Process Acceptance through Use Cases

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From Process Models to Projects

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

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Analogy “Management Commitment”

Hey Pig, I was thinkin’ we should open a restaurant.

I don’t know. What would we call it?

How about “Ham -n- Eggs.”

No thanks, I’d be committed, but you’d only be involved!

By Clark & Vizdos
Analogy “Uses Cases”

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?
“Goal Orientation” and “Appropriateness”
“Goals” and “Appropriate Level of Detail”

Company

Department

Employees
An Example on Company Level

- 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

- Management
- SW
- HW
- ME
- Supplier
- Customer
- Purchasing
- Controlling

... and even more ...
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 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 Power, High Interest**: Keep Satisfied
- **High Power, Low Interest**: Manage Closely
- **Low Power, High Interest**: Keep Informed
- **Low Power, Low Interest**: Monitor (Minimum Effort)
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.
Use Cases for Use Cases

- In Engineering: “Use Case Driven Development”

  ![Diagram](image)

  - Use cases
  - Object oriented analysis
  - Project planning
  - Tests and acceptance criteria
Use Cases: How to Define

1. Identify and describe primary scenario
2. Identify & describe secondary scenarios
3. Structure use cases
4. Identify use cases & link to actors
5. Identify and describe primary scenario

Describe scenarios
Example: Use Cases for Products

- **Navigation system**
  - Navigate to destination
  - Navigate to destination in a foreign country
  - Support maintenance
  - Configure vehicle

- **<<actor>>** Information server

- **Driver**

- **Service shop personnel**

- **Customer service personnel**
Example: Use Cases for Processes

Configuration Management

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

<<actor>> Product Life Cycle Management Tool

- 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

- 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

- **Process Improvement Planning**
- **Verification** of process assets
- Mapping between Use Cases and Process Assets supports to achieve **completeness**
- **Validation** of process assets
Keep it Simple and Smart!
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

- 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!
Thank You for your Attention!

Questions? Now or later:

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