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Process Acceptance through Use Cases

NDIA CMMI Conference 2011, Denver (CO)
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EFQM Baldridge · Corporate Initiatives · Six Sigma · ISO 9000 · PMI · CMMI · Prince · ITIL · V-Model XT · SPICE ISO15504

One group, filtering and translating the requirements into the organization's language

Process Improvement · Projects
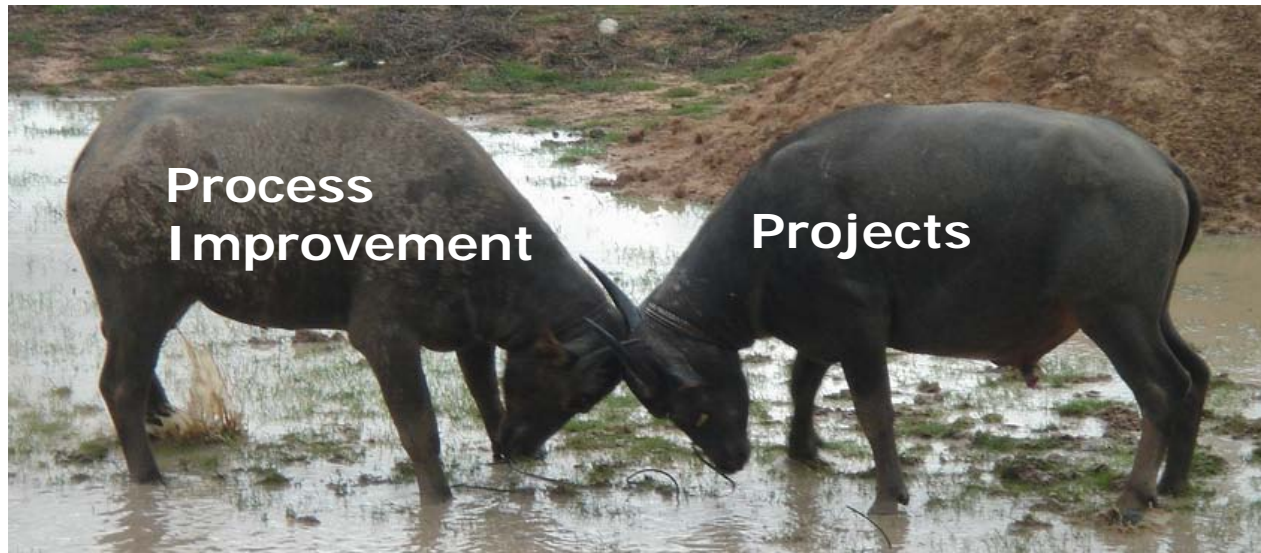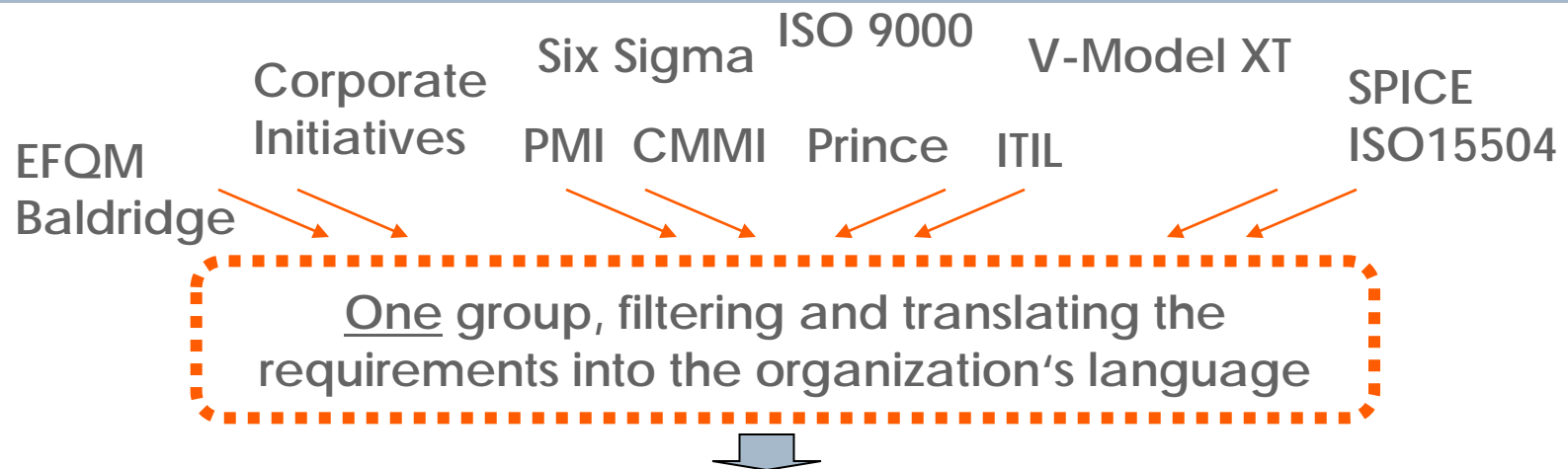
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Analogy "Uses Cases"
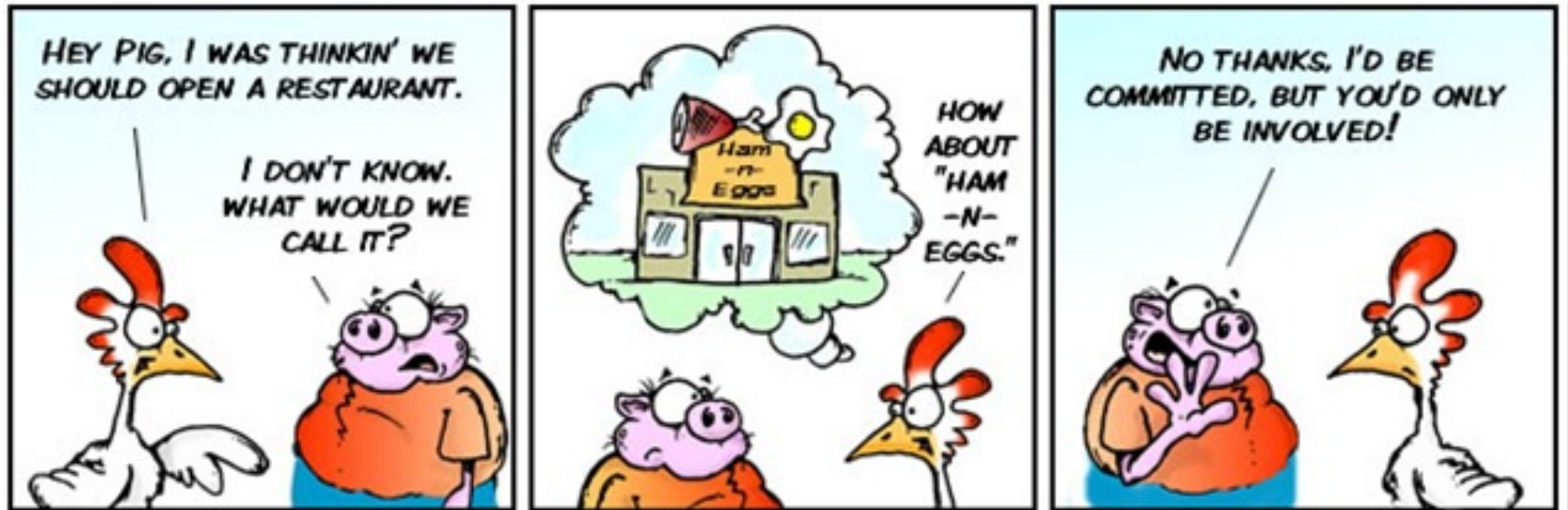
Context: Product Development

