

# ASAPIO enables SAP Systems for Event Messaging with Solace PubSub+

Product Overview | January 2022



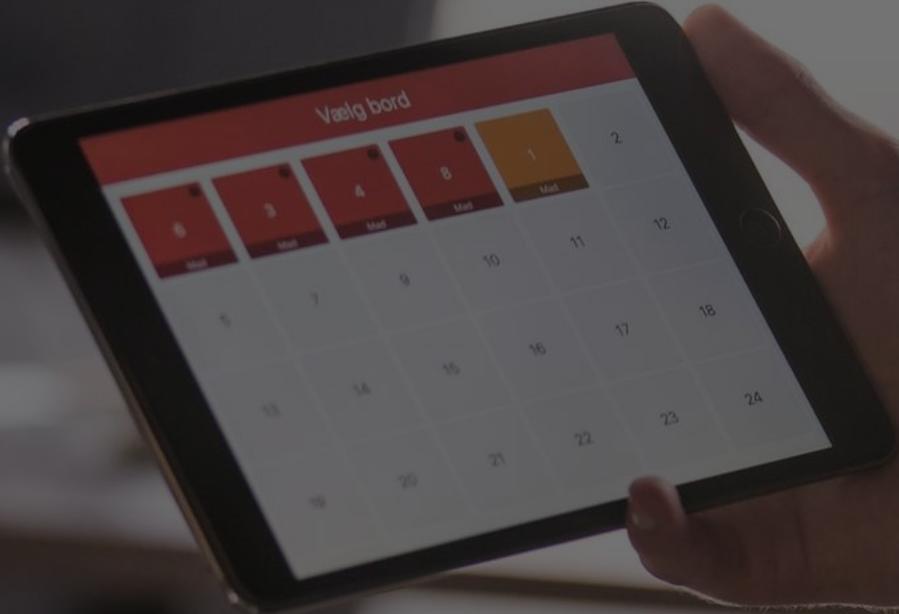
**SAP**® Certified  
Powered by SAP NetWeaver®





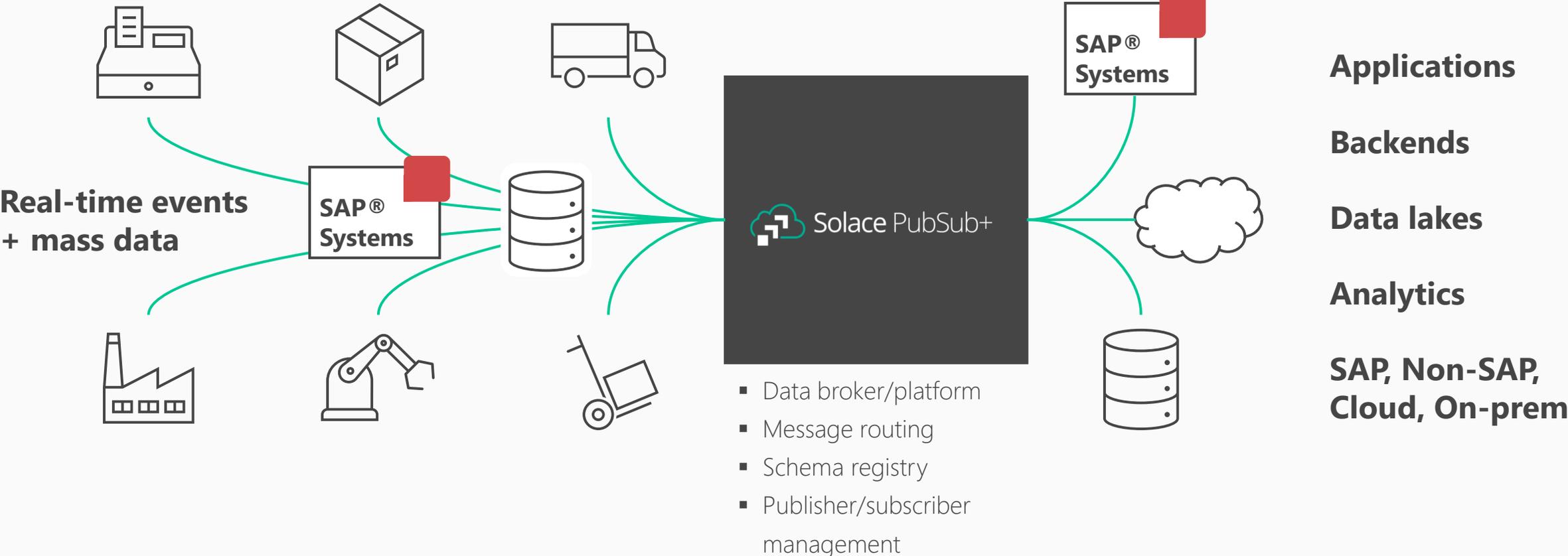
# Companies are becoming Software-defined

Online Shops, Digital Manufacturing,  
Real-time Logistics, Personalized Aftersales



