

# Model-Driven Configuration

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The SAP logo is located in the bottom left corner of the slide. It consists of the letters 'SAP' in white, bold, sans-serif font, set against a blue rectangular background.

# Agenda

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## Motivation

- Why model-driven configuration of IT systems can be helpful

## Challenges

- Transformation and Configuration of Process Models

## Approach

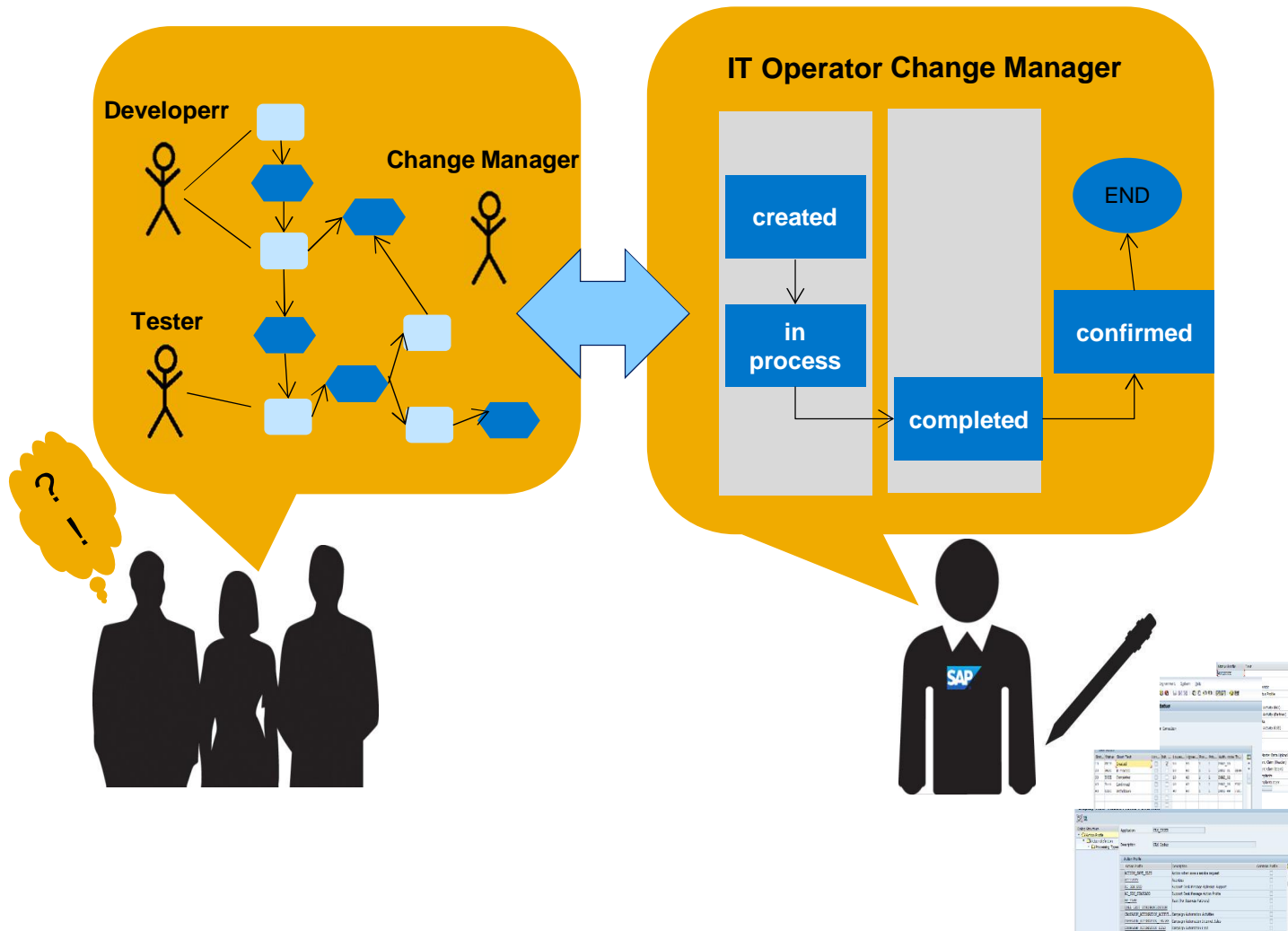
- Transformation Rules and Configuration Operators?

