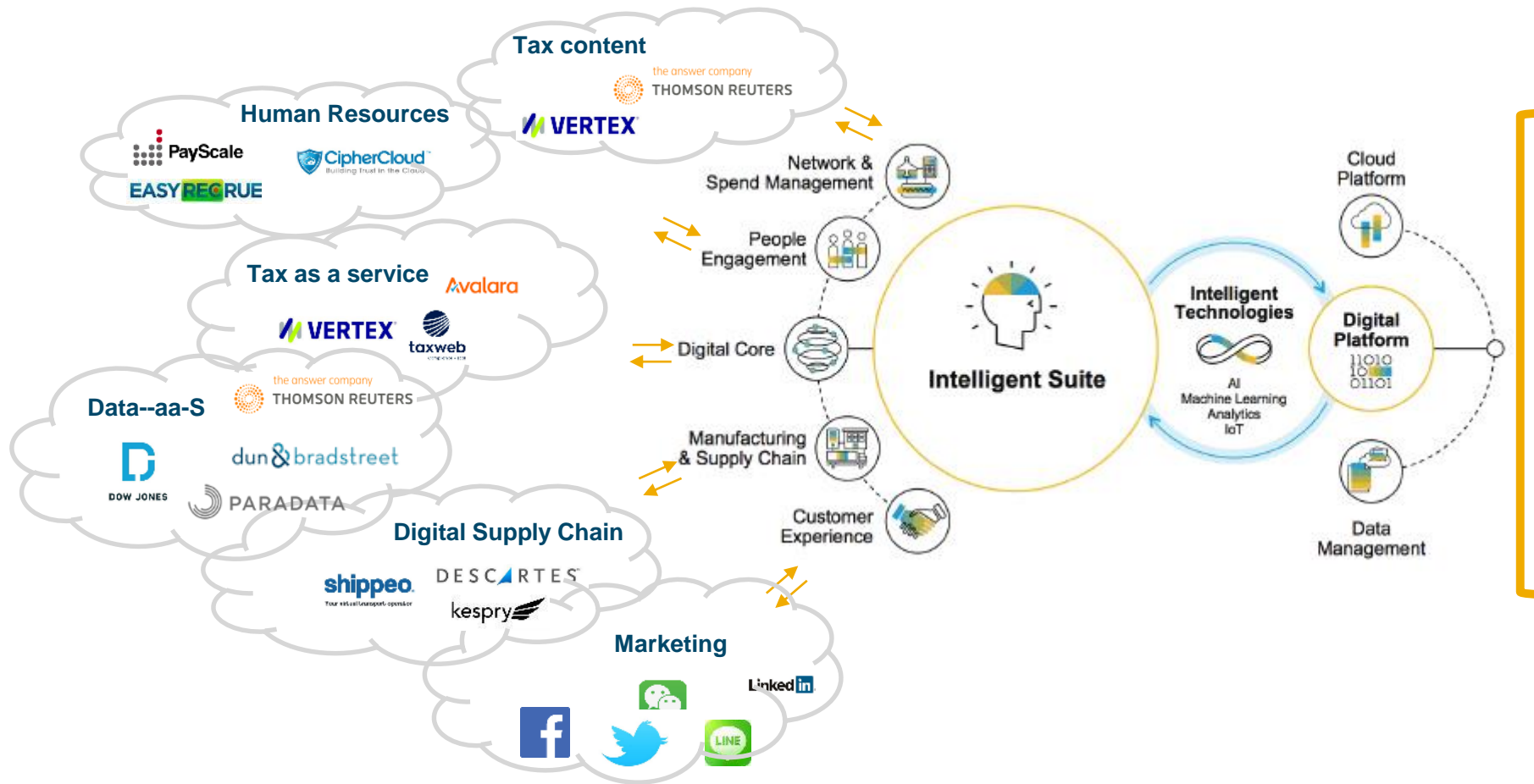
- Ecosystem partners simplify integration to SAP with ready-to-use prepackaged integrations in SAP API Business Hub