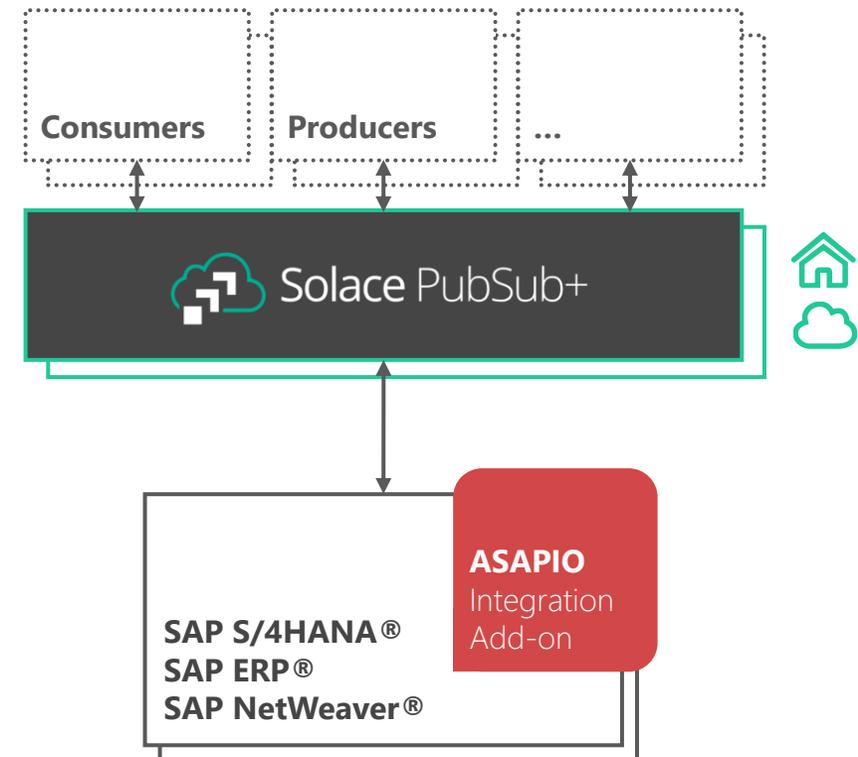
**...and this requires data from SAP systems!**

# ASAPIO and Solace enable SAP systems for Event Driven Architecture



# ASAPIO Connector for Solace® PubSub+

- ✓ One solution for any SAP connectivity
- ✓ Code-less interfaces AND custom code
- ✓ Outbound AND inbound messaging
- ✓ Real-time events AND mass data transfer
- ✓ Change Data Capture for any SAP application and master data
- ✓ Works with SAP ERP, SAP S/4HANA and many SAP NetWeaver systems.

