



# Real-time Integration of SAP Data

Enable SAP Systems for Event-driven Architecture,  
with SAP Business Technology Platform.

May 2021

# ASAPIO – SAP® Partner for Cloud Integration and Procurement Solutions

## **Experts in integration of cloud systems, SAP procurement solutions and technology.**

Founded in 2003 and managed by three former SAP employees, we are today an SAP Silver partner with a growing team of consultants and software developers. We operate worldwide, with headquarters in Munich, offices in Hamburg and Stuttgart, and our own nearshore center.


### **ASAPIO Integration Add-on**

Native connectivity for SAP systems

### **ASAPIO Consulting**

Strategy and implementation services





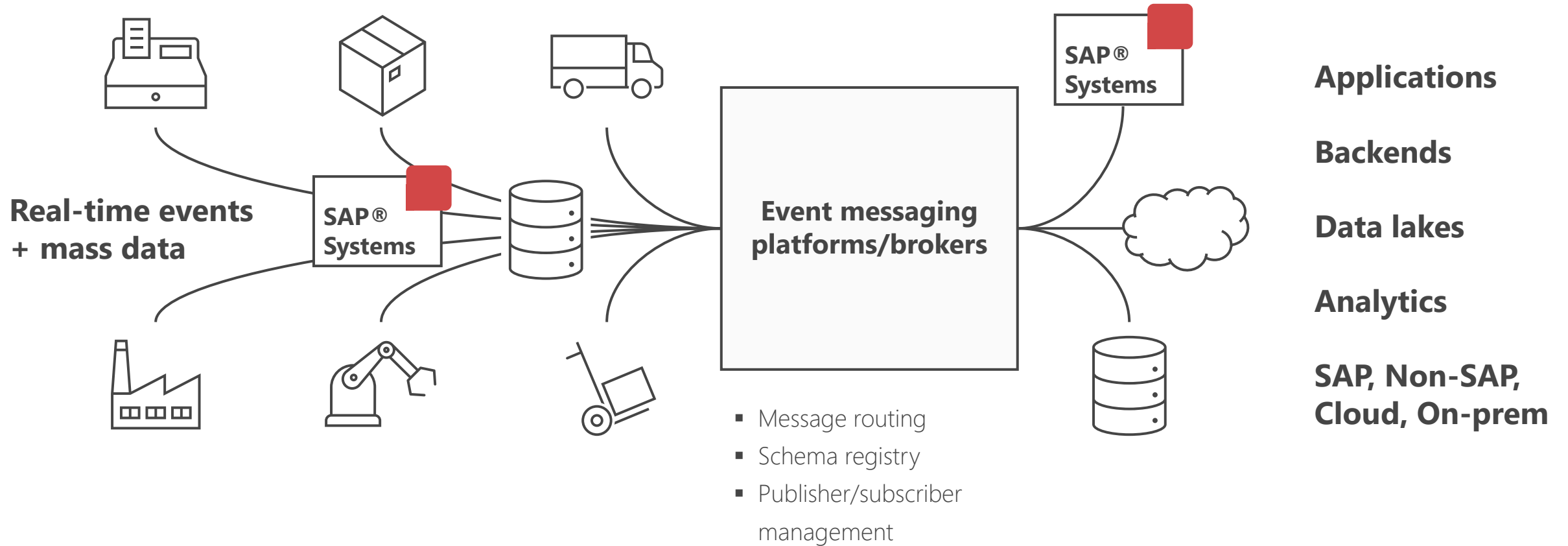
# Companies are becoming Software-defined

