



# Introducing SAP Integration Advisor

## A Learning System for Faster Exchange of Business Data in Heterogeneous Landscapes

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PUBLIC

# Agenda

## **SAP Integration Strategy in context of the Intelligent Enterprise**

Integration Advisor at a Glance

Demo

Further Information

Questions & Answers

# Disclaimer

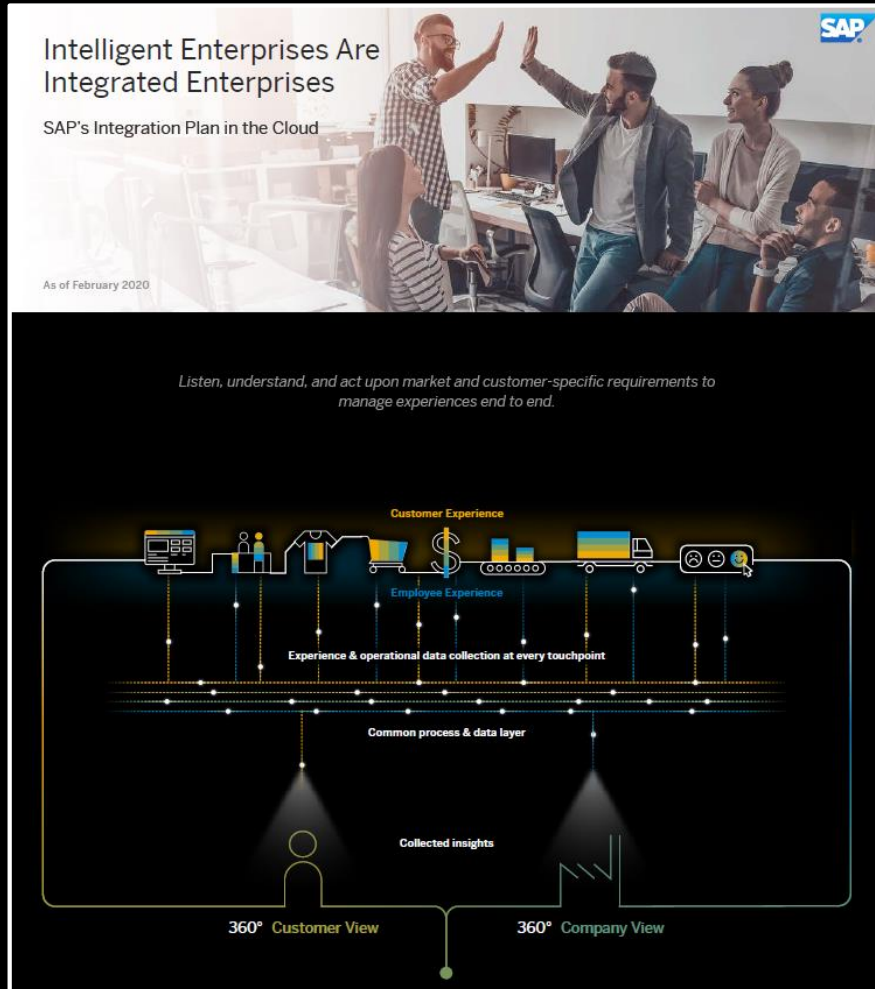
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# SAP Integration Strategy for the Intelligent Enterprise

## SAP's Integration Plan in the Cloud



- 1 | Big Picture for the Integrated Intelligent Suite
- 2 | End-to-End Business Process Integration along Suite Qualities
- 3 | Business Technology Platform incl. SAP Cloud Platform Integrate Suite
- 4 | Roadmaps for End-to-End Business Processes

[Integration  
Strategy Paper](#)

[Blog Christian Klein,  
CEO SAP SE](#)

