

IFG for Integration – SAP Application Interface Framework Status Update & Roadmap

Alexander Bundschuh, Product Management
June 2019

PUBLIC

Legal disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. 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 document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation 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 document is not a commitment, promise or legal obligation to deliver any material, code or functionality. This document 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 document is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP's willful misconduct or gross negligence.

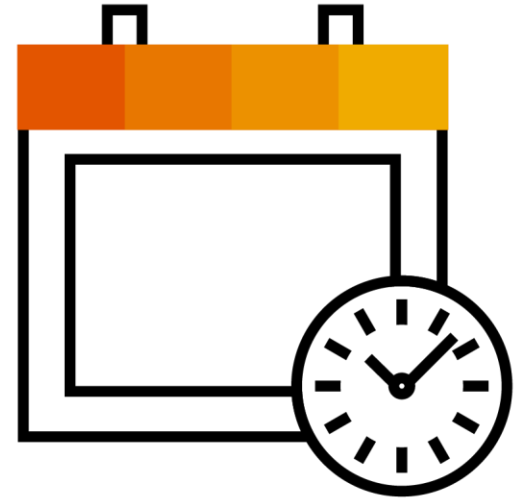
All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied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

Agenda

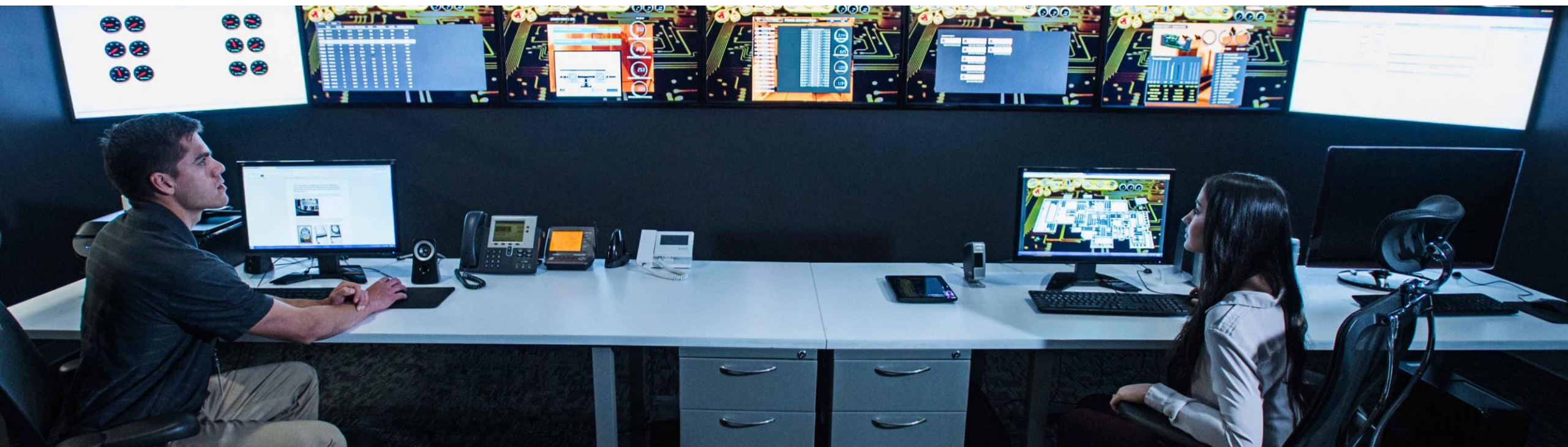
Overview – SAP Application Interface Framework

Recent innovations

Roadmap



AIF at a glance



SAP Application Interface Framework

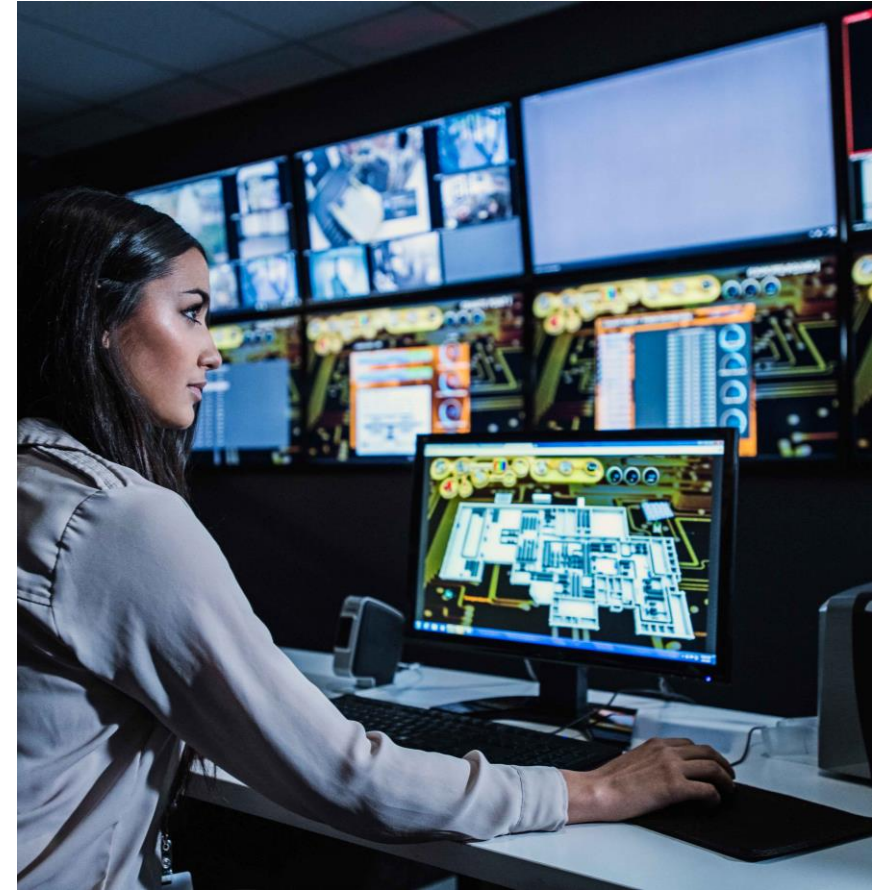
Value Proposition

Reduce time & cost for error handling

- Less IT workforce through empowered business users
- Role-based access, automated alerts, easy error handling

