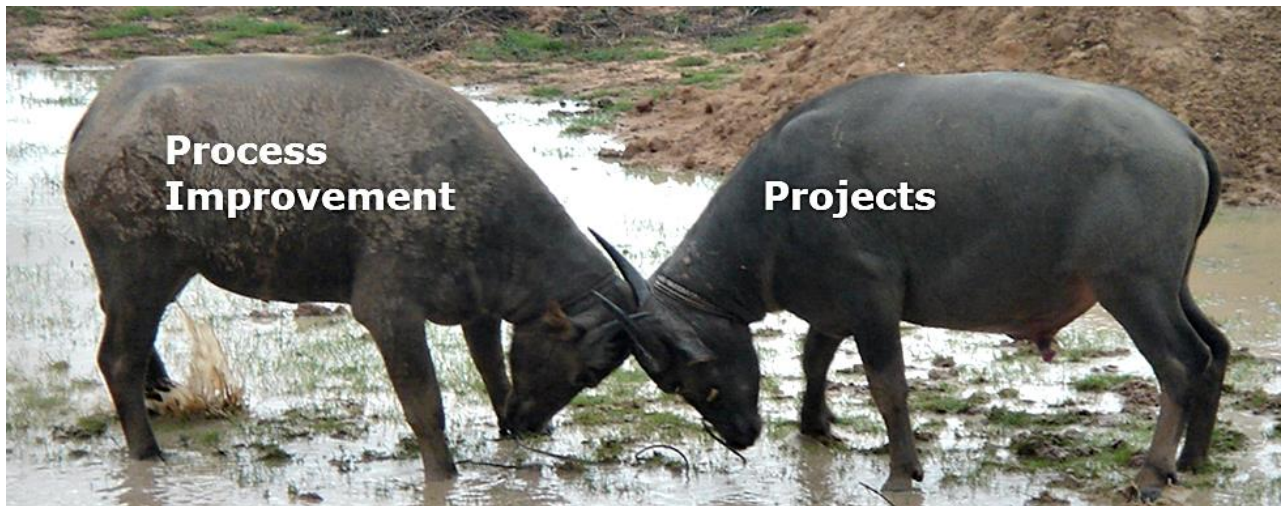
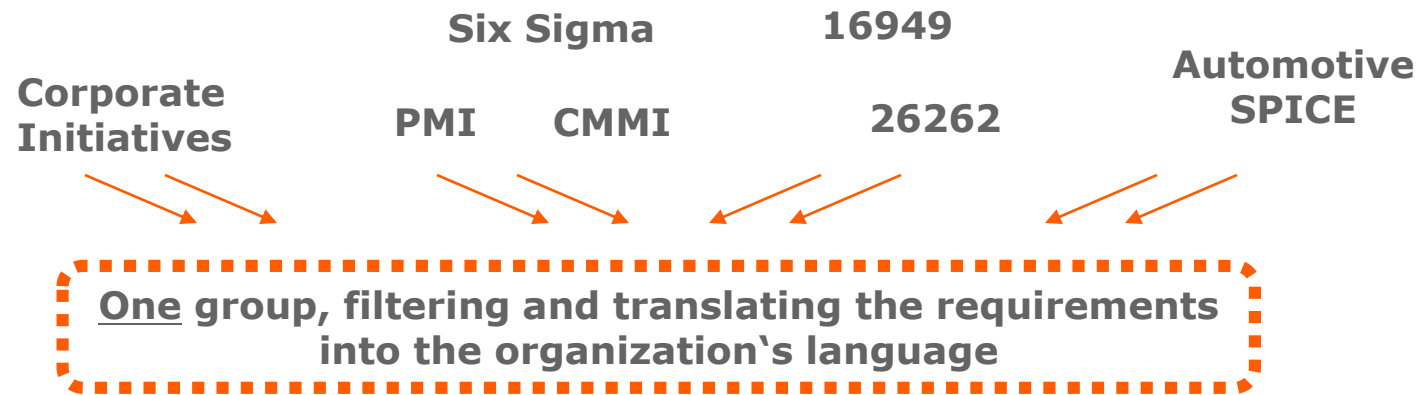


The background of the slide is a lush, dense tropical forest with various green plants, palm trees, and hanging vines. A semi-transparent dark grey banner is overlaid across the middle of the image.