Context: Process Development

Wikipedia:

- *"A **use case** in [...] system engineering is a description of a **system's behaviour** 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**.*

- Analogies to talk about:
  - What's an "**actor**" in a process improvement scenario?
  - What are the **actor's goals** in a process improvement scenario?
  - What is "**appropriate level of detail**" in a process improvement context?
  - What's the "**system**" and the "**system behaviour**" in a process improvement scenario?

process(es) (and output)
process input
role model
activities
process requirements
process tailoring

relevant stakeholder
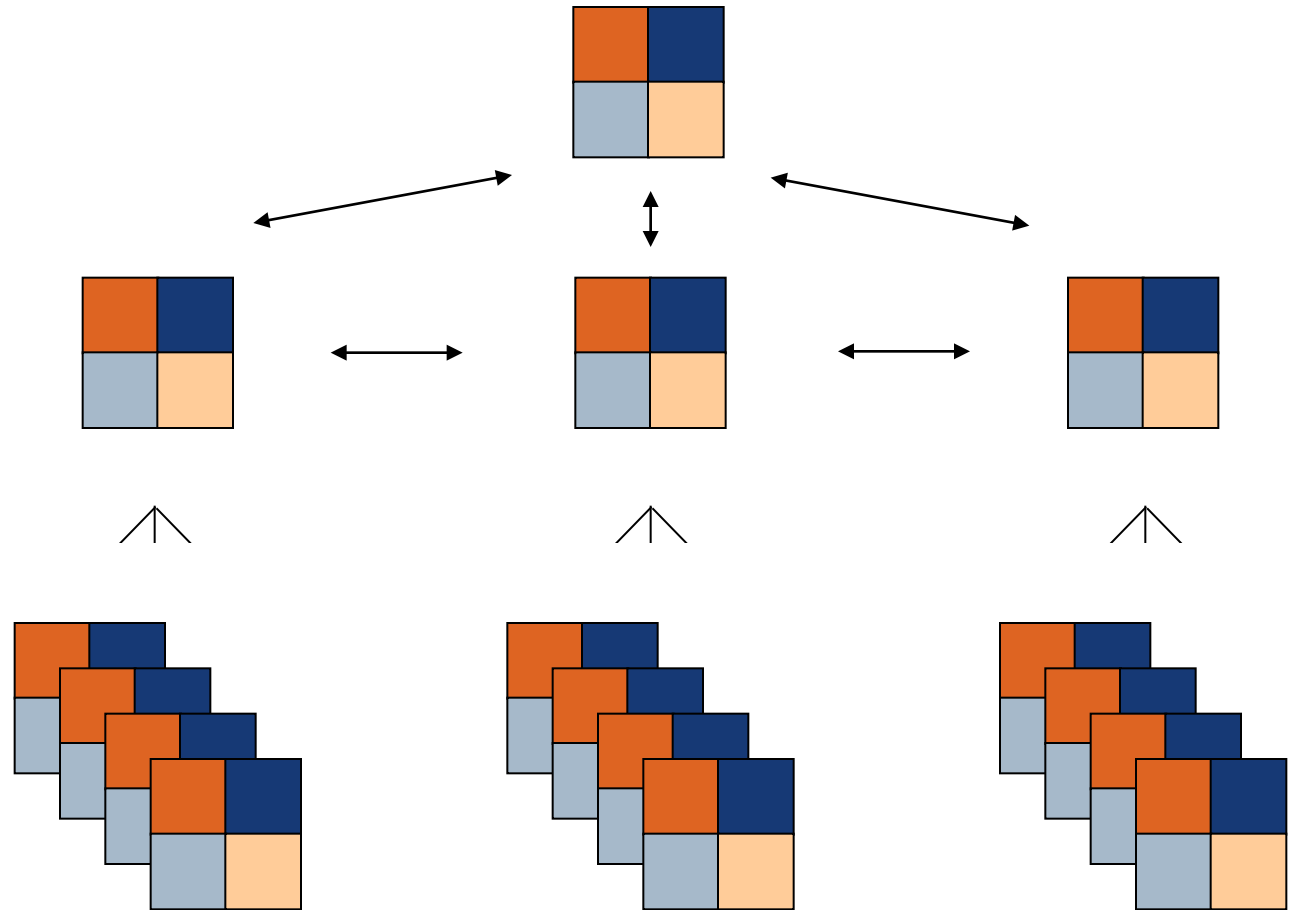process objective(s)

appropriateness

"Goals" and "Appropriate Level of Detail"

Company

Department

Employees

- Does the company's vision and the project's vision conform to each other?

- Scenario based business planning (→ Use Cases?)

- Typical questions (from the management viewpoint):
  - Where are we (the organization) in 5 years?
  - Who is then our customer? What does he need?
  - Which products do we have then?
  - Which kind of services will we offer?
  - Who will be our competitor?

