

# S/4HANA Finance for advanced payment management

Kolja Ewering, SAP  
September 2019

PUBLIC

# 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.

# Contents

Today's Payment Challenges

SAP's Focus

Advanced Payment Management

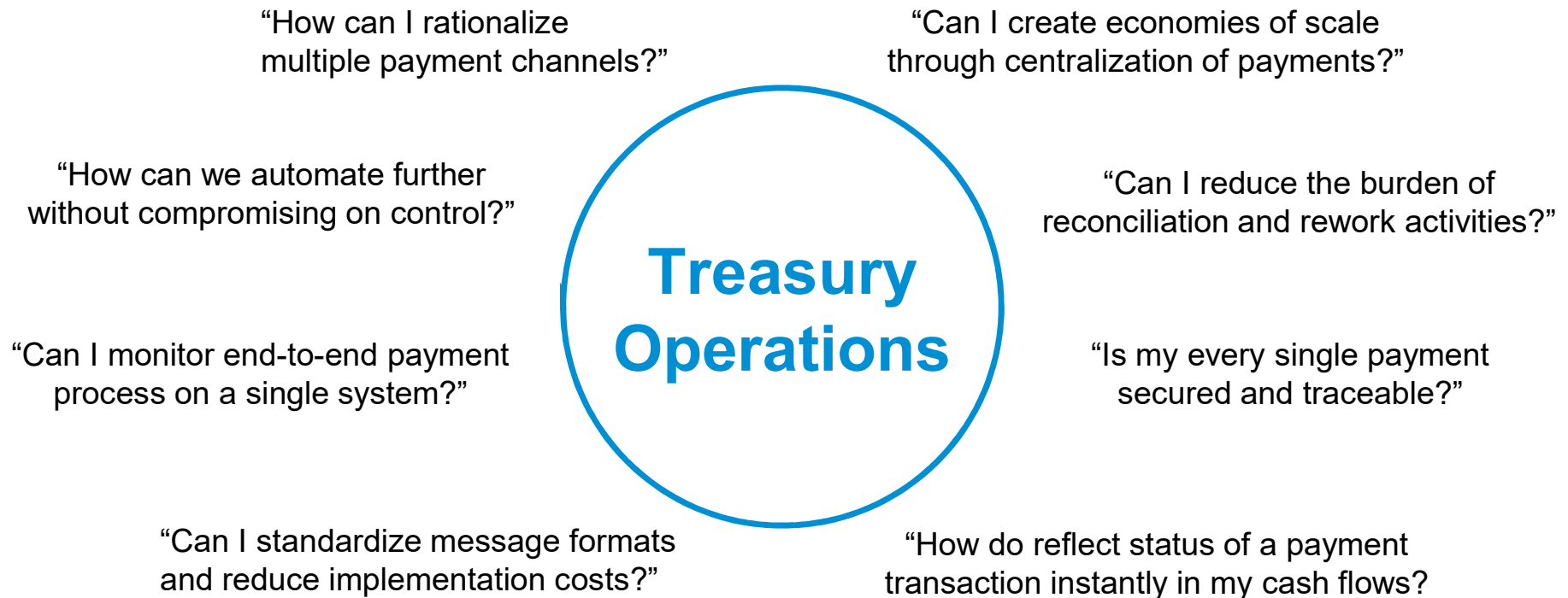
Payment Factory Models

- Using In-house Cash Only
- With Advanced Payment Management

Summary of Benefits

# Today's Payment Challenges

Disparate, slow, opaque and costly



**Being strategic means thinking of the future...**

# SAP's Focus on Present and the Future

## Emergence of payments as the backbone of "Lights out" Treasury Operations

### Payments of the future will be...

#### Frictionless

Seamlessly integrated from the payer to the beneficiary

#### Instant

Execution and settlement in seconds

#### Secure and Visible

Status of every payment tracked at every step from payer to the beneficiary

#### Inexpensive

Potential for lower costs with transparency into cost components

### ...which will require foundational changes.

#### Simplicity with End-to-end Integration

A **centralized payment platform** supported by standard-delivered APIs for data exchange

#### Efficiency and Automation

Process and system **efficiency** built across the **complete payment life-cycle**

#### Better Tracking and Control

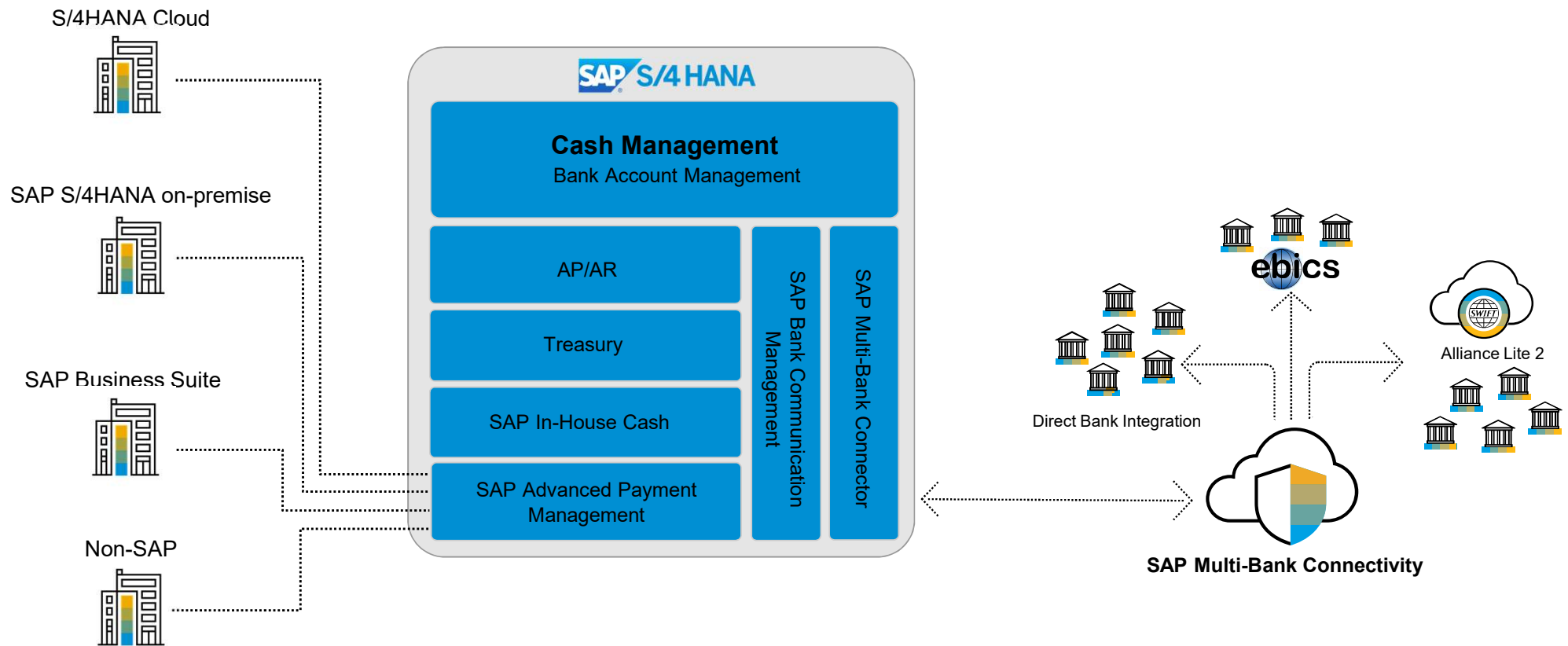
Status of every payment tracked along with **embedded exception handling and reporting**