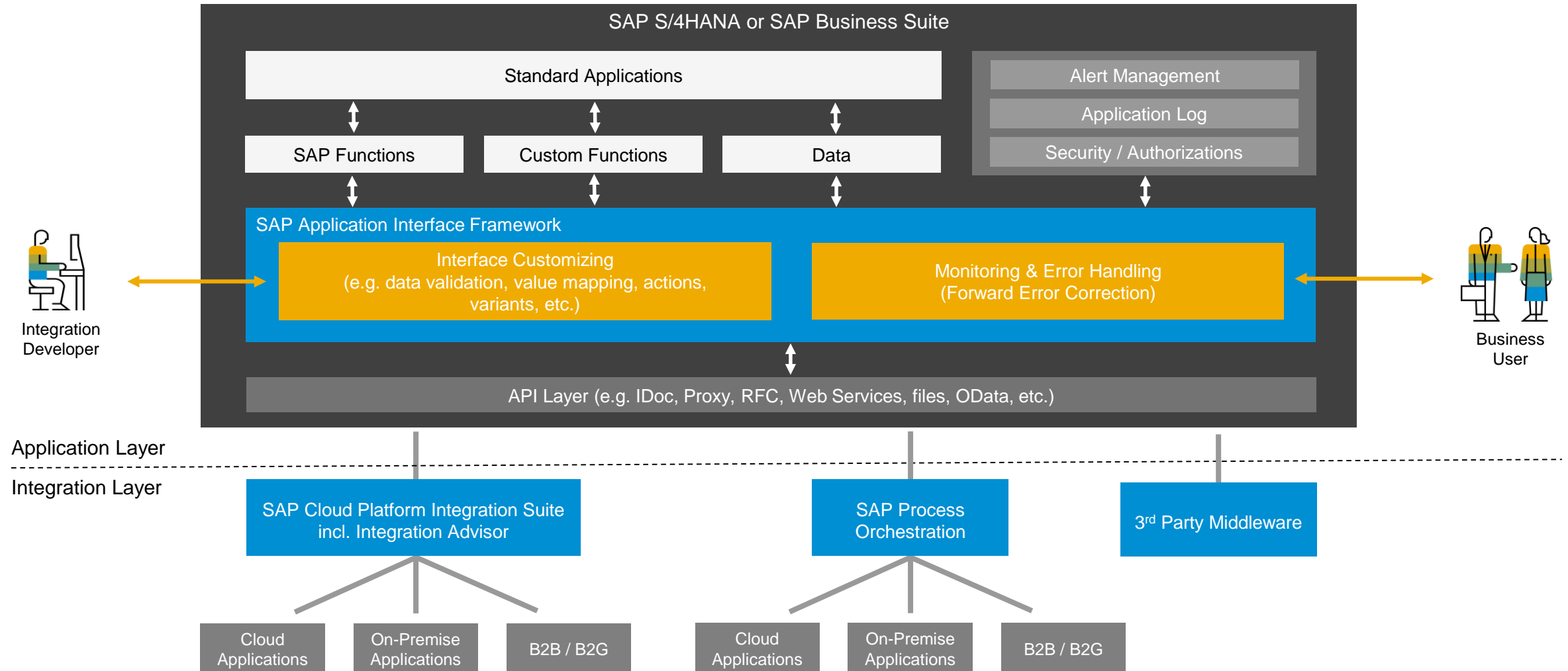
Ensured **governance** across your system landscape

- Application interface logic manageable in a structured way
- Fast implementation
 - well defined guidelines, reuse of components
- Role-based authorizations
 - controlled access, sensitive fields hidden

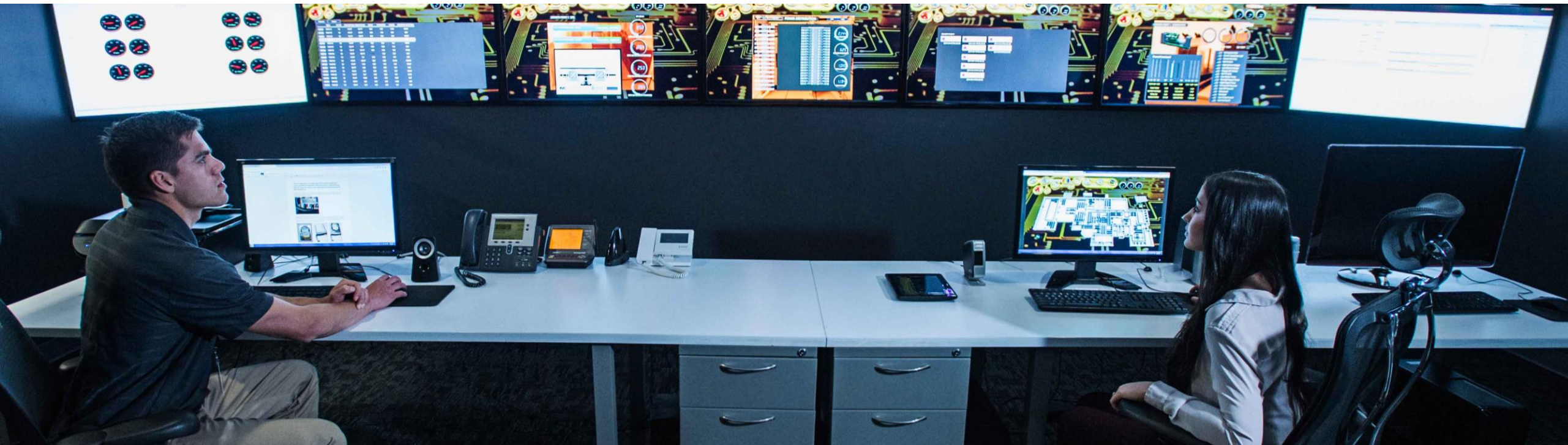


SAP Application Interface Framework

The big picture



Recent innovations



Recap: Enhanced Data Protection and Privacy capabilities at a glance

Shipped with AIF add-on 4.0

Master Guide Enhanced

- New chapter Data Protection and Privacy provides you with an overview of the personal data in SAP Application Interface Framework and with details about how to protect these data.
- See Master guide at help.sap.com

External Contact Enhanced

- New autonomous object replacing the external address of a recipient.
- Enables you to independently manage external contacts and to protect their personal data in the best possible way.

Read Access Log (New)

- Read access logging for the content of data messages and uploaded files.
- Enables you to answer questions about who accessed particular data within a specified time frame.

Change Log Enhanced

- Change logging for the content of data messages, value mappings, and external contacts.
- Enables you to check when a change was made, which employee made which change, the previous value, and the current value.

Data Archiving Enhanced

- New archiving objects and archiving programs for data messages, file adapter, and all related data.
- Enables you to use SAP Information Lifecycle Management (SAP ILM) for a more sophisticated and automated information lifecycle.

Blocking and Deletion (New)

- New SAP ILM objects for data messages, value mappings, and external contacts.
- Enables you to manage the blocking and deletion of personal data according to your legal obligations.

Recent innovations at a glance

Protocol support

- RFC enabled
- Basic OData enablement to display errors for error monitoring

Web Dynpro message dashboard enhancements

- Users enabled to download message content in the message dashboard
- Better payload view for the message monitor
- Forward navigation to another application

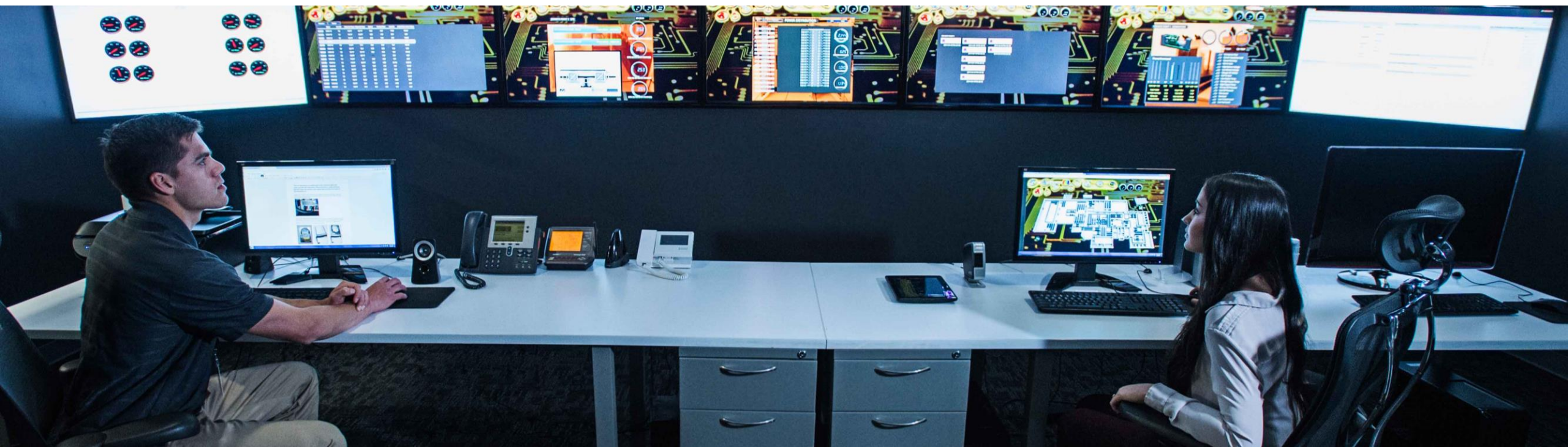
Display message alerts in notification center of the SAP Fiori launchpad