- Derived questions:
  - Which organizational structure do we need then?
  - With whom will we cooperate?
  - Which new technologies will we use?
  - Which quality goals do we have to fulfill?
  - What kind of culture do we need in the organization?
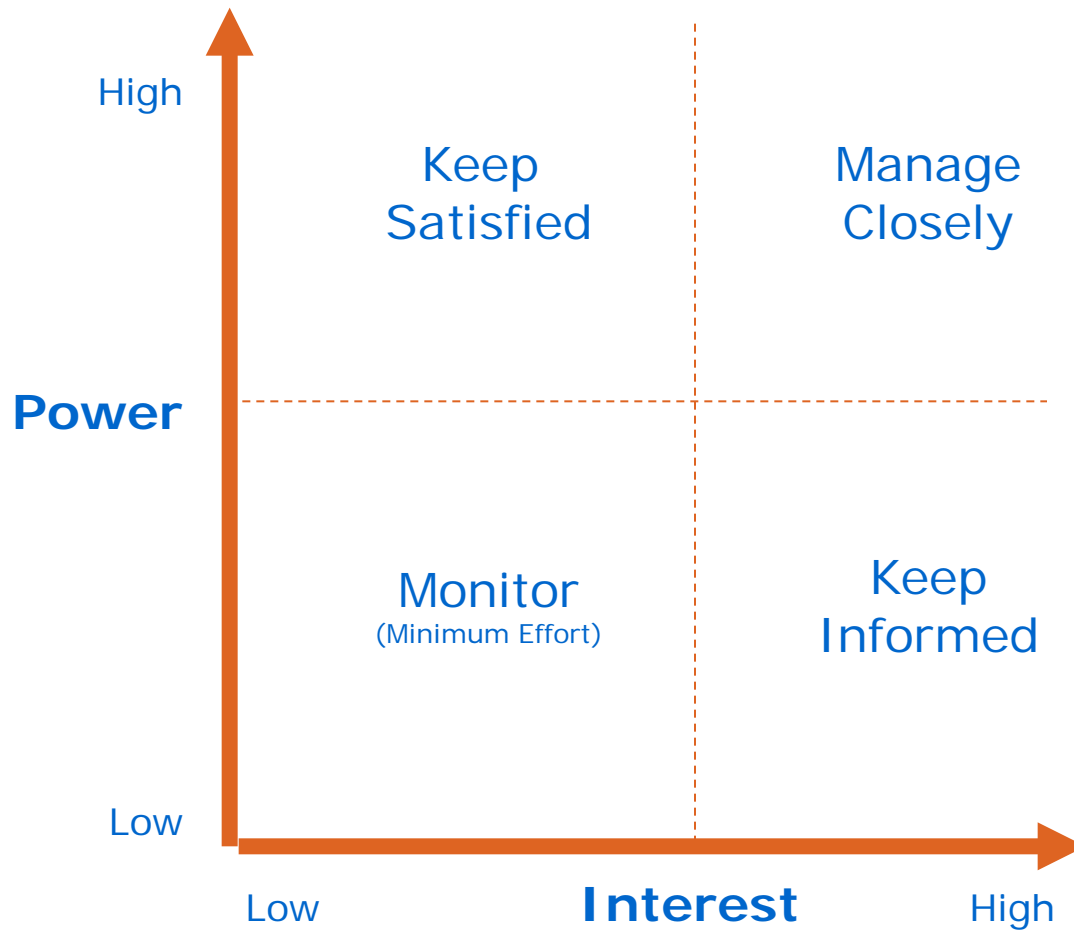 - What kind of skills do we need for this?

Actors = Process Stakeholder

- 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 regarding the project

- Stakeholder Relationship Management
  - Convince Stakeholders about the project's benefit (Motivation!)
  - Prevents conflicts
  - Basis for active Stakeholder Involvement during the project

Stakeholder Analysis

High

Keep Satisfied

Manage Closely

Power

Monitor
(Minimum Effort)

Keep Informed

Low

Low   **Interest**   High

More Details about "Use Cases"

- User's point of view

- What is the apparent functionality of the system?

- What are the neighbouring systems and users?

- Where are the system boundaries?

- Use cases describe the operational flow of the system.

- What the system should do, and not how!

- Semi-formal, and can be easily understood.
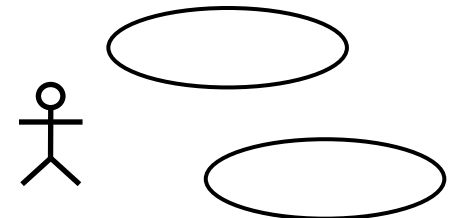
team members