#### Lower TCO

**Scalability** and **flexibility** through open architecture and standard delivered capabilities

# Advanced Payment Management with Centralized Cash Management

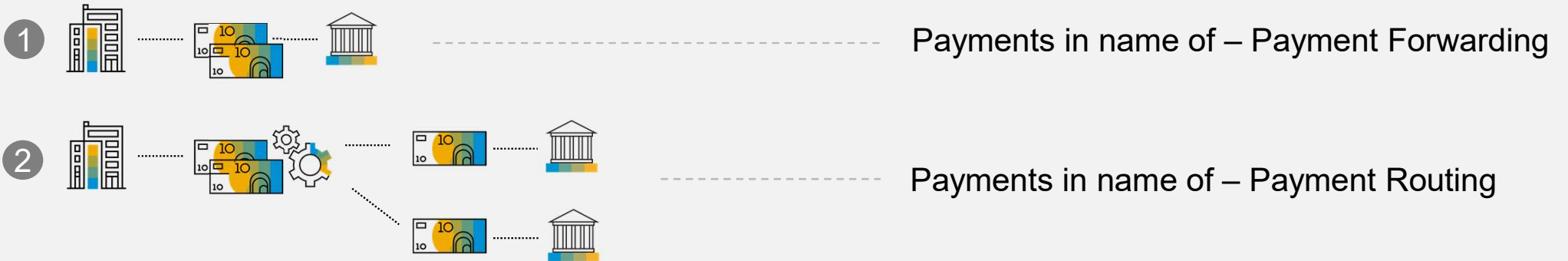
Highly integrated solutions enabling efficient treasury operations



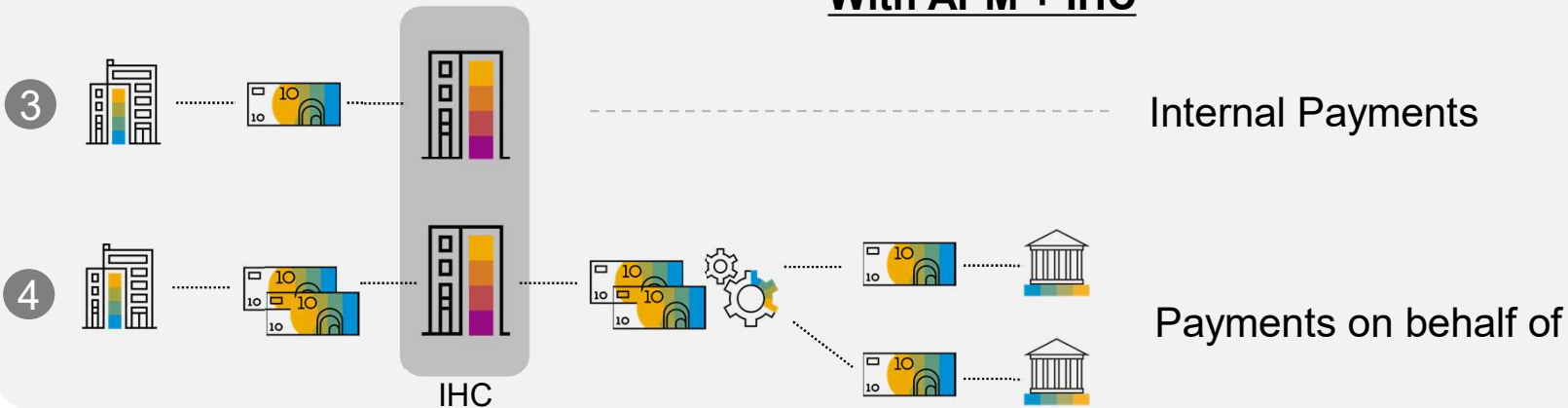
# Possibility of New Process Models with Advanced Payment Management