## Open Questions

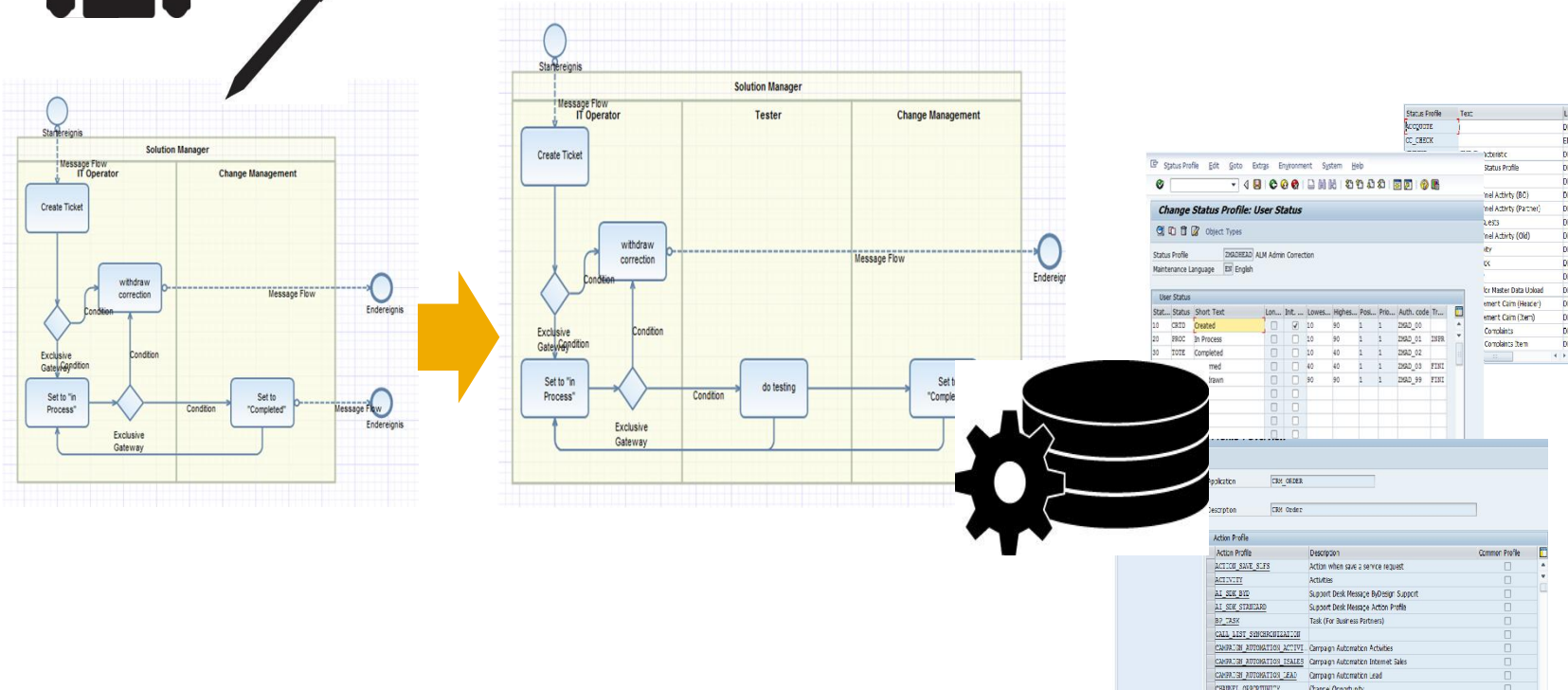


# Motivation

# Current Situation



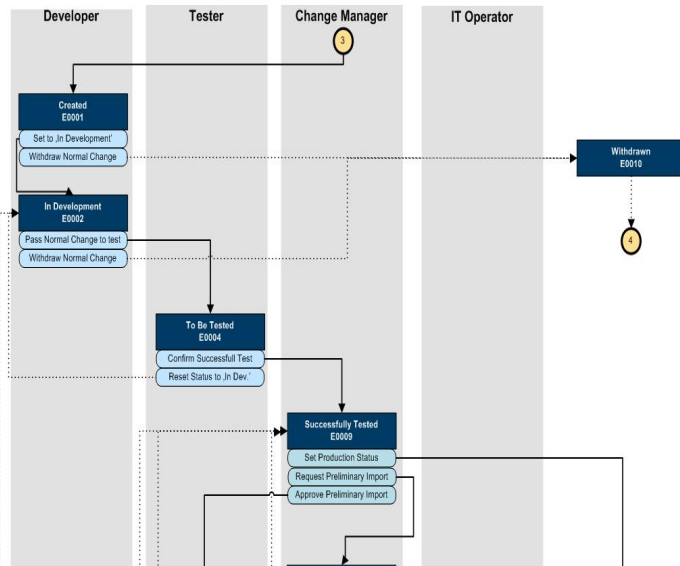