Engineering Process Transformation driven by Use Cases

From Process Models to Projects



This cannot be our intension!

“Goal Orientation”
“Appropriateness”



Define Goals

- Identify Business Objectives
- Derive Goals from Business Objectives

Analyze Process Capability

- Assess Current Situation
- Identify and Prioritize Changes

Define Process Organization

- Define Process Architecture
- Establish Process Management Organization

Model Processes

- Model and Pilot Processes
- Rollout Processes

Establish Learning Organization

- Measure Process Performance
- Derive Improvement Measures

Checklist ticking?

No, thank you!



Set the focus on the people!

Use Cases

Context Product Development

Product Development

Wikipedia:

"A **use case** in [...] system engineering is a description of a **system's behavior** as it responds to a **request** that originates from outside of that system. In other words, an use case describes "**who**" **can do** "**what**" with the system in question. The use case technique is used to capture a **system's behavioral requirements** by detailing **scenario-driven threads** through the functional requirements."

A use case should:

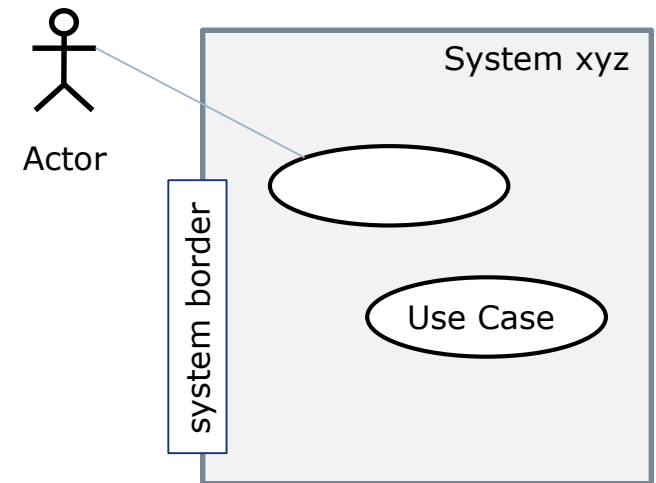
- Describe what the system shall do for the **actor** to achieve a particular **goal**.
- Include **no implementation-specific language**
- Be at the **appropriate level of detail**.



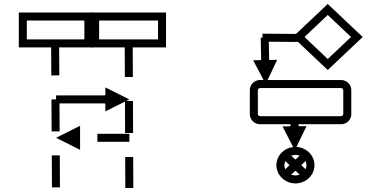
More Details about “Use Cases”

Context Product Development

- User's point of view
- What is the **apparent functionality** of the system?
- What are the **neighboring systems** and **users**?
- Where are the **system boundaries**?
- **Use cases describe the operational flow** of the system