With significantly upgraded standard SAP functionality for payments management

## With APM Only

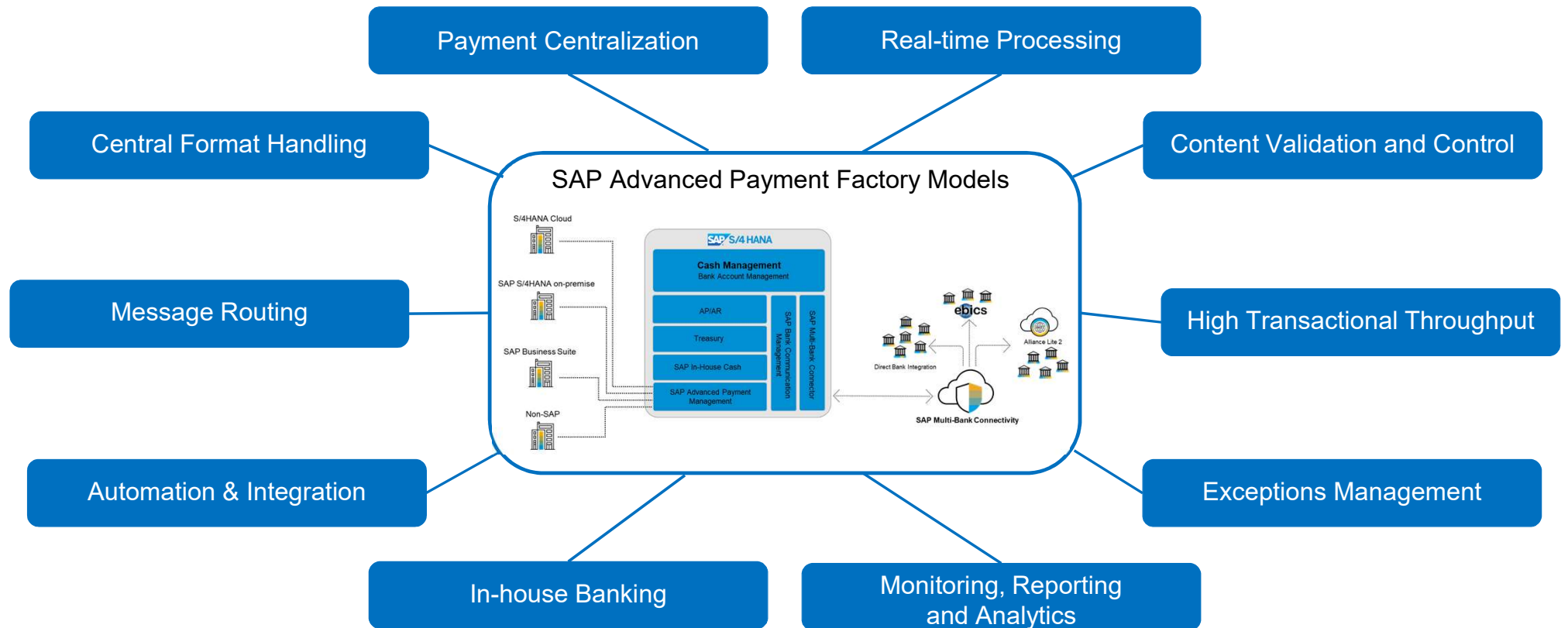


## With APM + IHC



# Running Advanced Payment Factory in SAP

Summary of capabilities across various process models using Advanced Payment Management





# SAP Payment Factory Models

## Comparison of capabilities of BCM Connector and advanced payment management

Payment Functionality	Description	BCM Connector	Advanced Payment Management
<b>Payment Centralization</b>	Ability to process payments from multiple sources in a through a consolidated channel to an external party.	✓	✓
<b>In-house Banking</b>	Ability to manage subsidiary balances in the In-house bank accounts as sub-ledger of external bank accounts with fully functional In-house Bank in SAP.		
<b>Payment Format Handling</b>	Ability to receive and send messages in multiple formats along the ability to transform from one to the other based on the requirements of the recipient.		✓
<b>Payment Message Routing</b>	Distribution of payment message based on pre-defined criteria - Route by all attributes of a payment and several special dimensions, e.g., Cut-off times, Percentage of business, Beneficiary bank, Available liquidity, due date and more.		✓
<b>Automation and Integration</b>	High level of automation and integration into cash management, bank account management, payment approvals, accounting & bank integration channels. Open architecture to integrate with non-SAP products throughout the process.		✓
<b>Real-time Processing</b>	Ability to respond instantly to changing requirements such as – reprioritization, cancellation, up-to-the-moment status.		✓
<b>High-volume Processing</b>	High transaction throughput including processing power for low-value ultra-high volume processes	✓	✓
<b>Validation and Control</b>	Message content validation based on extensive set of rules including standard-delivered and embedded <u>plus</u> checks for duplicates, embargo, sanctions, check, configurable blocs (such as banks, currencies, countries).		✓
<b>Exceptions Management</b>	Built-in functionality to monitor and fix exceptions in a central place, either manually or automatically.		✓
<b>Monitoring, Reporting and Analytics</b>	On-the-fly reporting and analytics for the full payment flow		✓

# SAP Payment Factory Models

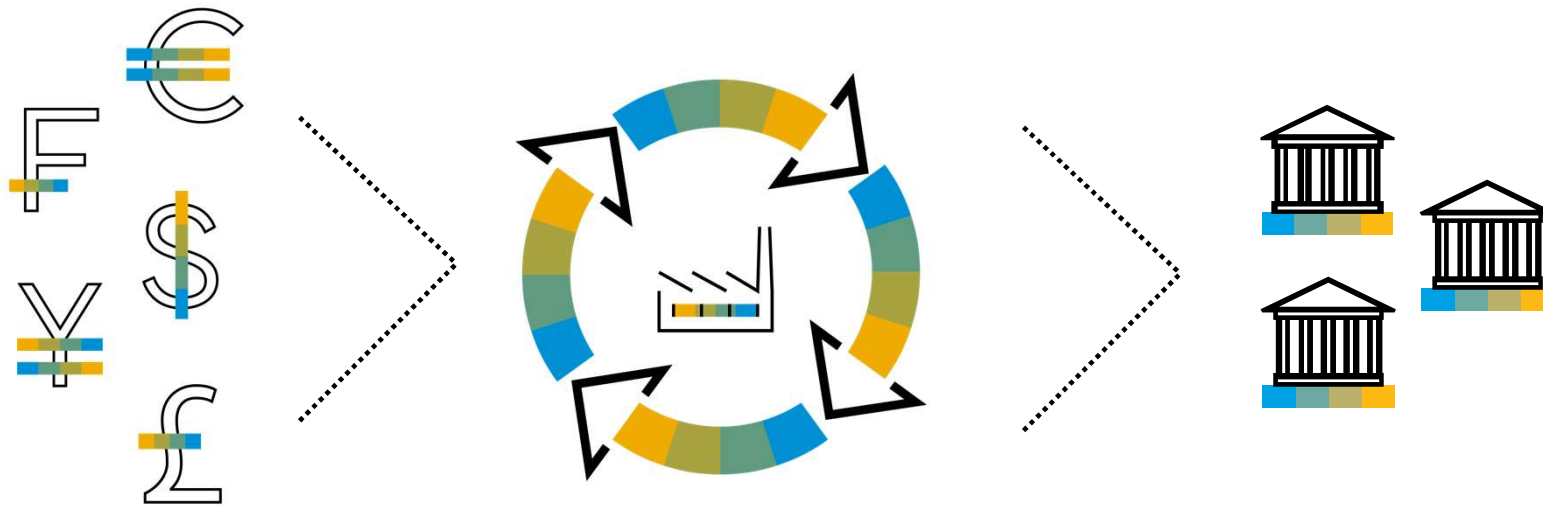
## Comparison of capabilities in various models