# Future Situation?



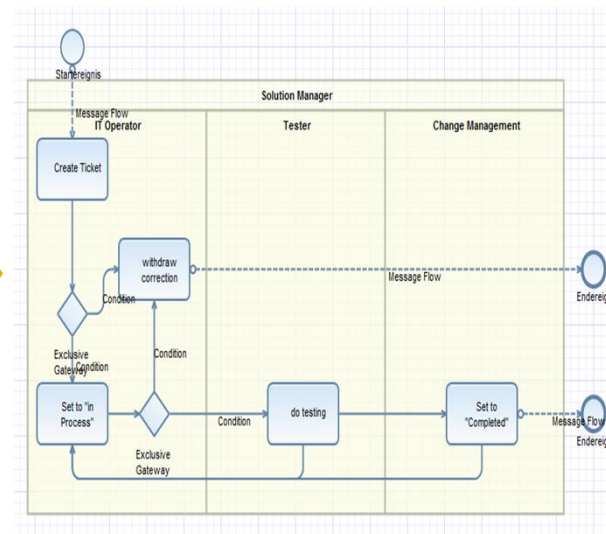
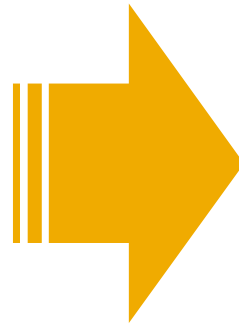