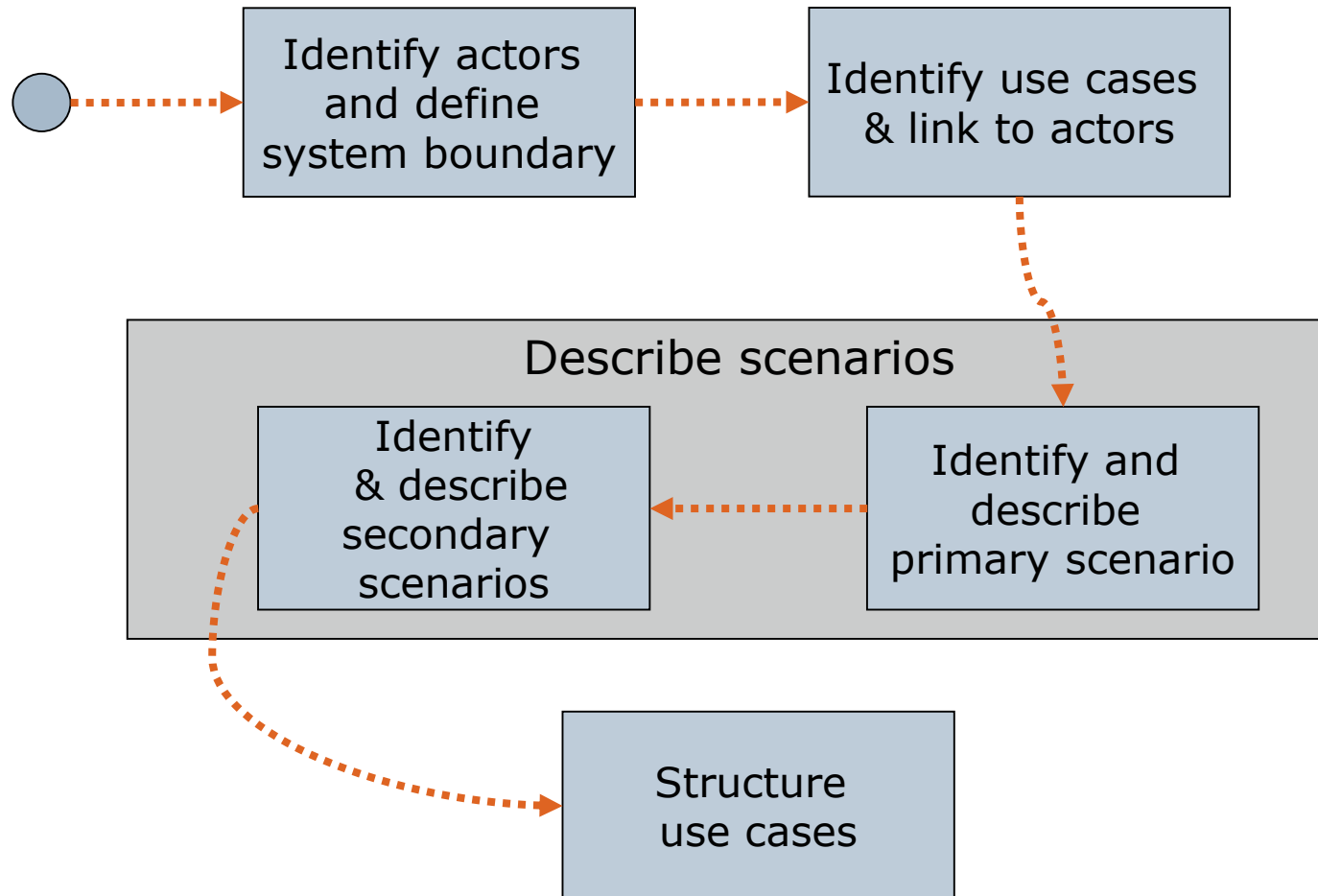
Happy Day Scenario
Alternative Scenarios