API for integrating AIF with FRUN

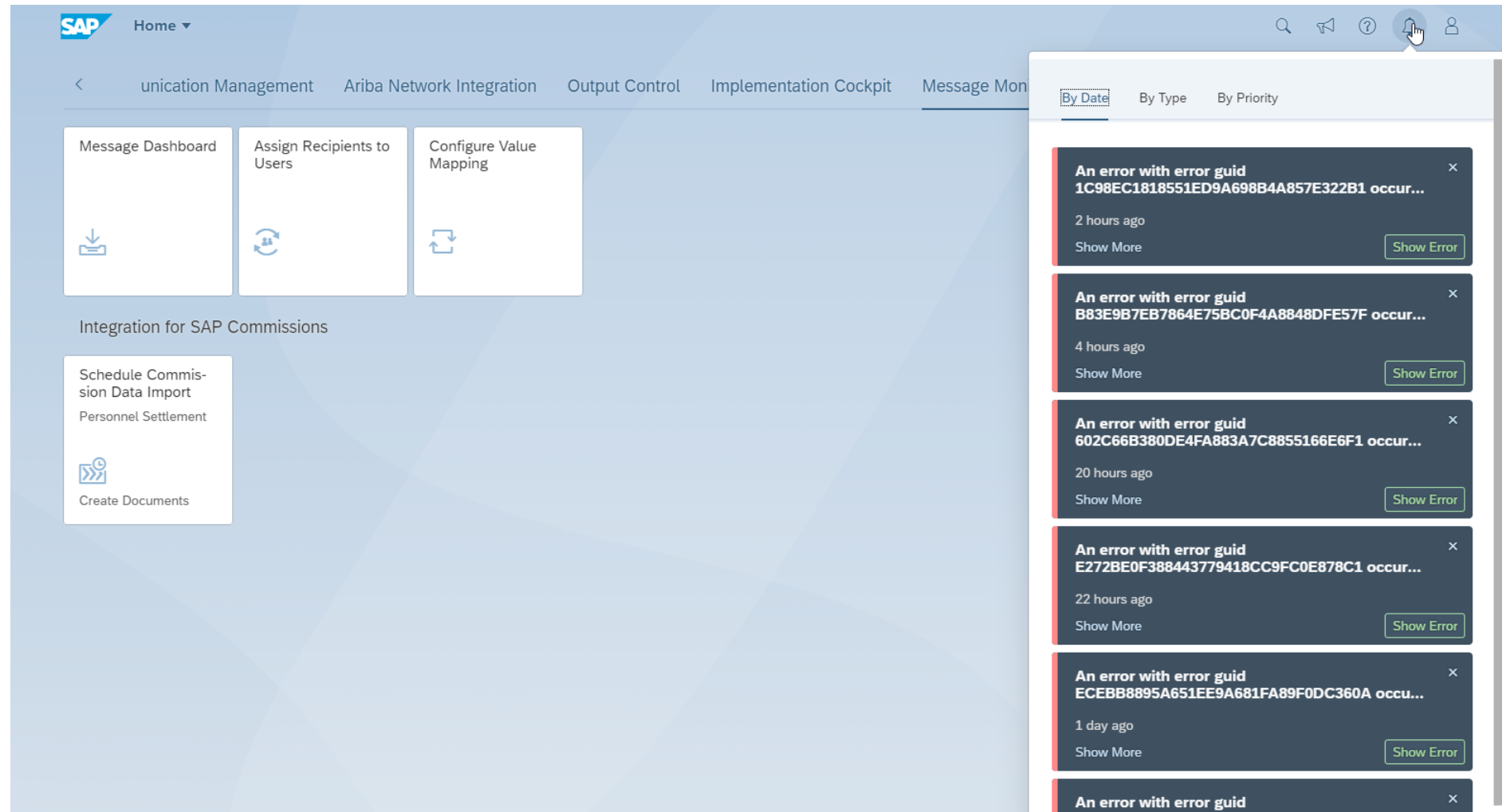
Optimized monitoring of serialization scenarios

- Navigate to root predecessor

UI improvements



Display message alerts in notification center of the SAP Fiori launchpad



Download message content in the message dashboard

<

SAP

Monitoring and Error Handling

Refresh

Icon Help

Data Messages

Reprocess

Cancel

Selected

Log History

Trace Level

Download

		Error	W...	Succ.	Info.	Number
<input type="checkbox"/>	/SDSLS Sales&Distribution Sales Integra...	1	0		0	0
<input checked="" type="checkbox"/>	SO_REPL_O/1 Sales Order Replicatio...	1	0		0	0

Details: SO_REPL_O/1 Sales Order Replication (1)

Log Messages

View: All Messages

Functions ValMap Hints Texts S

Data Structure

Data Structure

SALES_ORDER_BULK_RE

MESSAGE_HEADER

ID

UUID

REFERENCE_ID

REFERENCE_UUID

SENDER_PARTY

INTERNAL_ID

STANDARD_ID

CONTACT_PERSON

INTERNAL_ID

ORGANISATION

PERSON_FORMA

<?xml version="1.0"?>

- <n0:SalesOrderBulkReplication

xmlns:prx="urn:sap.com:proxy:CC2:/1SAI/TAS0DADBA0C2C5AEC76BC5:778"

xmlns:n0="http://sap.com/xi/SD-SLS">

- <MessageHeader>

<ID>40F2E9AFC5F91EE9A69BA59A6A1BAA72</ID>

<UUID>40f2e9af-c5f9-1ee9-a69b-a59a6a1baa72</UUID>

<CreationDateTime>2019-06-27T13:12:12Z</CreationDateTime>

<SenderBusinessSystemID>OMB85VI</SenderBusinessSystemID>

<RecipientBusinessSystemID>SD_API_TEST</RecipientBusinessSystemID>

</MessageHeader>

- <SalesOrder>

<SalesOrderID>23792</SalesOrderID>

<SalesOrderType>TA</SalesOrderType>

<SalesOrganization>1710</SalesOrganization>

<DistributionChannel>10</DistributionChannel>

<OrganizationDivision>00</OrganizationDivision>

<LastChangeDateTime>2019-06-27T13:03:23.355477Z</LastChangeDateTime>

<BillingCompanyCode>1710</BillingCompanyCode>

<SalesOrderDate>2019-06-25</SalesOrderDate>

<TotalNetAmount currencyCode="USD">0.0</TotalNetAmount>

<CreationDate>2019-06-25</CreationDate>

<OverallSDProcessStatus>A</OverallSDProcessStatus>

<OverallSDDocumentRejectionSts>A</OverallSDDocumentRejectionSts>

<OverallTotalDeliveryStatus>A</OverallTotalDeliveryStatus>

- <Partner>

<PartnerFunction>AG</PartnerFunction>

<BusinessPartnerID>17100273</BusinessPartnerID>

<Customer>17100273</Customer>

<AddressID>9000001780</AddressID>

</Partner>

- <Partner>

<PartnerFunction>RE</PartnerFunction>

<BusinessPartnerID>17100273</BusinessPartnerID>

<Customer>17100273</Customer>

<AddressID>9000001780</AddressID>

</Partner>

- <Partner>

<PartnerFunction>RG</PartnerFunction>

<BusinessPartnerID>17100273</BusinessPartnerID>

<Customer>17100273</Customer>

<AddressID>9000001780</AddressID>

</Partner>

- <Partner>

<PartnerFunction>WE</PartnerFunction>

<BusinessPartnerID>17100273</BusinessPartnerID>

<Customer>17100273</Customer>

<AddressID>9000001781</AddressID>

</Partner>

- <Item>

<SalesOrderItemID>10</SalesOrderItemID>

<SalesOrderItemCategory>TAN</SalesOrderItemCategory>

Better payload view for the message monitor

Before

Log Messages

View: All Messages

Customize

Reset Object Filter

Functions	ValMap	Hints	Texts	Status	Index	Message Text
				5	5	Direct call started
				5	5	Debit Memo Request 70000615 has be