- 2000+ partners by 2020 integrated out-of-the-box

Process integration for the Intelligent Suite

Three Base Patterns
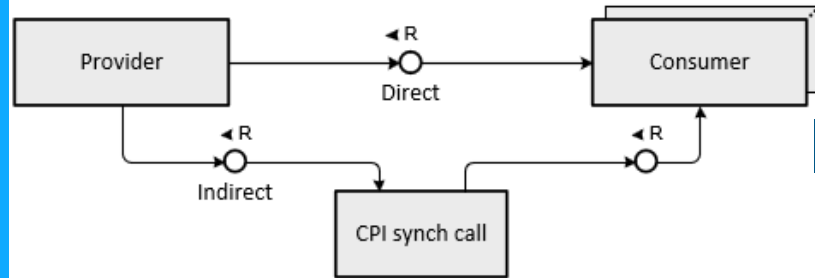
PULL PATTERN

Sync Request/Response

Consumer driven

Strengths: Authorization, Simplicity

Weaknesses: Polling, Provider Performance
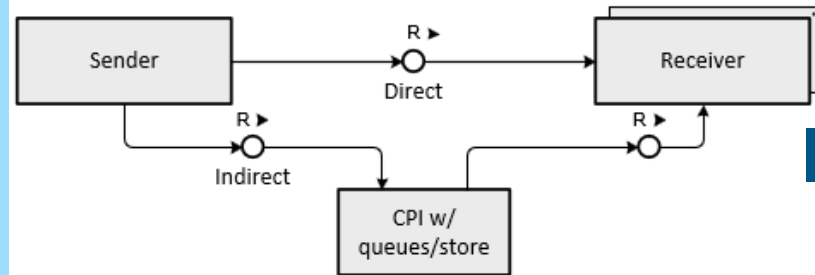
PUSH PATTERN

Async Messaging with QualityOfService

Sender driven

Strengths: Control, Decoupling

Weaknesses: Queues/Retry, Static Routing
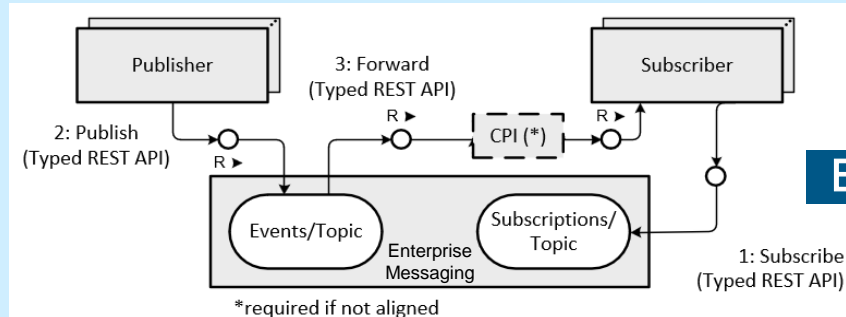
EVENT PATTERN