# SAP Integration Strategy for the Intelligent Enterprise

## Key Integration Principles

1

### OUT-OF-THE-BOX INTEGRATION



#### SAP to SAP

Integrated mission-critical  
business processes

2

### OPEN INTEGRATION



#### SAP to Non-SAP

APIs and 160+ connectors for  
third parties & extensions

3

### AI-DRIVEN INTEGRATION

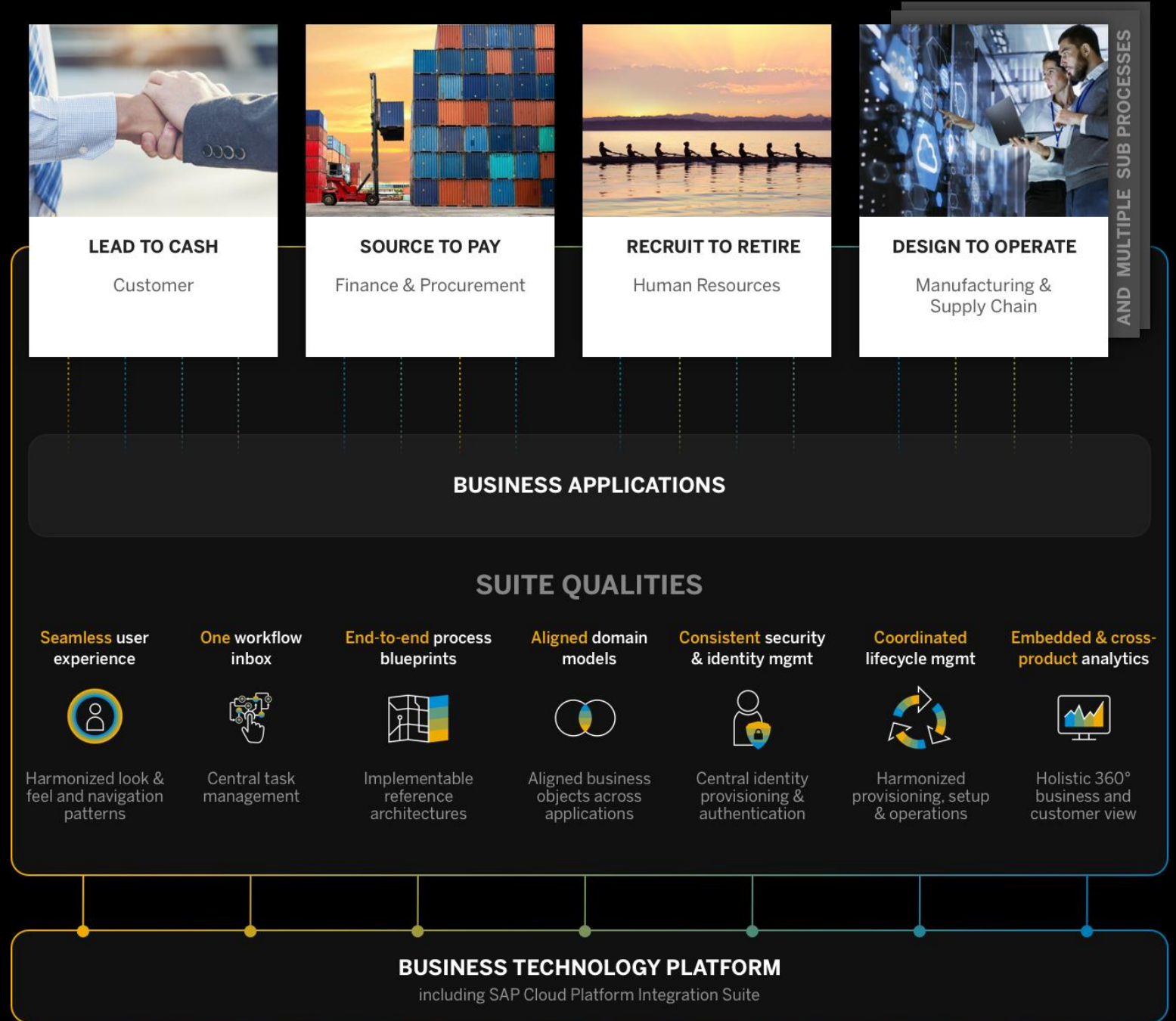


#### Artificial Intelligence

Simplified integration  
development

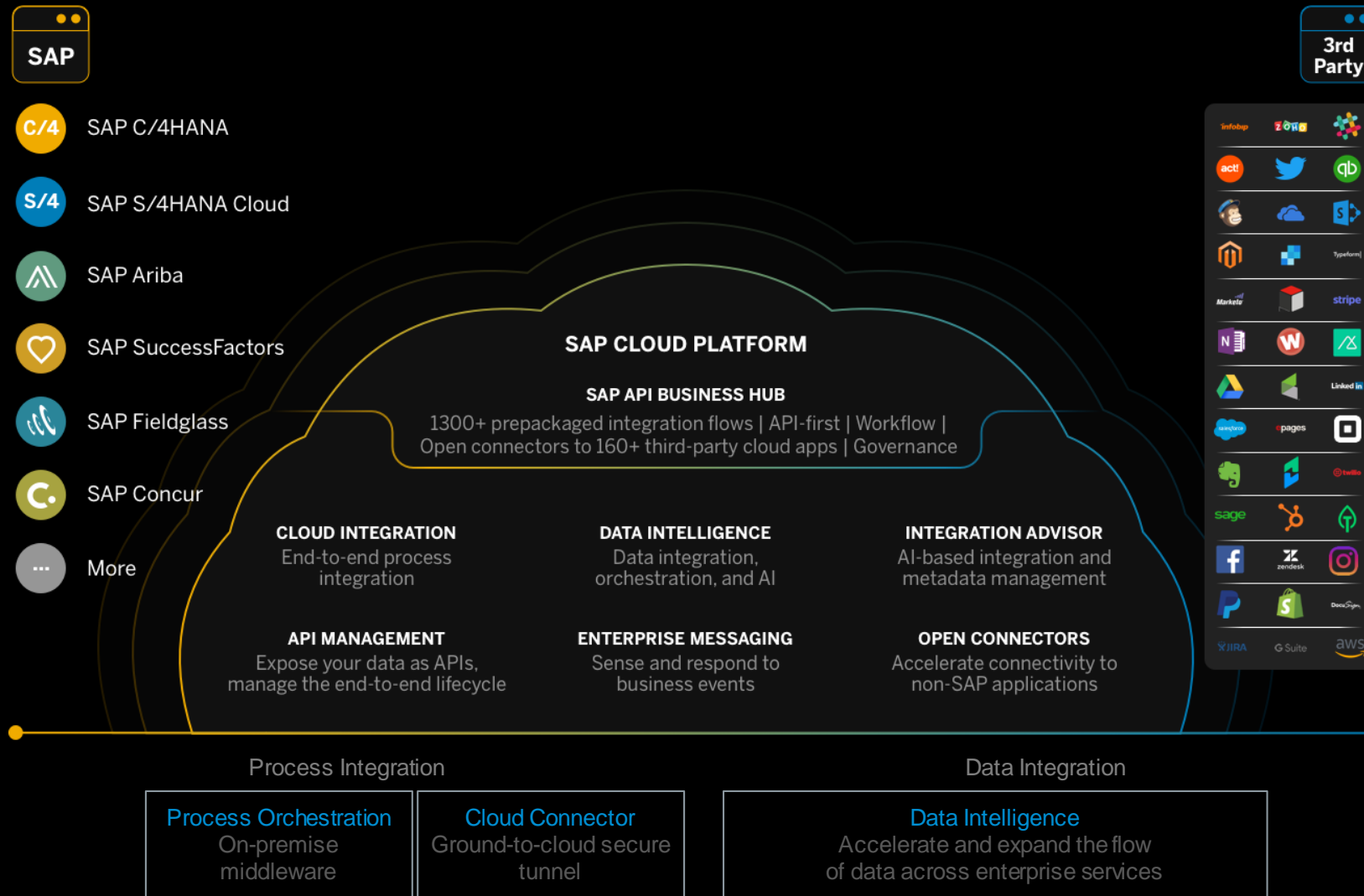
# SAP's Integrated Intelligent Suite

Suite Qualities facilitate seamless business process integration across SAP's portfolio and third party applications



