Disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP’s intentional or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.
Agenda

Integration Suite capabilities

Current situation in integration projects

Improve it with the Integration Advisor

Recent Innovations

Demo

Value Proposition and Roadmap

Time for hands-on exercise
SAP Cloud Platform Integration Suite
A modular iPaaS to connect the Intelligent Enterprise

**Cloud Integration**
Seamlessly integrate anything, anywhere (A2A/B2B) in real time.

**API Management**
Expose your data and processes as APIs. Manage E2E life cycle.

**Integration Advisor**
Accelerate implementation and maintenance of B2B scenarios using machine learning.

**API Business Hub**
Jump start integration projects with APIs, packaged integration content and adapters.

**Data Intelligence**
Deliver data-driven innovation, unifying enterprise AI and intelligent information management.

**Open Connectors**
Accelerate connectivity to 3rd party applications.

**Connectivity**
Securely access remote services that run on-premise.

**Enterprise Messaging**
Decouple communication and send messages & events.
Current situation in integration projects
Reality: Integrate APIs/interfaces in heterogeneous landscapes

Each interface has its own complexity
Flow of invoices in Intelligent Enterprise process “Procure-to-Pay”

* Every business partner has their own customized message interface, usually based on different B2B standards
Processes between applications via middleware
SAP Cloud Platform Integration

One integration flow per combination and variation
▪ Combination = between two different applications
▪ Variations = per message type and per different requirements in given business context
▪ Business context = considering aspects in different industries, countries, products, roles, etc.

Integration flows per combination

Meaning?
Need individual mappings, rules and scripts
Technical mapping in current middleware solutions

Meaning?

Why not mapped?

Complex function, because of different representation of semantics

Why mapped?

Why not mapped?
Typical end-to-end flow for building integration content

Current tools

- Business requirements
- Message implementation guideline
- Mapping guidelines
- Technical implementation
- Testing and correction
- Deployment

Efforts

- Business domain experts
- Integration experts
- Business requirements
- Message implementation guideline
- Mapping guidelines
- Technical implementation
- Testing and correction
- Deployment

Current tools

- SAP AIF
- SAP Process Orchestration

Media breaks

- no loop back
Tools for end-to-end flow steps
Most middleware systems just focus on technical implementations and deployment
Available information of type systems

- Available on different locations/systems
- Different media types (pdf, html, doc, …)
- Different level of detail
- Several documents for complete understanding necessary
- Available in non-/semi-structured formats
- Some type systems have fees
- Message structures too complex (< 4 billion different semantic expressions)
Message implementation guideline (MIG)

Required for implementation of a “standard” message interface based on a message definition of a type system specifying

- Scope, context and usage instructions
  - Relevant required and optional elements
  - Properties per element
  - Unambiguous business meaning per element
  - Required code lists and code values
  - Dependencies and conditions across elements
  - Constraints, validation rules and boundary conditions

Anonymized examples
Mapping guidelines (MAGs)

Mapping between source and target message interface

- Which elements have to be mapped in order to fulfill same business meaning and requirements?
- Which elements have to be additionally involved to convey the requirements completely?
- Are there any format or processing instructions such as splitting, assembling of values, or changing the format?
- How the code values have to be mapped?
- Are there any instructions for restructuring element groups?
Every standard interface must be customized

Example
An IDoc purchase order has
- 720 data elements
- 60 code lists with 4,000–5,000 code values
- <5% of these data elements, code lists, and code values are required per implementation
- But which one?

Customization means answering a lot of further questions, such as:

- Which elements are required?
- What is the exact meaning?
- What are the constraints and conditions of this element?
- Are the occurrences correct? Is this element mandatory?

Typical view of an IDoc interface

Influencing factors
- Industries
- Products and services
- Countries and laws
Improve it with the Integration Advisor
SAP Cloud Platform Integration Advisor
Main components

Library of Type Systems
library of predefined/standardized reusable data types

Message Implementation Guideline (MIGs)
functional specification describing the (source or target) structure of the customized interface

Mapping Guidelines (MAGs)
Specification of a mapping between a source and target MIG

Runtime Artifacts
Deployable scripts and schemas
A type system has a library of predefined/standardized reusable data types that follow a common syntax and methodology for modeling, naming and structuring.

A type system could be a B2B or A2A library based on a specific syntax representation such as XML or JSON.

Typical organizations are standardization bodies such as ISO, United Nations, ASC, etc. or software vendors like SAP SE.
SAP Cloud Platform Integration Advisor

Content of a Type System

The library of type systems shows a collection of available B2B or A2A type systems in a central place, including all the necessary information for creating and maintaining your customized interfaces.