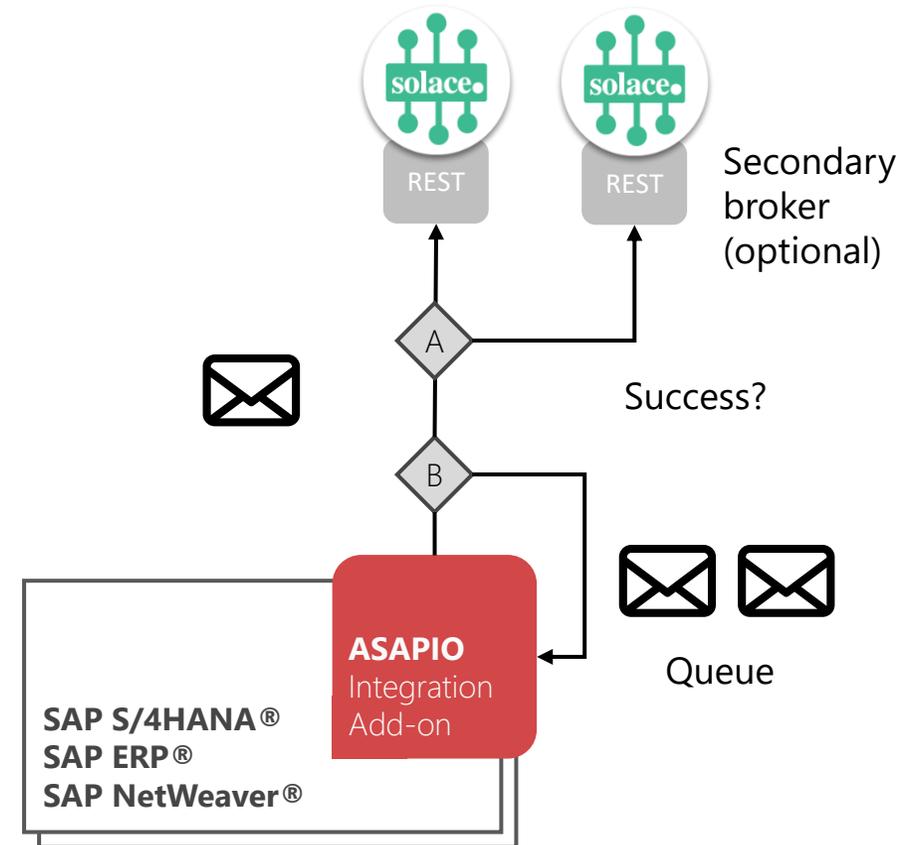


# Reliable message delivery with ASAPIO: “At least once” strategy + fail-over connections

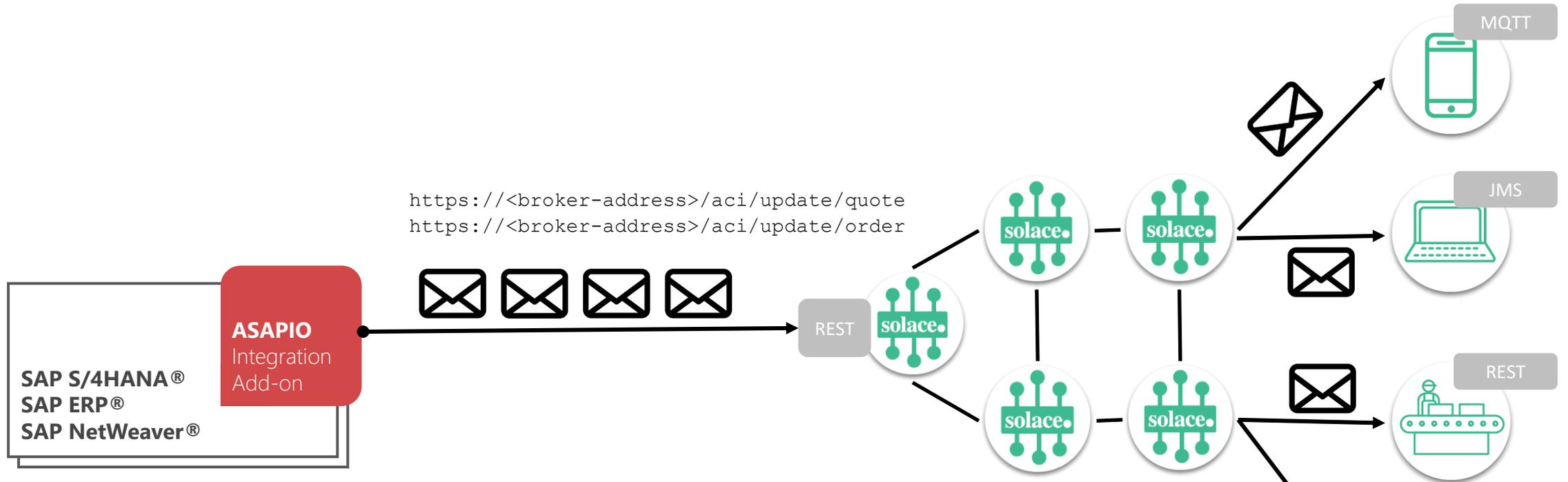
ASAPIO Integration Add-on has an **at least once** strategy to secure the delivery of messages to the Solace PubSub+ broker.

**(A)** If a broker is not available, ASAPIO supports automated switchover to a secondary broker.

**(B)** Messages are queued for re-sending (by a scheduled clean-up job) until a broker returns a success message confirming the receipt.



