

SESG Summary and conclusion

15-2-2023 @ USN Kongsberg

2pm – 5pm

SESG numbers and data

- SESG facilitators: 2
- Coffee with cookies available: Yes 😊
- Duration: 3 hours
- Participants: ~40 (people from industry and academia, including SESG facilitators)
- Presentations: 2
- Workshop groups: 9 (3-4 people in each group)
- Posters with group feedback

SESG event 15th February, 2023, 14:00-17:00

Title: Reflecting on Systems Engineering in Practice

Brief description:

Practitioners need reflection as one of the main tools to keep developing themselves, the so-called reflective practitioner. We explicitly teach the industry master students to reflect. For them this is an instrument to make the combination of working in a company (practice) and studying systems engineering at the university (theory) effective.

In this SESG, we have invited several alumni, and challenged them to look back at their master project from their current position in a company. In this way, we hope to explore how reflection is working in practice

Speakers:

- Frode Island-Bergan, Semcon
- Tone Lohndal Hogstad, KDA

We asked them the following questions, which you may ask yourself as well :-):

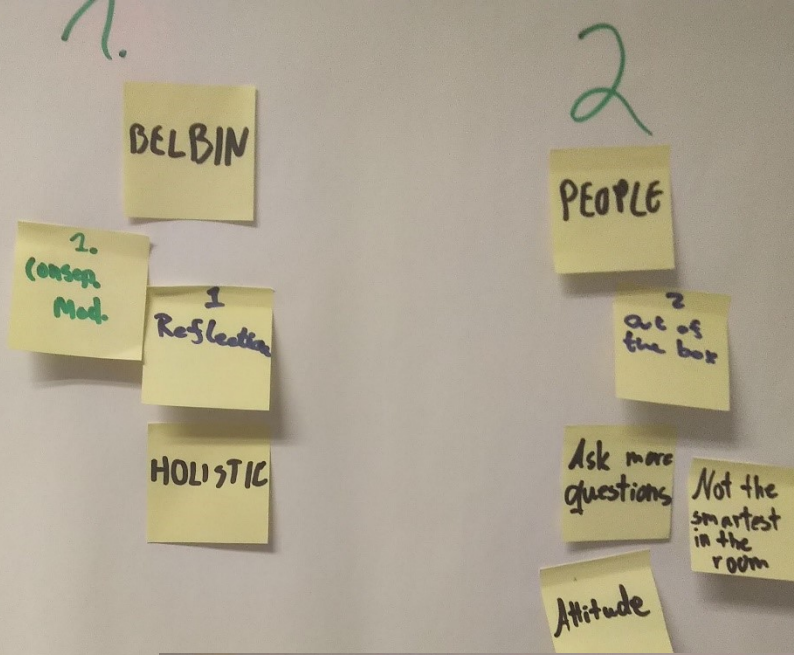
- Do you now think that you were digging a rabbit hole when doing the master project? Or quite the reverse, was the master project in hindsight a hot topic that upto today is highly relevant?
- What are, in your current position, the main challenges where systems engineering is a crucial part of the solution?
- What did you learn after finishing the master that you like to share with your peers?
- and a meta question, how much do you use reflection as a means to develop? What helps you do so, or what keeps you from doing it?

