



# Everyone is Talking About Digitalization - Let's Bring it to Life!

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## Learning Points

### **EVERYONE IS TALKING ABOUT DIGITALIZATION.**

How do we deal with it? Which tools are really supporting you here?

In this session, we would like to give you an overview, and ideas on how the Integration Framework supports digital transformation – on-premise, in the cloud or even on a small Raspberry Pi connecting business, people and things in a smart and efficient way.

***... let's bring it to life!***



# Agenda

- Quick facts
- **Digitalization** – transform your business
- Supporting **Digital Transformation**
- **Cloud Operation**
- Next generation ***Integration Framework 2.0***
- BPMN – supporting the ***Business Process Management*** standards
- Prepared for Industry 4.0 – supporting of **IoT**
- Live Demos



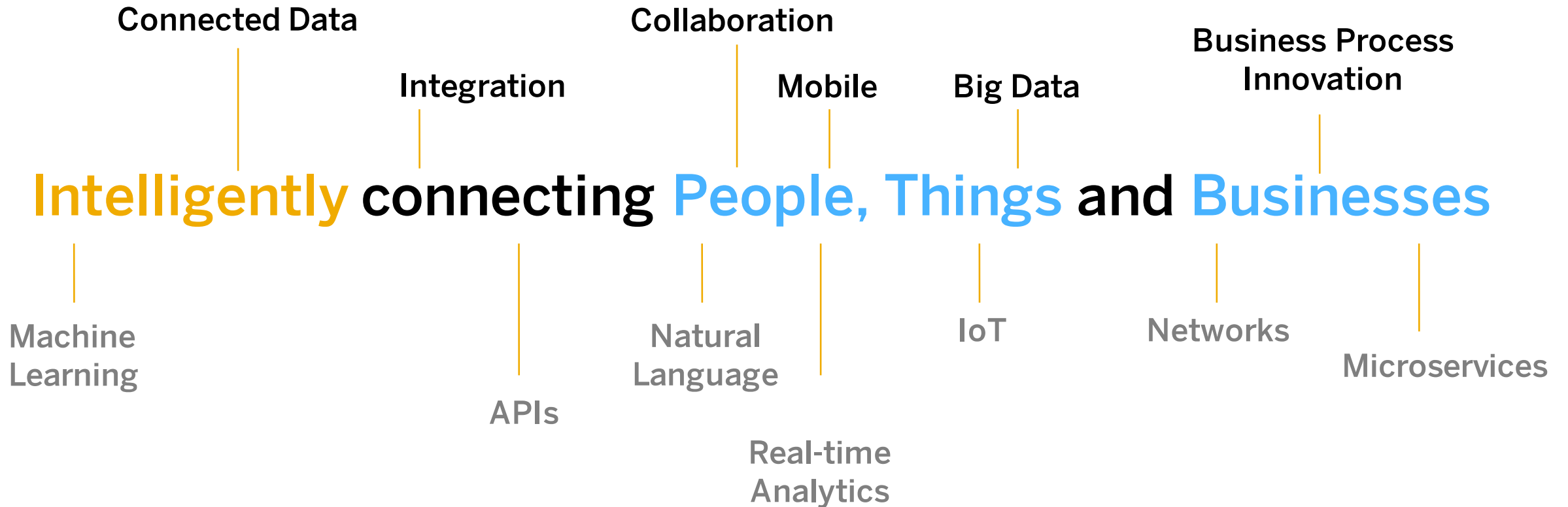
## 2017 was the Best Year Ever

- ✓ **33,000+** SAP Business One customers in **110+** countries are running the ***Integration Framework*** with either/both
  - standard content delivered by SAP
  - individual content built by partners and customers
- ✓ **600+** customers / **16,000+** users are running ***SAP Business One Intercompany Integration Solution*** which is a solution built on top of the Integration Framework
- ✓ **300+ large account customers** with **2,000+ subsidiaries** are using the *Integration Framework* to integrate *SAP ERP* and *SAP Business One*
- ✓ **3,000+** customers / **10,000+** users are running the ***SAP Business One Mobile Solution***
- ✓ **160+** customer are running the Integration Framework to integrate ***SAP Customer Checkout*** and *SAP Business One*



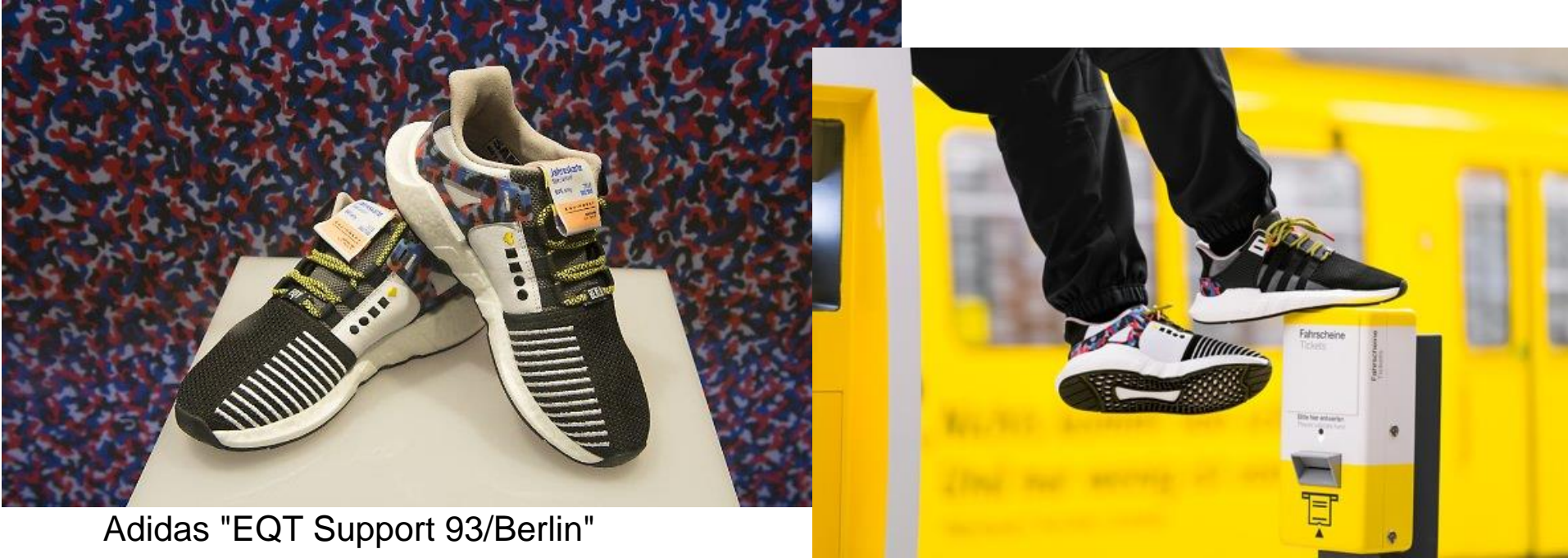
# Digitalization – Transform your Business

