



SAP BTP in a Nutshell

SAP Market Communication for Utilities

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Public

Agenda

SAP Market Communication for Utilities

- Introduction
- Benefits
- Example Process and Communication

How SAP Market Communication for Utilities is leveraging SAP BTP

- Solution Building Blocks
 - Market Message Transfer
 - Process Engine
 - Monitoring and Customer Self Services
- SAP BTP Highlights
 - SAP HANA Cloud
 - SAP BTP Kyma Runtime
 - SAP Cloud Foundry

A hand holding a glowing lightbulb in a field of tall grass at sunset. The sun is low on the horizon, creating a warm, golden glow. The lightbulb is held up, and its light is visible. The background is a field of tall grass, and the sky is a mix of blue and orange.

SAP Market Communication for Utilities

The Utilities Market Situation: Introduction



Global Energy Crisis

- Exploding prices and procurement issues for energy on a global level
- Need for more sustainable energy sources and efficient transit
- Radically changing global political situation requiring agility of enterprises



High degree of legal changes occurring regularly

- Companies struggling to deal with high number of regulatory changes regularly
- Increase resiliency against cyber-attacks, pandemics, etc.



Customer expectations

- Transformation of customer expectations from pure delivery of energy to service providers
- Offer best-in-class customer service



Drive operational excellence

- Build seamless operations in business networks
- Use smart technologies like AI for process automation

Solving Customer Needs on SAP Market Communication Cloud Together with SAP S/4 HANA Utilities Add-Ons

Building standardized processes on Market Communication Cloud for Utilities



Co-Innovation

- Common definition of industry best-practice business processes together with strategic customers
- Prioritization of requirements and enhancements in customer community



BTP Utilization

- Providing “Market Communication as a service” utilizing:
 - SAP Cloud Integration
 - SAP Cloud Foundry
 - SAP BTP Kyma Runtime
 - SAP HANA Cloud

Market Communication Cloud (German version)

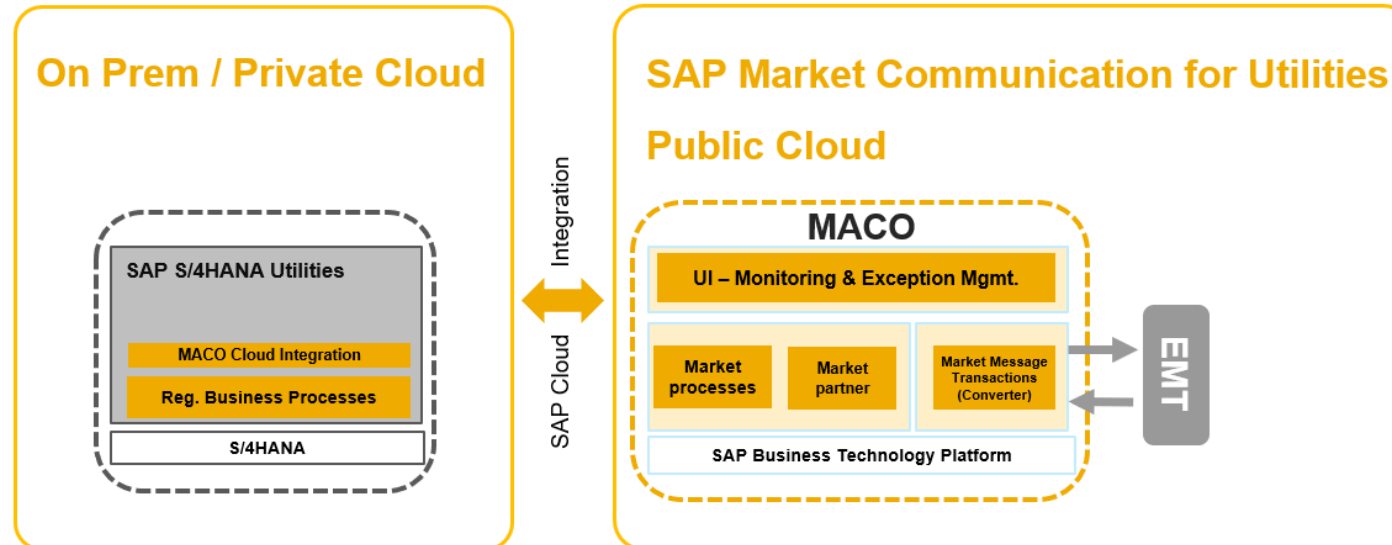
SAP Market Communication Cloud for Utilities is a public cloud solution for the **holistic management of communication processes in the German energy market**. Legislation requires the intercompany data-exchange processes between the various market participants in deregulated energy markets to comply to a strictly standardized regulatory framework. SAP Market Communication for Utilities performs conversion and data exchange processes as a service in the German energy market.