# SAP Cloud Platform Integration Suite

Leverage Pre-Packaged Integration Flows and Openness to Third Party Application





# Agenda

SAP Integration Strategy in context of the Intelligent Enterprise

## **Current Integration Situation**

Integration Advisor at a Glance

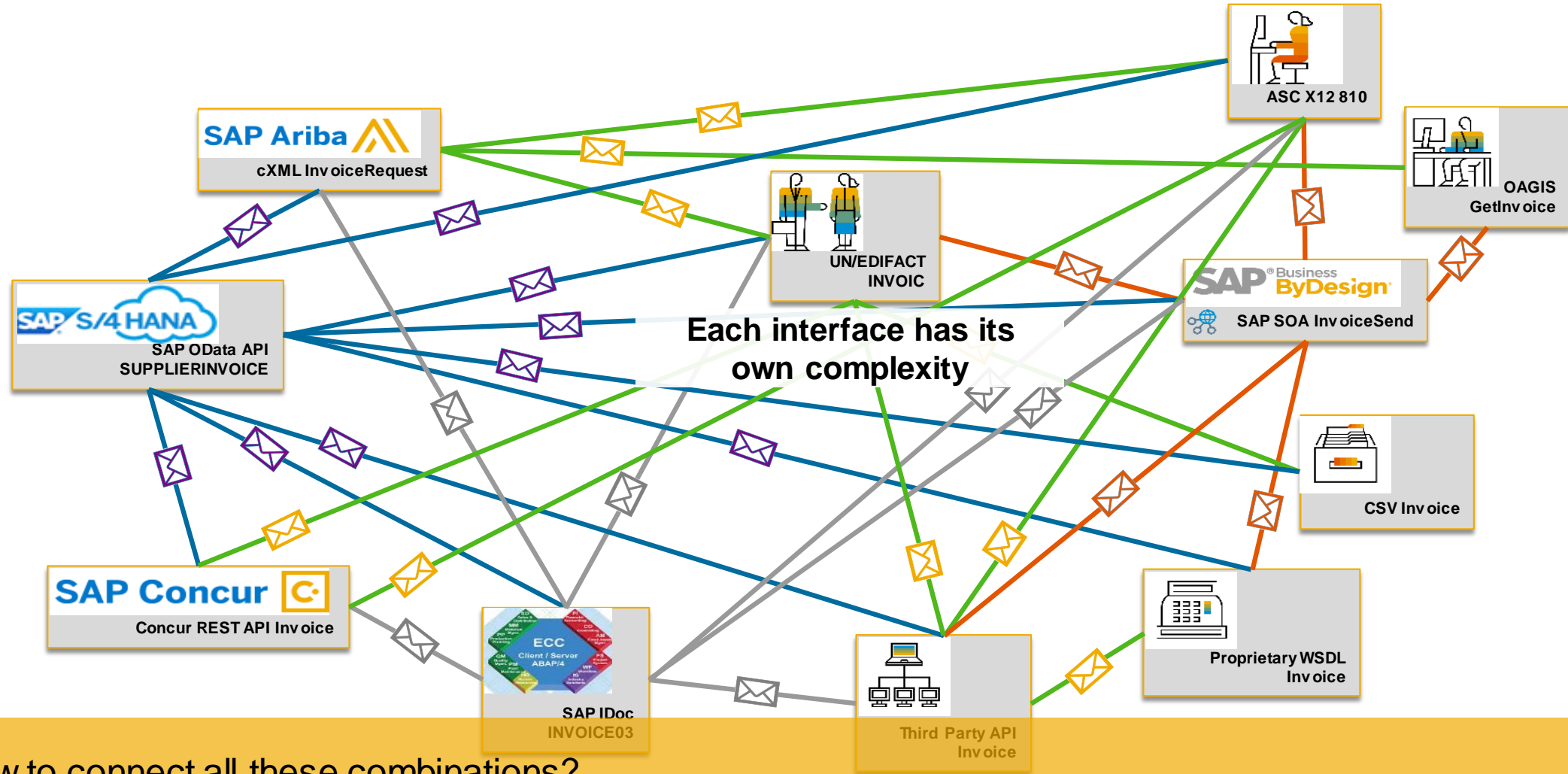
Demo

Further Information

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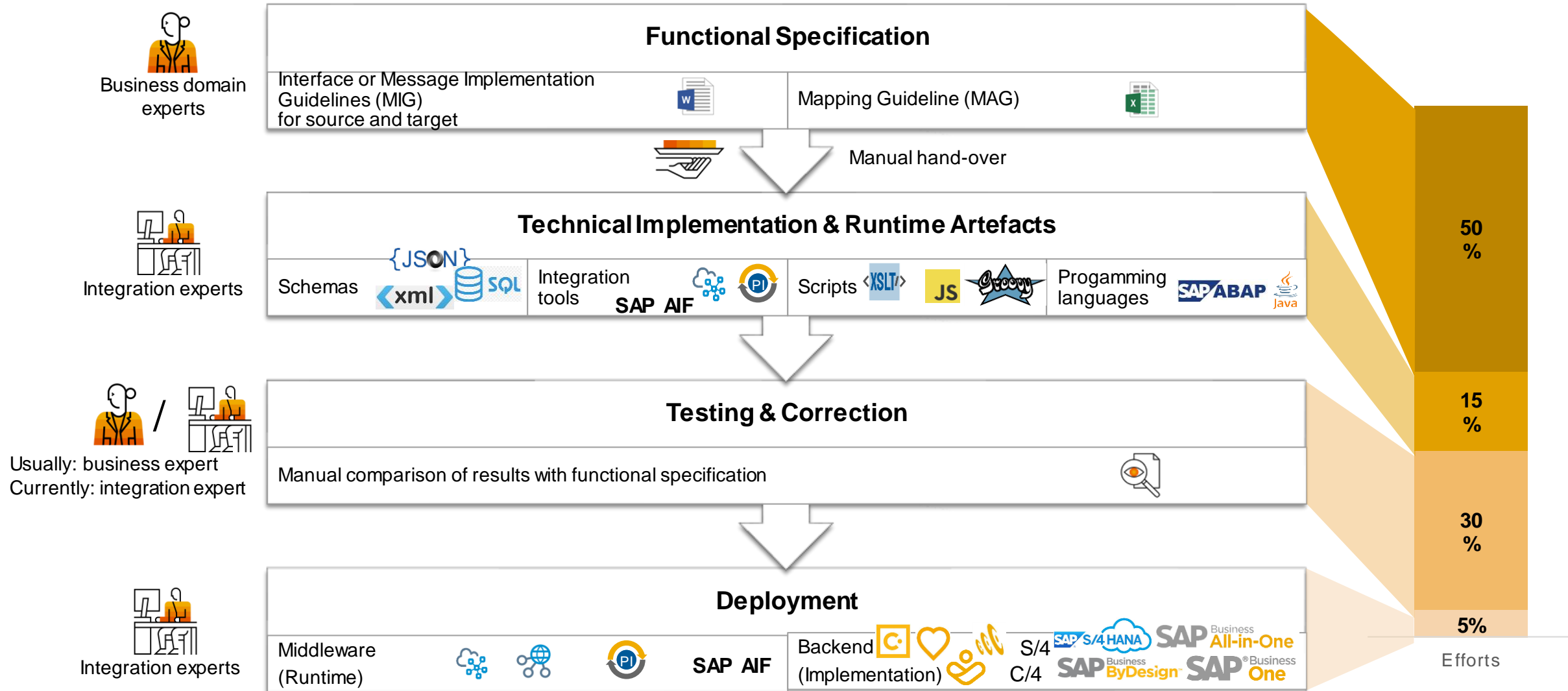


# Reality: Integrate APIs/interfaces in heterogeneous landscapes



How to connect all these combinations?

# Current Situation: Design Time – Manual and Redundant Work



# Examples of Guidelines

## 5. Invoice Specifics

### 5.1. Ariba SN Invoice Validation

The Ariba SN will reject invoice

- Invoice files that do not contain cXML data elements
- Invoices greater than 3,000 line items
- Invoices that fail to validate

In addition to the above network, the Ariba SN to Reject invoice go to Failed state:

- Invoices against PO's
- Invoices with a change
- Invoices with a change
- Invoices with an increase
- Invoices with an increase
- Invoices with additional
- Invoices with a change
- Invoices where the Supplier is missing
- Invoice missing line item
- Invoices backdated greater than 30 days
- Invoices with summary
- Invoices missing tax in
- Invoice missing bill-to
- Invoice missing sold-to
- Invoice missing from
- Invoice missing remittance
- Invoice missing ship from
- Invoices with a change
- Invoices with a change

### Blanket PO Rules

In addition to the above network, the Ariba SN to Reject invoice which will cause the invoice to be rejected:

- Invoices with a change
- Invoices with a change
- Invoices with an increase
- Invoices missing line item
- Invoices with a change

### Additional Validation Rules

- Allow case sensitive in required rules is not
- Enforce strict addressing must be present