process outcomes

interfaces between processes and tools

responsibilities
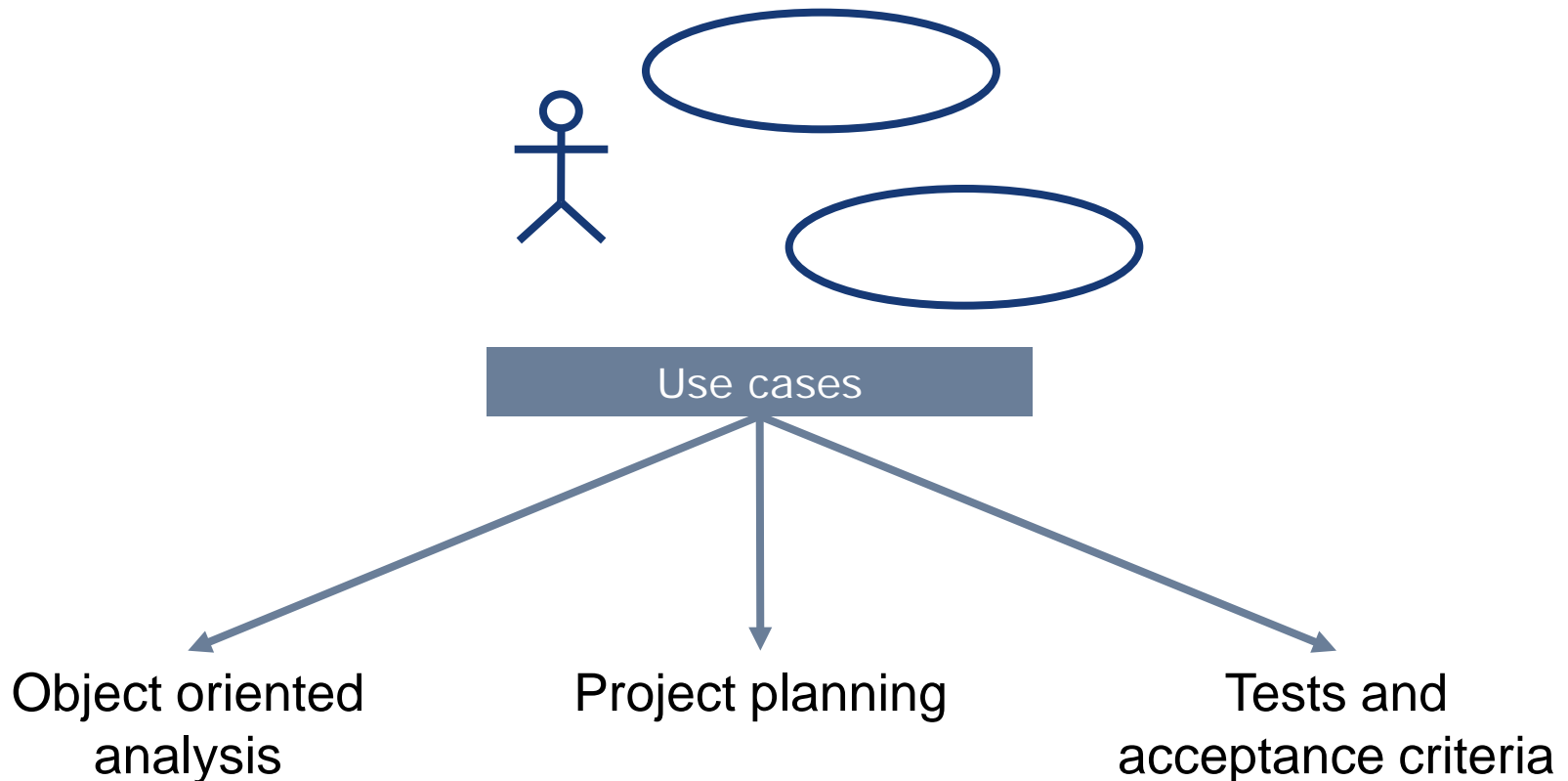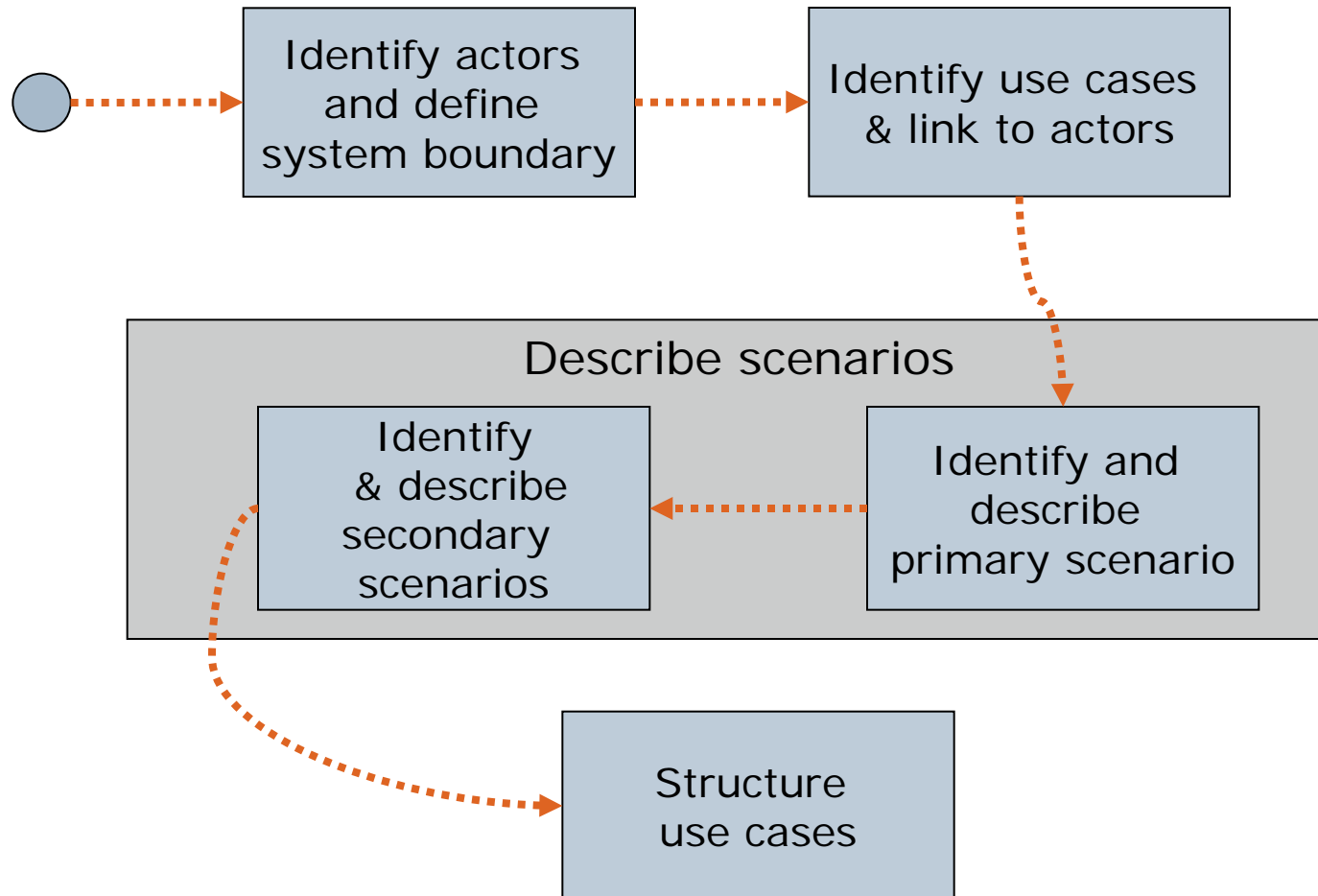
activities