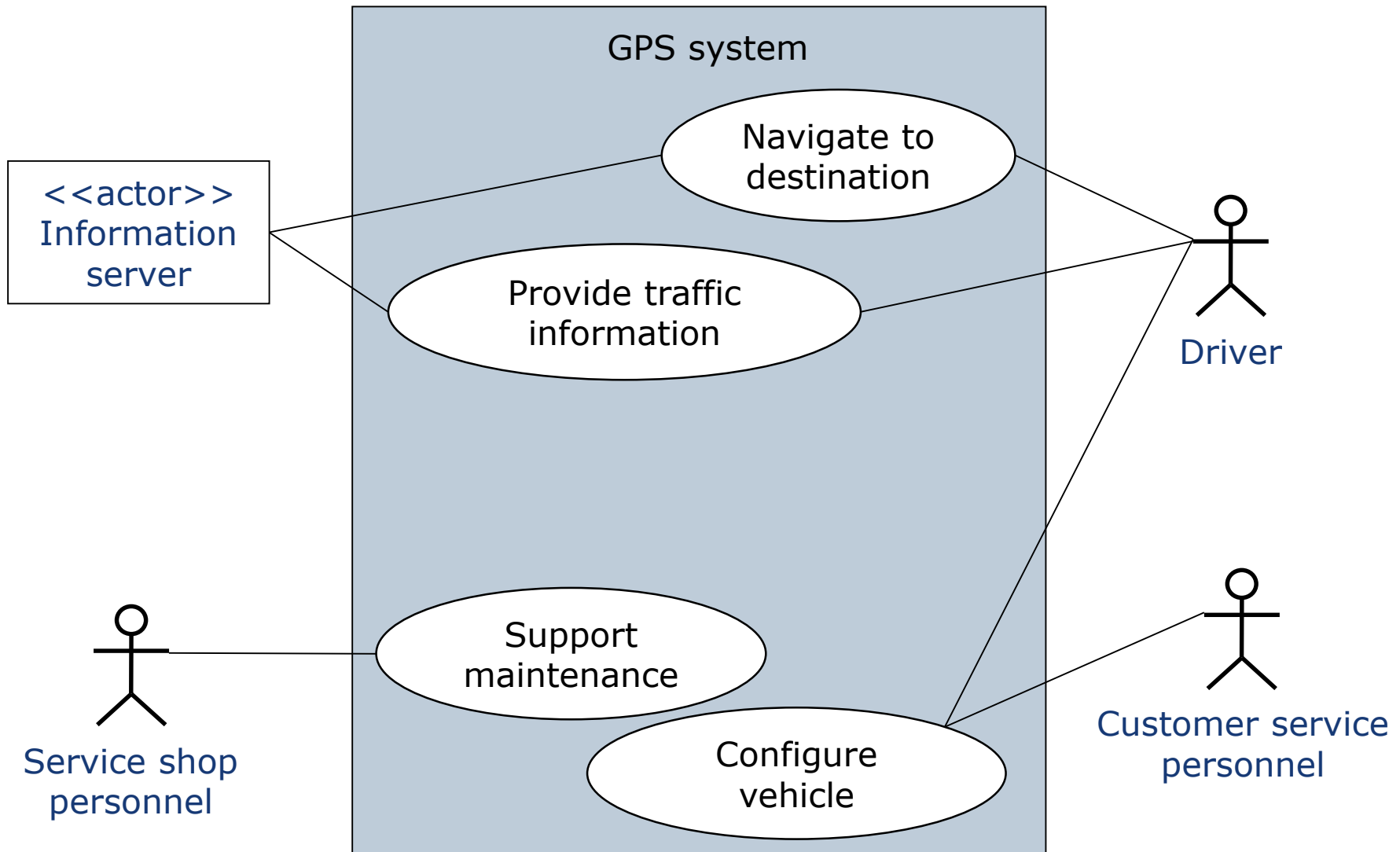
Sequence Diagrams
Activity Diagrams

Use Cases: How to Define

Context Product Development

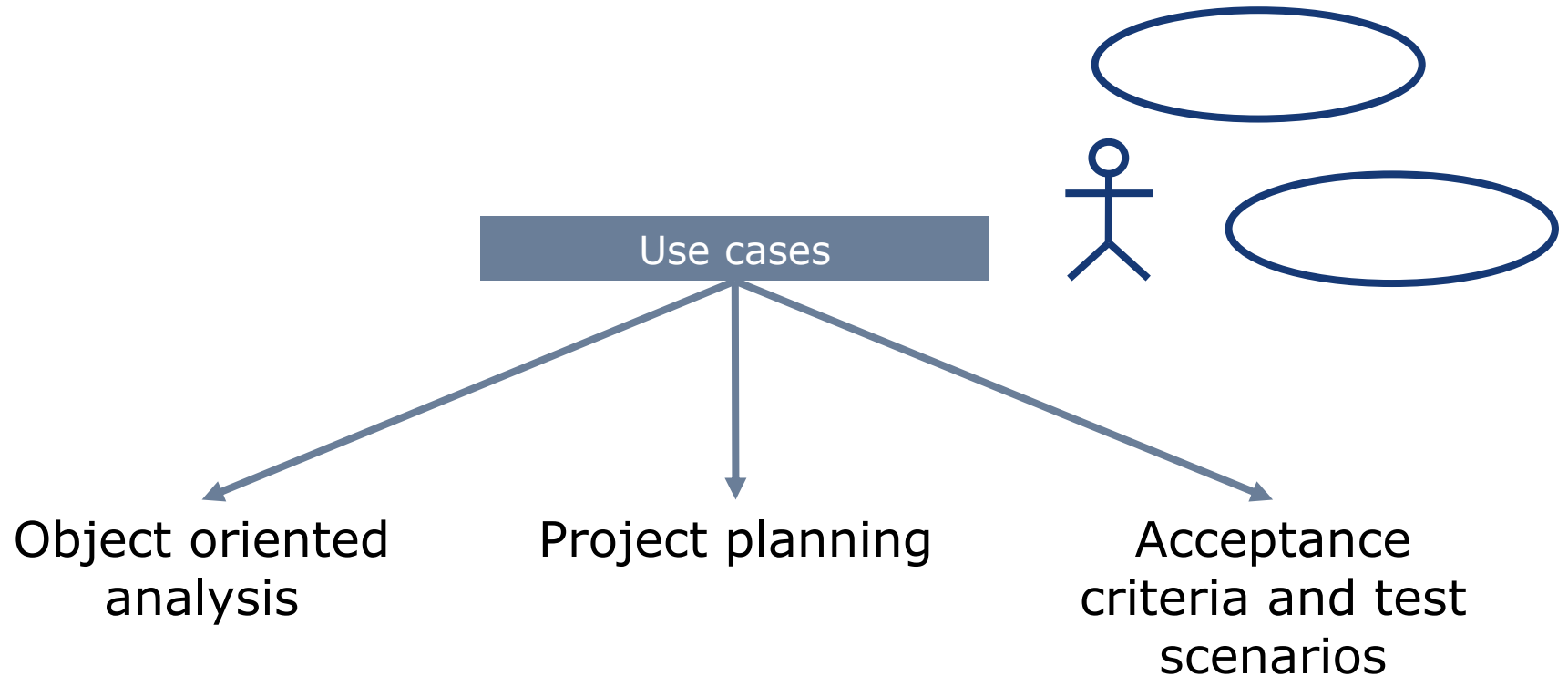


Example: Use Cases for Products



Use Cases for Use Cases

Context Product Development



Use Cases

Context Process Development

Product Development

Wikipedia:

"A **use case** in [...] system engineering is a description of a **system's behavior** as it responds to a **request** that originates from outside of that system. In other words, an use case describes "**who**" **can do** "**what**" with the system in question. The use case technique is used to capture a **system's behavioral requirements** by detailing **scenario-driven threads** through the functional requirements."

A use case should:

- Describe what the system shall do for the **actor** to achieve a particular **goal**.
- Include **no implementation-specific language**
- Be at the **appropriate level of detail**.

Process Development

set of processes
(external) process inputs