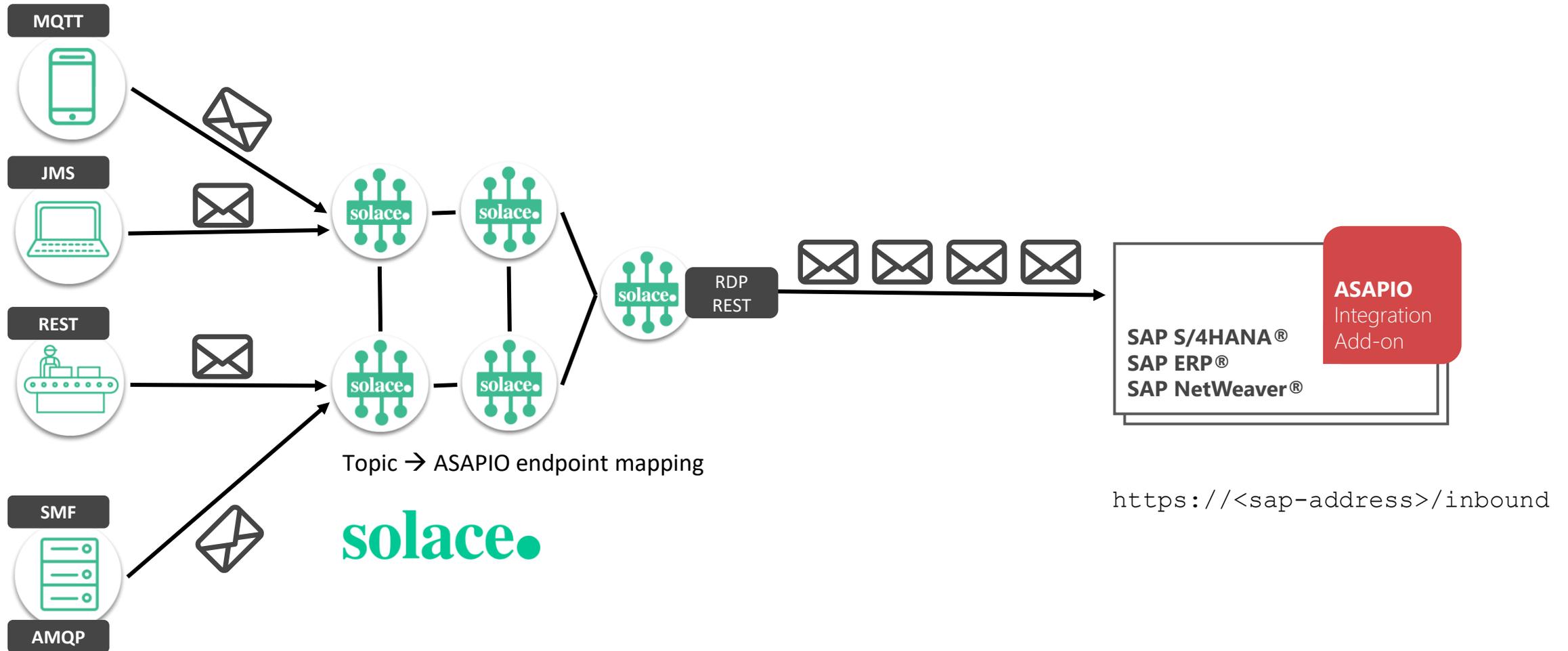
# Outbound event processing with Solace & ASAPIO



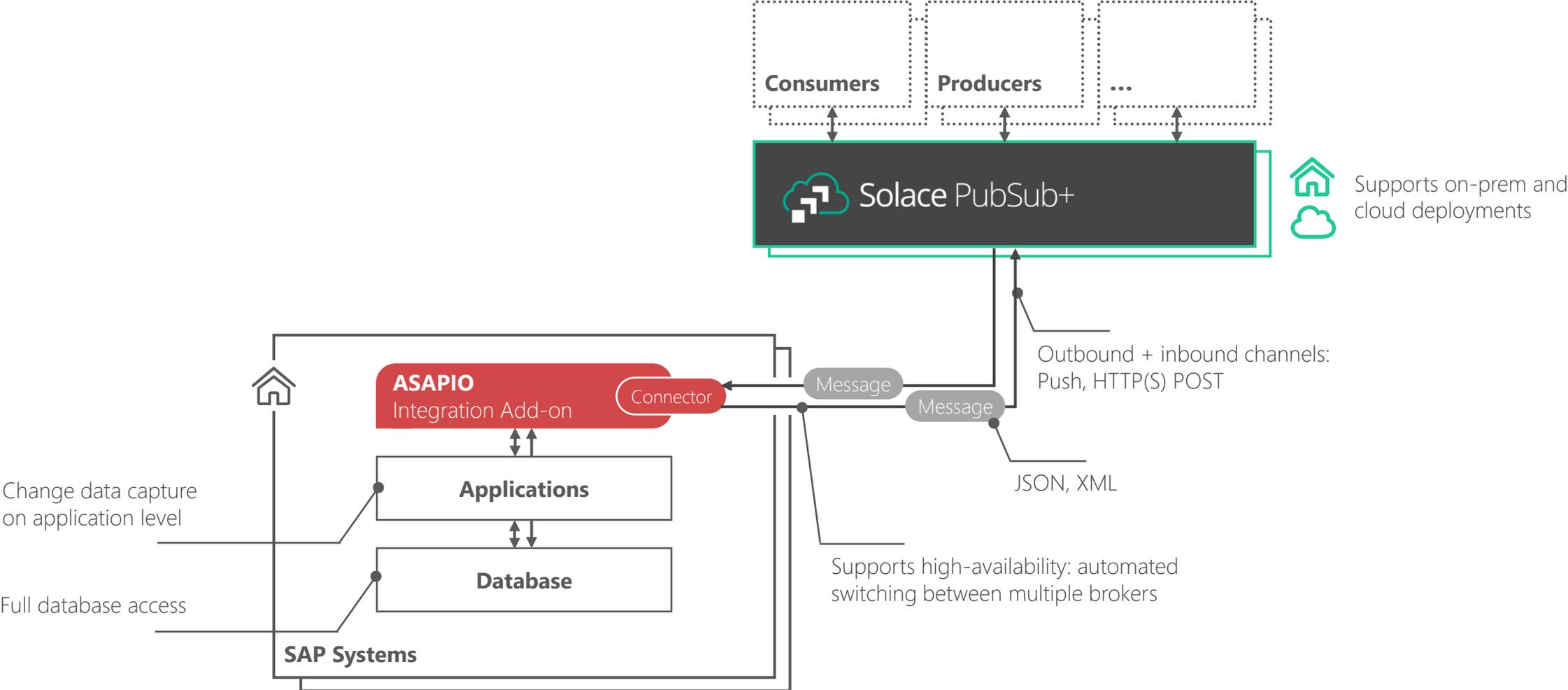
## REST Endpoint → Solace Broker Topic Mappings

