Successfully Initiating a Global Software Project

Masud Fazal-Baqiae (s-lab – Software Quality Lab), Anu Raninen (Sogeti Finland)

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Motivation

Agile!

Suitable process needed
Need to get it right quickly
  – Time pressure (startup phase)
  – Problems cause delay and quality issues

How to set up the development process?
1st Attempt: Top-Down Approach

• Setting:
  – On-site-visit of Indian delegation during startup phase
    • limited face-2-face time (1-2 working days)

• Approach:
  – presentations by project managers
  – limited involvement of the project team

• Challenges:
  - Lack of experience with distributed processes
  - Incomplete definition and documentation of as-is processes
  - Lack of experience with existing processes
  - Difficulty to determine required detail of process definition
Top-Down Approach: Results

High-level process descriptions

Artifacts used in former projects

Role Responsibilities

Org-Chart / Communication

Periodic Meetings
Issues with Top-Down Defined Process

• **Missing big picture**
  – E.g. requirements descriptions for a sprint were too detailed for their purpose and could not be finished in time

• **Uncertainty about the scope of responsibility of team members**
  – E.g. activities of the architects were not defined → not clear what architectural decisions would have to be discussed and coordinated

• **Unsuitability of activities and artifacts**
  – E.g. documents that were created by the German Requirements Engineer were not reused, but stuck to the format of previous projects resulting in additional effort and consistency issues

• **Misfit between responsibilities and skill sets**
  – E.g. missing familiarity with agile approaches → overspecification and schedule overruns
2nd Attempt: Looking for Bottom-Up Approach

- **Issue: Missing big picture and overview**
  - Visual approach to derive big picture

- **Issue: Misfit between responsibilities and skill sets**
  - Inclusive and interactive to address existing gaps

- **Issue: Uncertainty about the scope of responsibility of team members**
  - Quick results to define scope for all members

- **Issue: Misfit between responsibilities and skill sets**
  - Easy to learn and low ceremony to enable all members to participate

→ Make use of the existing LAPPI technique by Anu Raninen
2nd Attempt: Bottom-Up Approach

• Setting:
  – On-Site-Visit of German delegation two months after development start
    • limited face-2-face time (2 half-day workshops)

• Approach:
  – Interactive workshops with whole Indian team
    → use LAPPI technique

• Goals:
  – Reach common ground for development process
  – Quickly derive visualization of it
LAPPI by Anu Raninen

- A light-weight technique to practical process modeling and improvement target identification
- Originally designed for process improvement
- 2 Practical workshops

Roles and Information Flow

Roles:
- Role1
- Role2
- Role3

Information Flows:
- "Problem free" information from Role1 to Role2
- Problematic information from Role2 to Role3
- "Problem free" information from Role3 to Role2

Process:
- Step 1
- Step 2
- Step 3
- Step 4
- Step 5
LAPPI: Capture Process and Issues for Improvement
LAPPI in Action: Roles and Infos

- little participation in beginning, but then engaging team
- High parallelization, mostly complete after 1h
- Gaps became obvious:
  e.g., what to deliver by project manager
• high participation from beginning
• Extensions to LAPPI: added roles & artifacts to activities, added timeline

• Results:
  • uncovered contradicting conception about when requirements refinement had to take place
  • defined point in time during sprint for specification freeze
Conclusions & Outlook

• Defining suitable distributed development process is important, as bad process can result in schedule overruns and software issues.

• Bottom-up approach using e.g. LAPPI has following advantages:
  – Speed up by collaborative definition
  – Fosters discussions by whole team
  – Immediate visual result
  → Achieves more detailed and more accurate result even quicker

• Possible improvement:
  – Guidance on how to combine information of two models to integrated, consistent model
  – How to apply LAPPI with team scattered across multiple locations