Payment Functionality	Description	IHC Only	APM Only	APM + IHC
<b>Payment Centralization</b>	Ability to process payments from multiple sources in a through a consolidated channel to an external party.	✓	✓	✓
<b>In-house Banking</b>	Ability to manage subsidiary balances in the In-house bank accounts as sub-ledger of external bank accounts with fully functional In-house Bank in SAP.	✓		✓
<b>Payment Format Handling</b>	Ability to receive and send messages in multiple formats along the ability to transform from one to the other based on the requirements of the recipient.		✓	✓
<b>Payment Message Routing</b>	Distribution of payment message based on pre-defined criteria - Route by all attributes of a payment and several special dimensions, e.g., Cut-off times, Percentage of business, Beneficiary bank, Available liquidity, due date and more.		✓	✓
<b>Automation and Integration</b>	High level of automation and integration into cash management, bank account management, payment approvals, accounting & bank integration channels. Open architecture to integrate with non-SAP products throughout the process.	Limited*	✓	✓
<b>Real-time Processing</b>	Ability to respond instantly to changing requirements such as – reprioritization, cancellation, up-to-the-moment status.		✓	✓
<b>High-volume Processing</b>	High transaction throughput including processing power for low-value ultra-high volume processes (such as FI-CA).		✓	✓
<b>Validation and Control</b>	Message content validation based on extensive set of rules including standard-delivered and embedded <u>plus</u> checks for duplicates, embargo, sanctions, check, configurable blocs (such as banks, currencies, countries).	Limited*	✓	✓
<b>Exceptions Management</b>	Built-in functionality to monitor and fix exceptions in a central place, either manually or automatically.		✓	✓
<b>Monitoring, Reporting and Analytics</b>	On-the-fly reporting and analytics for the full payment flow		✓	✓

\* Due to additional customization requirements in IHC

# S/4HANA Finance for advanced payment management

## Automation & Integration



Centralize payments from all subsidiaries globally (SAP or non-SAP)

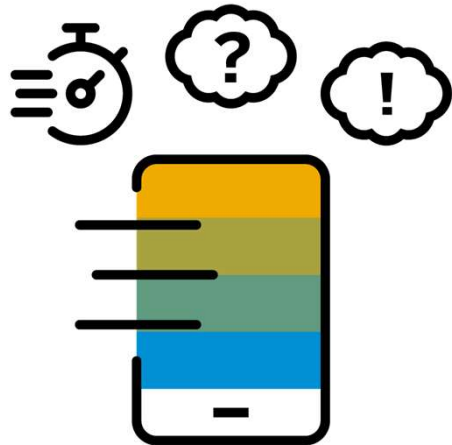
Keep subsidiaries updated on payment processing results

High level of automation and integration into cash management, bank account management, payment approvals, accounting & bank integration channels

Open architecture to integrate with non-SAP products throughout the process

# S/4HANA Finance for advanced payment management

## High volume & real-time payment processing



Payment volumes are constantly increasing

At the same time expectation on processing speed is evolving towards real-time

React instantly on ad-hoc business requests like

- Prioritizing a single payment
- Requesting a cancellation of a payment
- End to end payment monitoring for payment inquiries

Handle high transaction volumes originating for example out of FI-CA

# S/4HANA Finance for advanced payment management

## Ensure validity & integrity of payments

Lower bank rejection rates by validating correctness of payment details even before sending it to the bank

- Leveraging standard checks
- Embed your own validations

Detect duplicate payments

Perform embargo/sanction list screening

Define payment blocks for

- Recipient banks
- Currencies
- Countries



# S/4HANA Finance for advanced payment management

## Reacting on Exceptions

Payments are running into erroneous situations based on various reasons. Instead of pushing these payments back to the local subsidiary systems the solution allows to fix these errors in a central place, either manually or automatically.

The screenshot displays the SAP S/4HANA Finance interface. On the left, a table lists 'Payment Items' with columns for Item Key, Check Text (Long), Amount, and Work Basket ID. The table contains 20 rows of data, including various transaction types and amounts in EUR and USD.

On the right, a detailed view of an 'Ordering Party Item' is shown. The item key is 18.10.2018 / 000000140506, and the amount is 1,000.00 EUR. A red error message is displayed: 'Account Does Not Exist / House Bank Account Check: Account number / IBAN DE36700500101231231 not found More'. The interface includes fields for 'general' (Amount, Original Amount, Exchange Rate), 'Account' (Clearing System Member ID Code, Bank Country, Bank Key, BIC, Account Number), and 'Dates' (Orig. Val. Date, Value Date, Due Date).

# S/4HANA Finance for advanced payment management

## Bank Account Optimization & Routing Flexibility



Define payment routing based on business rules (master data)

Route by all attributes of a payment and several special dimensions, e.g.

- Cut-off times
- Percentage of business
- Beneficiary bank
- Available liquidity
- Adherence to due date
- Transaction Currency
- Payment Scheme compatibility
- Amount limits
- Payment Type
- ...