# Challenges

# Challenge 1 – Process Model Transformation

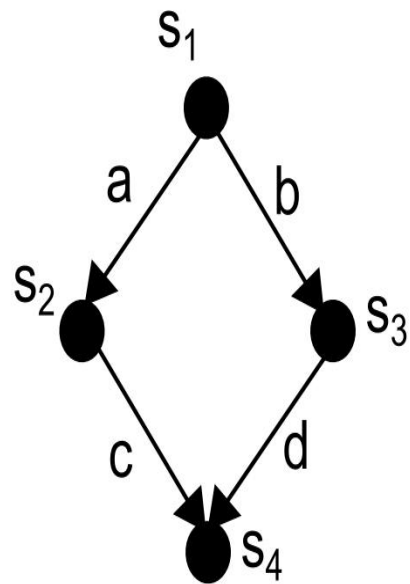


**Status-based Diagramm**

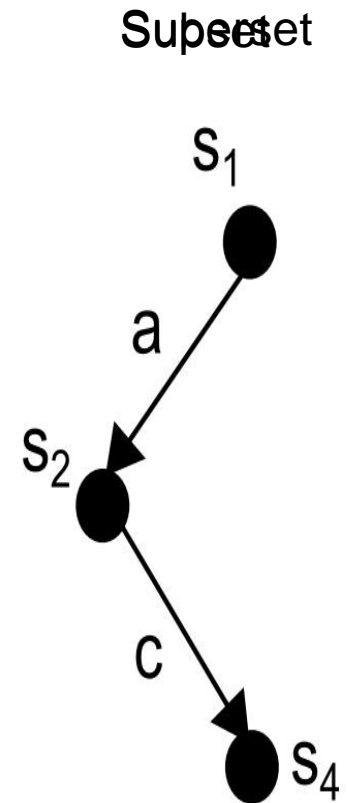


**BPMN Model**

## Challenge 2 – Configurable Process Models

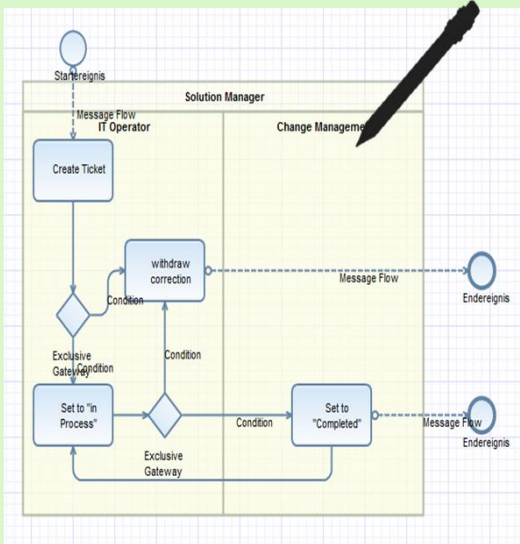


Configuration

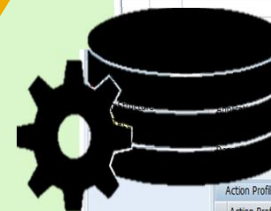




# Challenge 3 – Interface for System Configuration



**Configuration of Standard Process**



Stat...	Status	Short-Text	Lon...	Int...	Lowes...	Highes...	Posi...	Pri...	Auth. code	Tr...
10	CRUD	Created	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10	90	1	1	ZMAD_00	
20	PROC	In Process	<input type="checkbox"/>	<input type="checkbox"/>	10	90	1	1	ZMAD_01	INFR
30	TOFE	Completed	<input type="checkbox"/>	<input type="checkbox"/>	10	40	1	1	ZMAD_02	
40	TEST	Confirmed	<input type="checkbox"/>	<input type="checkbox"/>	40	40	1	1	ZMAD_03	FINI
90	CANC	Withdrawn	<input type="checkbox"/>	<input type="checkbox"/>	90	90	1	1	ZMAD_99	FINI








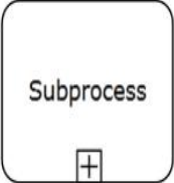
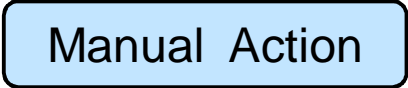

Action Profile	Description	Common Profile
ACTION_SAVE_SLFS	Action when save a service request.	<input type="checkbox"/>
ACTIVITY	Activities	<input type="checkbox"/>
AI_SKM_BYD	Support Desk Message ByDesign Support	<input type="checkbox"/>
AI_SKM_STANDARD	Support Desk Message Action Profile	<input type="checkbox"/>
BP_TASK	Task (For Business Partners)	<input type="checkbox"/>
CALL_LIST_SYNCHRONIZATION		<input type="checkbox"/>
CAMPAIGN_AUTOMATION_ACTIVI...	Campaign Automation Activities	<input type="checkbox"/>
CAMPAIGN_AUTOMATION_ISALES	Campaign Automation Internet Sales	<input type="checkbox"/>
CAMPAIGN_AUTOMATION_LEAD	Campaign Automation Lead	<input type="checkbox"/>
CHANNEL OPPORTUNITY	Channel Opportunity	<input type="checkbox"/>