Every company to become a software-driven company by





## A Simple Example On How Things Get Digitally Transformed



Adidas "EQT Support 93/Berlin"

**This is not only a nice sneaker but also a valid ticket for all public transport in the city of Berlin**



**“Integration is a core competency of digital transformation”**

 **IDC** International Data Corporation



# The Integration Framework 2.0 Supports Digital Transformation

## Multiple Deployment Options

### on-Premise/ on-Demand



- **Single tenant**

### Cloud



- **Ready for cloud computing**
- **Supports multi-tenancy (iPaaS/SaaS)**

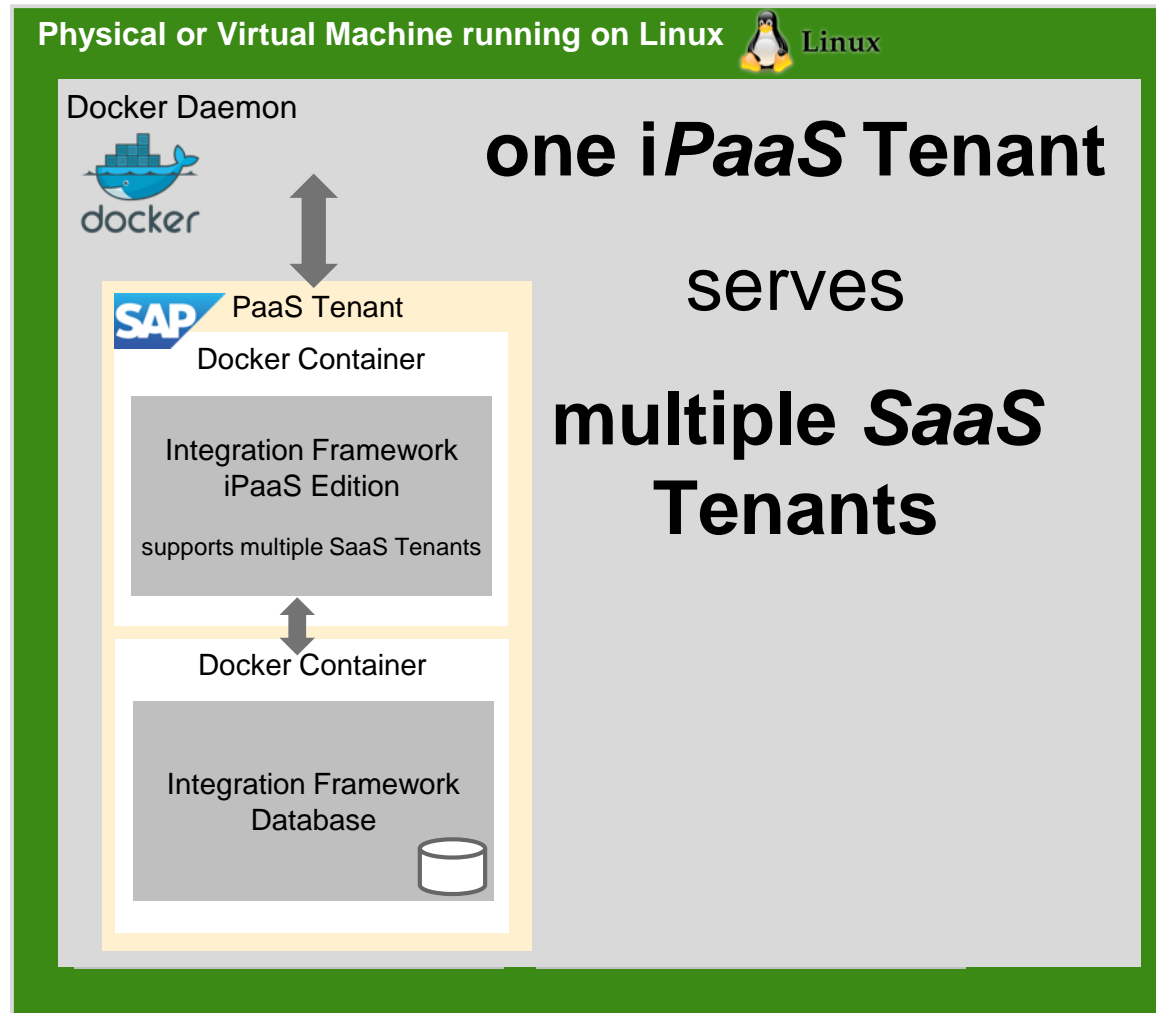
### Single Board Computer



- **Installation on e.g. Raspberry Pi**
- **Communicates e.g. with sensors**



# Cloud-Optimized Operation with Integration Framework 2.0



- Deployment in Cloud Platforms:



CLOUD FOUNDRY

- Multiple iPaaS tenants
- Multiple SaaS tenants
- New tenants up and running in 30 seconds
- Use cases:
  - SAP B1 cloud operated by SAP
  - SAP B1 cloud operated by partners
  - SAP B1 customer private cloud