Perform rerouting and regrouping of payments

Link payment formats, cut-off times, bank account details, bank clearing account, etc. in one place with central governance and approval processes

# S/4HANA Finance for advanced payment management

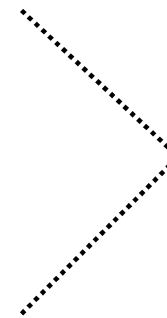
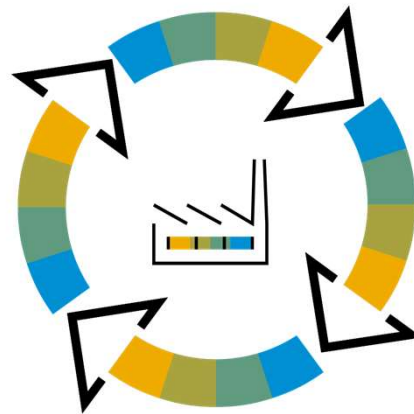
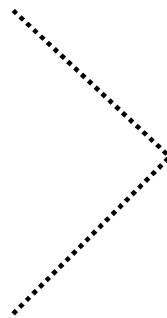
## Central Format Handling

MT101

ISO 20022

Local formats

Proprietary formats

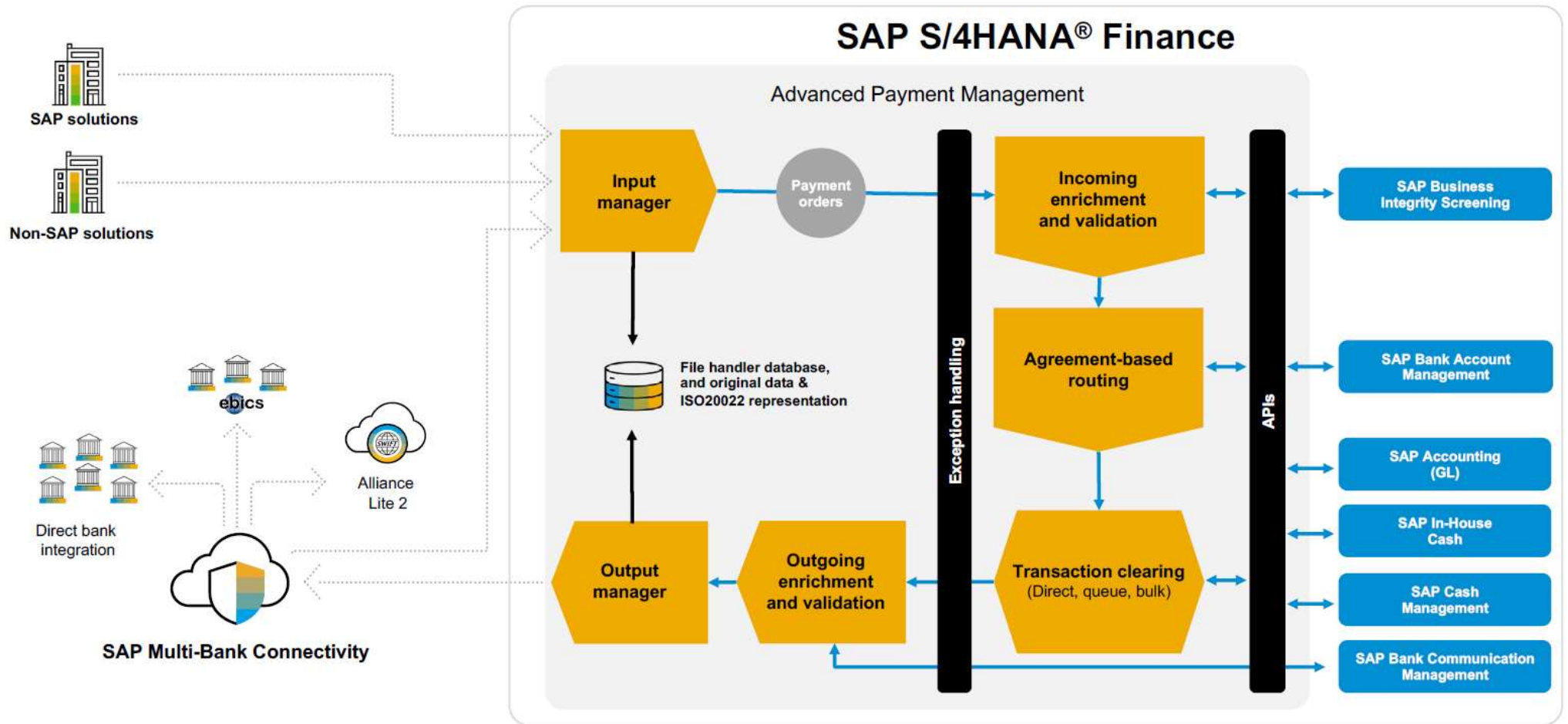


Bank specific payment formats



# Overview of Advanced Payments Management (APM)

New set of capabilities for running Payment Factories in S/4HANA



# Sample Process

## Bulk payment scenario from SAP subsidiary

Subsidiary runs an automatic payment run (F110) creating an outbound message to one determined external bank account. The paid items are cleared out by an FI posting.