For each type system, you will find the following components:

- Versions
- Messages
- Complex Types
- Simple Types
- Codelists
SAP Cloud Platform Integration Advisor

easily create your Message Implementation Guideline (MIG)

1. Select the required type system
2. Select the required version
3. Select the required message type
   Or alternatively import a customized structure (xsd Format)
4. Upload a Payload (optional)
5. Provide general information, choose the direction & set the business context
A Mapping Guideline (MAG) is used to create a complete mapping at the semantic level that covers the aspects, constraints, and parameters from the source and target Message Implementation Guidelines (MIG).

These can be used for internal purpose or can be shared with trading partners as proposal or a reference guideline.
SAP Cloud Platform Integration Advisor
How does all the pieces work together

Crowdsourcing capabilities for business oriented interfaces and mappings

- **Machine learning** approach that helps you to get out-of-the-box proposals ready to start your integration projects without the need for deep domain knowledge and reduces your efforts by 60% or more

- Central integration knowledge base for integration wherein all crowdsource based learnings from interface customizations and mappings are stored - with international and SAP standards

- **Automatic generation** of documentation and runtime artifacts

- **Community collaboration** for creating and maintaining tailored integration interfaces and mappings

This functionality is unique in the market and protected by various patents held by SAP
SAP Cloud Platform Integration Advisor
simplify projects by using the Trading Partner Management

One integration flow for many receivers
- One connection from the sender system
- Mapping, validation coming from the partner directory
Tight connection to SAP’s integration and orchestration portfolio

Integration Advisor

Central and intelligent content management system for creating and maintaining integration content, for

SAP Cloud Platform Integration
- Gets content via automatic push service
- Stores content in Partner Directory
- Enables dynamic invocation of content by integration flows

SAP Process Orchestration
- Supports IA’s integration content
- In hybrid runtime environment starting with version 7.5
- In JAVA based runtime starting with version 7.3

SAP API Business Hub
- Embedded IA editing capabilities
- Enables direct customization/extensions of provided APIs

SAP Application Interface Framework
- Gets validation rules, constraints, code value mappings and data conversion rules
- Pushes updates to IA

1.) This is the current state of planning and may be changed by SAP at any time without notice.
Recent Innovations
SAP Cloud Platform Integration Advisor

shared functions

- Mapping functions are often used in the same way
- Increases reuse
- Reuse inside the MAG later inside the tenant
- built-in date/time conversion
SAP Cloud Platform Integration Advisor

MIG comparison

- Compare MIGs to identify similarities and differences
- Can compare 2 to n MIGs
- Can compare different versions of the same MIG but also different MIGs
SAP Cloud Platform Integration Advisor
exchange MIG version in MAG

- As MIGs can exist in different versions it is now possible to exchange the used version in the MAG.
SAP Cloud Platform Integration Advisor

code value mapping

- Code value mappings are often used in the same way
- Increases reuse
- Makes changes to a value mapping easier
SAP Cloud Platform Integration Advisor

Custom Messages

- Define messages outside a typesystem
- Use IA for every message
Value Proposition and Roadmap
SAP Cloud Platform Integration Advisor

Value proposition

Intelligent tool acting as an accelerator for implementation and enhancements of integration scenarios
- Content management system with complete application-to-application, business-to-business library content
- Embedded proposal service based on continuous deep learning
- Documentation and runtime artifact generation
- Embedded simulation service
- Content governance features
- Accelerated interface enhancements for intelligent enterprise

Reduces integration scenario implementation time and effort by 60% or greater

This functionality is unique in the market and protected by approximately 50 patents held by SAP.
Join the new era of integration content building

The aim is to commoditize the integration content knowledge
▪ Crowdsourced machine learning
▪ Collaborative understanding

This facilitates
▪ Higher flexibility
▪ Lower cost for implementation
▪ Better transparency

For definition, review, and deploy of interfaces and mappings in end-to-end integration scenarios

Don’t miss the chance to switch the speed of your integration projects

From: Integration Advisor = To:
SAP Cloud Platform Integration Advisor
Product road map overview

https://roadmaps.sap.com/board?q=integration%20advisor&range=CURRENT-LAST#Q3%202020

Customer Influence and Adoption

Thank you.

Contact information:

**Marco Ertel**  
Product Manager SAP Cloud Platform Integration Suite  
marco.ertel@sap.com