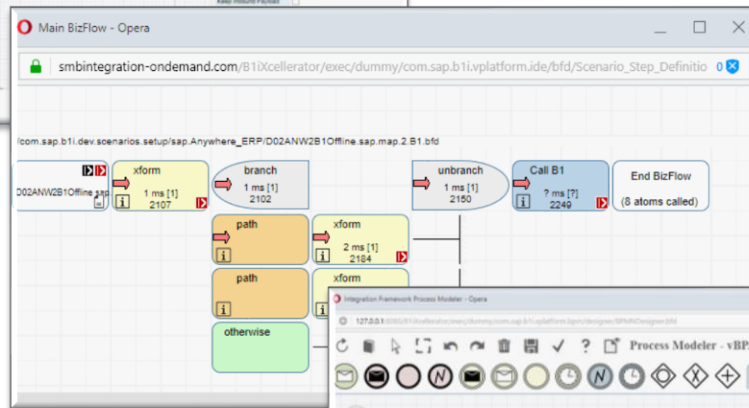
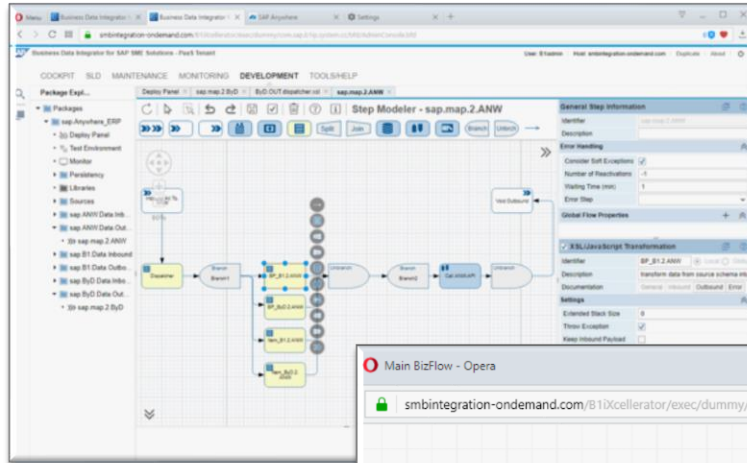


# The Next Generation Integration Framework 2.0

## New Programming Models for Scenario and Process Design

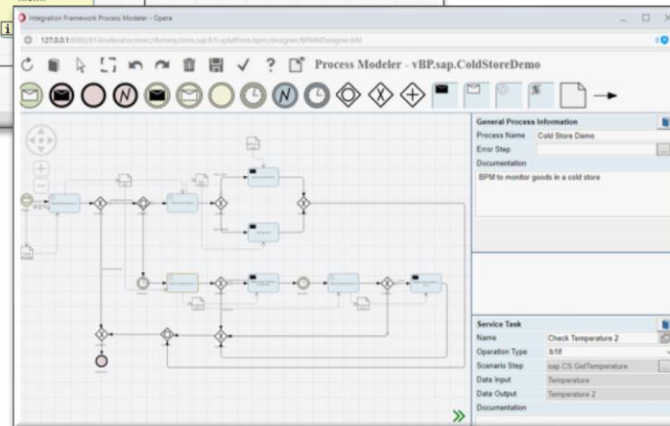
### Integration Framework 2.0

- New and modern web-based IDE
- Single and Multiple tenant integration model
- Also programming model for IoT



### Integration Framework 1.x

- Single tenant integration model only
- Makes use of the *Semantic Integration Model*:  
UI supported scenario design, inbuilt value mapping etc.



### Business Process Management

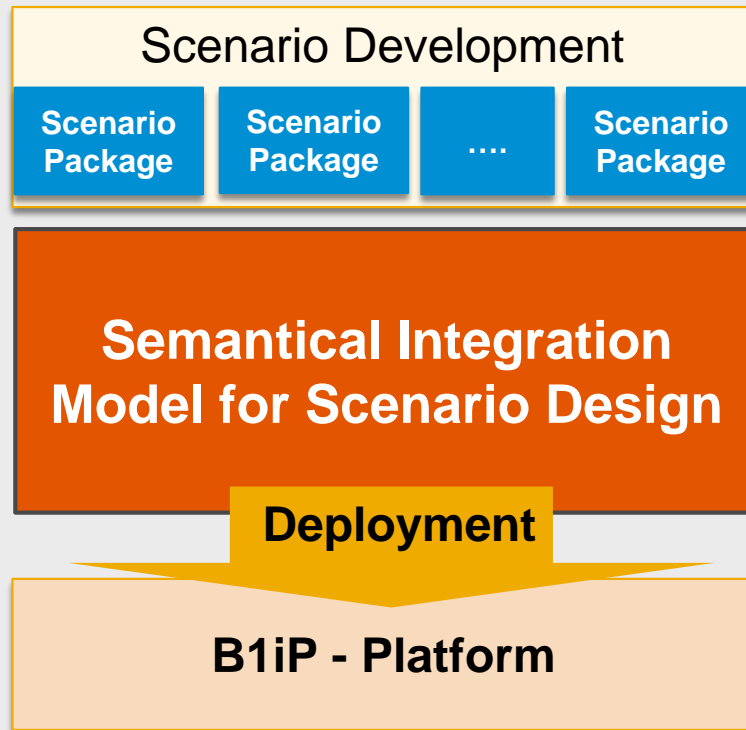
- Orchestration of Business Processes BPMN 2.0
- Tasks linked to Integration Scenarios
- Graphical Runtime control