| SAP-ACI Endpoint  | Topic                 |
|---|-----------------------|
| <a href="https://&lt;broker-address&gt;/aci/update/salesorder">https://&lt;broker-address&gt;/aci/update/salesorder</a> | aci/update/salesorder |
| <a href="https://&lt;broker-address&gt;/aci/update/quote">https://&lt;broker-address&gt;/aci/update/quote</a>           | aci/update/quote      |
| <a href="https://&lt;broker-address&gt;/aci/update/warehouse">https://&lt;broker-address&gt;/aci/update/warehouse</a>   | aci/update/warehouse  |

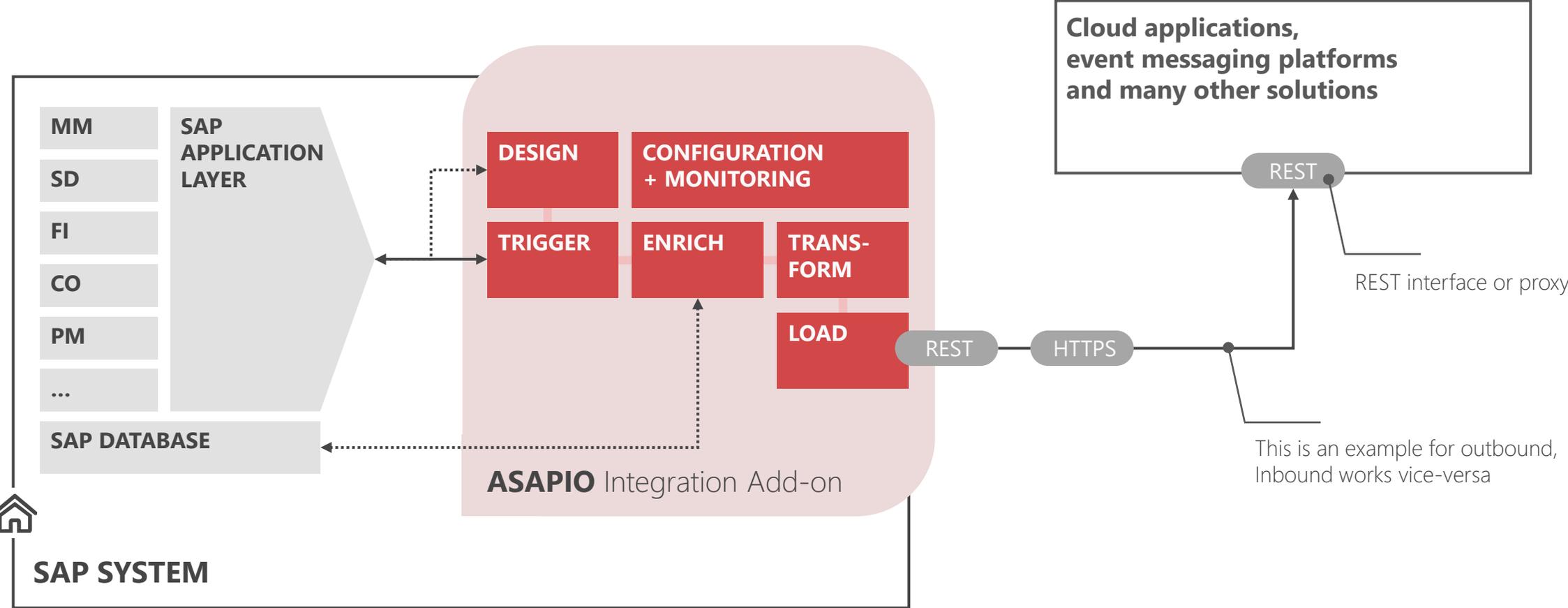
# Inbound event processing with Solace & ASAPIO