Transfer of outbound message (XML, IDoc, CSV, ...) to payment factory via webservice, ALE or physical file

Input manager of the payment factory converts inbound format into a meta format representing the payment

(Optional) approval workflow

### Enrichment & Validation (E&V)

- Validate payment correctness (e.g. detect duplicates, validate data, validate internal cut-off times, ...)
- Enrich missing data (e.g. subsidiary specific processing rules, BIC codes, ...)
- Return status message for received payment message/file to subsidiary (e.g. PAIN.002)

### Routing

- Option 1: Forward payment as is to house bank (no rebulking, no bank account determination)
- Option 2: Regroup and/or reroute payments to accounts of subsidiary (PINO)
- Option 3: Regroup and/or reroute payments to central group accounts (POBO)
- Option 4: Internal Transfer
- Retrieve and validate bank account details maintained in BAM (Bank Account Management)

### Clearing

- Update of Cash Management flows
- In case of rerouting – update accounting / in-house bank

### Outgoing Enrichment & Validation

- Payment release/authorization via SAP Bank Communication Management

### Output Manager

- Create target payment format leveraging existing DMEE trees
- Trigger bank communication directly via SAP Multi-Bank Connectivity

# Components in Detail

## Input Manager

### Integration of subsidiary systems (SAP or non-SAP) via

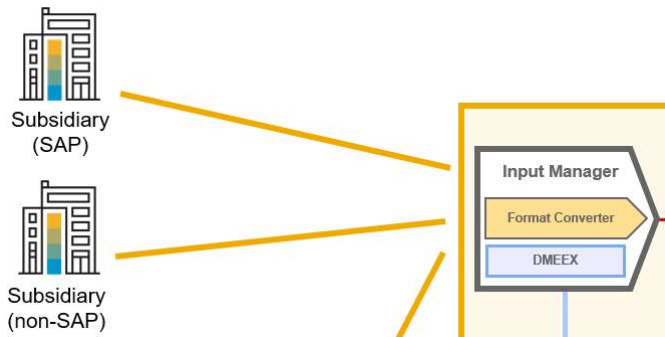
- Web Service (SAP Multi-Bank Connectivity Service)
- IDoc
- File

### Conversion from any format into a central meta format aligned with ISO20022

- Code based
- Configuration based (DMEE)
- Multiple formats pre-delivered e.g. ISO20022 (CGI), MT101

Inbound format can be validated for correctness (e.g. fields missing, values not permitted)

Original format stored with the payment in the solution



# Components in Detail

## Enrichment & Validation



### Payments in internal meta format are validated and enriched using

- Pre-defined validation like checking for duplicates, validating account information, validating cut-off times, ...
- Trigger status notifications or correspondence (e.g. email) to sending subsidiaries on their payments
- A first, unqualified, cash management update is triggered
- New custom check based on configuration of business rules
- Entirely new checks added by customers based on extensions

Checks can reach out to external applications like SAP Business Integrity Screening or non-SAP systems

- Checking can be synchronous or asynchronous
- If checking is asynchronous the respective payment is parked until a response is received

Checks can raise functional errors which can be passed to exception handling.

Exception Handling triggers reactions for these specific errors based on configuration (e.g. manual repair, automatic repair, return, reject, ignore, ...)

# Components in Detail

## Exception Handling



Any functional or technical error throughout the lifecycle of a payment is attached to the payment batch or transaction and is passed to exception handling

For an error a reaction is determined based on business rules which could be based on the type of error, payment type, priority, amount, customer segmentation or similar

Available reactions include for example

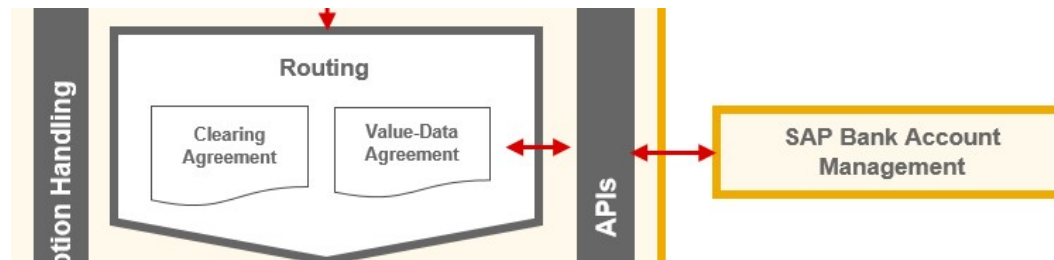
- Rejection / reversal
- Return
- Redirection
- Manual repair **via Fiori App**
- Automatic repair
- Retry
- Ignore
- ...

In addition the solution allows to recall a full batch or a single transaction in various processing stages

- If payment is still internal the system stops processing and sends it to exception handling where a reaction like reject, return or repair is determined and executed
- If the payment has already been sent out a request for cancellation (camt.055 or MT192) can be send out to the instructed bank

# Components in Detail

## Routing



Routing payments towards banks and bank accounts based on business rules

Business rules can use all attributes of a payment like amount, currency, country, payment type, priority and additional attributes like time, % distribution of payments

Options for routing are

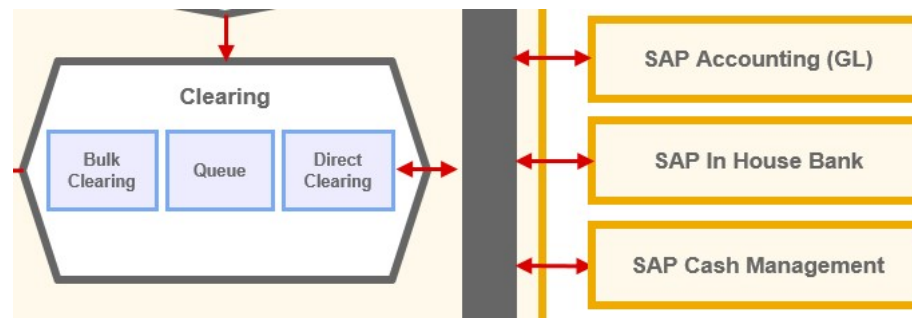
- Forward payment as is to bank (no rebulking, no bank account determination)
- Regroup and/or reroute payments to accounts of subsidiary (PINO)
- Regroup and/or reroute payments to central group accounts (POBO)

Retrieve and validate bank account details maintained in BAM (Bank Account Management)

Determined clearing agreement defines rules like the type of transaction (single or bulk), target payment format, accounting rules, cut-off times, ...