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



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

# Event-driven is the new paradigm for data in motion and SAP data is a key part of it!



# Top requirements for SAP system integration

**Scalable** and fast to implement, because Digitalisation brings a growing number of interfaces

**Time-to-market** is crucial, and building custom SAP interfaces always caused significant effort

**Flexibility** is a requirement, because IT landscapes and business needs will change

**Strategic** solutions are necessary, aligned with customers and SAP's product strategy

**Universal** connectivity approaches are required, to reduce overall complexity and efforts in operation

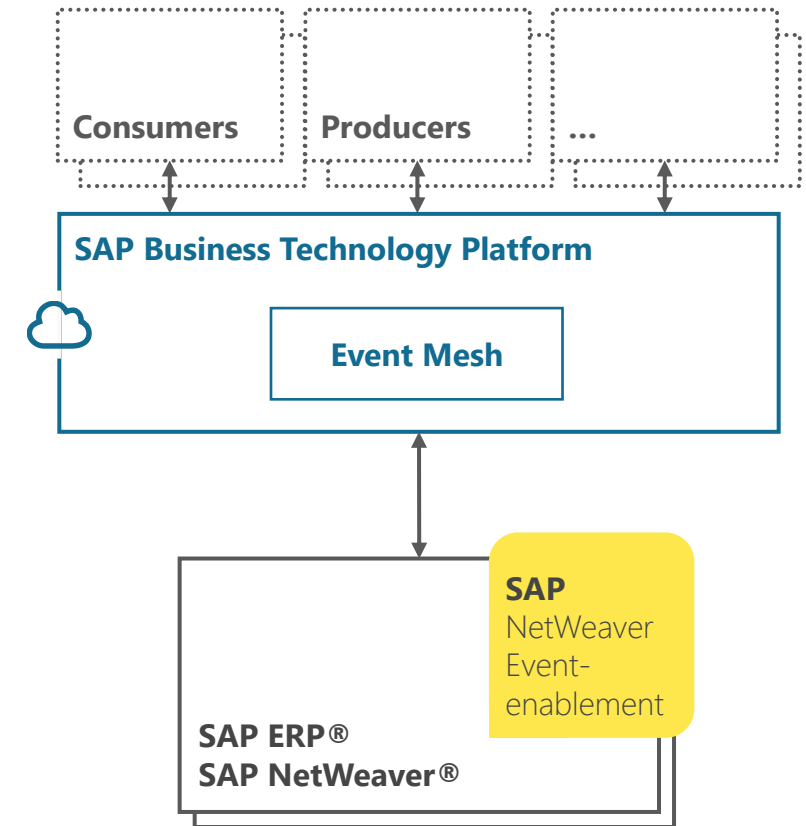


# SAP NetWeaver® Event-enablement Add-on

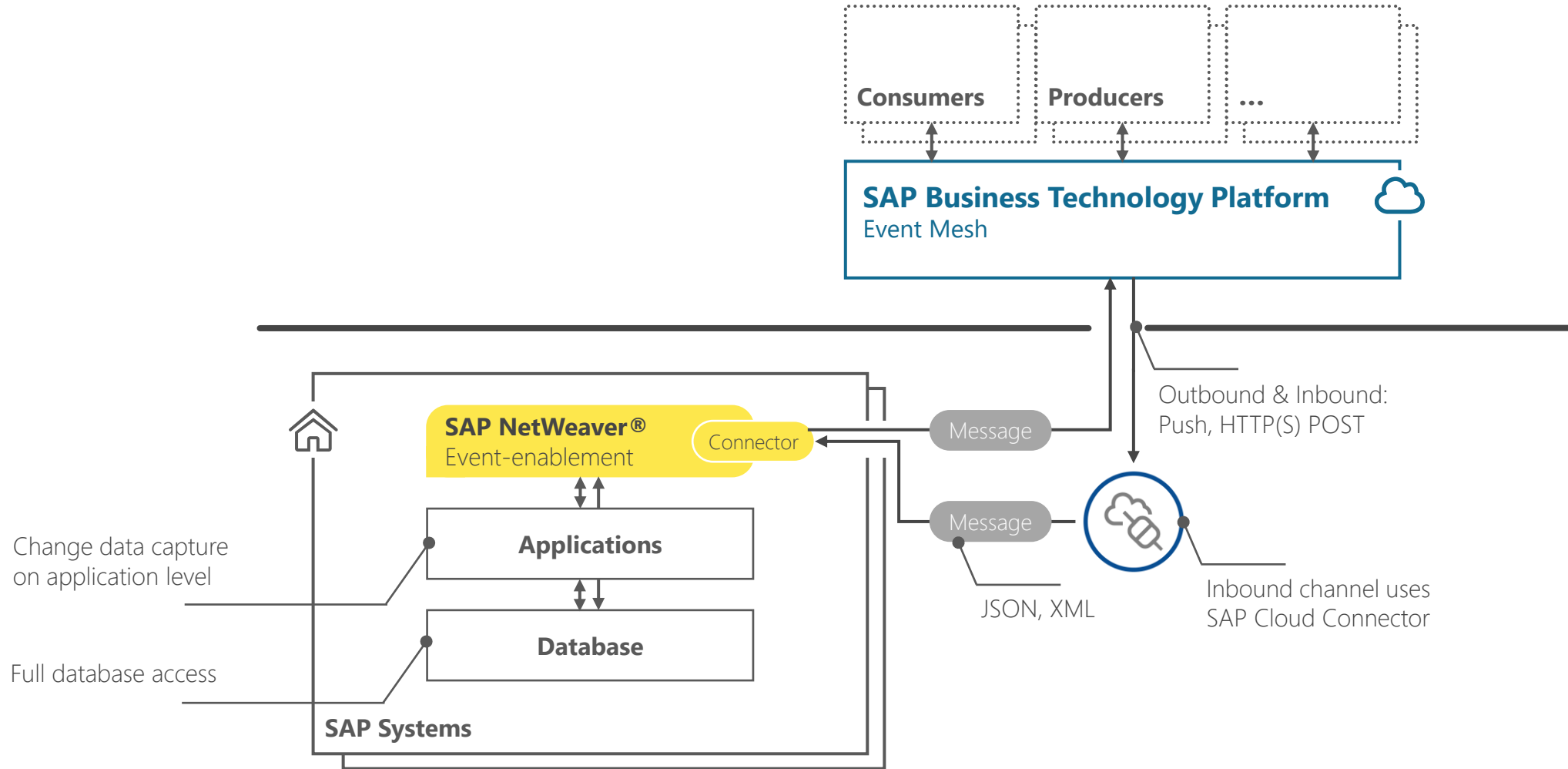
## Key features:

- ✔ Supports outbound (push) messages
- ✔ Supports inbound messages via SAP Cloud Connector and SAP Event Mesh Webhooks
- ✔ Processing options: Single event; batch loads (single events per message); multi-threaded batch loads across multiple SAP work processes.
- ✔ Change Data Capture on SAP Application Level
- ✔ Full SAP database access
- ✔ Code-less message configuration

SAP NetWeaver Event-enablement Add-on is based on ASAPIO Integration Add-on



# SAP NetWeaver® Event-enablement Add-on





# ASAPIO offers additional connectivity to other platforms

**Native connectivity for SAP® systems to cloud applications, event messaging platforms and many other solutions.**

- ✓ 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 by SAP + available from SAP\*

SAP Fieldglass 

SAP Business Technology Platform  
Event Mesh

SAP Add-ons\*

SAP Ariba 

Solace PubSub+

Microsoft  
Azure

VERGABEMANAGER

CONFLUENT

APACHE  
kafka

StreamSets

Google Cloud

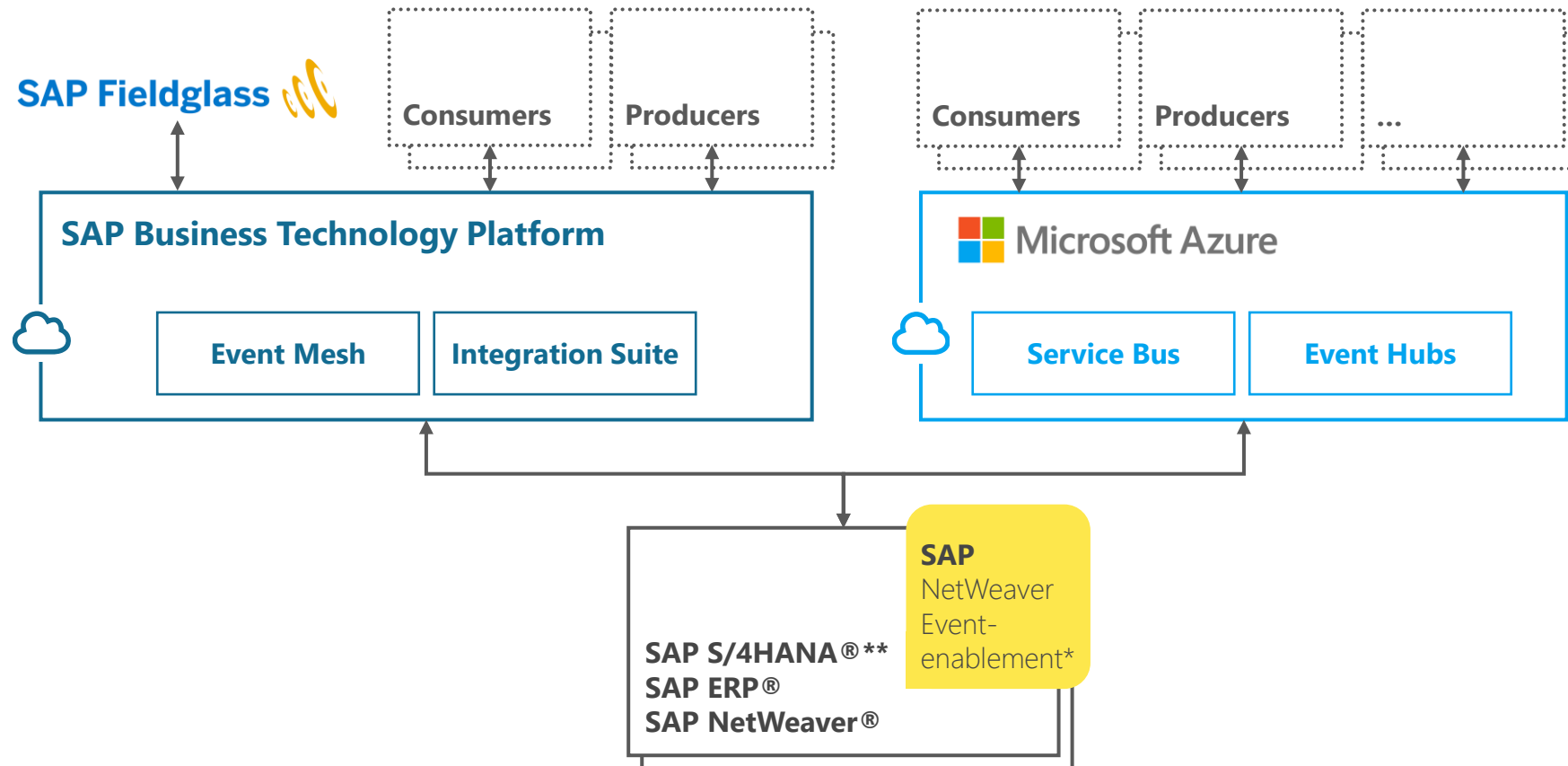
ASAPIO Connectors



SAP S/4HANA®  
SAP ERP®  
SAP NetWeaver®

ASAPIO  
Integration  
Add-on

# Example – Hybrid scenario with Microsoft Azure + SAP Event Mesh

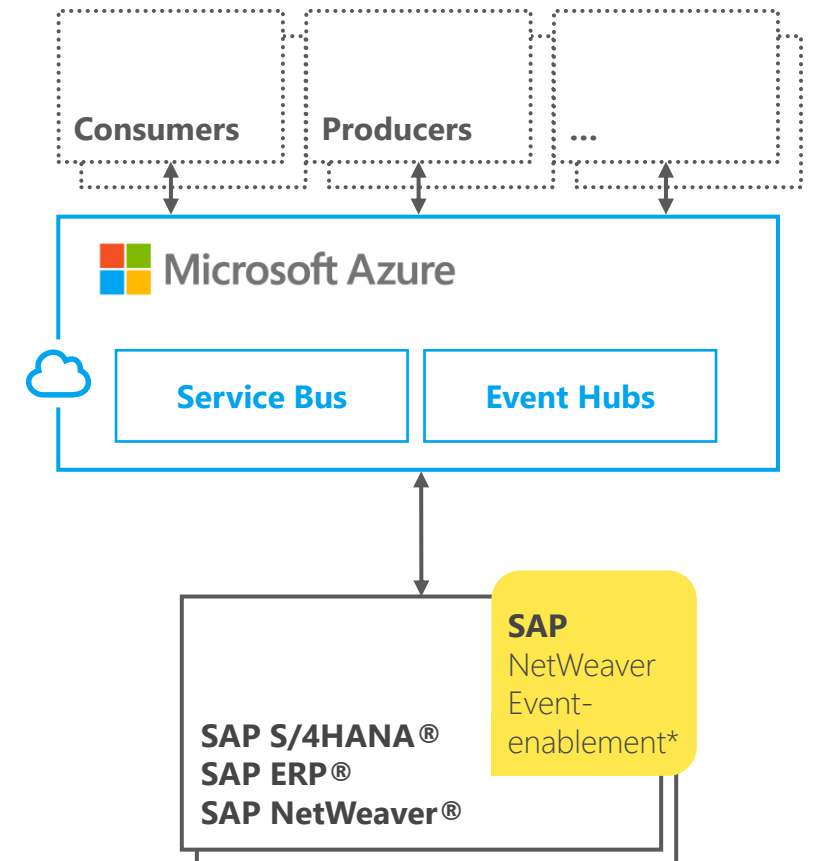


\*with additional ASAPIO Connector for Microsoft® Azure®

# ASAPIO Connector for Microsoft Azure

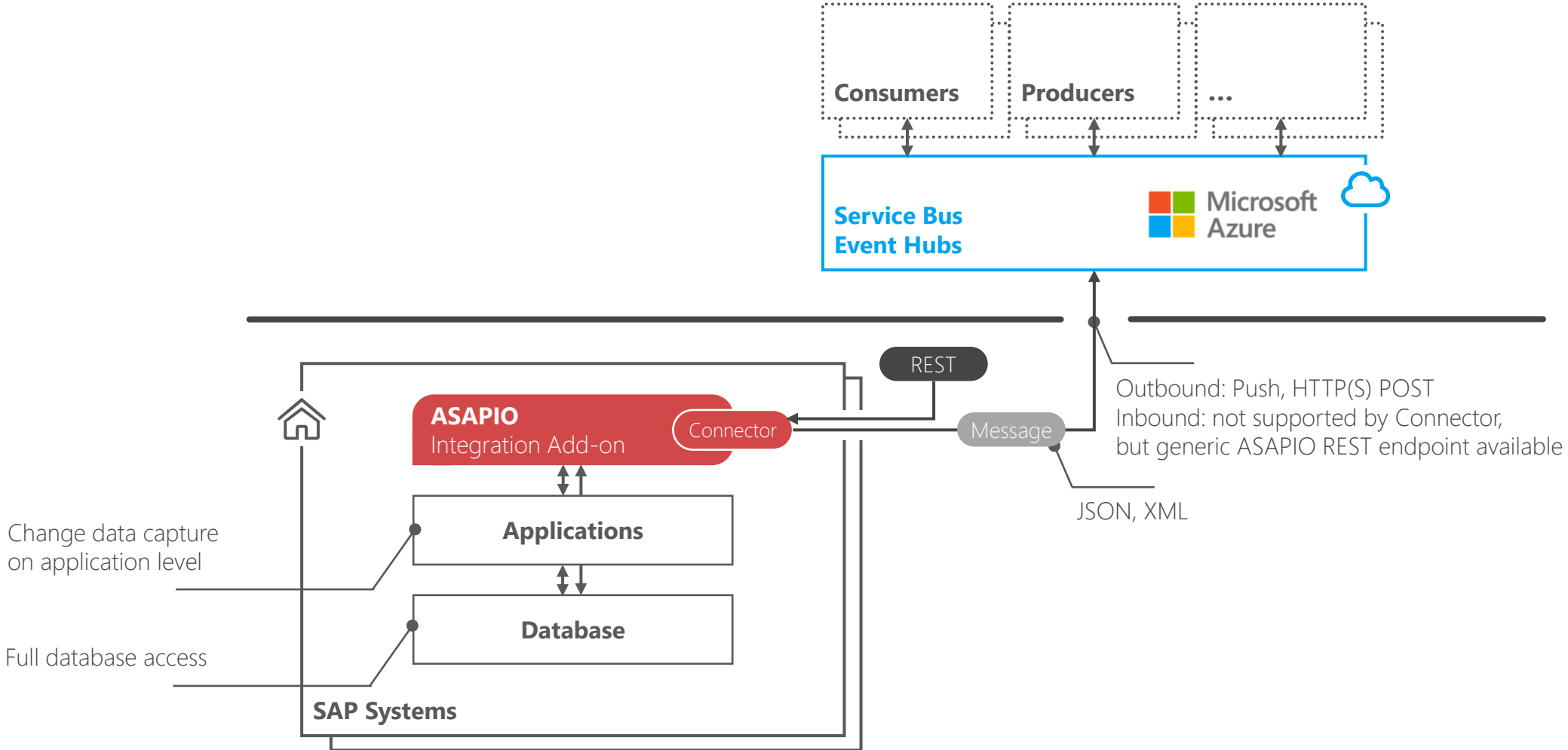
## Key features:

- ✔ Connect to **Service Bus** and **Event Hubs**
- ✔ Supports outbound (push) messages
- ✔ Inbound messages possible via ASAPIO REST endpoint
- ✔ Uses HTTP(S) POST method/REST
- ✔ Change Data Capture on SAP Application Level
- ✔ Full SAP database access
- ✔ Code-less message configuration



\*with additional ASAPIO Connector for Microsoft® Azure®

# ASAPIO Connector for Microsoft Azure



# Key benefits of ASAPIO Integration Add-on

## 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

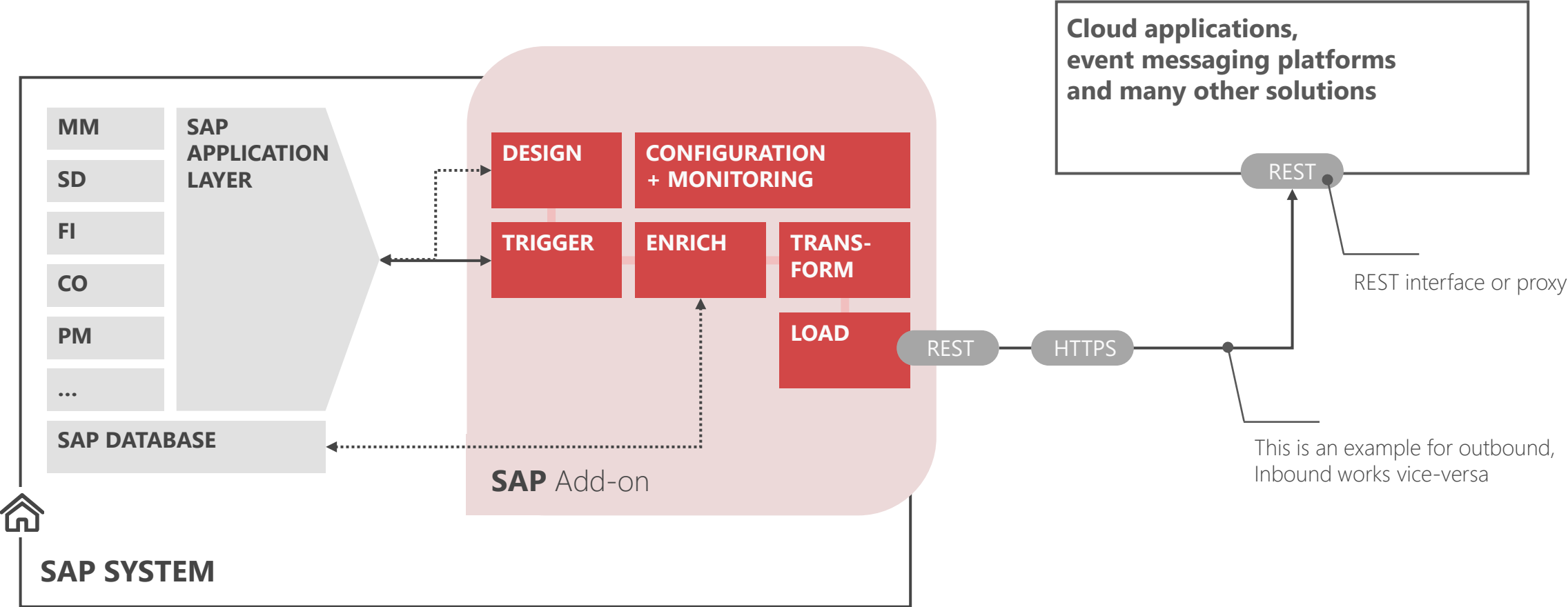
Saves time, reduces risk +  
lowers maintenance efforts