Benefits

- Highly reduced effort for regularly occurring legal change implementations
- Unlock capacity for the core business and new business models
- Improved Monitoring and Exception Handling

SAP Market Communication cloud for Utilities enables customers to

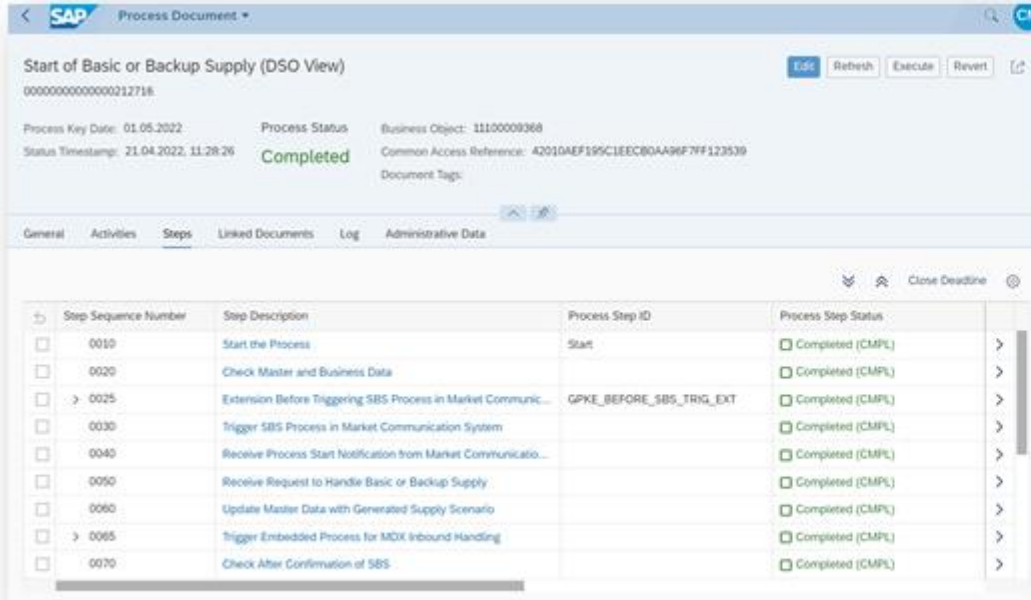
- Automatically run legally compliant processes as a service managed by SAP
- Handle Exceptions in Market Communication in Self-Services with low effort
- Dynamically scale their business and market processes on a usage-based metric
- Seamlessly connect to the SAP S/4HANA Utilities Add-Ons for the German Market



[Solution Page \(sap.com\)](https://www.sap.com/solutions/mcc-germany)

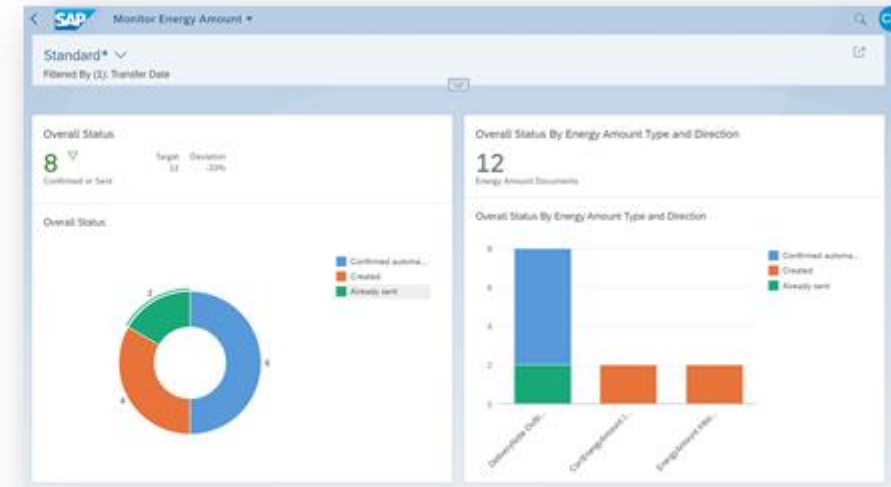
[Help.sap.com](https://help.sap.com)