# Components in Detail

## Clearing



Clearing executes the rules determined in routing

Processing options are

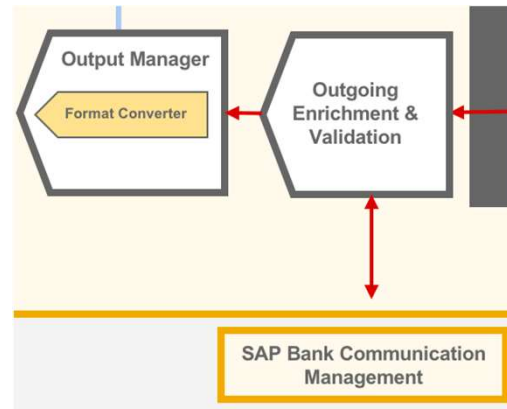
- Direct clearing for high prio payments or real-time payments
- Queue payments until a certain point in time, e.g. for timed/scheduled payments
- Bulk payments based on bank / account / currency / payment type / ... until a certain time or a max amount is reached

A qualified Cash Management update is triggered

Posting towards In-house Cash or FI is triggered to update bank or internal clearing accounts

# Components in Detail

## Outgoing Enrichment & Validation



Outgoing Enrichment & Validation allows you to carry out last minutes checks on the payments, especially in case a payment was parked in the solution for some time, e.g. last minute sanction list screening

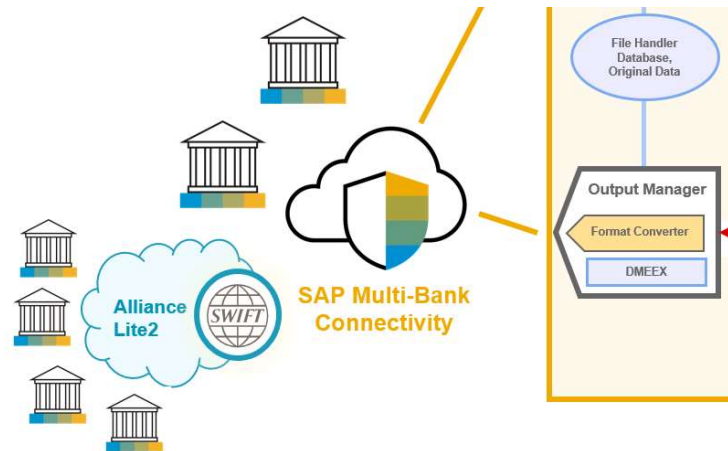
In addition an approval via SAP Bank Communication Management is triggered

- In case of a final approval the payment is passed to the Output Manager
- In case of a batch or single transaction reject the entire batch or a single transaction is passed to Exception Handling where a reaction on this reject is determined, e.g. reverse, reject, repair, ...



# Components in Detail

## Output Manager



Once the payment batch or single payment is approved the Output Manager creates the target payment format using DMEE

- The solution maps the internal meta format onto the existing payment formats available in DMEE / PMW
- Optionally the original format is forwarded without change in case of a pure forwarding based on the stored data in the file handled database (original data)

The generated format is either stored as physical file or is directly sent to SAP Multi-Bank Connectivity

Once a status notification is received the status of the batch and its transactions is updated and BCM is informed

- In case of a negative status the transaction/batch is sent to exception handling to react on this status
- In case of a positive status the transaction/batch is updated and optionally finalized

# Components in Detail

## Cross-Functions

Manual payment creation via Fiori App

Investigation Fiori App to search for payments and show details

Payment blocks for countries, currencies and banks which prevent payments to go out

Approval workflow including a corresponding Fiori App for various activities in the solution (creation, change, processing, ...)

Analytical Fiori App to have a view on current status of the system and all its payments

Reconciliation reports between subsidiaries and advanced payment management

...



Home

Advanced Payment Management

Cash Management

Fiori Apps Overview

Bank Relationship















Cash Operations

Basic Cash Operations





Liquidity Management

Deposits



<p>Create Payments</p>  <b>38</b>	<p>Manage Payments</p>  <b>...</b>	<p>Repair Payments</p>  <b>...</b>	<p>Maintain Payment Blocks</p>  <b>...</b>	<p>Manage Payment Batches</p>  <b>...</b>	<p>Payments Analyzer Items in Repair</p>  <b>121</b>	<p>Manage Payments Failed Imports</p>  <b>627</b>	<p>Payments Analyzer Items completed, fin...</p>  <b>1</b> Today
<p>Approve Bank Payments</p>  <b>38</b>	<p>My Inbox All Items</p>  <b>...</b>	<p>Manage Correction Rules</p>  <b>...</b>	<p>Maintain Routes and Clearing Agreements</p>  <b>...</b>	<p>Service Level Agreement</p>  <b>...</b>	<p>Exception Control</p>  <b>...</b>		

### Incoming Payment Order

Payment Order: 03.06.2019 / 100000168008    Sum Amounts:    Release Amount:  
Type: Credit Transfer Order                    **1,75** GBP                    **2,50** EUR

ORDER & ORDERING PARTY ITEM

RECIPIENT PAYMENT ITEMS

#### General

Payment Item:  
03.06.2019 / 200001990709

Transaction Type:

Payment Priority:

External Order No.:

#### Account

Clearing System Member ID Code:

Bank Country:

Bank Key:

BIC:

Account Number:

IBAN:

Account Currency:  
GBP

Account Holder:  
MARCI DE VRIESI

#### Dates & Process Control

Value Date:

Planned Exec. Date:  
03.06.2019



Country Blocks



Currency Blocks



Bank Blocks

Currency Blocks (2) | Standard ▾

Edit Delete Print ↻ + ⚙️

<input type="checkbox"/>	Block Key	Currency	Status	Updates Pending	Blocked Payments	Valid From	Valid To	Created On
<input type="checkbox"/>	23.01.2019 / 201901239421	United States Dollar (USD)	Active		37	23.01.2019	23.01.2019	23.01.2019 >
<input type="checkbox"/>	25.01.2019 / 201901257474	United Arab Emirates Dirham (AED)	Active		0	25.01.2019	30.12.9999	25.01.2019 >

Select Clearing Area

## Recipient Item

 [Flow](#) [Print](#) [Recall](#) [Reject](#) [Show File Handler Data](#) ...