Push Pattern with Publish&Subscribe

Publisher&Subscriber driven

Strengths: Flexibility, Decoupling

Weaknesses: Authorization, Audit Logging

Agenda

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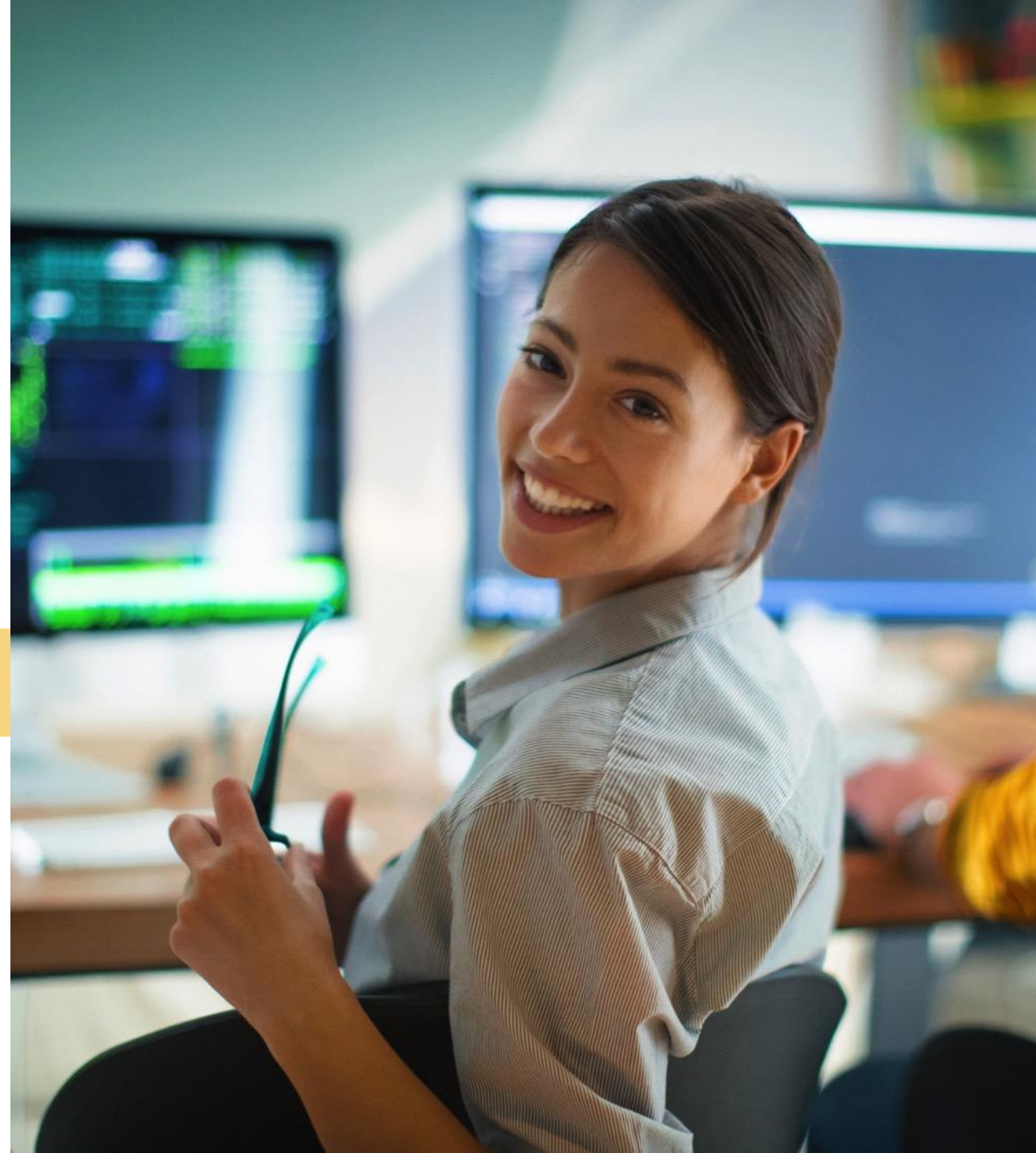
Reference architecture

End-to-end process models – descriptive & linked to runtime artifacts
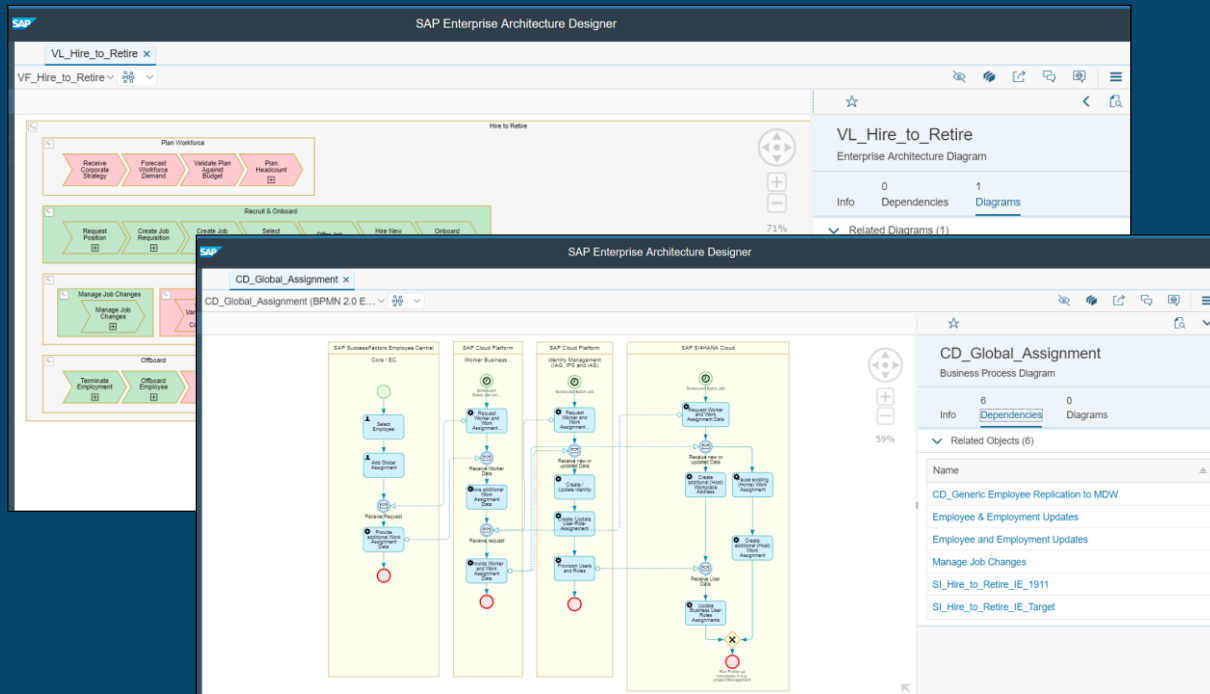
Example: Total Workforce Management (Hire to Retire)