Example:  
<InvoicePartner>

```
<Contact role="billTo">
  <Name xml:lang="en">
    <PostalAddress>
      <Street>1314 Ches
      <City>Sunnyvale</
      <State>CA</State>
      <PostalCode>9408
      <Country isoCount
    </Contact>
  </InvoicePartner>
```

In addition to the above, Ryder will only accept original invoice Failed invoice validation

Ryder allows for omission of payment

### 5.2. Ryder Specific Validation

Ryder invoices defined:

- Invoice against an existing purchase order (Invoice)
- Invoice against order or contract as a Non-PO Invoice)
- Invoice against contract that is required for Non-PO Invoice

Ryder supported invoice types:

- Invoices Detail Invoice
- Invoices line items may be added
- Invoices Invoice - appropriate
- Invoices Against Blanket
- Invoices Detail Request Header
- Invoices Ariba SN will default all as (cXML 1.2.018 and higher)
- Credit Memo - Supplier submitted to Ryder
- Debit Memo - Supplier submitted to Ryder

Non-supported invoice types:

- Paper Invoice - Ryder rejects
- Invoices for Purchasing
- Information Only Invoice
- Duplicate Invoices - Invoice failed validation
- Header Invoice - a single consolidated invoices
- Non-PO - invoice against
- Cancel - Ryder does support

EDI COMPETENCE CENTER  
INVOIC\_D96A.doc

## 4 SEGMENTS DESCRIPTION

### Invoice Heading Section

#### UNH - M 1 - MESSAGE HEADER

This segment is used to head, identify and specify a message

#### BGM - M 1 - Beginning of message

This segment is used to indicate the type and function of the message.

#### DTM - M 1 - Date/time/period

This segment is used to specify the date of the invoice.

#### FTX - M 2 - Free text

This segment is used to provide free form or coded text to complete invoice message.

#### SG2 - M 3 - NAD-FIL-SG3

A group of segments identifying names, addresses and Delivery Schedule.

#### NAD - M 1 - Name and address

This segment is used to identify the trading parties. Identification of the buyer and supplier of goods and services. Additionally, the issuer of the invoice and the invoice number buying and supplying parties. The consignee or delivery different to the buyers address.

#### FIL - C 1 - Financial Institution Information

A segment identifying the financial institution and relevant buyer and where necessary other parties.

#### SG3 - M 1 - RFF-DTM

A segment group for giving references only relevant to whole invoice.

#### RFF - M 1 - Reference

This segment is used to identify additional reference Schedule.

#### SG7 - M 1 CUX-DTM

A group of segments specifying the currencies and related invoice. Currency data maybe omitted in national and international transactions.