Solving Customer Needs on SAP Market Communication Cloud Together with SAP S/4 HANA Utilities Add-Ons



The screenshot displays the SAP Process Document interface for a completed process. The process key is 0000000000000212718. The process status is 'Completed' with a timestamp of 21.04.2022, 11:28:26. The process key date is 01.05.2022. The process status is 'Completed'. The business object is 11100009368. The common access reference is 42010AEF195C1EEC80AA9F7FF122539. The document tags are empty. The process steps are listed in a table below.

Step Sequence Number	Step Description	Process Step ID	Process Step Status
0010	Start the Process	Start	Completed (CMPL)
0020	Check Master and Business Data		Completed (CMPL)
0025	Extension Before Triggering SBS Process in Market Communic...	GPKE_BEFORE_SBS_TRIG_EXT	Completed (CMPL)
0030	Trigger SBS Process in Market Communication System		Completed (CMPL)
0040	Receive Process Start Notification from Market Communicatio...		Completed (CMPL)
0050	Receive Request to Handle Basic or Backup Supply		Completed (CMPL)
0060	Update Master Data with Generated Supply Scenario		Completed (CMPL)
0065	Trigger Embedded Process for MDX Inbound Handling		Completed (CMPL)
0070	Check After Confirmation of SBS		Completed (CMPL)



- Highly automatized process and message Handling
- Seamless integration with SAP S/4HANA Utilities
- Improved Monitoring and Exception Handling
- Regulatory updates as per legal requirements to ensure process compliance

Help Portal: SAP Market Communication for Utilities

<https://help.sap.com/maco>

SAP Help Portal (Documentation) Browse by Product | Learning Journeys | What's New | Explore SAP |

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- Business Data
- Inventory List
- Supply
 - GPKE
 - Starting the Supply (SUPN View)
 - Canceling the Supply (SUPN View)
 - Canceling the Supply (SUPO View)
 - Receiving Deregistration Requests (SUPO View)
 - Ending the Supply (SUPO View)
 - Starting the Basic or Backup Supply (SUPN View)
 - Receiving Terminations of Supplier Assignments (SUPO View)**
 - Receiving Deregistrations Due to Shutdown
 - Receiving a Revocation of a Future Assignment
- Billing and Invoicing
- Energy Quantity Settlement
- Redispatch
- Times of Use
- MeMi Processes
- Processes for the Party Responsible for Settlement
- Data Structures Exchanged With the Business System

Receiving Terminations of Supplier Assignments (SUPO View)

In this market process, you are the old supplier (SUPO) and you receive a termination of assignment due to supplier insolvency from the distribution system operator (DSO). SAP Market Communication for Utilities sends the termination of assignment and a request for the supply scenario to your business system.

```
graph TD; subgraph Business User; direction TB; B1[Handle Process Start Notification and Request for Supply Scenario]; B2[End Process: Receipt of Termination of Supplier Assignment]; end; subgraph SUPO Business System; direction TB; S1[Handle Process Start Notification and Request for Supply Scenario]; S2[End Process: Receipt of Termination of Supplier Assignment]; end; subgraph SAP Market Communication System; direction TB; M1[Start Process: Receipt of Termination of Supplier Assignment]; M2[Check and link the existing deregistration request]; M3[Perform APERAK Check]; M4[End Process: Receipt of Termination of Supplier Assignment]; end; subgraph Market Partner; direction TB; P1[DSO]; end; P1 -.->|UTILMD (11037)| M1; M1 --> M2; M2 --> M3; M3 -->|Not OK = APERAK| P1; M3 -->|OK| S2; S2 -->|Send Process Start Notification and Request for Supply Scenario (BM_SUSC_READ_REQ)| M3; S2 -->|Receive Supply Scenario (BM_SUSC_READ_RESP)| M3; M3 -->|Send Process End Notification (BM_GPKE_SUP_INSOLVENCY_BS_INFO_PROC_END)| S2;
```

Was this page helpful?