# Integration Framework 2.0 is Faster at Runtime

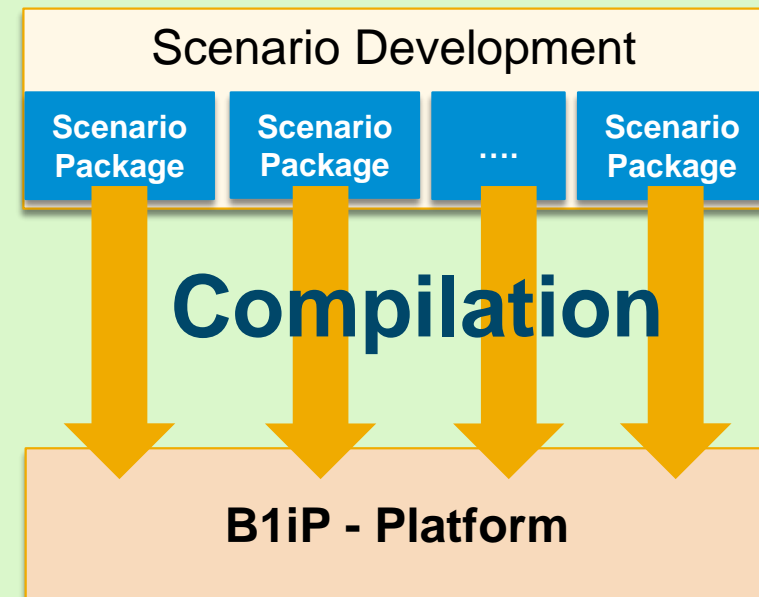
## Integration Framework 1.0

At runtime, the complete model is activated - everything runs through the full model



## Integration Framework 2.0

Only necessary artefacts are generated and activated – the integration logic runs directly on the platform





# Integration Framework 2.0 – new web-based IDE

The screenshot displays the SAP Integration Framework 2.0 web-based IDE interface. The interface is divided into several key areas:

- Navigation Tree:** Located on the left, it shows a hierarchical view of packages and sources, including 'sap.B1ifHelper.Tests' and various test suites.
- Multiple Tabs:** The top of the IDE shows multiple open tabs for different projects and configurations, such as 'sap.B1ifHelper' and 'B1ifHelper.Tests\_B1ifHelper\_atom1.xml'.
- Design Elements:** A central toolbar provides various design elements and actions like 'Split', 'Join', 'Branch', and 'Unbrch'.
- Design Area:** The main workspace contains a flow diagram with elements like 'B1ifHelperIN', 'InitializeB1ifMsg', 'atom1', 'SQLCall', 'atom3', 'Branch Branch1', 'Persist1', 'Unbranch', 'atom6', and 'VoidOut'.
- Notification Area:** A bar at the bottom of the design area for displaying messages or errors.
- Error Handling:** A panel on the right provides configuration options for error handling, including 'Consider Soft Exceptions', 'Number of Reactivations', and 'Waiting Time (min)'.
- Details Area with Zoom:** A panel on the right shows detailed configuration for an 'Adapter Call in BizFlow', including 'Identifier', 'Description', 'XPath Expression', and 'Adapter Type' (JDBC).



# Multi-Tenancy - Deploying Scenarios per Customers

Deployment Panel - Multi Tenancy

Scenario Package: sap.devTestSuite **1 Select Package**

Scenarios: 8

Development Status: ok

Deployment: deployment(s)

Activation: deployment(s) active **5 Activate**

**2 Add Customer for Deployment**



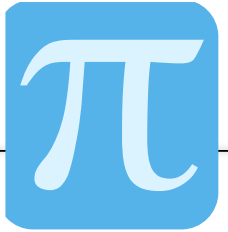
**3 Select Scenarios and Steps**

**4 Assign Systems**

Scenario Package	Scenario Name	Trigger	Successor Step	Runtime Artefacts	Trigger	Systems
sap.B1ifHelper.Tests						
✓	✓	✓	✓	✓	✓	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
sap.Enqueue.Tests						
✓	✓	✓	✓	✓	✓	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
sap.ExternalCalls.Tests						
+	+	+	+	+	+	Systems
sap.FlowCalls.Tests						
+	+	+	+	+	+	Systems
sap.Include.Tests						
+	+	+	+	+	+	Systems
sap.OnError.Tests						
✓	✓	✓	✓	✓	✓	Systems
✓	✓	✓	✓	Runtime Artefacts	Trigger	Systems
+	+	+	+	+	+	Systems
sap.Queue.Tests						
+	+	+	+	+	+	Systems



## Combining Deployment and Programming Models

	 on-premise/ on-demand	 Cloud	 IoT
Programming Models			
Integration Framework 1.x	✓	(✓)*	✗
Integration Framework 2.0	✓	✓	✓
BPM Model	✓	✓	✓

