Abstract

Industry master students work part-time in an engineering company. The Reflective Practice workshops are set-up to stimulate reflection about theory and practice. The workshop *Domain Knowledge* addresses the questions: What is domain knowledge, what domain knowledge is required for system design, how do I acquire domain knowledge?
Colophon

Merete Faanes from Buskerud University College created the educational flow Reflective Practice. Reflective Practice is a thread throughout the entire master Systems Engineering to stimulate students to relate Education and Practice.

These workshops are the result of the cooperation of Merete Faanes and Gerrit Muller
Pre-assignment

Make an overview of the domain knowledge that you have acquired until now.

Provide a few specific examples of such domain knowledge.

Make a list of domain knowledge that you like to acquire.
9:00  welcome, last workshop, introduction this workshop

9:10  block 1: Business

10:20 block 2: Process and Organization

11:30 block 3: Engineering

12:40 plenary discussion

12:50 pre-assignment next workshop, close
Workshop Ground Rules

+ Start individually for 5 minutes
+ Then discussion in the group
> Let the less experienced participants start with answering
BAPO framework

market
customers
financials
turnover
profit
cash flow
capital use
value chain
goods flow
life cycle

From: COPA tutorial;

customer needs
stakeholder concerns
requirements
specification and design
functions
qualities
decompositions
interfaces
technologies

people
processes
roles
responsibilities
relationships
sites/locations

B
Business

A
Architecture

P
Process

O
Organization

Workshop Reflective Practice; Domain Knowledge
6  Gerrit Muller

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BAPOframework
What is the Value Chain in your domain;
> Be specific, e.g. Names of customers and suppliers

What are the financial figures of merit
> e.g. typical product or project cost, company turnover, material cost

What are timing figures of merit,
> e.g. project duration, system life time, order lead time

Results on flipover
+ Make an organogram

> be specific e.g. add names

+ What is the product or project process

+ What is your immediate project context

> be specific add names, components/functions and roles

Results on flipover
+ What are the key performance parameters of the system;
> be specific with names and numbers
+ Make a list of all involved technologies
+ Classify technologies as Core, Key or Base

results on flipover
Core, Key, and Base Technologies

Technology life cycle

- Own value IP
- Critical for final performance
- Commodity

Total Product

Core
Key
Base

make   outsource   buy   refer customer to 3rd party

Partnering
Provide the answers to the questions in blocks 1, 2, and 3 of this workshop; be specific with names, functions, and numbers in max 4As.

- value chain, financial and timing figures of merit
- organogram, product or project process, immediate project process
- key performance parameters, technologies, classification in core, key, and base

Use the opportunity to ask questions in your organization. This assignment is a good excuse to talk to people that you normally would not speak.

Ask your company supervisor to verify what you have written.

Write a 1 page reflection report, discussing the workshop, the experiences in obtaining answers, and the feedback from your supervisor.
Pre-assignment next Workshop

Fill in the pre questionnaire at

http://www.gaudisite.nl/RPHTAquestionnairePre.doc

Add your name to the filename when submitting it by email
Alternate assignment; only after permission of the teacher

- do the pre-assignment and submit this to the teacher (as all other students)
- go through the workshop questions yourself
- discuss the questions and your answers with a local colleague
- write a (max) 2-page document with your answers including examples and rationale behind the answers
- send this 2-page document by mail to another student and ask for comments
- update the 2-page document
- do the post-assignment, include what the feedback of the other student changed in your thinking
- send 2-page document and post-assignment to the teacher