SAP Market Communication for Utilities: FAQ and Example Process

FAQ on MaCo:

<https://help.sap.com/docs/market-communication-for-utilities/faq/general-faq?locale=en-US>

What is a Market Communication Cloud Process? – an example including the communication of BTP with SAP S/4HANA

The screenshot shows the SAP Process Document interface for a process titled "Receipt of Meter Reading (DSO View)". The process ID is 00000000000000898533. The process key date is 01/02/2023, and the status timestamp is 03/20/2023, 13:35:27. The process status is "Completed".

The interface includes a search bar with "Search In: 'Apps'", a notification bell, and a user profile icon labeled "CM". Action buttons for "Edit", "Refresh", "Execute", "Revert", and a share icon are visible.

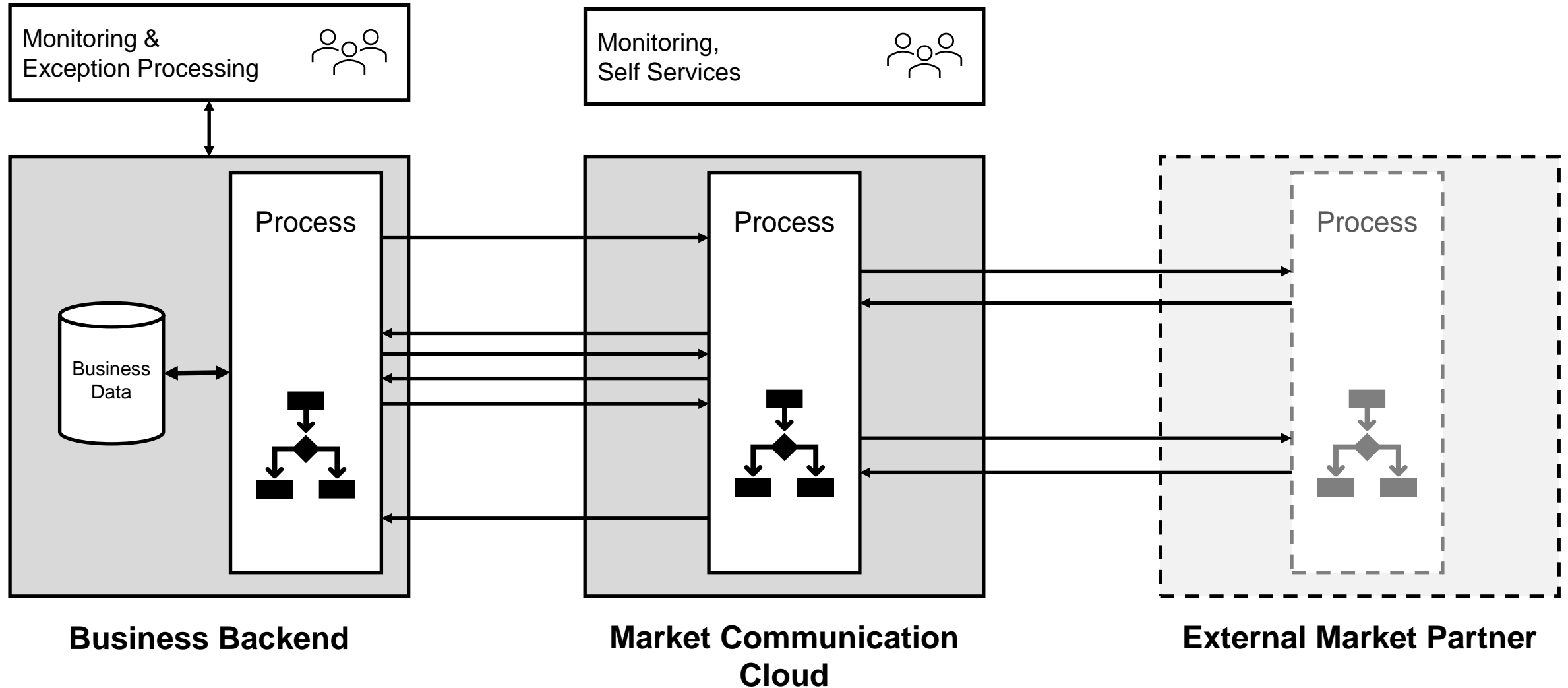
The "Steps" tab is active, showing a table of process steps. The table has columns for Step Sequence Number, Step Description, Process Step ID, Process Step Status, Status Timestamp, Step Timestamp, and Deadline. All steps are marked as "Completed (CMPL)".