Objective

- Provide a consistent overview on E2E processes supported by the Intelligent Suite

Use Cases for Enterprise Architects

- Explore how E2E scenarios decompose into applications, modules, business services, technologies and integrations

- Map out the roadmap to adopt the solution and transition from current solution landscape to target

- Implement E2E scenarios which are connected with runtime artifacts

Reference architecture

Outlook: SAP delivered models in SAP API Business Hub
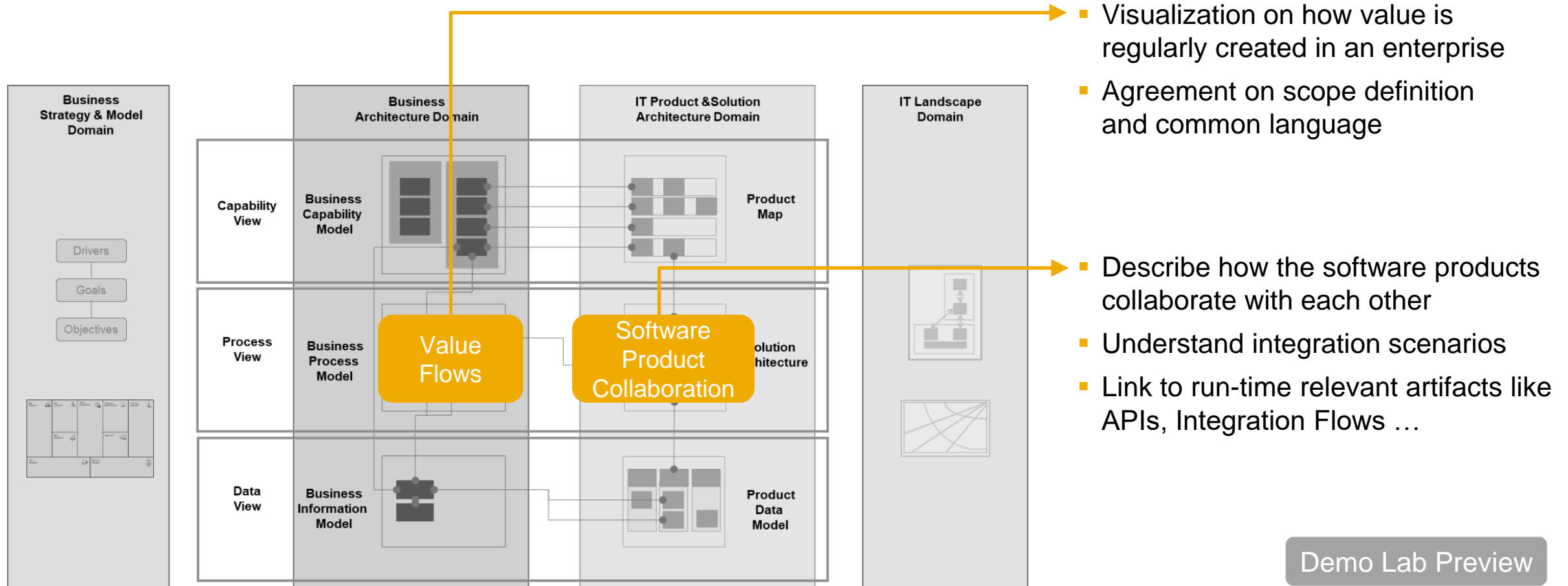
- Visualization on how value is regularly created in an enterprise
- Agreement on scope definition and common language