Mmmhhh.....
processes and methods

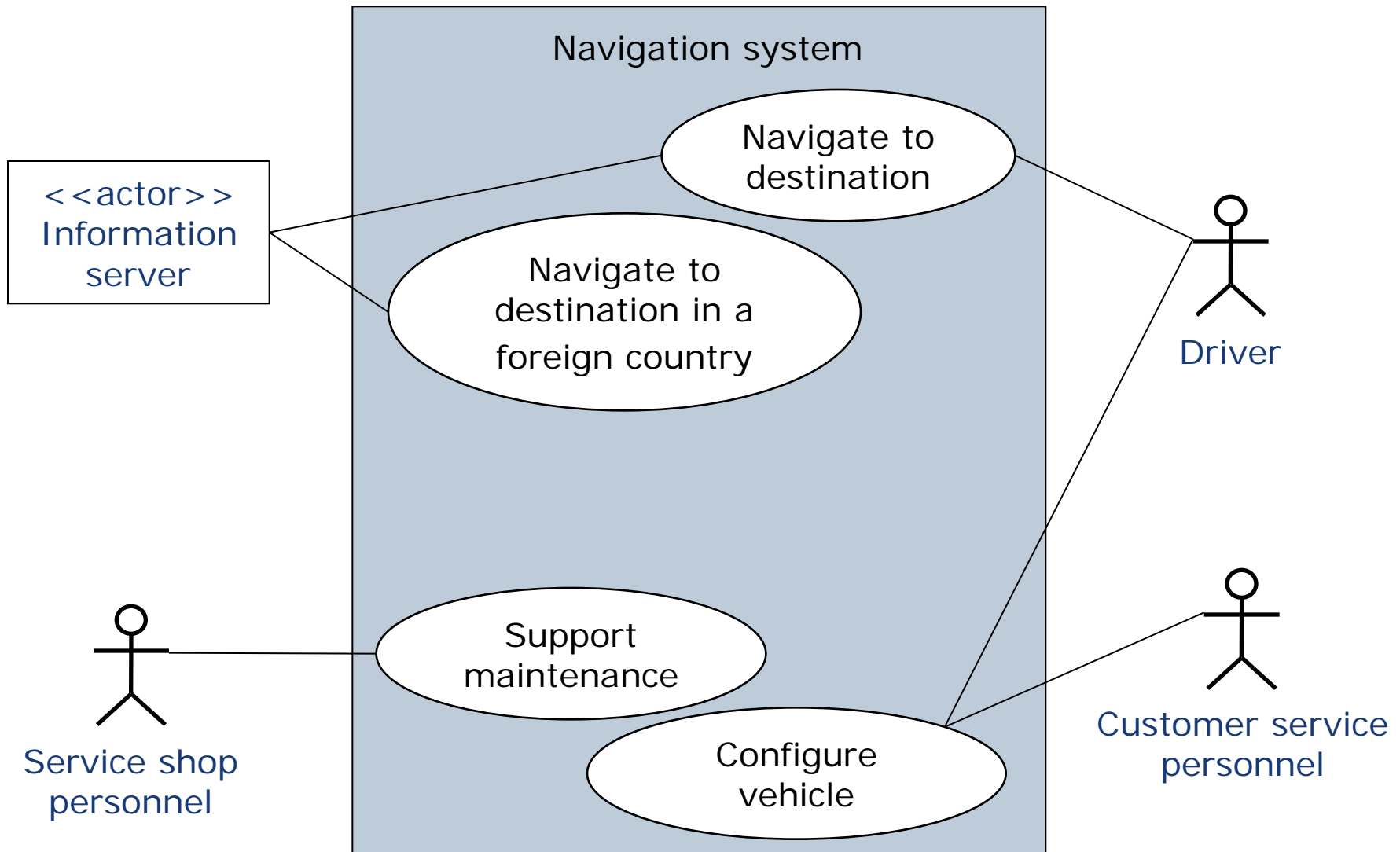- In Engineering: "Use Case Driven Development"