#### CUX - M 1 - Currency

This segment is used to specify currency information for

#### SG8 - M 1 PAT-DTM

A group of segments specifying the terms of payment applicable

Order Response / Acknowledgement with line item and schedule																
EDIFACT Message: ORDERS01, in																
IDoc Type: ORDERS01, out																
Inst #	Segment name	Field name	Value as example	Code	Inst #	Group	Segment tag	Composite	Data element	Value as example	Inst #	Group	Segment name	Field name	Value as example	Code
7	E2EDK14	QUALF	1000	016	2	002	DTM	C507	2005	19980629	2	002	DTM	C507	2380	002
8	E2EDK03	IDAT	19980629	002	2	002	DTM	C507	2379	102	3	002	DTM	C507	2380	012
9	E2EDK03	IDAT	19980618	012	3	002	DTM	C507	2005	19980618	3	002	DTM	C507	2380	012
10	E2EDK03	IDAT	19980618	025	3	002	DTM	C507	2379	102	3	002	DTM	C507	2380	012
11	E2EDK04	MWSKZ	0.000	AO	7	002	NAD	C082	3035	SE	4	E2EDKA1002	PARVW	PARTN	IDOC-LI-01	LF
12	E2EDKA1002	PARVW	IDOC-KU-01	AG	8	002	NAD	C082	3039	BY	5	E2EDKA1002	PARVW	PARTN	IDOC-KU-01	AG
		NAME1	Kaufstolz		8	002	NAD	C058	3124	Kaufstolz			NAME1	Kaufstolz		
		NAME2	Einkaufsgesellschaft mbH		8	002	NAD	C058	3124	Einkaufsgesellschaft mbH			NAME2	Einkaufsgesellschaft mbH		
		ORT01	Walldorf		8	002	NAD	C058	3164	Walldorf			ORT01	Walldorf		
		PSTLZ	69185		8	002	NAD	C058	3251	69185			PSTLZ	69185		
		LAND1	DE		8	002	NAD	C058	3207	DE			LAND1	DE		
		TELFI	069/5511		9	005	CTA	C076	3139	PD			TELFI	069/5511		
		SPRAS	D		10	005	COM	C076	3148	06221-12345						
		ANRED	Firma		10	005	COM	C076	3155	TE						
		HAUSN	000000													
		REGIO	06		9	005	CTA	C056	3412	Dietl.B.			BNAME	Dietl.B.		
		BNAME	Dietl.B.													
		SPRAS_ISO	DE													
13	E2EDKA1002	PARVW	IDOC-KU-01	RE	11	002	NAD	C082	3035	AA	6	E2EDKA1002	PARVW	PARTN	IDOC-KU-01	RE
		NAME1	Kaufstolz		11	002	NAD	C058	3039	IDOC-KU-01			NAME1	Kaufstolz		
		NAME2	Einkaufsgesellschaft mbH		11	002	NAD	C058	3124	Kaufstolz			NAME2	Einkaufsgesellschaft mbH		
		ORT01	Walldorf		11	002	NAD	C058	3164	Walldorf			ORT01	Walldorf		
		PSTLZ	69185		11	002	NAD	C058	3251	69185			PSTLZ	69185		
		LAND1	DE		11	002	NAD	C058	3207	DE			LAND1	DE		
14	E2EDKA1002	PARVW	IDOC-KU-01	RG	12	002	NAD	C082	3035	FT	7	E2EDKA1002	PARVW	PARTN	IDOC-KU-01	RG
		NAME1	Kaufstolz		12	002	NAD	C058	3039	IDOC-KU-01			NAME1	Kaufstolz		
		NAME2	Einkaufsgesellschaft mbH		12	002	NAD	C058	3124	Kaufstolz			NAME2	Einkaufsgesellschaft mbH		
		ORT01	Walldorf		12	002	NAD	C058	3164	Walldorf			ORT01	Walldorf		
		PSTLZ	69185		12	002	NAD	C058	3251	69185			PSTLZ	69185		
		LAND1	DE		12	002	NAD	C058	3207	DE			LAND1	DE		
15	E2EDKA1002	PARVW	IDOC-KU-01	WE	13	002	NAD	C082	3035	CN	8	E2EDKA1002	PARVW	PARTN	IDOC-KU-01	WE
		NAME1	Kaufstolz		13	002	NAD	C058	3039	IDOC-KU-01			NAME1	Kaufstolz		
		NAME2	Einkaufsgesellschaft mbH		13	002	NAD	C058	3124	Kaufstolz			NAME2	Einkaufsgesellschaft mbH		
		ORT01	Walldorf		13	002	NAD	C058	3164	Walldorf			ORT01	Walldorf		
		PSTLZ	69185		13	002	NAD	C058	3251	69185			PSTLZ	69185		
		LAND1	DE		13	002	NAD	C058	3207	DE			LAND1	DE		
		SPRAS	D													
		ANRED	Firma													
		HAUSN	000000													
		REGIO	06													
		SPRAS_ISO	DE													
16	E2EDKA1002	PARVW	IDOC-KU-01	WE	13	002	NAD	C082	3035	CN	8	E2EDKA1002	PARVW	PARTN	IDOC-KU-01	WE
		NAME1	Kaufstolz		13	002	NAD	C058	3039	IDOC-KU-01			NAME1	Kaufstolz		
		NAME2	Einkaufsgesellschaft mbH		13	002	NAD	C058	3124	Kaufstolz			NAME2	Einkaufsgesellschaft mbH		
		ORT01	Walldorf		13	002	NAD	C058	3164	Walldorf			ORT01	Walldorf		
		PSTLZ	69185		13	002	NAD	C058	3251	69185			PSTLZ	69185		
		LAND1	DE		13	002	NAD	C058	3207	DE			LAND1	DE		
		SPRAS	D													
		ANRED	Firma													
		HAUSN	000000													
		REGIO	06													
		SPRAS_ISO	DE													
Mapping ORDERS 93.2 EDIFACT ORDERS 93.2 Qualifiers Mapping ORDERS 93.2																

## Technical Implementation: Message Mapping

The image is a composite of four panels illustrating the process of creating a Groovy script for SAP Cloud Platform Integration (CPI).

- Top Left Panel:** Shows the SAP Cloud Platform Integration interface. It displays a table of invoice items with columns like 'Suchen', 'Structure', and 'Occure...'. A tree view on the right shows the data structure, including 'ns2 InvoiceReques', 'MessageHeader', 'Invoice', 'SupplierInvoic', 'SupplierInvoic', 'DocumentDa', 'GrossAmount', 'Party', 'GlobalLoca', 'BuyerParty', 'SupplierPa', 'Address', 'FormOf', 'Address', and 'Address'.
- Top Right Panel:** Shows a Groovy script in the 'TransportationOrder to IFTMIN XML' editor. The script defines functions for mapping invoice items and references. Key functions include:
  - `def Map<String, List<ItemInfo>> prepareShipToLocationItemAssignment(def items) {`
  - `def List<String> getChildItemIds(def itemId, def items) {`
  - `def List<ReferenceSegment> prepareReferenceSegments(def references, List<ReferenceSegment> references) {`
- Bottom Left Panel:** Shows a graphical mapping expression diagram. It includes nodes like 'PARVV', 'RS', 'PARTN', 'equals(str,...)', 'ifWithoutIEI', and 'mapWithDefa...'. Arrows indicate the flow of data between these nodes.
- Bottom Right Panel:** Shows a snippet of the resulting XSLT code generated from the mapping expression. The code includes elements like:
  - `<OrderID>`
  - `<OrderDate>`
  - `<DocumentLanguage>`
  - `<OrderType>`
  - `<RequestType>`

The image is watermarked with 'Graphical, Technical Mapping' and 'Transformation Scripts (Groovy, XSLT)'.

