Development of an Adaptation Module Creation Process for a Performance Management System

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About

- The thesis was carried out at a company which is a major global telecommunications network supplier
- Supervised by professor Raimo Kantola

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Background 1/2

- The combination of rapid subscriber growth, increased usage and new applications require ongoing operator investments to improve network coverage, capacity and functionality

- The operators improve their understanding of network behavior by managing, analyzing and presenting performance data generated by the network over a period of time

- Processing of large quantities of performance statistics provides accurate and valuable information about network capacity and usage

Background 2/2

- The studied performance management system is designed to operate in multi-technology and in multivendor environment

- An adaptation module makes it possible to include network elements from various vendors and various technologies for the performance management system

- Almost every performance management system delivery involves a creation of a new adaptation module

- The performance management system has been introduced lately, and there was not a proper process description for the adaptation module creation process

Research Problem

- The main research problem:
  - How to develop an adaptation module creation process for a performance management system?

- Additional research questions were:
  - Can the case process be improved?
  - How to share information in order to avoid doing overlapping tasks in different units?

Research Method

- Literature studies
  - Books, academic publications, documents
- Interviews and discussions
  - Managers and experts at the case company
- Teamwork and workshops

Structure of the Research

- Introduction
- Theoretical studies
  - Process
  - Process management and tools for process management
  - Network management and performance management
- Case study
  - Introduction of the case company and its generic processes
  - Introduction of the target system
  - Development of the case process
  - Analysis of the case process
- Conclusions and Discussion

Development of the Case Process

- Workshops with experts and developers
- Process description according to literature:
  - Scope
  - Customers
  - Objectives
  - Inputs and outputs
  - Step-by-step description

Analysis

- Process map
- Process hierarchy
- Process flowchart
- Process maturity model
- Streamlining tools

Conclusions

- Most of the process management tools described and utilized in this thesis have not been used before in process management in the studied case company's sections

- The case process needs proper and well-defined measurements that are currently missing

- Some continuous process development methods should be applied to the case process in future

- Improvement points:
  - coordination and management issues
  - information sharing
  - version management
  - tools
  - testing phase

Future Research

- Generally, all the noted points of improvement for the case process could and maybe should be studied in future

- Version management of adaptation modules will be the most important target for development. It will be the most efficient way to avoid doing overlapping work

- Important research area would also be process developing issues. This should also include the design of new development tools for adaptation modules

- The goal for these studies would be to reduce the lead-time of adaptation modules significantly

Questions?

Thank You!

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