Step Sequence Number	Step Description	Process Step ID	Process Step Status	Status Timestamp	Step Timestamp	Deadline
0010	Receive Electricity Meter Reading from Market ...	CP_PROCESS_START	Completed (CMPL)	03/20/2023, 13:35:22	03/20/2023, 13:35:22	
0050	Check if Process Is Device Change Related		Completed (CMPL)	03/20/2023, 13:35:22	03/20/2023, 13:35:22	
0100	Internal: Send Supply Scenario Request to Busi...		Completed (CMPL)	03/20/2023, 13:35:22	03/20/2023, 13:35:22	
0110	Internal: Receive Supply Scenario Response fro...		Completed (CMPL)	03/20/2023, 13:35:26	03/20/2023, 13:35:26	
0150	Check if Process is DSO Change Related		Completed (CMPL)	03/20/2023, 13:35:26	03/20/2023, 13:35:26	
> 0200	Embedded Process for APERAK Check for Non-...		Completed (CMPL)	03/20/2023, 13:35:26	03/20/2023, 13:35:26	
0400	Prepare Meter Reading to Send to Business Sy...		Completed (CMPL)	03/20/2023, 13:35:26	03/20/2023, 13:35:26	
0500	Internal: Send Meter Reading Update Request t...		Completed (CMPL)	03/20/2023, 13:35:27	03/20/2023, 13:35:26	
0900	Update Meter Reference Table		Completed (CMPL)	03/20/2023, 13:35:27	03/20/2023, 13:35:27	
8999	End Process		Completed (CMPL)	03/20/2023, 13:35:27	03/20/2023, 13:35:27	

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How SAP MaCo is leveraging SAP BTP