Item Key: 03.06.2019 / 200001990606      Processing Status:      Amount:      Reserved By User ID  
Transaction Type: Credit Trsf.RCP (CT\_RCP)      **Outgoing Order - completed (34)**      **2,45** USD      -  
Input Order: [03.06.2019 / 100000168007](#)  
Output Order: [03.06.2019 / 500000092002](#)

### General

Item Key:  
[03.06.2019 / 200001990606](#)   

Processing Status:  
**Outgoing Order - completed (34)**

External Status:

Transaction Type:  
Credit Trsf.RCP (CT\_RCP)

Payment Priority:

Amount:  
2,45 USD

Amount Acct Crcy:

Original Amount:

Exchange Rate:  
0,0000000000

External Item Ref.:  
000000001381058

### Account

ClearSysMemberIdCd:

Bank Key:  
DE / 67050505

BIC:  
MANSDE66XXX

Account Number:  
32234531

IBAN:  
DE23670505050032234531

Account Holder:  
EXTERNAL VENDOR 1 PYF2

Company Code:

House Bank:

Account ID:

### References

Input Order:  
[03.06.2019 / 100000168007](#)

Output Order:  
[03.06.2019 / 500000092002](#)

Predecessor Item:

Successor Item:

Payment Batch/Queue:

Memo Record:  
[125943](#)

G/L Document:

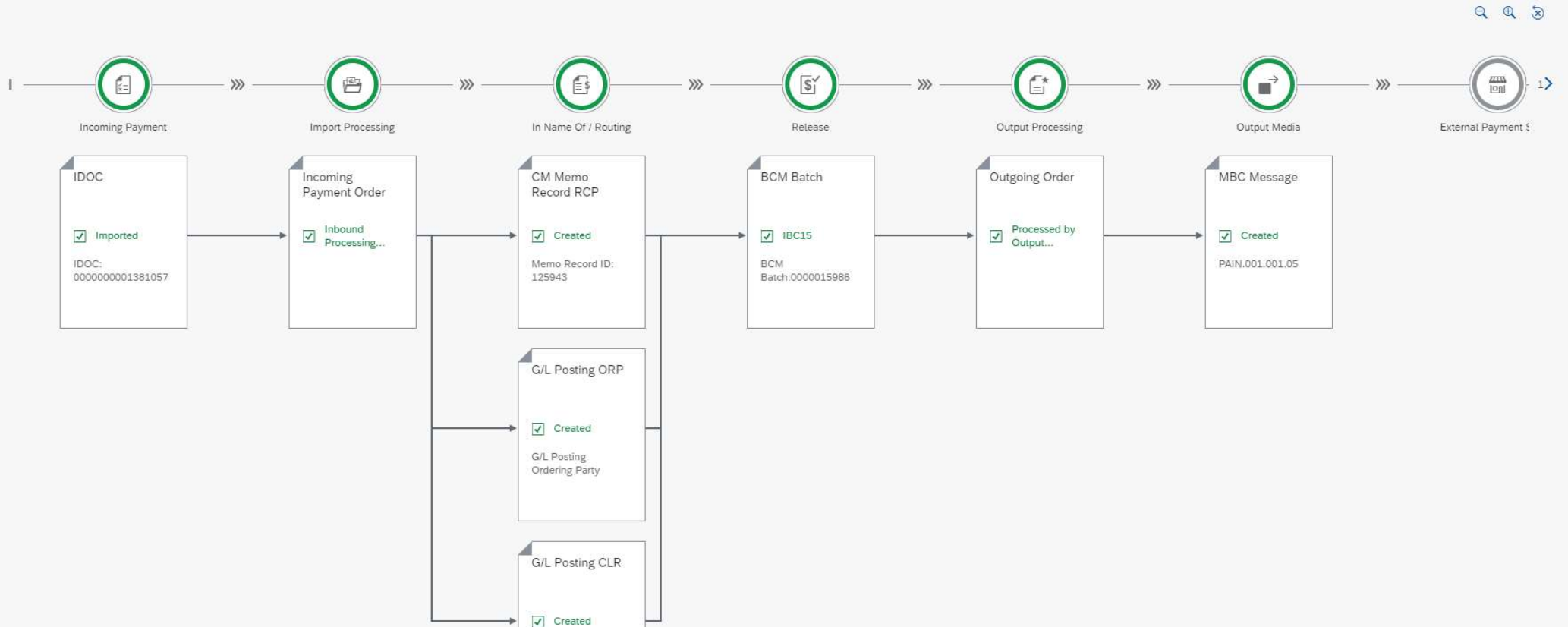
IHC Payment Order:

### Recipient Item

📄 Flow Print Recall Reject Show File Handler Data ⋮

Item Key: 03.06.2019 / 200001990606    Processing Status: **Outgoing Order - completed (34)**    Amount: **2,45 usd**    Reserved By User ID: -  
Transaction Type: Credit Trsf.RCP (CT\_RCP)  
Input Order: [03.06.2019 / 100000168007](#)  
Output Order: [03.06.2019 / 500000092002](#)

### PROCESS FLOW



### Recipient Item

📄 📄+ Reject Simulate Processing ...

Item Key: 31.01.2019 / 200000752223      Processing Status:      Amount:      Reserved By User ID  
Transaction Type: Credit Transfer RCP - credit item (CT\_RCP)      **In Postprocessing (70)**      **15,24** EUR      Kolja Ewering  
External Status:

ITEM DATA    INSTRUCTIONS

SLA Country Restriction / Transaction type CT\_RCP is not allowed for country AE [More](#)

#### General

Payment Priority:

Amount:

Amount Acct Cray:

Original Amount:

Exchange Rate: 0,0000000000

External Status:

Cat. Purpose Code:

Service Level Code:

#### Account

Clearing System Member ID Code:

Bank Country:

Bank Key:

BIC:

Account Number:

IBAN:

Account Currency:

Account Holder:

#### Account Address

**Structured**    Unstructured

Street:

Building Number:

ZIP:

Town:

Country Subdivision:

Country:

Save    **Process**    Cancel



Follow us



[www.sap.com/contactsap](http://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](http://www.sap.com/copyright) for additional trademark information and notices.