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# Agenda

SAP Integration Strategy in context of the Intelligent Enterprise

Current Integration Situation

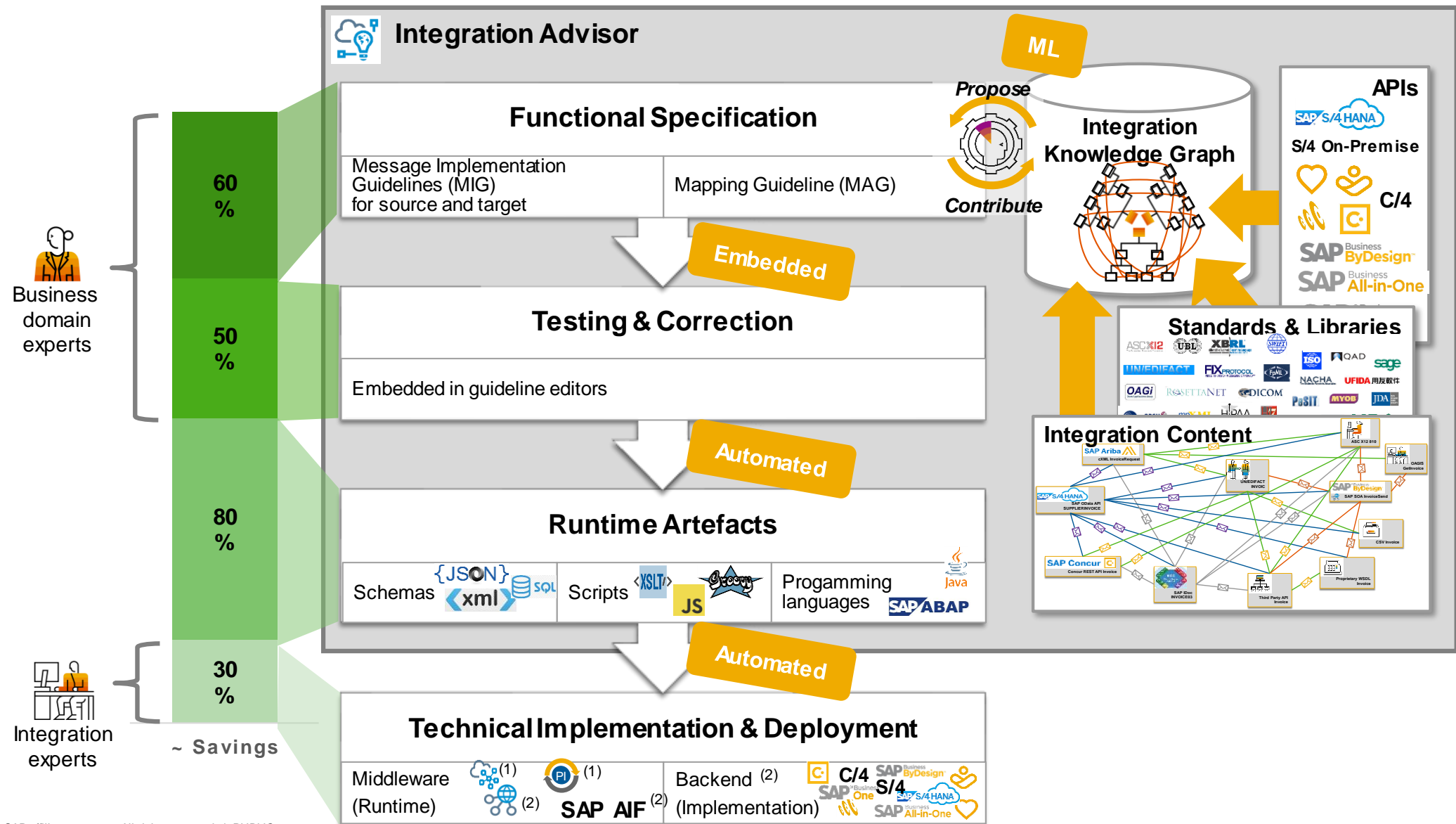
**Integration Advisor at a Glance**

Demo

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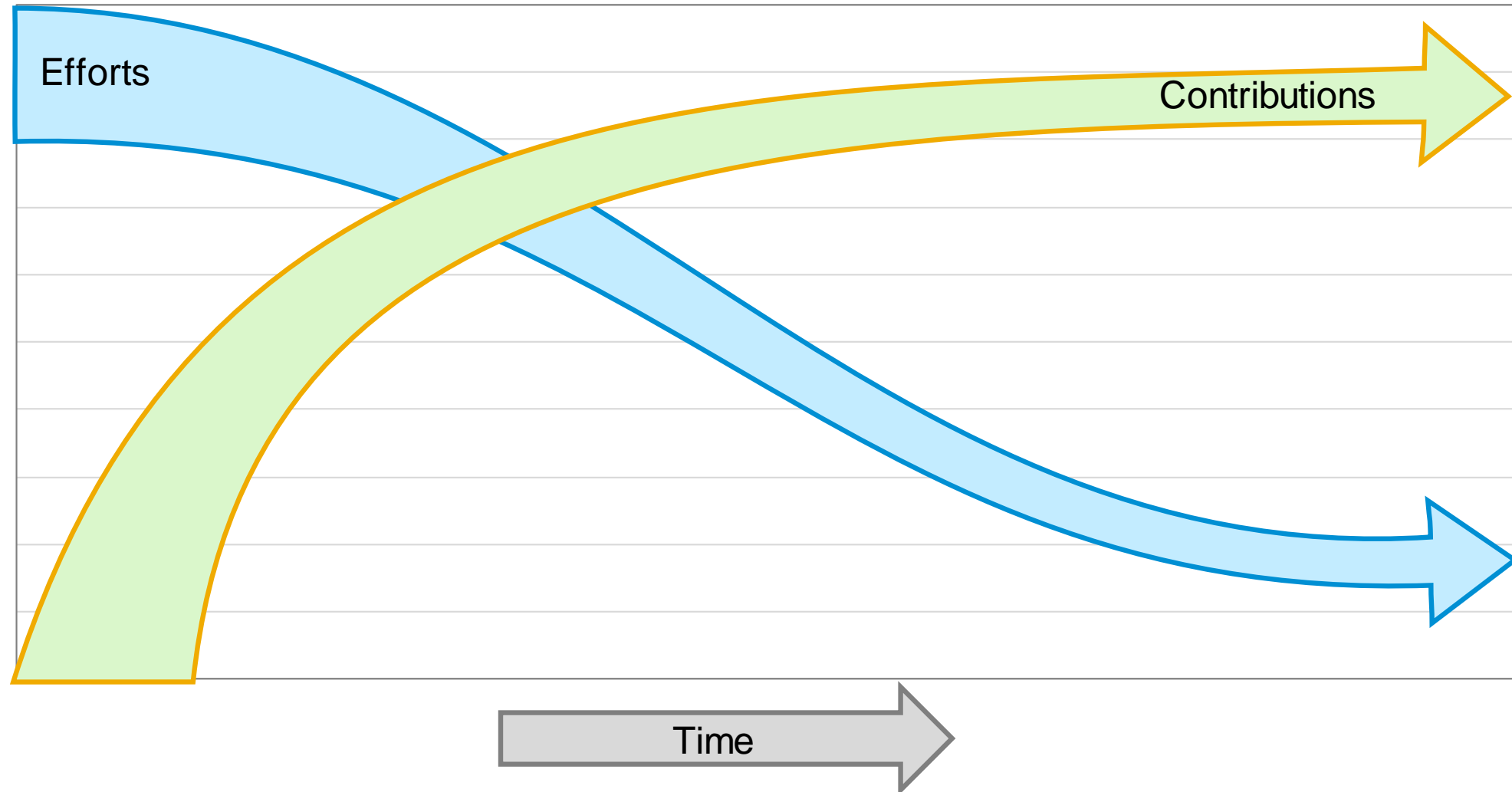
Questions & Answers

# The Integration Advisor Approach





# Collaborative Learning and Automation





# SAP Cloud Platform Integration Advisor at a Glance

## One stop shop

- One tool for all phases of A2A/B2B/B2G integration projects

## Wikipedia like

- All necessary information on single place

## Proposal service

- Machine learning using crowd sourced learnings

## Business oriented

- Addresses business domain experts

## Community collaboration

- Common working on integration content

## Agnostic

- Independent of runtime and platform technologies

## Automatic generation and deployment

- Documentation and runtime artifacts

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# Benefits

Provides benefits to the user in all phases of integration projects

- Focus on guidelines, and specifications + automatic generation of runtime artefacts
- Proposal service, use and start with what is proposed
- Central management system – documentation in one place

This facilitates

- Lower cost for implementation
- Higher flexibility
- Higher consistency
- Better transparency
- Reduce redundant work and capabilities



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SAP Integration Strategy in context of the Intelligent Enterprise

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Integration Advisor at a Glance