Use cases

Object oriented analysis

Project planning

Tests and acceptance criteria

Example: Use Cases for Products

Example: Use Cases for Processes

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Configuration Management

- SW development changes source code
- HW development has to implement a change because parts are not available anymore (supplier doesn't build anymore)
- Delivery from supplier / customer
- Release of a Product Baseline
- Delivery to customer

<<actor>>
Configuration Management System (MKS, etc.)

<<actor>>
Product Life Cycle Management Tool

Project Team

Supplier

Manufacturing

Customer

Example Configuration Management
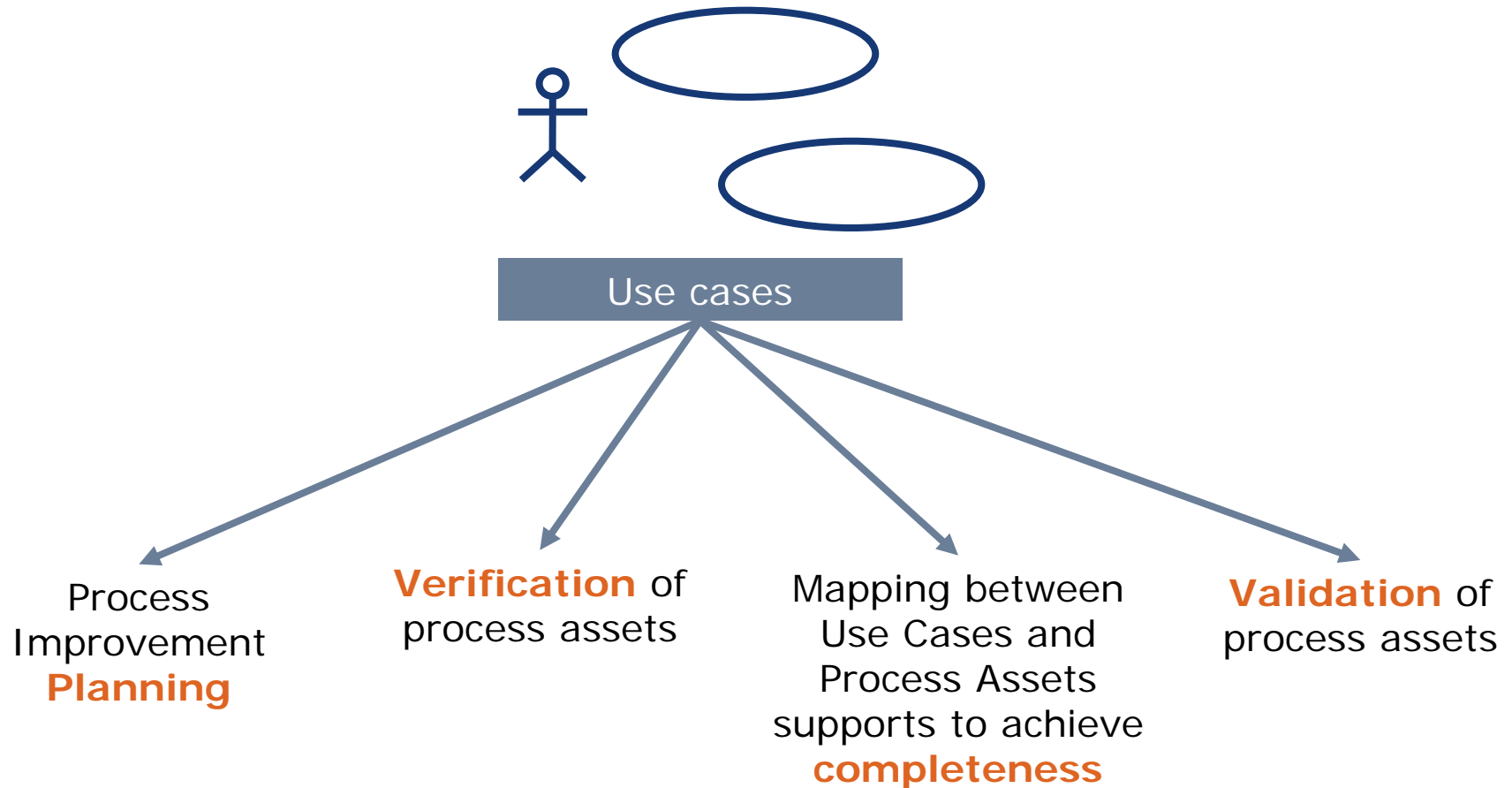
- Stakeholder, e.g.:
  - Controlling
  - Purchasing
  - Development (SW, EE, ME)
  - Manufacturing