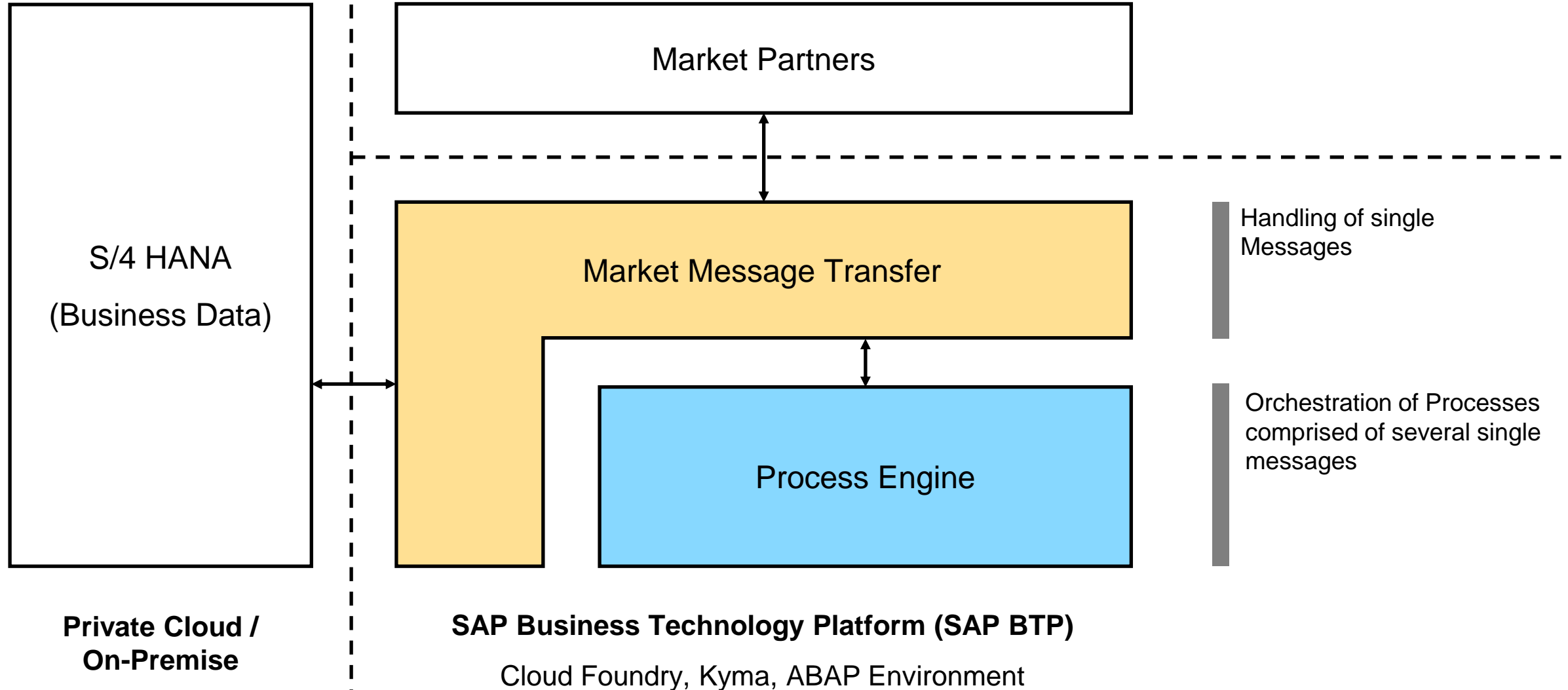
Market Process



Market Processes – Characteristics and Challenges

- Characteristics of Market Processes:
 - comprised of several message-based interactions between partners
 - interact several times with the Business Backend System for data retrieval or update
 - Are fully standardized across all market partners due to legal regulations
- High volume of Market Processes to be supported
- Peak situations require highly elastic scaling of the solution
- Process Engine must be capable to handle deadlines and wait times
- Solution must efficiently handle very large messages (aggregated data, e.g. meter readings or invoices)

Solution Building Blocks



Market Message Transfer

What?

- Handling of single messages, typically EDIFACT
- Encryption, Decryption
- Technical Routing
- Format Parsing and Rendering
- Format Syntax checks (inbound and outbound)

How?

- SAP Cloud Integration
- SAP HANA Cloud
- SAP Cloud Foundry (Java, CAP)
- SAP Audit Logging

Process Engine

What?

- Orchestration of Business Processes comprised of several single messages
- Business Logic
- Data retrieval from Business Backend
- Push of data change requests to Business Backend
- Business Data Mapping
- Business Data Validation
- Deadline Processing

How?

- SAP BTP, Kyma Runtime (NodeJS, CAP)
- SAP HANA Cloud
- SAP Message Queueing
- SAP Cloud Logging Service
- SAP BTP, ABAP Environment

Monitoring and Customer Self Services

What?

- Monitoring on Business Process Level
- Message Routing based on Business Content and customer specific rules
- Various Customer Self Services (e.g. Connection Data, Partner Data, Certificates etc.)

How?

- SAP BTP, Cloud Foundry (NodeJS, Java, CAP)
- SAP HANA Cloud
- SAP Message Queuing
- SAP Business Rules Service

BTP Highlights – SAP HANA Cloud

- Reliable Storage of transactional data
- Fast and scalable
- Seamlessly integrated

BTP Highlights – SAP BTP, Kyma Runtime

- Fully managed Kubernetes Cluster
- State-of-the-Art cloud runtime
- Highly and elastically scalable
- Well-known open source tools pre-installed and ready for use, e.g. Istio Service Mesh
- BTP Operator allows easy consumption of BTP Services

BTP Highlights – SAP BTP, Cloud Foundry

- Proven BTP runtime
- Suitable for JAVA and NodeJS Applications
- Easy BTP Service consumption
- All BTP Services available for peering
- Stable, well documented and supported

Some further SAP BTP Services

- SAP HTML5 Application Repository Service for SAP BTP
- SAP Audit Log Service
- SAP Credential Store
- SAP Authorization and Trust Management Service
- SAP Service Manager
- SAP Software-as-a-Service Provisioning service

Thank you.

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