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# Further Information

Integration Advisor is generally available

- Available with SAP Cloud Integration Suite Enterprise Edition or as SAP CPEA license in combination with other Cloud Integration Suite license

Target audience are the business domain experts who are responsible for guidelines/specifications

- In specific (integration) departments, partners or SAP Intelligent Delivery Group

SAP Intelligent Delivery Group plans a fixed price service using Integration Advisor

Customers like Endress & Hauser already using Integration Advisor for all their B2B scenarios



# Interest?

Workshops, PoCs, ramp-up trainings, licenses, further questions or projects, contact:

- Marco Ertel (PM Cloud Integration Suite) – [marco.ertel@sap.com](mailto:marco.ertel@sap.com)
- Jürgen Tötschinger (Integration Advisor Evangelist) for PoCs and workshops – [juergen.toetschinger@sap.com](mailto:juergen.toetschinger@sap.com)
- Michelle Luft (Integration Advsiior Evangelist) for trainings - [michelle.luft@sap.com](mailto:michelle.luft@sap.com)
- Kevin Elbers (Business Development Manager) for partners and integration delivery services at SAP – [kevin.elbers@sap.com](mailto:kevin.elbers@sap.com)
- Gunther Stuhec (Integration Advisor Chief Architect) – [gunther.Stuhec@sap.com](mailto:gunther.Stuhec@sap.com)

Further information:

- Blogs: <https://blogs.sap.com/2019/03/12/integration-content-advisor-overview-of-components-and-further-reading/>
- SAP Cloud Platform Integration Suite: <https://www.sap.com/products/cloud-platform/capabilities/integration.html>

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# Thank you.

Contact information:

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