- Describe how the software products collaborate with each other
- Understand integration scenarios
- Link to run-time relevant artifacts like APIs, Integration Flows …

Demo Lab Preview

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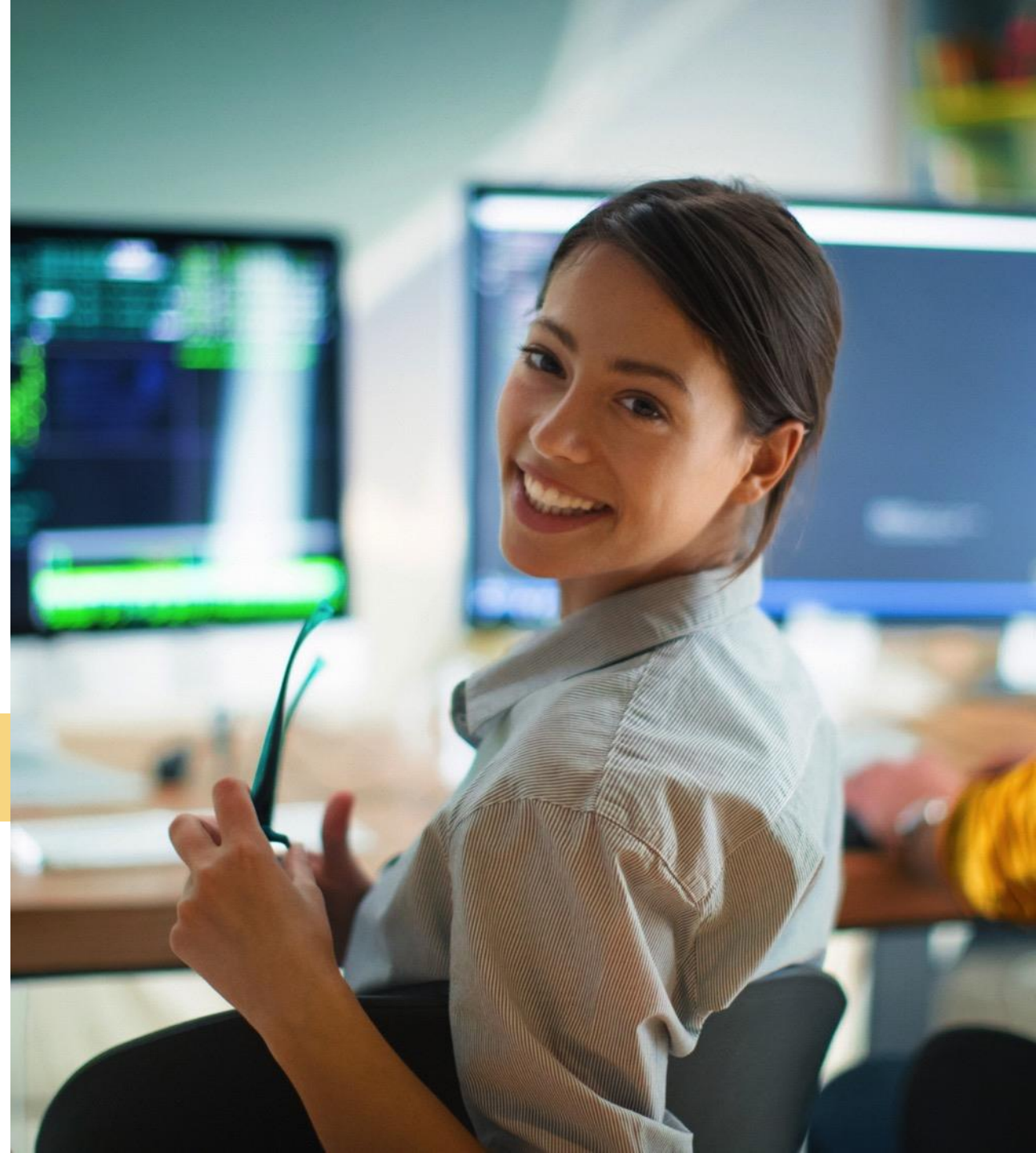
APIs, Prepackaged Integration Content and more

1 ALIGNED APIS

Simplify SAP-2-SAP integrations for the Intelligent Suite by aligned domain models and APIs.