# ASAPIO Connector for Solace® PubSub+



# Architecture / How does it work?



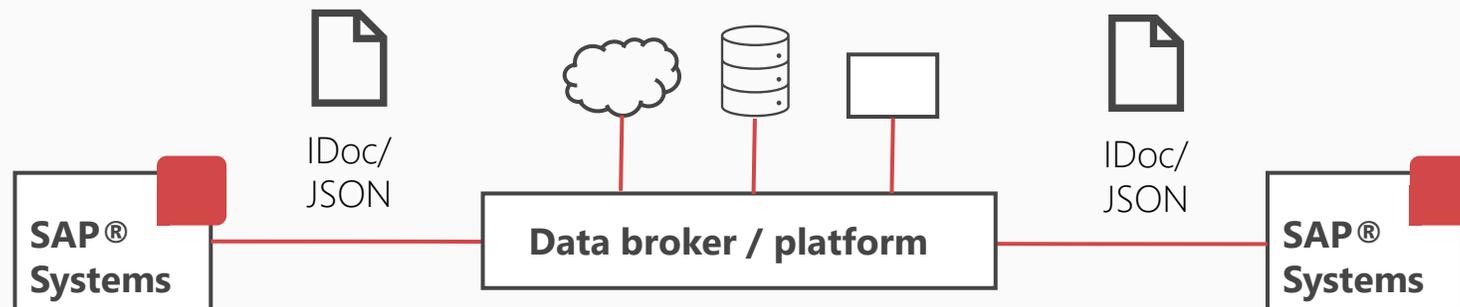


# IDoc-to-JSON conversion

# How to use IDoc messaging in today's IT landscapes?

IDoc messages have been the gold standard of reliable SAP-to-SAP communication for many years in SAP ERP, and are still strategic and relevant for SAP S/4HANA – ASAPIO Integration Add-on now allows you to use all your SAP standard and custom IDocs in today's heterogeneous IT landscapes and for event-driven architecture – code-less!

- **On-the-fly IDoc conversion to JSON-based messages, bidirectional**
- **for SAP-to-SAP connectivity via data brokers and platforms**
- **for SAP-to-any connectivity, using IDocs as a proven and reliable interface**



# On-the-fly bidirectional IDoc-to-JSON conversion, with ASAPIO Integration Add-on

## Features overview

- ✓ For **IDoc-to-IDoc connectivity**, e.g. for connecting SAP systems via data platforms
- ✓ For **IDoc-to-any connectivity**, e.g. use existing interfaces for event-driven messaging with cloud platforms
- ✓ Supports **any IDoc** – SAP standard and custom-built
- ✓ Dynamic **topic generation** from IDoc payload
- ✓ Works as own IDoc processing port, no changes required to existing communication channels
- ✓ Supported for all ASAPIO connectors and available for SAP S/4HANA, SAP ERP and other supported SAP NetWeaver systems



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# Why use ASAPIO for SAP integration?

Our customers choose ASAPIO Integration Add-on because it is fast to implement and delivers high performance. It enables SAP systems for both event-driven and mass data transfer, supporting inbound and outbound communication. The Add-on provides Change Data Capture (CDC) on SAP application layer, which has significant advantages over middleware or database-only approaches.

**80%**  
less time

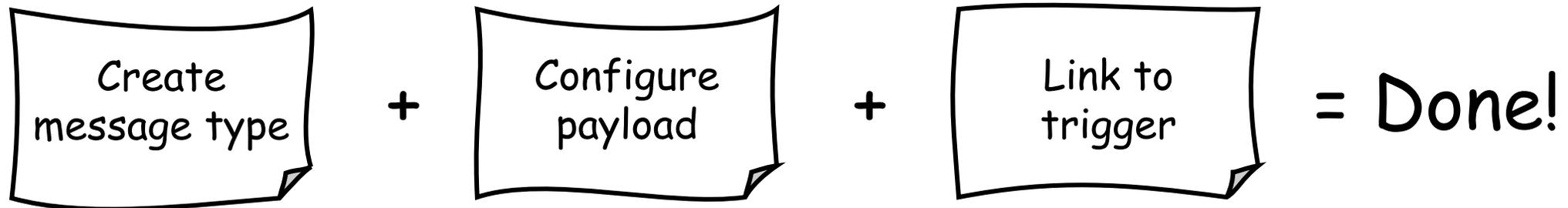
*“With the help of ASAPIO’s integration solution, we could reduce our interface development and deployment time by ~80%. It is easy to configure and operate, because it leverages proven SAP standard technology.”*

— Technology Architect, Oil & Gas Customer (US)

# How to configure an outbound event

**Just 3 steps to send out messages, based on e. g. SAP business object changes:**

1. Create a message type for any configured outbound channel
2. Configure the payload (message content) e. g. using Message Builder, Event Notifications or custom code
3. Link the trigger to the message type (business object event, scheduled job or custom trigger)



# Features for code-less message configuration

## ASAPIO delivers built-in features for code-less creation of events.

- ✓ **Event Notification** handler can automatically generate events from SAP business object events, with event name, SAP object type and id. Compatible with SAP S/4HANA event notifications.
- ✓ **Message Builder** generates message payloads automatically, based on tables and fields which can be configured in database views. The handler creates a structured JSON message body and can be used in both event-driven and batch-mode transfers.