\* Single tenant only

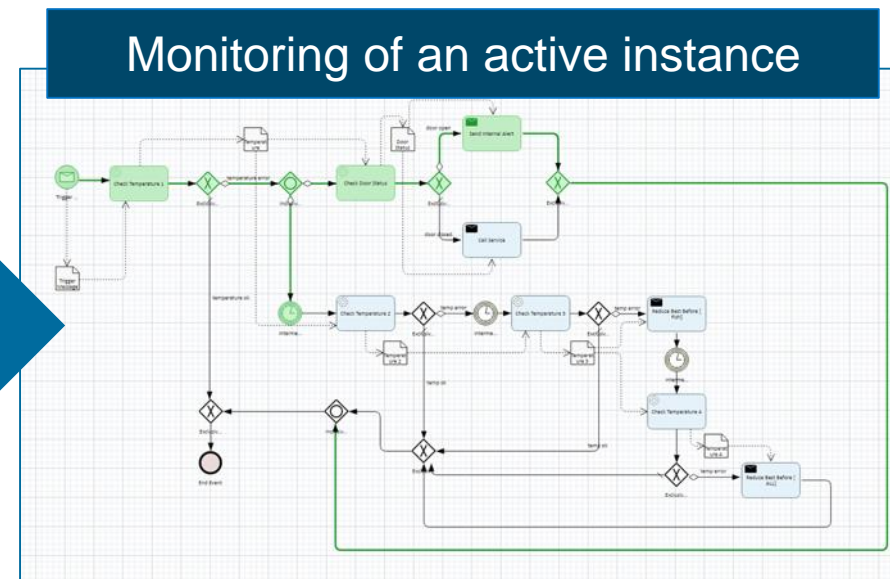
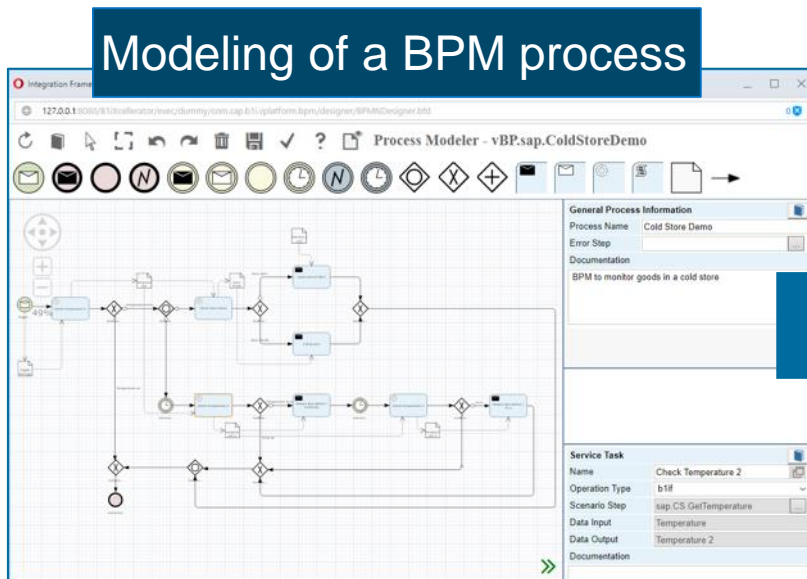


## Benefits of the Integration Framework 2.0 Programming Model

- Comes in addition with the Integration Framework – all programming models can run at the same time in parallel
- Optimized for **Cloud Computing**
- Inbuilt **Multi-Tenancy**
  - More flexibility in scenario deployments
- Built to address all **integration developers**
  - Higher flexibility
  - More control and transparency when developing integration content
  - "Classical" developers feel more comfortable because of the new browser-based IDE
- Up to **10 times faster** – runs directly on top of the integration platform
- Does not replace the current programming model

# Business Process Management – an Additional Layer on Top

- Business Process Modeling is based on BPMN 2.0
- **Orchestrates** the integration scenario steps:
  - Adds timer based/automated tasks
  - Considers human steps in the flow/model designer such as for example work confirmations and others







# Improvements: New System Landscape Directory

The screenshot displays the SAP Integration Framework (IF) System Landscape Directory (SLD) interface. The top navigation bar includes 'SLD', 'SETTINGS', 'MONITORING', 'DEVELOPMENT', and 'TOOLS/HELP'. The user is logged in as 'User: B1iadmin' on 'Host: 127.0.0.1:8080'. The left sidebar shows a tree view of system categories, including 'B11 Server', 'Custom', 'File and FTP', 'HTTP', 'Legal Package Systems', 'SAP Business One Systems', 'SAP Systems', 'Test Systems', and 'Web Services'. A context menu is open over the 'B11 Server' category, listing options: 'Create Category', 'Create System', 'Import', 'Export', 'SysType Properties', 'Settings', and 'Help'. The main area shows the configuration for a system named 'MX-WS-EDICOM'. The 'General Information' section includes fields for Type (H.AnySystem), Description (HTTP Access Active and Passive), Name (MX-WS-EDICOM), and ID (001sapMX01). The 'Connectivity List (Active)' section is expanded to show 'HTTA' configuration: destProtocol (https), destHost (cdfiws.sedeb2b.com), destPort (443), destPath (/EdiwinWS/services/CFDI), method (POST), authentication (basic), user, password, and user2query. A 'Test Connection' button is visible. The 'Connectivity List (Passive)' section is partially visible, showing 'HTTP' configuration with an associatedSrvIP field. Three blue callout boxes highlight key features: 'Context Menu' (pointing to the menu), 'System Categories' (pointing to the sidebar), and 'Assign Systems with Drag&Drop' (pointing to the system list area).



