

# Workshop Reflective Practice; How to Apply SE in Practice

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## 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 *How to Apply SE in practice* is the second workshop, where the questions are: Where are Systems Engineering techniques and methods applied in my company? Where can Systems Engineering techniques and methods add value? How can I make a start in applying Systems Engineering techniques and methods?

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logo  
TBD

## *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

Fill in the pre questionnaire at

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

Add your name to the filename when submitting it by email

We use the results of this questionnaire in anonymous form for research.

# Agenda

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t welcome, last workshop, introduction this workshop

anticipating the master project

t+0:10 block 1: What did you apply so far and what did you experience?

t+1:20 block 2: What can or needs to be applied?

t+2:30 block 3: How to start applying SE methods?

t+3:40 plenary discussion

t+3:50 pre-assignment next workshop, close

Start thinking about a topic for your master project.  
Discuss ideas with colleagues, alumni, your supervisors,  
etc.

See <http://www.gaudisite.nl/SEthesisProjectPaper.pdf> and  
send this paper to your supervisor too.

- + What SE methods did you apply?
- + What worked well, what did not work?
- + What keeps you from applying SE methods?

- > Be specific
- > Give examples

Findings and highlights on flipover

- + What SE methods do you want to apply?
- + What needs does the organization have?
- + What SE methods are beneficial for the organization?

> Be specific

> Give examples

Findings and highlights on flipover

- + How can you make a start in applying SE methods?
- + What is a good timing?
- + Who to involve and who to address?
- + What do you make and show?

> Be specific

> Mention names, projects, dates, milestones

Findings and highlights on flipover

# Post-assignment

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Make an architecture overview of your own system; you need this overview for the SESI course. See next slide when your system is classified or highly confidential.

The overview has to cover the following aspects:

- partitioning structure (block diagrams, Work Breakdown Structure (WBS), or Bill of Material (BoM))
- dynamic behavior (functional models, e.g. Energy, Material, or Information (EMI) flows, state diagrams, sequence diagrams, etc.)
- Key Performance Parameters of the system-of-interest (quantifications)
- the relation between parts, dynamic behavior and key performance

maximum 5 pages

Write an 1 page reflection report, discussing the workshop and the architecting assignment.

# How to Cope with Confidentiality

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The closer you can stay to your “real” system the more realistic and valuable the learning outcome. The staff treats your material as confidential. However, if your system is classified or highly confidential, then take one of the following steps (in order of preference):

- *obfuscate*: make changes to values or features to remove the confidentiality
- use past system that is similar (works only if that is not confidential)
- *transpose*: select a similar system in another domain (for example move from missile to drone)

# Pre-assignment next Workshop

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Position yourself on the *national cultural dimensions*

and position your company on the *organizational cultural dimensions*.

Use the dimensions as described by Geert Hofstede

<https://geerthofstede.com/culture-geert-hofstede-gert-jan-hofstede/6d-model-of-national-culture/>

<https://www.hofstede-insights.com/organisational-culture>

[http://en.wikipedia.org/wiki/Geert\\_Hofstede](http://en.wikipedia.org/wiki/Geert_Hofstede)

deliver report (max 4 A4's) at least one week before the workshop

# Replacing assignment; only after permission of the teacher

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- 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