Data Content

Edit

Data Structure:

Search and Replace

Monitoring and Error Handling

Select Data Structure

Data Structure
Control record (IDoc)
IDoc: Document header general data
IDoc: Document header date segment
IDoc: Document Header Partner Information
IDoc: Document header reference data
IDoc: Document Item General Data
IDoc: Document Item Object Identification

New

Details: SO_REPL_O/1 Sales Order Replication (1)

Log Messages

View: All Messages

Customize

Reset Object Filter

Functions	ValMap	Hints	Texts	Status	Index	Message Text	Details	Time	Message Type	Message Class	Message Num
				1	1	HTTP Code: 404 (Not Found)		13:12:13	E	/AIF/MES	000

Data Structure

Data Structure

SALES_ORDER_BULK_REPLICATION

MESSAGE_HEADER

SALES_ORDER

TOTAL_NET_AMOUNT

PARTNER

ITEM

REQUESTED_QUANTITY

REQUESTED_QUANTITY_IN_BASE_UNI

NET_AMOUNT

PARTNER

Data Content

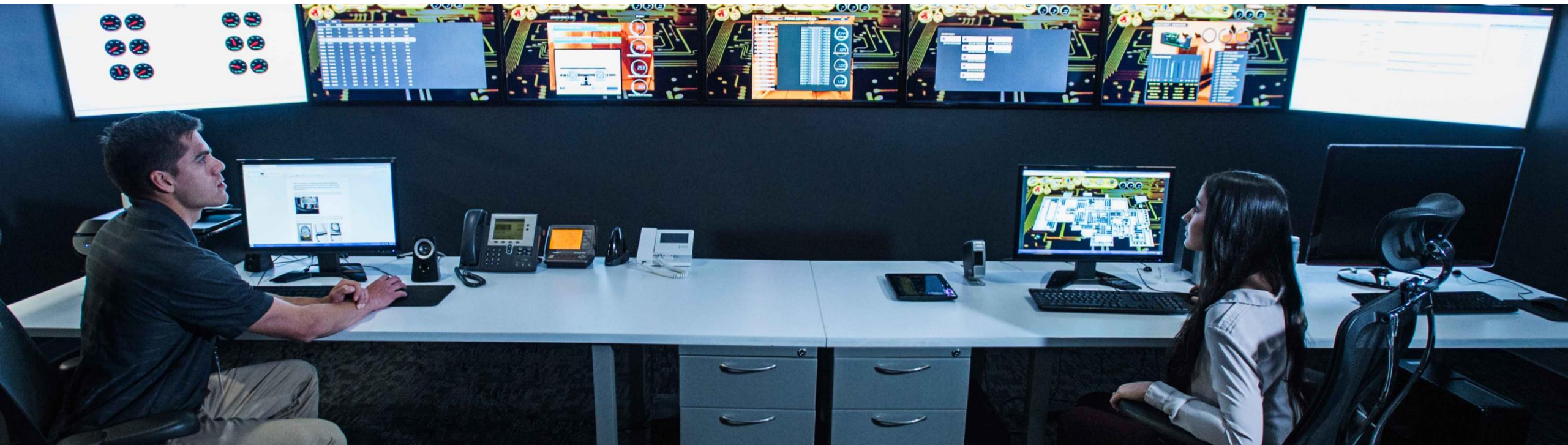
Edit

Data Structure: PARTNER:Sales Order Partner Replication

Search and Replace

EXP__LED	_LINE_Nr	PARTNER_FUNCTION	BUSINESS_PARTNER_ID	CUSTOMER	SUPPLIER	PERSONNEL	CONTACT_PERSON	AD
	1: 1.1	AG	17100273	17100273				900
	1: 1.2	RE	17100273	17100273				900
	1: 1.3	RG	17100273	17100273				900
	1: 1.4	WE	17100273	17100273				900

Optimized monitoring of serialization scenarios



Serialization purpose: Sequencing of Interface Messages

Requirement

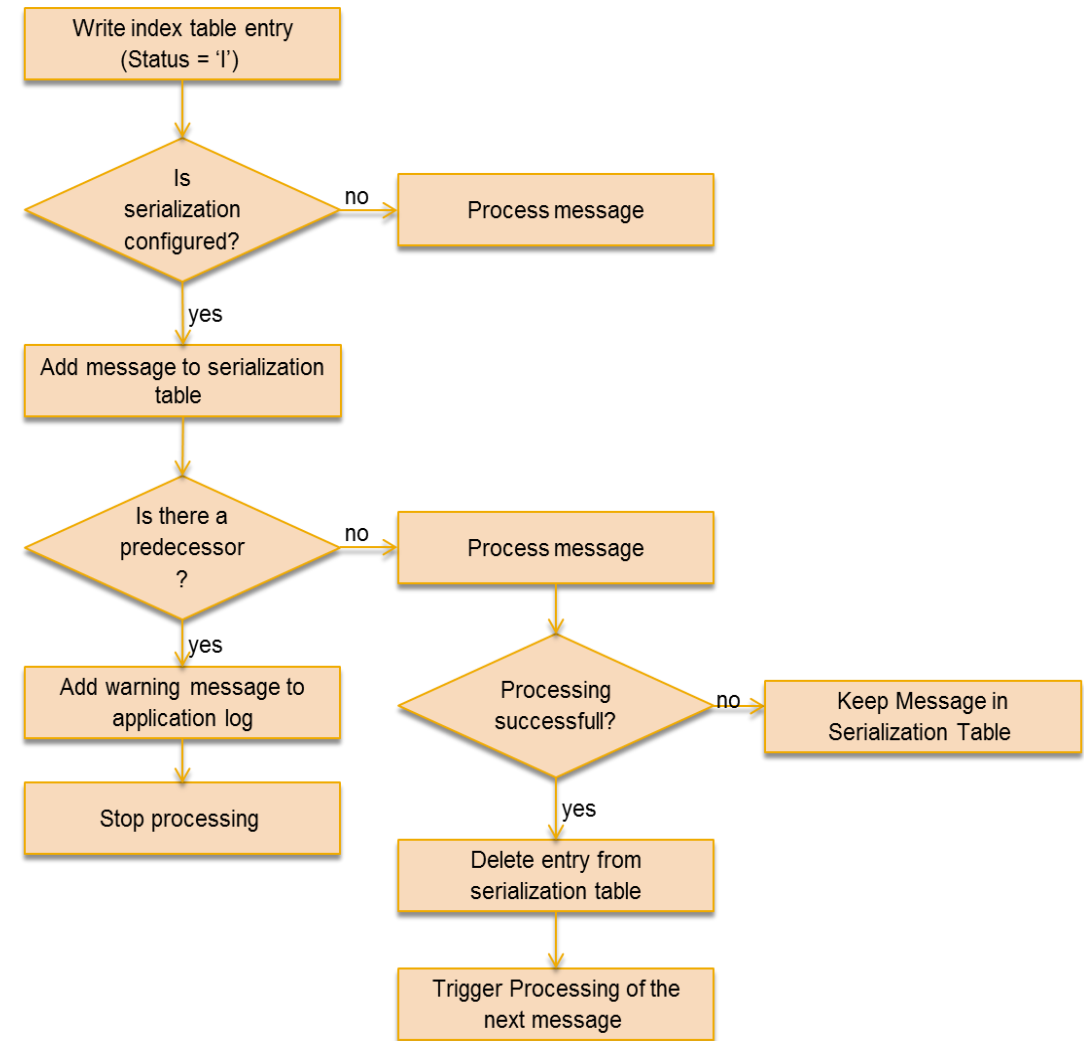
- Some interface messages need to be processed in a certain order
- A subsequent change is allowed to be executed only after all predecessor messages have been processed successfully

Example

- Multiple subsequent updates of address data
- FI Document change/reverse

Serialization Type:

- External Index
- External Timestamp
- Internal Timestamp



Sample: Serialization Customizing for Central Finance

Change View "Define Serialization Object": Overview

BC Set: Change Field Values

Dialog Structure

- Define Serialization Object
 - Assign Serialization Object to
 - Assign Key Fields for Seri...
 - Assign Key Fields for Lock...