### Event Notification

Event name,  
SAP business object type,  
SAP object ID

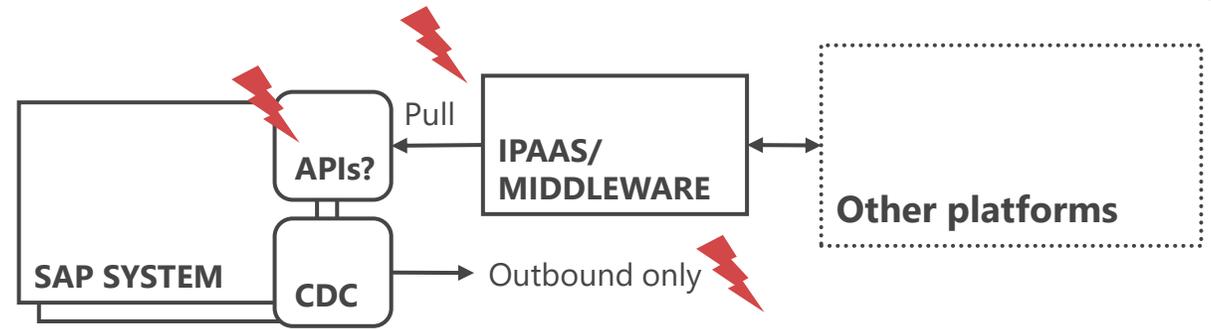
### Message Builder

```
{
  "specversion": "1.0",
  "type": "asapio.aci.acievents01.msctest",
  "source": "SAP_EM/MATERIAL_CHANGE",
  "id": "MATERIAL_CHANGE2020110322541650 ",
  "time": "2020-11-03T22:54:15.565Z",
  "data": {
    "MARA": [
      {
        "MANDT": "100",
        "MATERIAL_NUMBER": "CP_5001",
        "MTART": "FERT",
        "MATKL": "015",
        "BASE_UNIT": "ST",
        "MARM": [
          {
            "ADDITIONAL_UNIT": "KAR",
            "UMREZ": 15,
            "UMREN": 1,
            "EAN11": "4015000267397",
            "BRGEW": 3.750,
            "GEWEI": "KG"
          }
        ]
      }
    ]
  }
}
```

# ASAPIO + Solace approach, compared to others

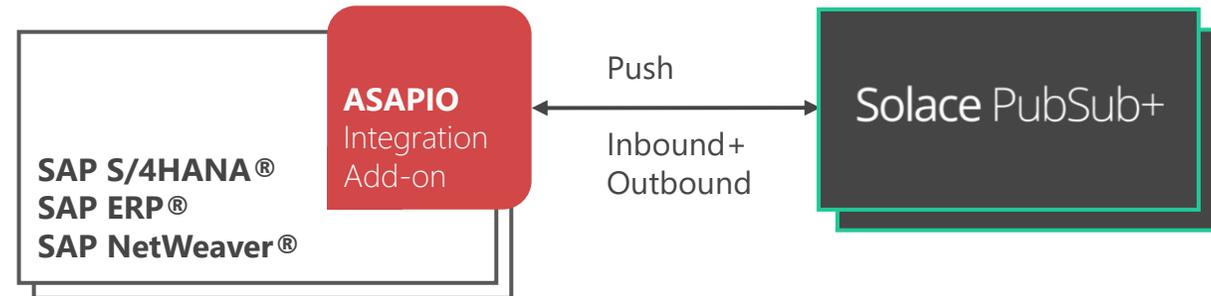
## Downsides of Middleware or Database CDC approaches:

- Custom API developments required
- iPaaS or middleware required
- CDC tools are fast, but have no application access
- Typically only 1:1 connectivity
- Middleware is a performance bottleneck



## Benefits of ASAPIO approach:

- Native connectivity
- Change Data Capture on application layer
- Full database access
- Certified by SAP and Solace
- Supports high availability scenarios



# ASAPIO Integration Add-on is built for high performance

## Performance:

- ✓ Multi-threaded batch mode, for load distribution to multiple SAP work processes
- ✓ Close to zero latency, for true real-time messaging
- ✓ Minimal system performance impact in daily operation

\*Example figures from April 2021, from one of our large enterprise customers. Connectivity use-case: SAP ERP to a data lake, via ASAPIO Integration Add-on and REST proxy.

**8.000**  
events/second\*

Outbound  
Multi-threaded  
Batch mode

**260.000**  
events/day\*

Outbound  
Event-driven

# Key benefits of using ASAPIO Integration Add-on for Solace®

## Native SAP connectivity

- ✓ Change data capture on SAP application level
- ✓ Full database access
- ✓ Outbound + inbound
- ✓ for SAP S/4HANA®, SAP ERP® and other systems

One integration solution,  
for any connectivity

## Code-less + custom code

- ✓ Notification Events built-in, for SAP business objects
- ✓ Message Builder creates message payload, code-less
- ✓ Business content available
- ✓ Fully extensible