- 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
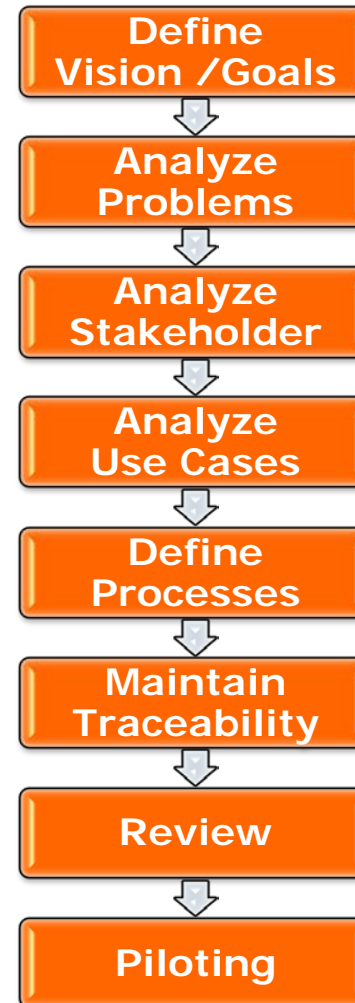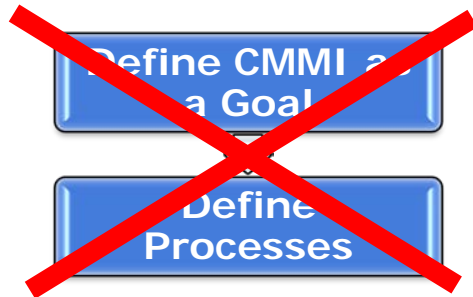
Summary Use Case Analysis

- Systematic Use case Analysis
  - Leads to an **overview of actors**
    - Process Stakeholders (team and management roles, external stakeholder)
  - Places the **focus on the actors** (stakeholders) and therefore focus automatically **on the business needs** (instead on the "level")
  - **Reduces complexity** because the whole process is subdivided in smaller use cases and scenarios
  - **Best practice**:
    - While discussing use cases ask the process stakeholders for current issues with this process!
    - Trace Use Cases and Process Issues to the solution!
  - Supports to create a **tool map** (overview of tools and interfaces between them)

Use Cases for Use Cases

Use cases

Process Improvement **Planning**

Verification of process assets

Mapping between Use Cases and Process Assets supports to achieve **completeness**

Validation of process assets

Lessons Learned

Define CMMI as a Goal

Define Processes

Define Vision /Goals

⬇

Analyze Problems

⬇

Analyze Stakeholder

⬇

Analyze Use Cases

⬇

Define Processes

⬇

Maintain Traceability

⬇

Review

⬇

Piloting

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"
    - Terms (Glossary)
    - Visualize Process Interfaces

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

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Thank You for your Attention!

Questions? Now or later:

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