# Improvements: Easy BizStore Access

BizStore Datasets and Groups  
with Export Function

Open and Edit Documents

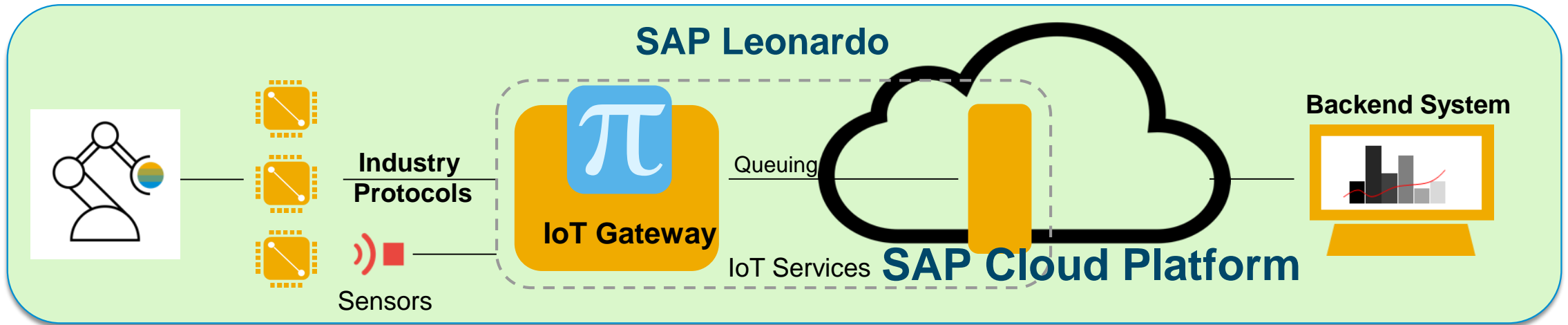
Drag & Drop  
Content to BizStore



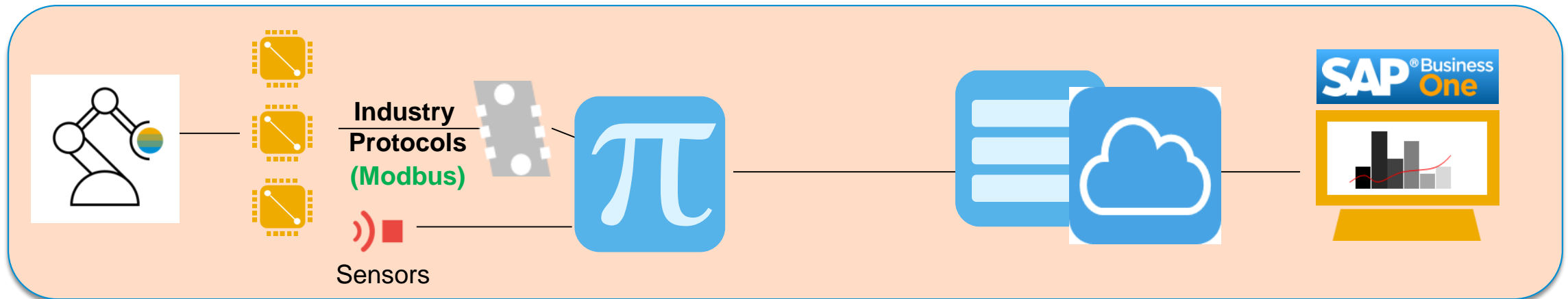
```
<?bpc.pltype.out bpm.pltype=xm1?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" xmlns:b1e="urn:com.sap.bli.sim:b1event" xmlns:b1ie="
xmlns:jdbc="urn:com.sap.bli.adapter:jdbcadapter" xmlns:rfc="urn:sap-com:document:sap:rfc:functions" xmlns:sim="u
version="1.0" bfa:force="" vpf:force="" jdbc:force="" rfc:force="" b1e:force="" b1ie:force="" xci:force="" sim:f
<xsl:output method="xml" encoding="UTF-8" indent="yes" />
<xsl:param name="atom" />
<xsl:param name="sessionId" />
<xsl:variable name="msg" select="/vpf:Msg/vpf:Body/vpf:Payload[./@Role='S']" />
<xsl:variable name="vptsDoc" select="document('/com.sap.bli.internal/xml/timestamp')" />
<xsl:variable name="vpts" select="concat($vptsDoc/*/year,'/', $vptsDoc/*/month,'/', $vptsDoc/*/date,' ', $vptsDoc
<xsl:variable name="vpSender" select="/vpf:Msg/vpf:Header/vpf:Sender/@Id" />
<xsl:variable name="vpObject" select="/vpf:Msg/vpf:Header/vpf:Sender/@ObjId" />
<xsl:variable name="vpReceiver" select="/vpf:Msg/vpf:Header/vpf:ReceiverList/vpf:Receiver[./@handover='P']/@Id"
<xsl:variable name="vpActionCode" select="/vpf:Msg/vpf:Header/vpf:Variables/vpf:var[./@id='ActionCode']/@val
<xsl:variable name="vpAddonType" select="/vpf:Msg/vpf:Header/vpf:Variables/vpf:var[./@id='AddonType']/@value" />
<xsl:variable name="vpAlertID" select="/vpf:Msg/vpf:Header/vpf:Variables/vpf:var[./@id='AlertID']/@value" />
<xsl:variable name="vpAttachmentEntry" select="/vpf:Msg/vpf:Header/vpf:Variables/vpf:var[./@id='AttachmentEntry'
Variables/vpf:var[./@id='AttachmentLine']/
Variables/vpf:var[./@id='AttachmentPath']/