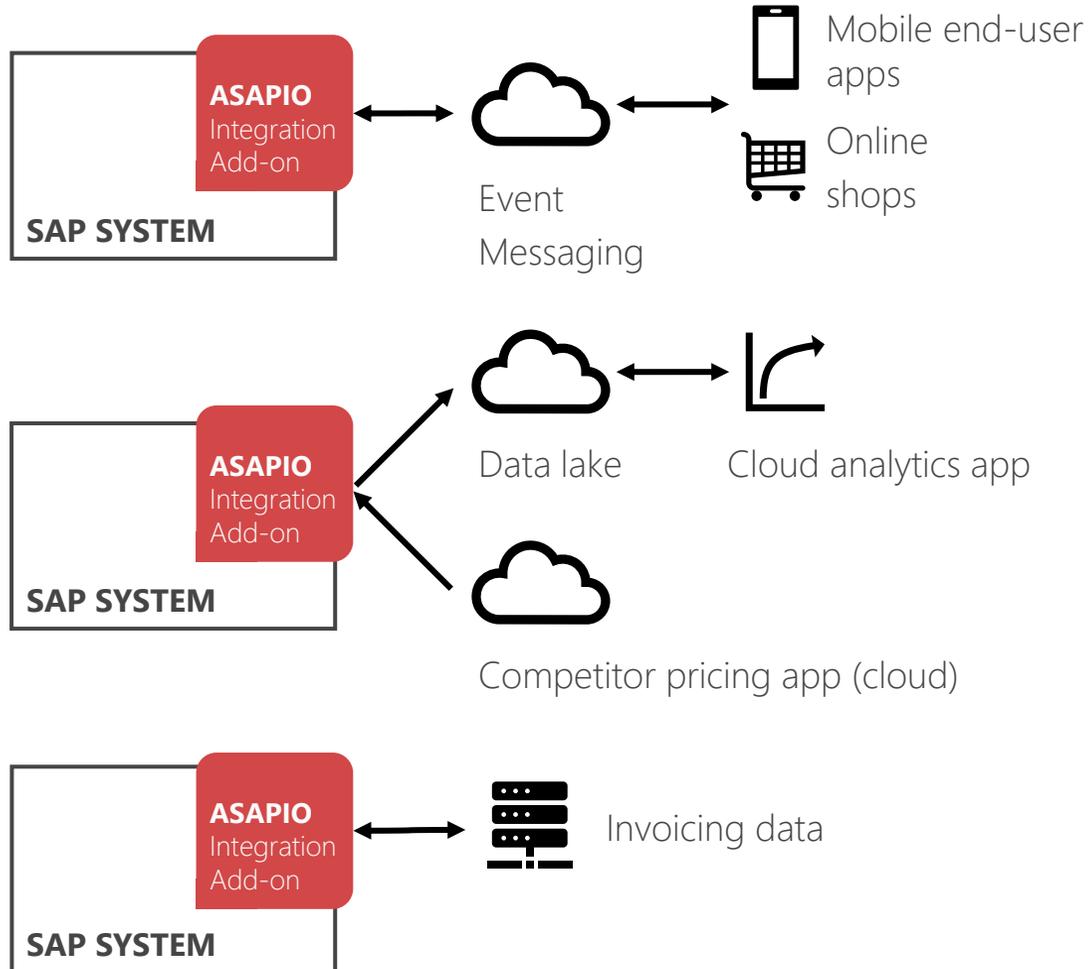
Saves time, reduces risk +  
lowers maintenance efforts

## Real-time + mass data

- ✓ Single event mode
- ✓ Batch mode
- ✓ Multi-threaded mode, for large data volume
- ✓ Trigger events by configuration

Event-driven integration is  
strategy, at SAP + customers

# Business use-case examples from our customers



## Sales, logistics and procurement data

Provide high-volume data (SAP sales orders and logistics info), for buffered data provisioning to data lakes, end-customer mobile apps, online shops and more.

## Retail sales and material stock data

E. g. send SAP order volume and stock info data to data lakes, for real-time analytics during high-volume promotions (Black Friday).

## Product pricing data

Inbound process, for event-driven load of competitor pricing into SAP ERP®, for automated price benchmarking.

## Invoice management integration

Inbound application integration, e. g. event-driven transfer of invoicing data to SAP and non-SAP systems.

# ASAPIO services for customers and partners

## ASAPIO supports customers and SAP partners:

- ✓ Consulting services for design and implementation
- ✓ Enablement sessions for SAP consultants and developers
- ✓ Pre-sales and sales support (e.g. Demos, Presentations)
- ✓ Global back office support from two time zones possible
- ✓ Early info about roadmap and product updates
- ✓ ASAPIO is open to co-design prepacked solutions and additional connectors, together with customers/partners
- ✓ Co-sellers and resellers are welcome

CONSULTING

TRAINING +  
CERTIFICATION

DEVELOPER  
ENABLEMENT

BACK OFFICE  
SUPPORT

CO-SELLING

# Get ASAPIO Integration Add-on for your Solace connectivity!

## Native connectivity for SAP® systems to Solace PubSub+

- ✓ One solution for any SAP connectivity
- ✓ Real-time events + mass data transfer
- ✓ Outbound + inbound messaging
- ✓ Change Data Capture for SAP applications
- ✓ Code-less + custom code
- ✓ Certified + available from Solace and SAP\*

Visit [solace.com/asapio/](https://solace.com/asapio/) for more information



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