2 PREPACKAGED INTEGRATION

Simplified, pre-packaged integrations based on standardized integration patterns.

3 BUSINESS SCENARIOS

Delivering end-to-end process models – descriptive & linked to runtime artifacts

Agenda

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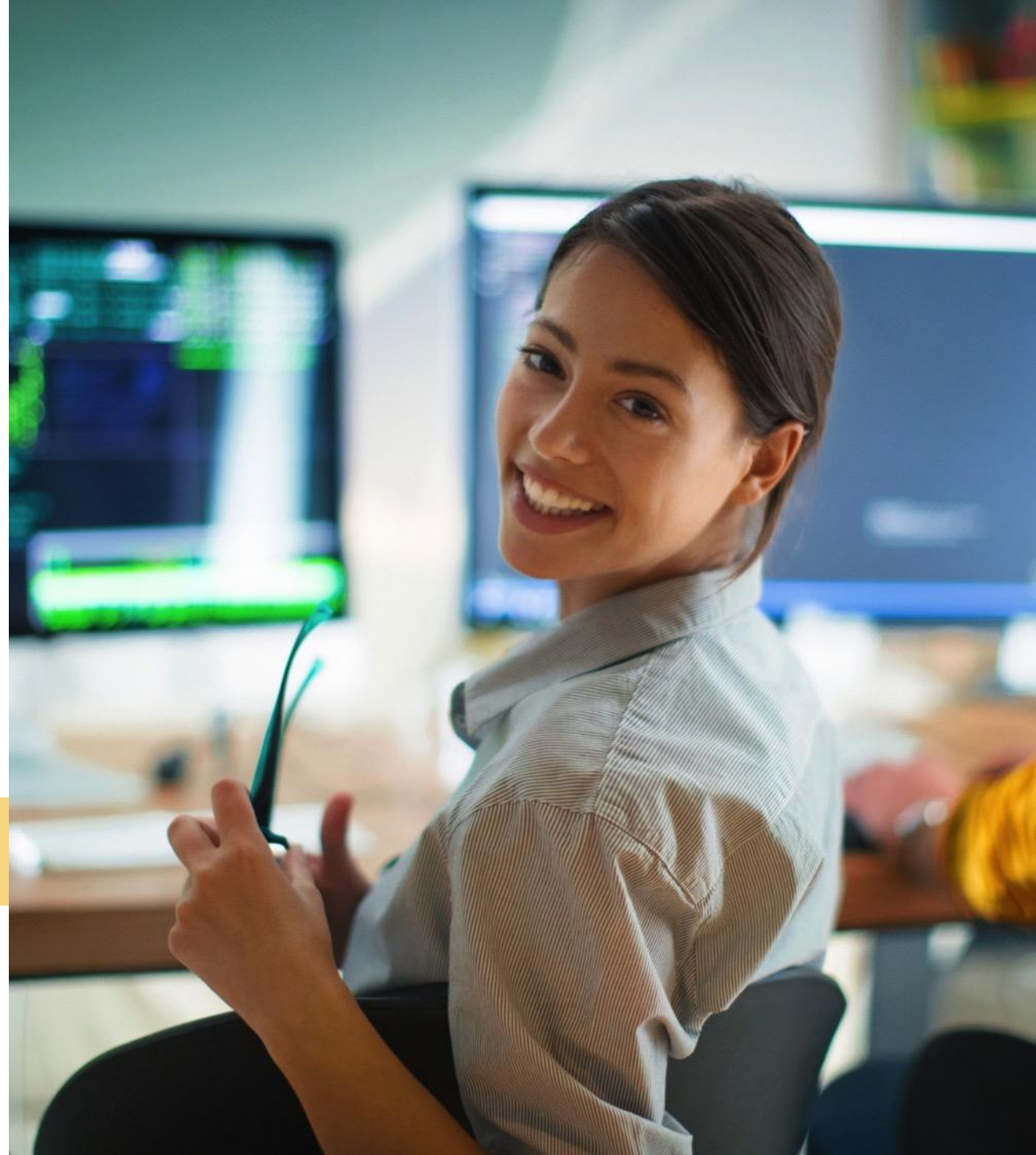
Thank you.

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