s/vpf:var[./@id='bpCode']/@value" />
s/vpf:var[./@id='callID']/@value" />
les/vpf:var[./@id='CardCode']/@value" />
name="vpCntctCode" select="/vpf:Msg/vpf:Header/vpf:Variables/vpf:var[./@id='CntctCode']/@value" />
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```



# Examples of Internet of Things Scenarios

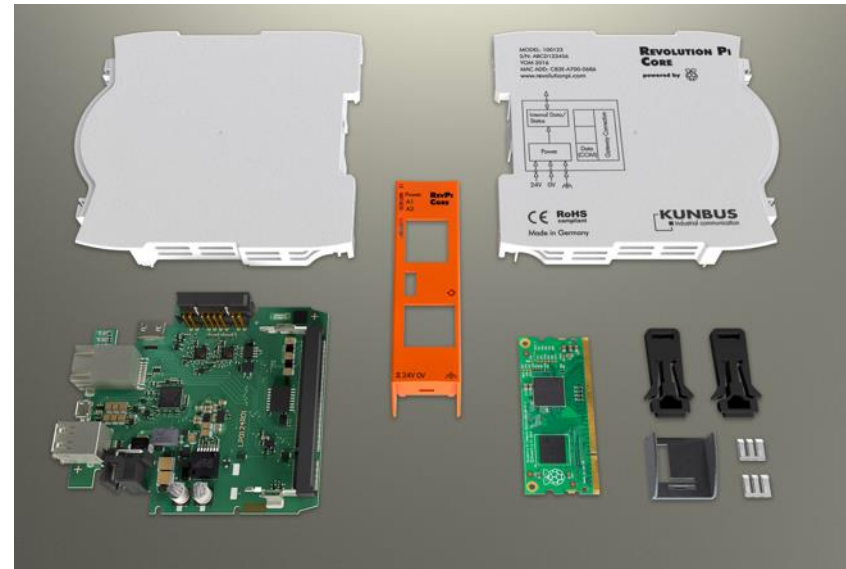


## Machines: PLC = Programmable Logic Controller





## Industry 4.0 / Internet of Things with Raspberry Pi and Revolution Pi



***Revolution Pi*** (manufactured by KUNBUS), is a modular and inexpensive industrial PC based on the established ***Raspberry Pi***.

Equipped with *Raspberry Pi* Compute Module, the base module can be expanded using appropriate I/O modules and fieldbus gateways.

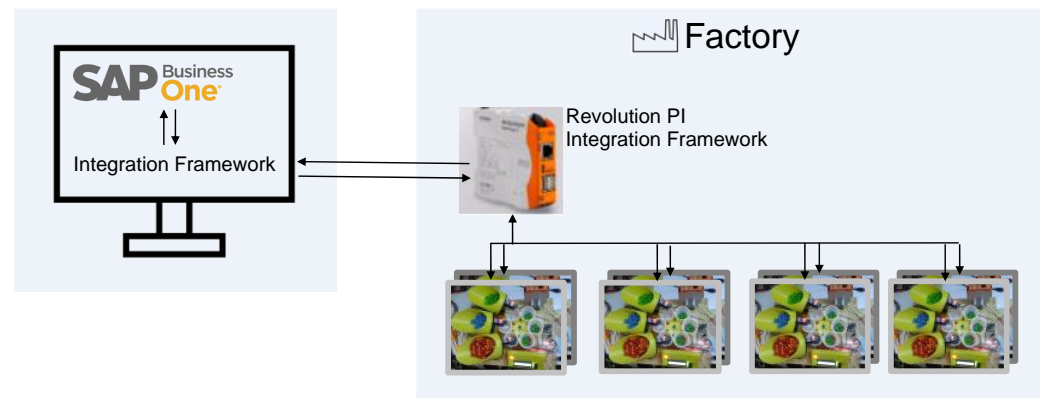


# Demo: Integrated Production with SAP Business One



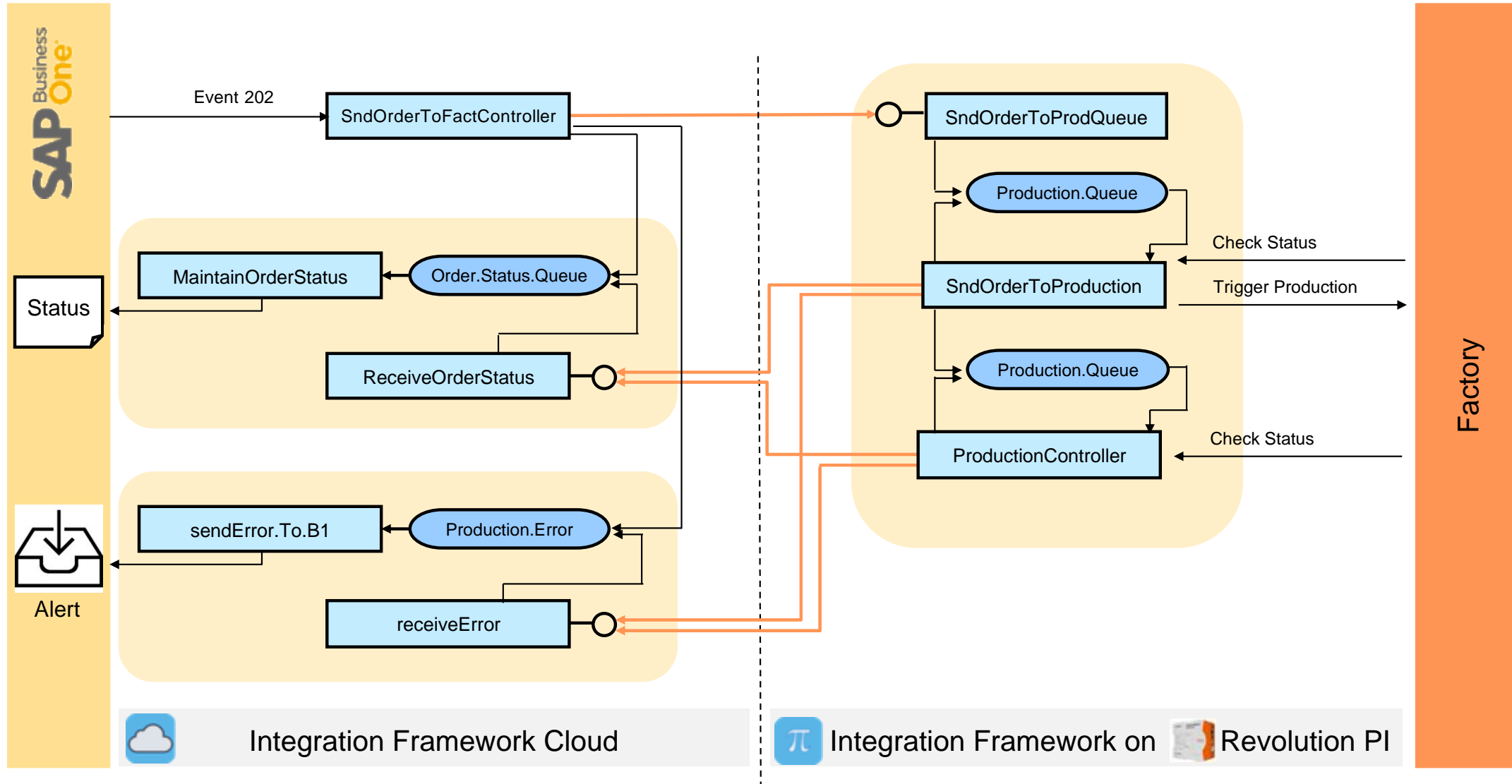
To run the factory demo, we provide two scenario packages:

- sap.B1FactoryConnector runs in the backend, connected to SAP Business One.
- sap.FactoryController runs on a Revolution Pi in the factory, connected via MODBUS protocol to the factory controller.



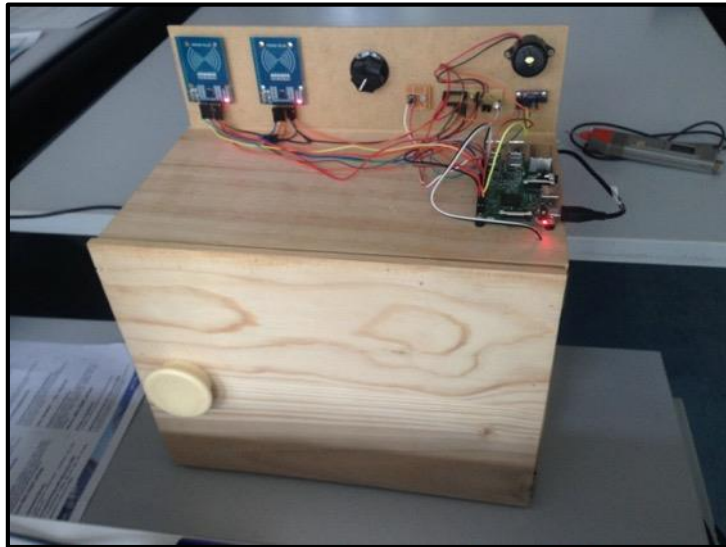


# Demo: Production Order Control – Scenario Steps

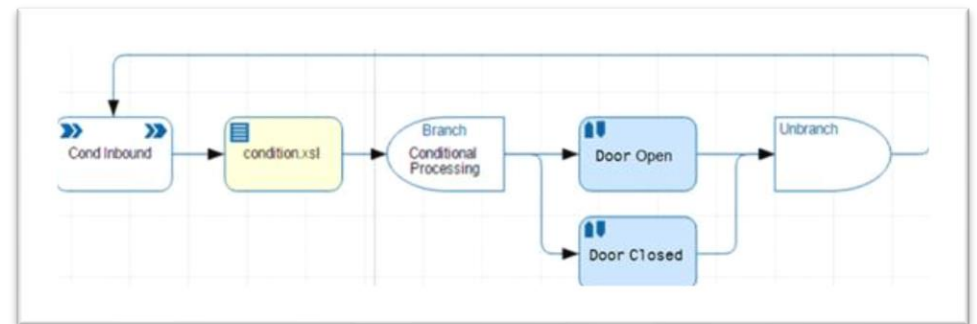
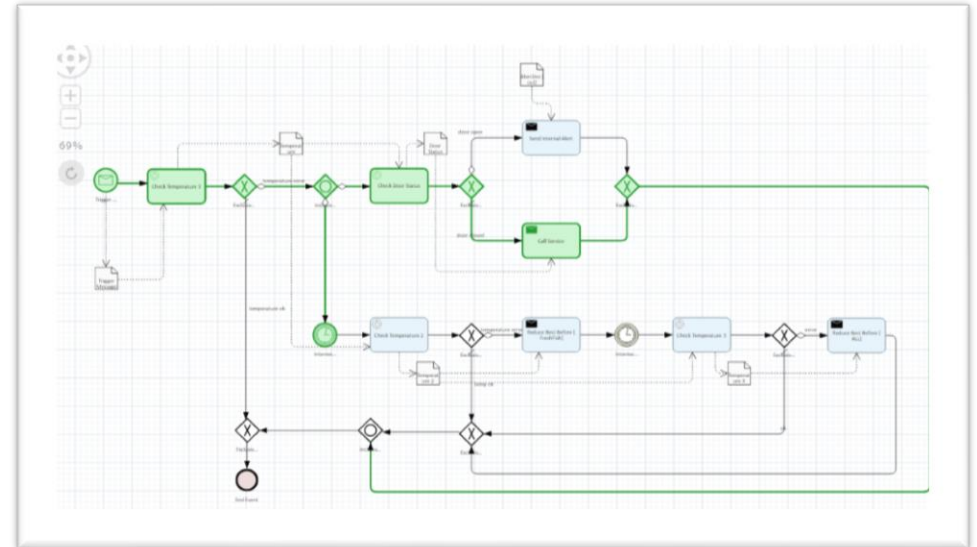




# Demo: Monitoring of a Coldstore with BPM incl. Inventory Transfer



- Edge-based Integration Framework processes RFID scans for warehouse events
- Temperature exceptions trigger door check logic. Door open status triggers user notification in **SAP Business One**
- Business process logic calculates new product best-before in **SAP Business One** date based on temperature exception event