**Configuration of IT System**

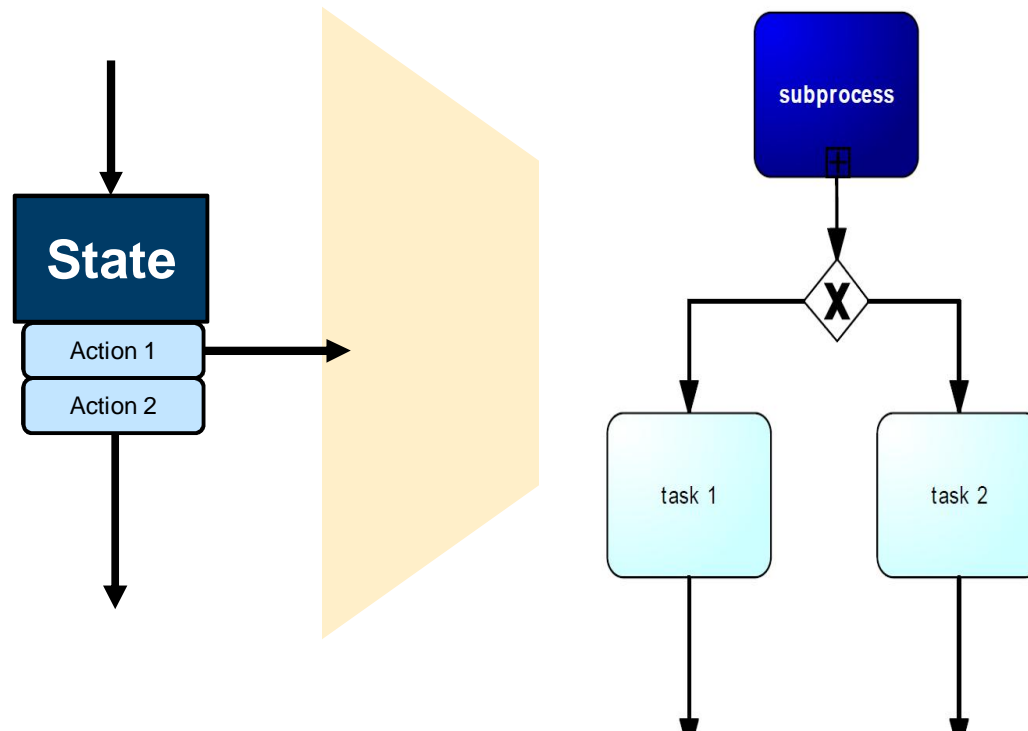


# Approach

# Example Syntax Mapping – from State Diagram to BPMN

	 Start Event  End Event
 Reference Point	 Catching  Throwing Intermediate Link Event
	
	

# Example Mapping Rule: Transform States and Actions



# How can BPMN models be made configurable?

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→ Determine degree of possible adaption

Introduction and definition of configuration operators with options



**Fix**

– permanent



**Adaption**

– move



**Configuration**

– move  
– delete

# How to add new process fragments to the standard process?

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→ Insert placeholder for new model fragments