Namespace: /FINCF

Ser. Obj.	Serial.Ty.	Serialization Table	Enqueue Object for Locking	Wait.Tim
AC_DOC	2 External Timestamp	CFIN_AIF_SER		
AC_DOC_EX	2 External Timestamp	CFIN_AIF_EX_SER		
AC_PREREQ	2 External Timestamp	CFIN_AIF_PREREQ		
AV_PO	4 No Serialization	CFIN_AIF_AVPOSER	EFINS_CFIN_AVPO	3

Display View "Assign Key Fields for Serialization": Overview

Dialog Structure

- Define Serialization Object
 - Assign Serialization Object to
 - Assign Key Fields for Seri...
 - Assign Key Fields for Lock...

NS	Interface	Version	NS	Ser. Obj.	Field Na...	Fld. SN.
/FINCF	AC_DOC	2	/FINCF	AC_DOC	AWORG	12
/FINCF	AC_DOC	2	/FINCF	AC_DOC	AWREF	11
/FINCF	AC_DOC	2	/FINCF	AC_DOC	AWSYS	13
/FINCF	AC_DOC	2	/FINCF	AC_DOC	AWTYP	10

Display View "Assign Key Fields for Serialization": Overview

Table View Edit Goto Selection Utilities System Help

NS	Interface	Version	NS	Ser. Obj.	Field Name for Serialization ...	Fld. SN.
/FINCF	AC_DOC	2	/FINCF	AC_PREREQ	LNR_SENDER	31
/FINCF	AC_DOC	2	/FINCF	AC_PREREQ	BUKRS_SENDER	30
/FINCF	AC_DOC	2	/FINCF	AC_PREREQ	GJAHR_SENDER	32
/FINCF	AC_DOC	2	/FINCF	AC_PREREQ	LOGSYSTEM_SENDER	33

Challenges

- Lots of messages are in status *In Process*
- High volume
- High number of errors

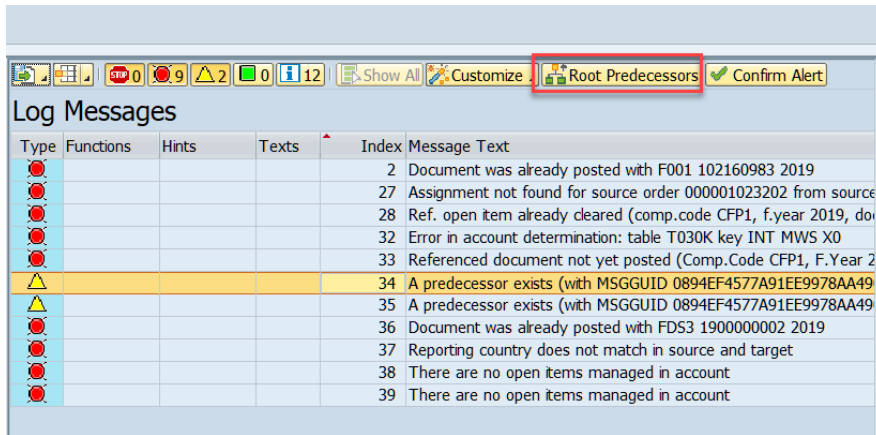
Improvement addressing *blocked* messages

New: Navigate to root predecessor

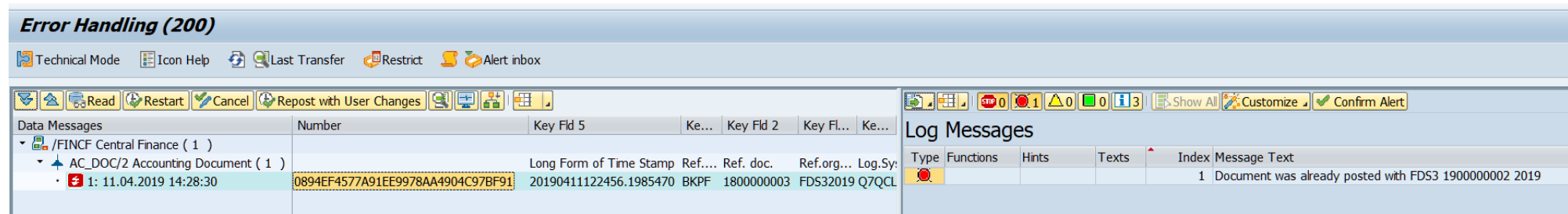
SAP note 2713863 - Serialization: to quickly locate root predecessor messages

Action:

- Solve the business error and re-process Message in /AIF/ERR
- In case of “Document already posted” errors, you can cancel such message after double checking
- The successor messages will be automatic triggered and processed



Type	Functions	Hints	Texts	Index	Message Text
				2	Document was already posted with F001 102160983 2019
				27	Assignment not found for source order 000001023202 from source
				28	Ref. open item already cleared (comp.code CFP1, f.year 2019, do
				32	Error in account determination: table T030K key INT MWS X0
				33	Referenced document not yet posted (Comp.Code CFP1, F.Year 2
				34	A predecessor exists (with MSGGUID 0894EF4577A91EE9978AA49
				35	A predecessor exists (with MSGGUID 0894EF4577A91EE9978AA49
				36	Document was already posted with FDS3 1900000002 2019
				37	Reporting country does not match in source and target
				38	There are no open items managed in account
				39	There are no open items managed in account



Technical Mode Icon Help Last Transfer Restrict Alert inbox									
Data Messages					Log Messages				
Number					Key Fld 5	Ke...	Key Fld 2	Key Fl...	Ke...
▼ /FINCF Central Finance (1)									
▼ AC_DOC/2 Accounting Document (1)									
1: 11.04.2019 14:28:30					0894EF4577A91EE9978AA4904C97BF91	20190411122456.1985470	BKPF	1800000003	FDS32019 Q7QCL

Type	Functions	Hints	Texts	Index	Message Text
				1	Document was already posted with FDS3 1900000002 2019