role model / activities

process requirements
process tailoring

relevant stakeholder/ roles
measurable process objective(s)
process first, tools second

granularity of processes

Actors = Process Stakeholder



Actors: Stakeholder Analysis

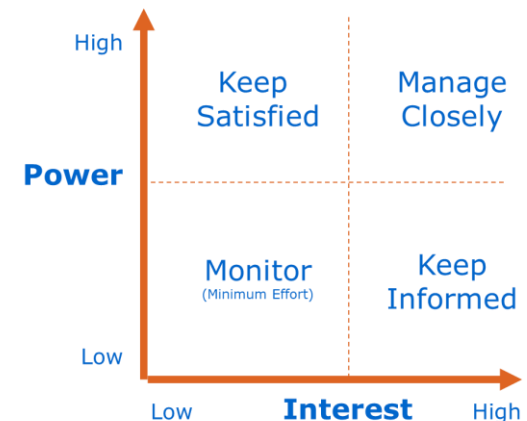
Document the Stakeholders

- For each Stakeholder
 - Name
 - Function (Role)
 - Additional personal data / contact data
 - Availability (time and region) during the project
 - Relevance of the Stakeholder
 - Knowledge area and scope
 - Personal goals / interests



Stakeholder Relationship Management

- Convince Stakeholders about the project's benefit (motivation!)
- Prevent conflicts
- Basis for **active Stakeholder Involvement** during the project



More Details about “Use Cases”

Context Process Development

- User's point of view
- What is the **apparent** functionality of the system?
- What are the **neighboring** systems and **users**?
- Where are the **system** boundaries?
- Use cases describe the operational **flow** of the system.