## 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

# Architecture / How does it work?



# Features for code-less message configuration

**ASAPIO delivers two 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

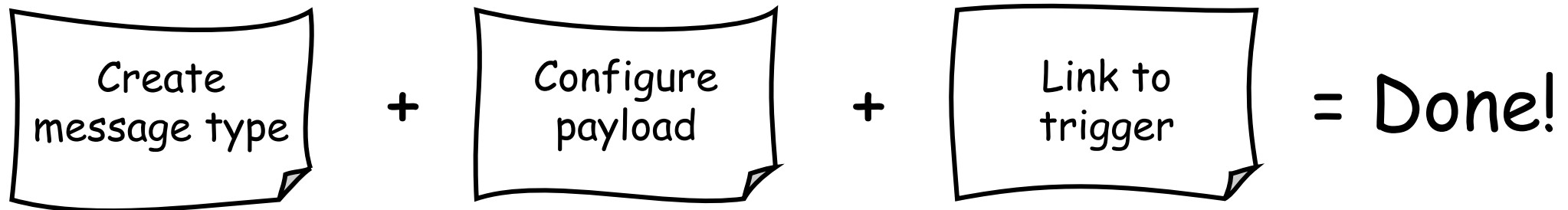
## Message Builder

```
{
  "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"
          }
        ]
      }
    ]
  }
}
```

# 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)

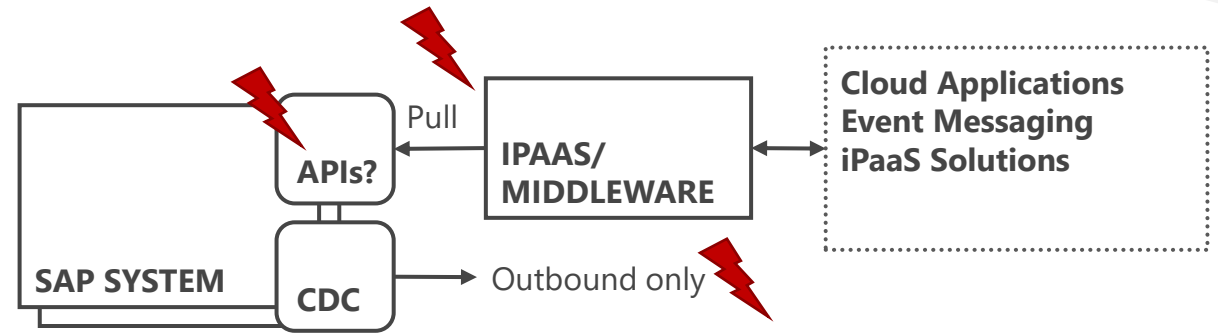




# ASAPIO approach compared to others

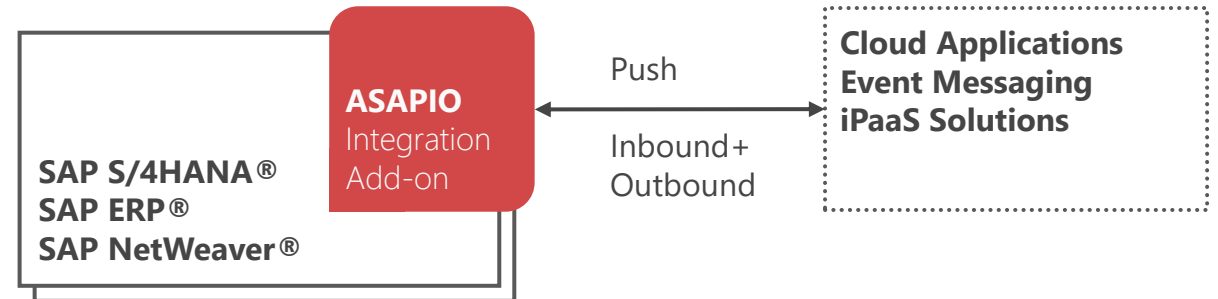
## Downsides of Middleware or Database CDC approaches:

- ✓ 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
- ✓ One solution for any connectivity
- ✓ SAP-certified
- ✓ High performance



# ASAPIO Integration Add-on is built for high 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.

## Performance example data\*:

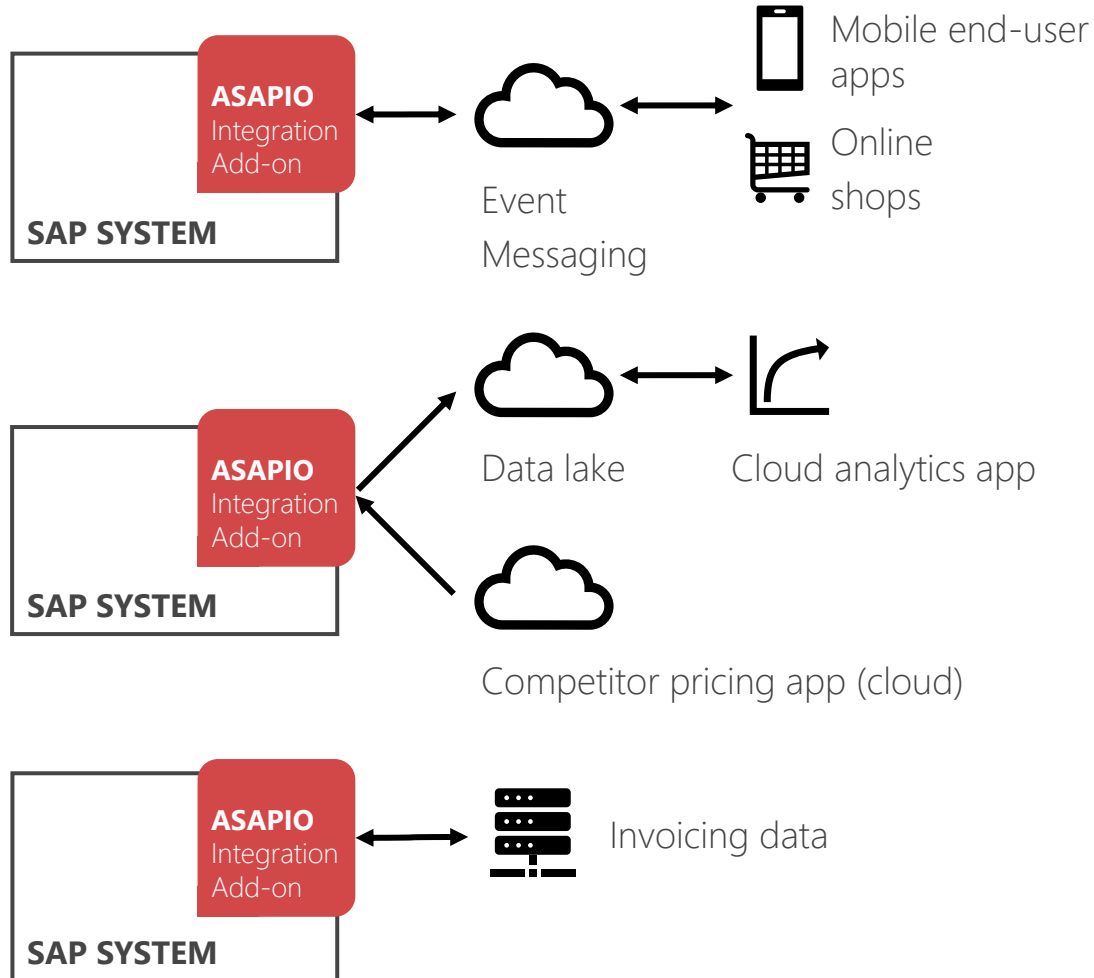
**8.000**  
events/second

Outbound  
Multi-threaded  
Batch mode

**260.000**  
events/day

Outbound  
Event-driven

# 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.

# Get SAP NetWeaver Event-enablement Add-on for your SAP connectivity use-cases!

- ✓ 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 SAP\*

One integration solution for  
any SAP connectivity



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