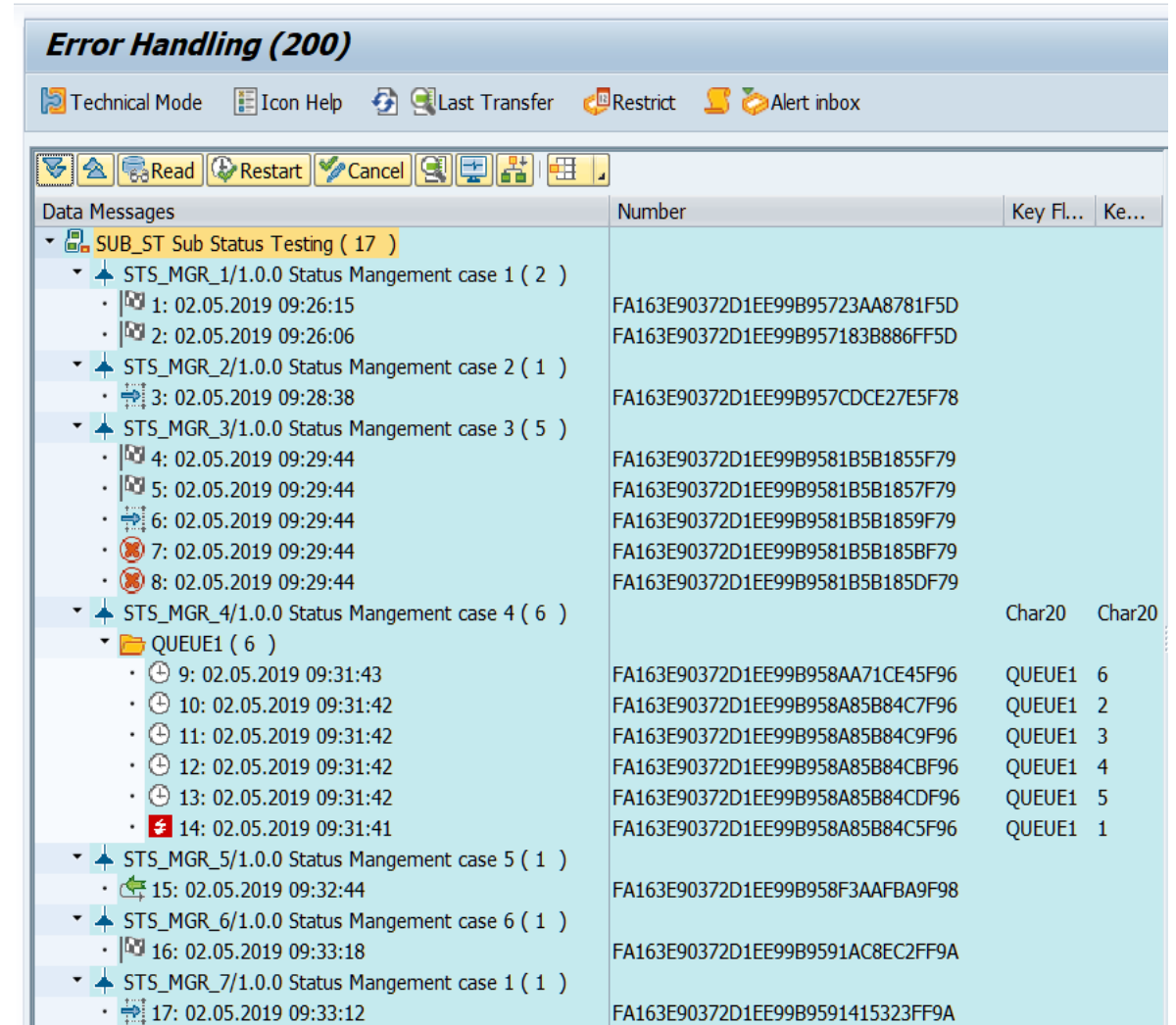
Improvement planned addressing lots of *In Process* messages

Sub status for *In Process* messages

- In Process
- Waiting to be processed
- Auto reprocessing
- Blocked by predecessor
- Error in job processing

Planned* to be shipped with release 1909

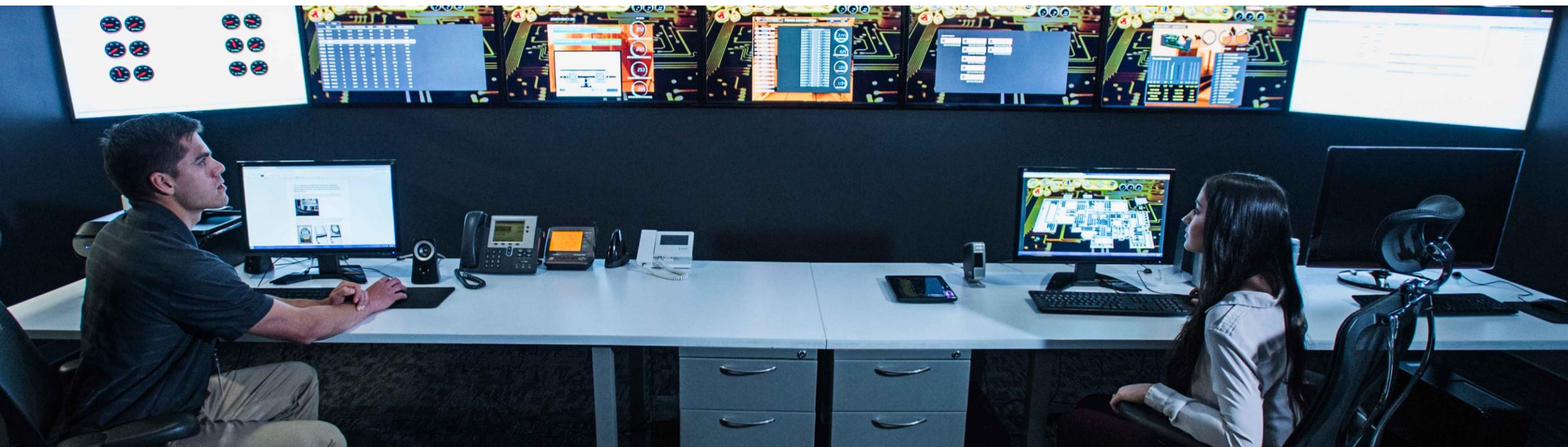
* This is the current state of planning and may be changed by SAP at any time without notice.



The screenshot shows the SAP Error Handling (200) window. The title bar is "Error Handling (200)". Below the title bar is a toolbar with icons for "Technical Mode", "Icon Help", "Last Transfer", "Restrict", and "Alert inbox". Below the toolbar is a row of icons for "Read", "Restart", "Cancel", and others. The main area is a table with columns "Data Messages", "Number", "Key Fl...", and "Ke...". The table contains a list of messages, including "SUB_ST Sub Status Testing (17)", "STS_MGR_1/1.0.0 Status Mangement case 1 (2)", "STS_MGR_2/1.0.0 Status Mangement case 2 (1)", "STS_MGR_3/1.0.0 Status Mangement case 3 (5)", "STS_MGR_4/1.0.0 Status Mangement case 4 (6)", "STS_MGR_5/1.0.0 Status Mangement case 5 (1)", "STS_MGR_6/1.0.0 Status Mangement case 6 (1)", and "STS_MGR_7/1.0.0 Status Mangement case 1 (1)". Each message has a list of sub-messages with timestamps and status icons. The sub-messages are numbered 1 through 17. The status icons include a green checkmark, a yellow warning triangle, and a red error icon. The table also shows a "QUEUE1" section with sub-messages 9 through 14, each with a timestamp and a status icon. The "Key Fl..." and "Ke..." columns show the key fields for each message, such as "FA163E90372D1EE99B95723AA8781F5D" and "FA163E90372D1EE99B957183B886FF5D".

Data Messages	Number	Key Fl...	Ke...
SUB_ST Sub Status Testing (17)			
STS_MGR_1/1.0.0 Status Mangement case 1 (2)			
• 1: 02.05.2019 09:26:15	FA163E90372D1EE99B95723AA8781F5D		
• 2: 02.05.2019 09:26:06	FA163E90372D1EE99B957183B886FF5D		
STS_MGR_2/1.0.0 Status Mangement case 2 (1)			
• 3: 02.05.2019 09:28:38	FA163E90372D1EE99B957CDCE27E5F78		
STS_MGR_3/1.0.0 Status Mangement case 3 (5)			
• 4: 02.05.2019 09:29:44	FA163E90372D1EE99B9581B5B1855F79		
• 5: 02.05.2019 09:29:44	FA163E90372D1EE99B9581B5B1857F79		
• 6: 02.05.2019 09:29:44	FA163E90372D1EE99B9581B5B1859F79		
• 7: 02.05.2019 09:29:44	FA163E90372D1EE99B9581B5B185BF79		
• 8: 02.05.2019 09:29:44	FA163E90372D1EE99B9581B5B185DF79		
STS_MGR_4/1.0.0 Status Mangement case 4 (6)			
QUEUE1 (6)			
• 9: 02.05.2019 09:31:43	FA163E90372D1EE99B958AA71CE45F96	QUEUE1	6
• 10: 02.05.2019 09:31:42	FA163E90372D1EE99B958A85B84C7F96	QUEUE1	2
• 11: 02.05.2019 09:31:42	FA163E90372D1EE99B958A85B84C9F96	QUEUE1	3
• 12: 02.05.2019 09:31:42	FA163E90372D1EE99B958A85B84CBF96	QUEUE1	4
• 13: 02.05.2019 09:31:42	FA163E90372D1EE99B958A85B84CDF96	QUEUE1	5
• 14: 02.05.2019 09:31:41	FA163E90372D1EE99B958A85B84C5F96	QUEUE1	1
STS_MGR_5/1.0.0 Status Mangement case 5 (1)			
• 15: 02.05.2019 09:32:44	FA163E90372D1EE99B958F3AAFBA9F98		
STS_MGR_6/1.0.0 Status Mangement case 6 (1)			
• 16: 02.05.2019 09:33:18	FA163E90372D1EE99B9591AC8EC2FF9A		
STS_MGR_7/1.0.0 Status Mangement case 1 (1)			
• 17: 02.05.2019 09:33:12	FA163E90372D1EE99B9591415323FF9A		