Process Development

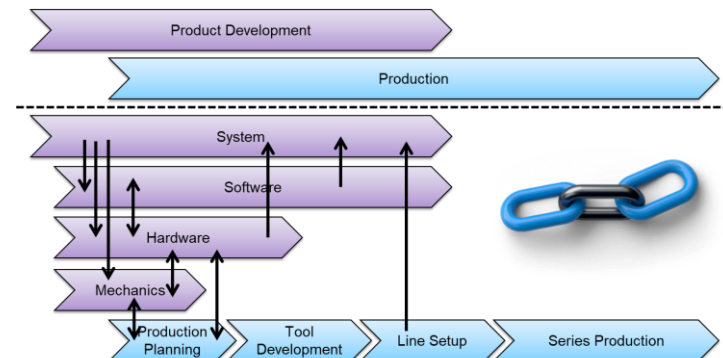
roles/ team members

process outcomes

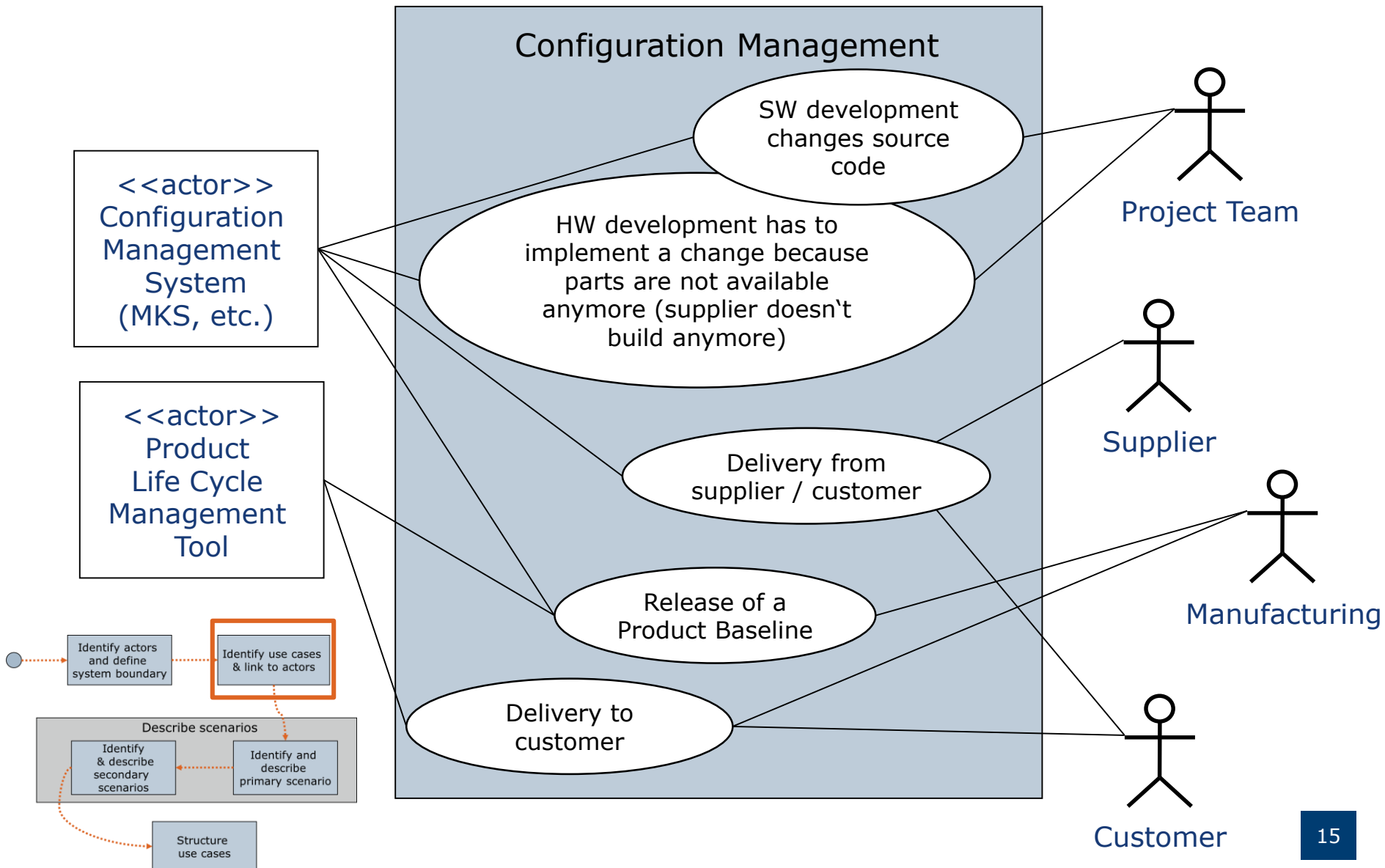
interfaces between
processes, role model