## Definition of configuration frame



- insert
- delete



### **Configuration constraint:**

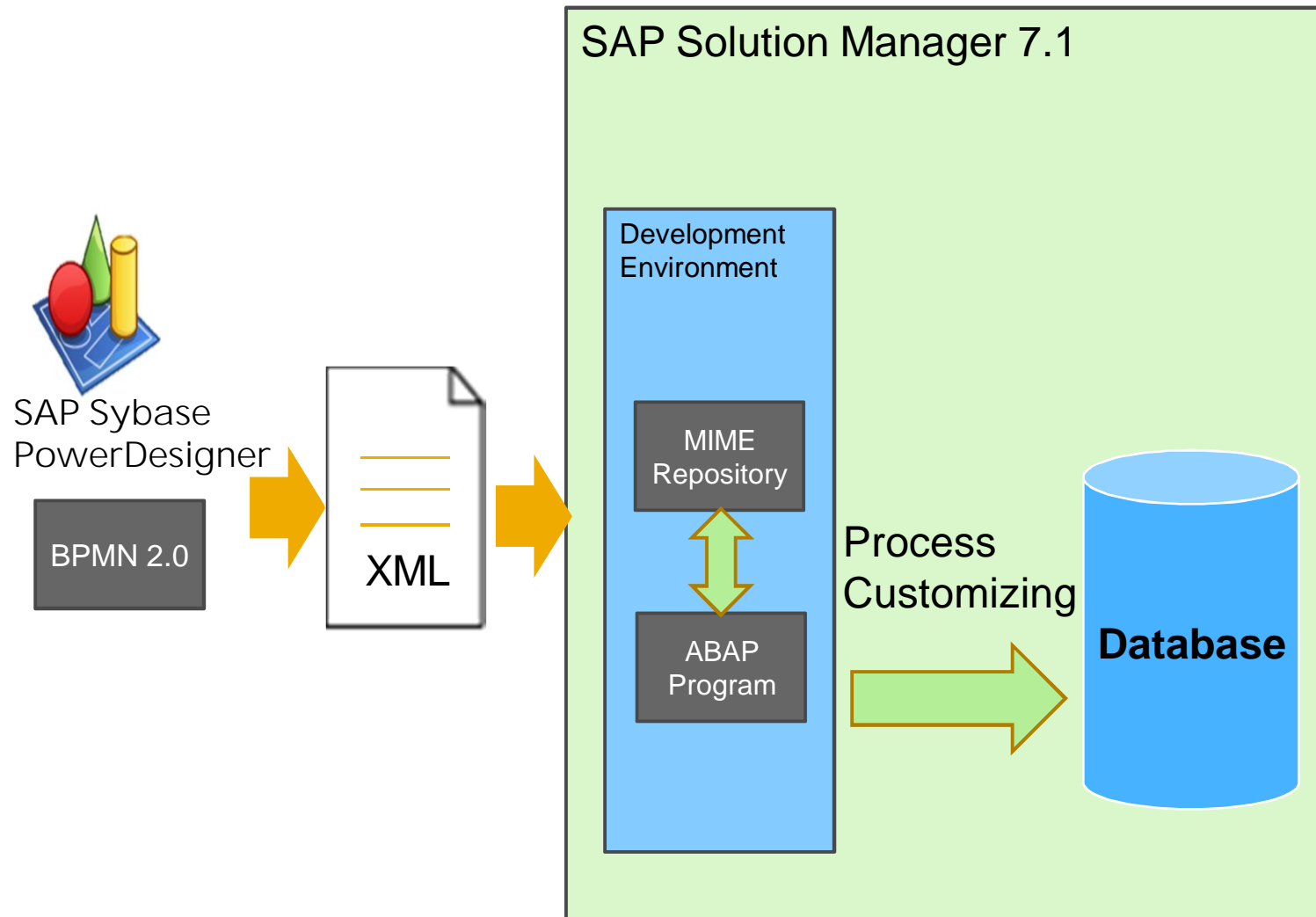
- set of allowed notation elements
- additional attributes (technical information)
- naming convention for notation elements



### **Configuration condition:**

- allowed roles
- number and type of activities
- additional specification

# Prototype Development





# Open Questions



# Fragen zur Diskussion

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- **In wie weit kann die Auswertung von Systemen/Dokumenten helfen Prozesswissen (Beteiligte, Reihenfolgeabhängigkeiten) zu erfassen?**
- **Gibt es Regeln für die Abbildung von technischem Systemwissen in Prozessmodellen?**
- **Ist eine automatisierte Überführung von Zustandsmodellen in Prozessmodellen auf Aktivitätenbasis möglich?**
- **Wie können statusbasierte Prozesse mit BPMN beschrieben werden?**
- **Gibt es geeignetere Notationen für die Modellierung datenbasierter Prozesse?**
- **Lassen sich technische Details für spätere Systemparameter in einem BPMN Modell erfassen?**
- **Lassen sich Prozessmodelle für individuelle Anpassungen wieder verwenden?**



# Backup



# Assure that Mapping Rule 1 is always Valid!