Roadmap



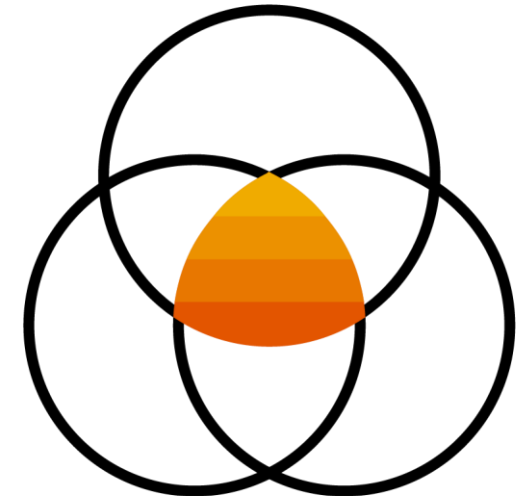
Customer Engagement Initiative Project in 2019

Monitoring and error handling in SAP S/4HANA and SAP S/4HANA Cloud

As SAP Application Interface Framework has become the de facto default monitoring and error handling tool in SAP S/4HANA and SAP S/4HANA Cloud, its adoption is increasing.

With the growing usage in SAP S/4HANA and SAP S/4HANA Cloud, new requirements towards the framework have come up, and hence SAP plans to invest in the following topic areas:

- Fiori UI for message monitoring incl. monitoring of serialization scenarios
- Fiori UI for customizing & configuration of the application interfaces
- Monitoring in the context of SAP Central Finance
- Interoperability between AIF & SAP Cloud Platform Integration
- Interoperability between AIF & SAP Cloud Platform Workflow Services



Innovation Roadmap

Recent

Data protection and privacy compliance

- Log access to personal data
- Enhanced change log to track changes
- Block and delete personal data using *SAP Information Lifecycle Management*

Monitoring and error handling

- Navigate to root predecessor
- Message alerts in *SAP Fiori* notification center (Cloud)

Interoperability

- Advanced message monitor in *Focused Run for SAP Solution Manager*

Planned*

Monitoring and error handling

- Find predecessor in Web Dynpro UI
- Sub status for *In Process* messages
- *SAP Fiori* UI

Protocol support

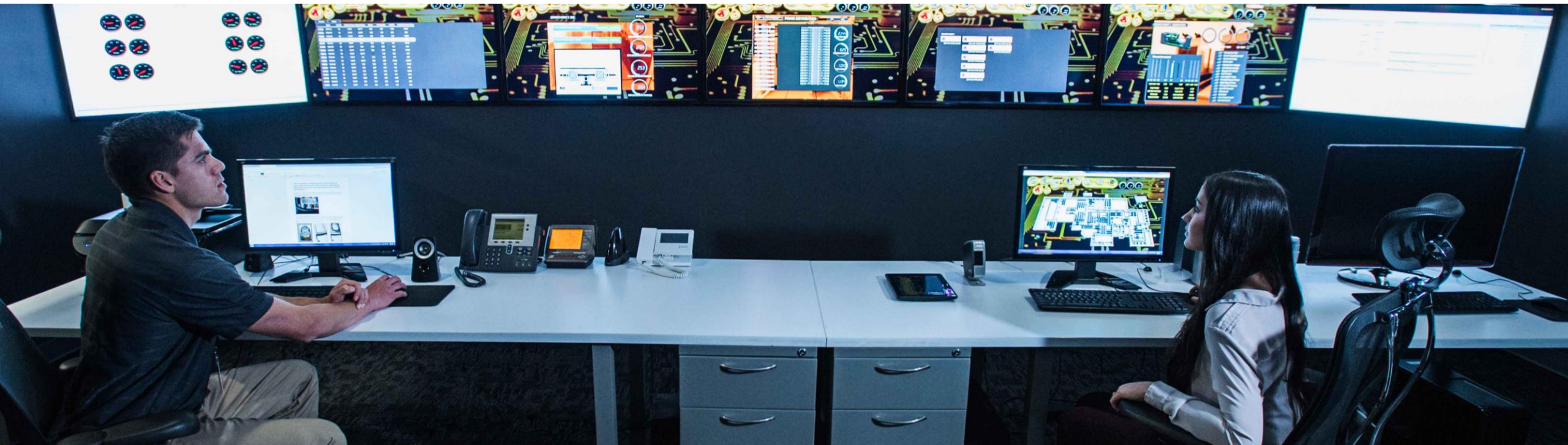
- OData enablement

Interoperability

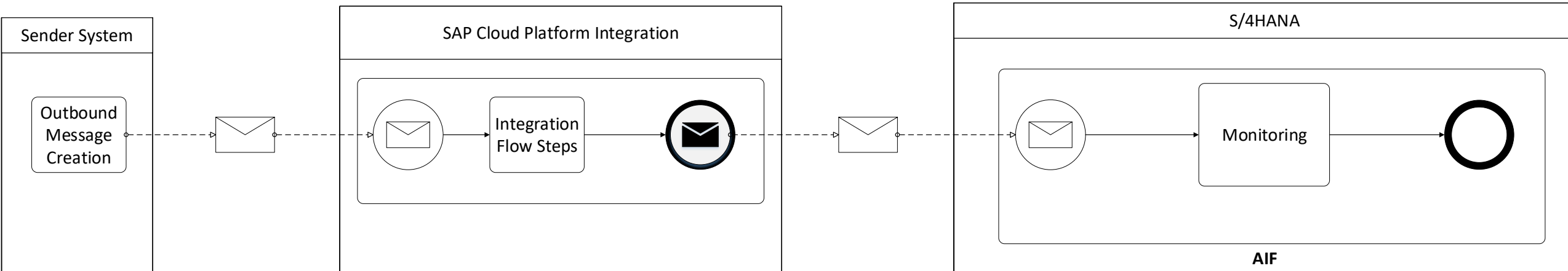
- Show technical errors of *SAP Cloud Platform Integration*
- *SAP Cloud Platform Workflow* service for alerting, approvals, etc.
- *SAP Cloud Platform Integration Advisor* to create mappings and validation checks
- Machine Learning to cluster errors, predict erroneous situations, automatically resolve errors, etc.

* This is the current state of planning and may be changed by SAP at any time without notice.