RASI

process flows
first ideas for tailoring



Example: Use Cases for Processes



Stakeholder, e.g.:

- Controlling
- Purchasing
- Development (SW, EE, ME)
- Manufacturing

Challenges:

- Ensure information flow
(The right information to the right place at the right time)
- Different tools per discipline / department

Prerequisite:

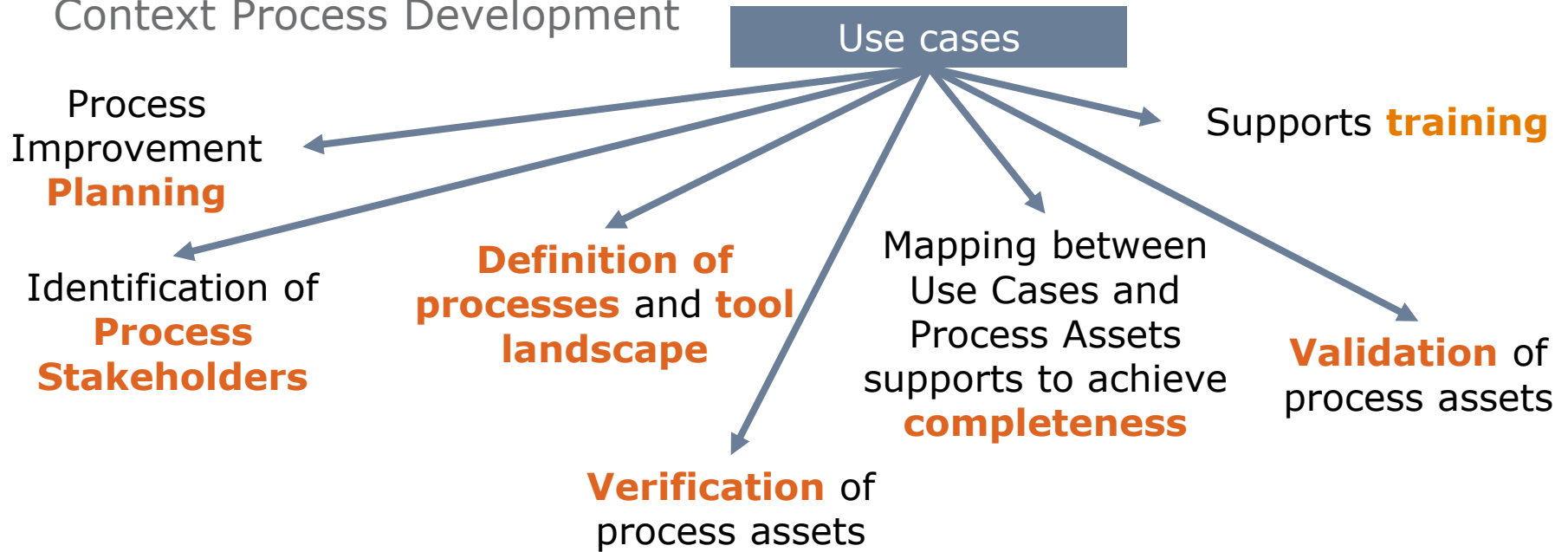
- Know who are the Stakeholders
- Understand the Stakeholder's needs
- Understand their current problems:
Terms, Processes, Tooling