## Planned Availability

- A pre-version of the Integration Framework 2.0 including the new programming model will be available with SAP Business One 9.3 PL04 - customer can go live with on-premise integration use cases in agreement with SAP.
- The full version will be available 9.3 PL05 to be used productively in on-premise, cloud and IoT deployments.





# Demo of Additional Examples





# Integration Framework for SAP Business One (aka B1iF)



## Available scenarios and use cases to enhance the scope of SAP Business One

- **sap.B1Mobile**  
Covers 100+ Web services for mobile devices
- **sap.Xcelsius - Dashboards**  
Provides generic services to launch dashboards based on Xcelsius
- **sap.DATEV-HR**  
Interface for German payroll provider DATEV - but also in general usable as template with other payroll providers
- **sap.RFQ – Request for Quotation**  
Provides electronic response form for vendors to enter quotation data
- **sap.B1Ariba**  
Integrates SAP Business One into the ARIBA network
- **sap.CustomerCheckout**  
Integrates the SAP Customer Checkout (POS solution) and SAP Business One
- **sap.C4C (SAP Hybris Cloud for Sales)**  
integrates SAP Business One with SAP Cloud for Sales to expand the CRM functionality
- **sap.Concur**  
integrates SAP Business One with SAP Concur (manages travel and expenses)



# SAP Business One Integration for SAP NetWeaver (aka B1iSN)



Scenarios provided to integrate Headquarters running SAP ECC / SAP BW / S/4HANA (on premise) and SAP Business One



- Master Data Integration (Material and Business Partners)
- Intercompany Purchasing
- Management Reporting for Sales Analysis \*
- Liquidity Forecasting \*
- In-House Cash \*
- Customizing Data Distribution\*
- Financial Consolidation Preparation

\* only relevant for Headquarters running SAP ECC / SAP BW



# Thank you

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