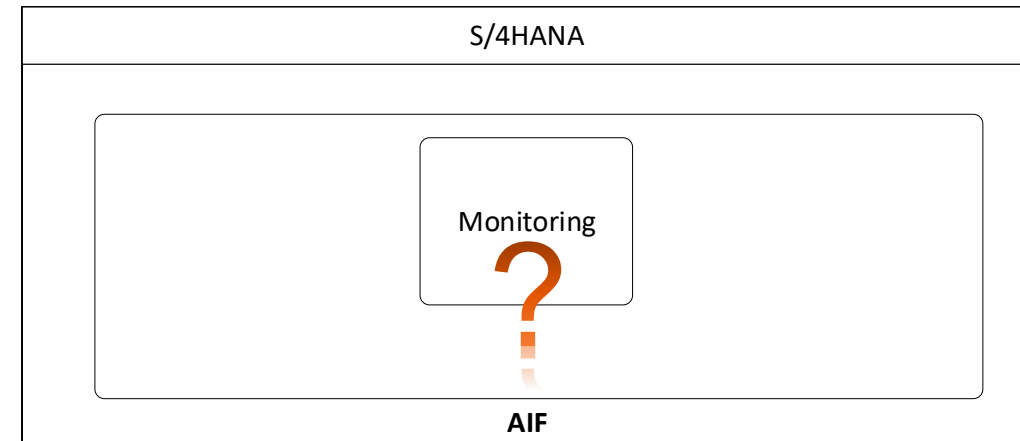
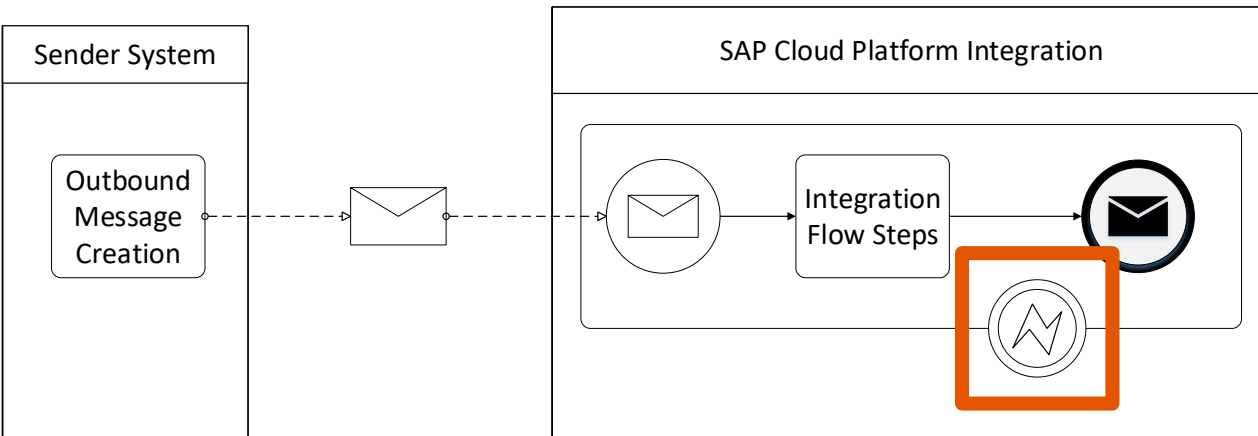
Sneak preview: Interoperability between AIF & CPI



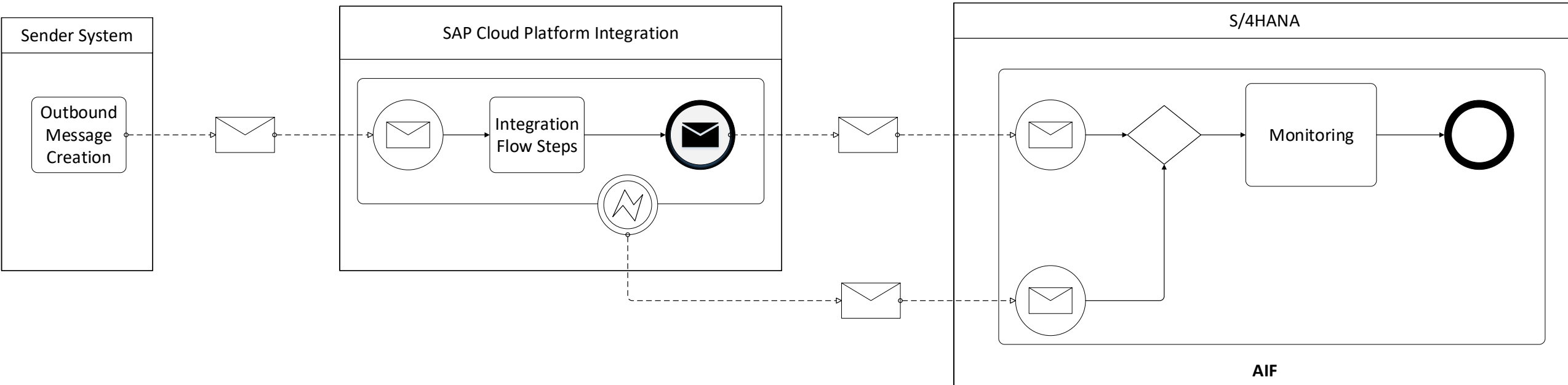
Scenario: CPI is used as middleware to send messages to S/4HANA



Problem: Errors in SAP CPI are not monitored in AIF



Approach: Error Forwarding from SAP CPI to SAP AIF



Summary Error Forwarding from SAP CPI to SAP AIF

Supported Scenario: Inbound IDOC, Inbound Web Service

Timeline*:

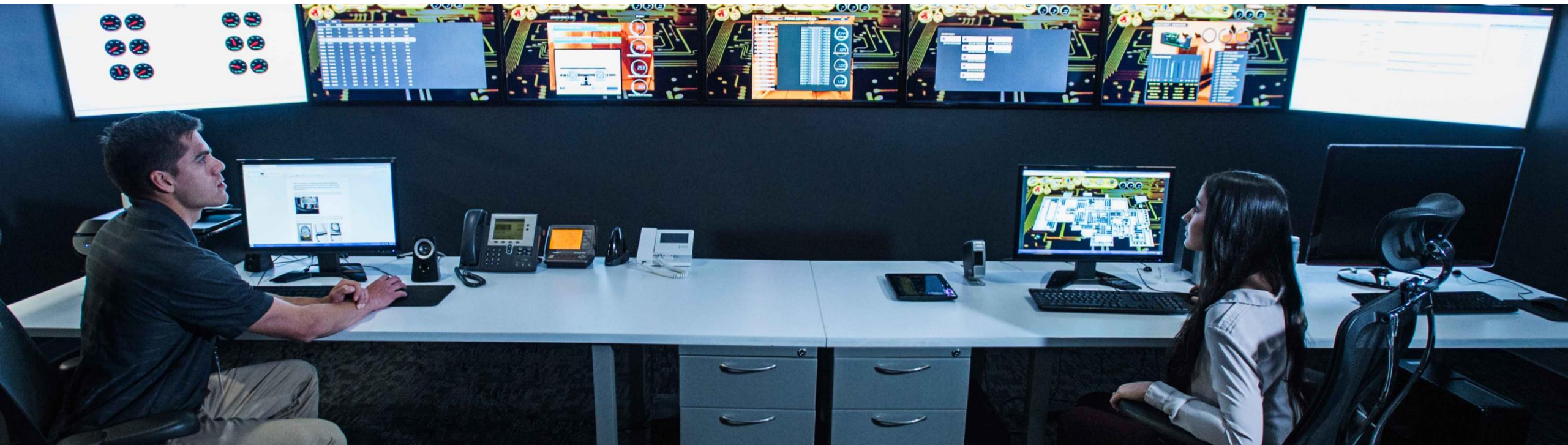
- On-premise: Release 1909
- Cloud: Release 1911

What will be provided:

- Custom Application Engine, Custom Persistence Engine in AIF
- Integration Package with Examples and Integration Guide on SAP API Business Hub

* This is the current state of planning and may be changed by SAP at any time without notice.

Further information



Further information

- [Product information](#)
- [Roadmap](#)
- [Solution brief](#)
- [Community](#)
- [SAP Help Portal](#)
 - Release notes, master guide, installation and upgrade guide, security guide, etc.
- [FAQ note](#)
- [License FAQ](#)

Thank you.

Contact information

Alexander Bundschuh

alexander.bundschuh@sap.com

Follow us



www.sap.com/contactsap

© 2019 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. 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, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See www.sap.com/copyright for additional trademark information and notices.