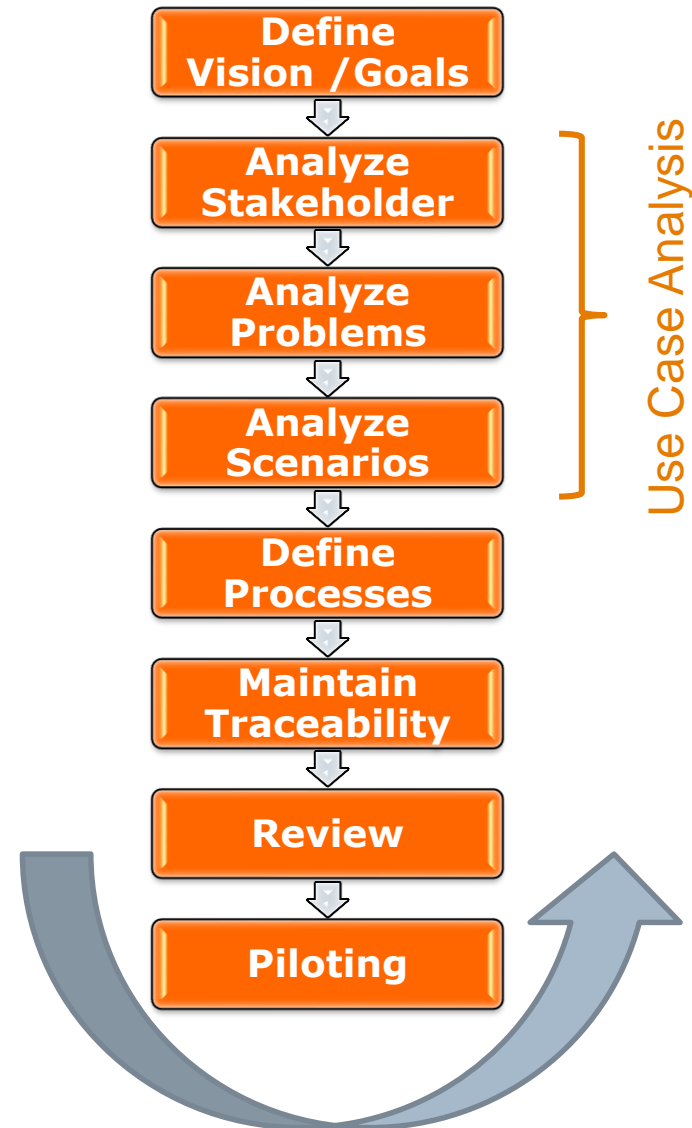
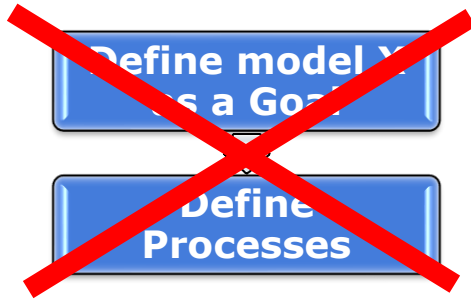
} Use Case Analysis

Use Cases for Use Cases

Context Process Development



Lessons Learned





Summary

Focus on Stakeholder

Goals & Needs

- Traceability
Vision – Goals – Strategy –
Use Cases – Problems – Solutions

Focus on **Process Integration**

- Mutual Comprehension
- What does my colleague need to be able to do the work?
- Build the “Big Picture”
 - Process architecture
 - Visualize Process Interfaces
 - Create a tool map
 - Terms (Glossary)



Help the business, help the people!
Think about what do they really need!



Thank You for your Attention!

Questions? Now or later:

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