Initiating questions for group work

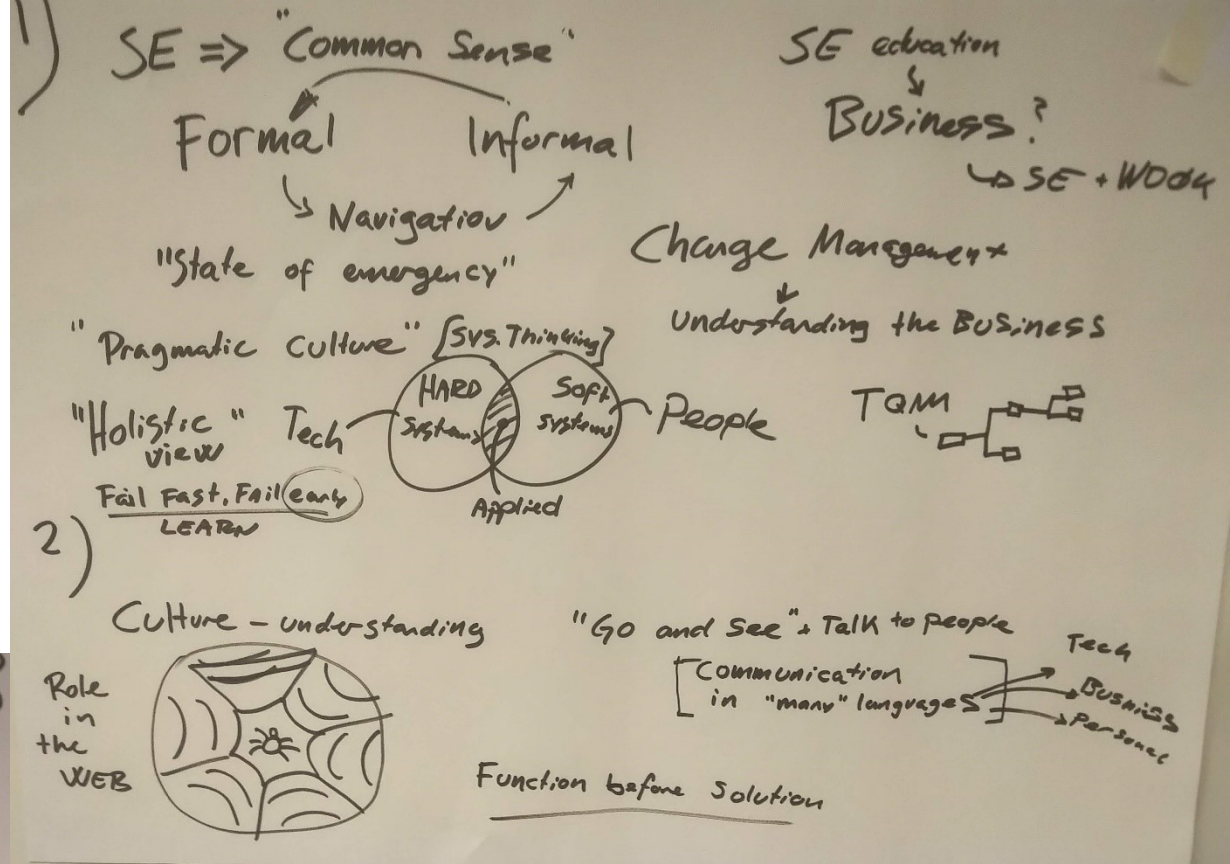
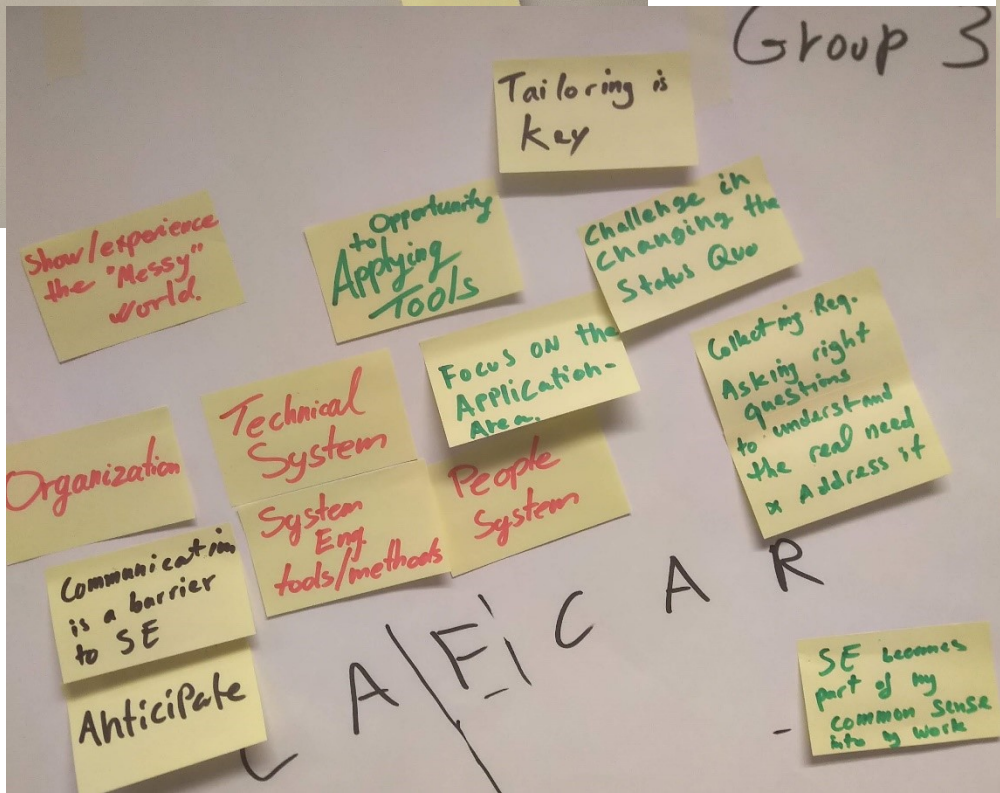
What **insight** from your **formal education** do you use in **today's practice**?

What **insight** do you like to trigger in the formal **education of future (systems) engineers**?

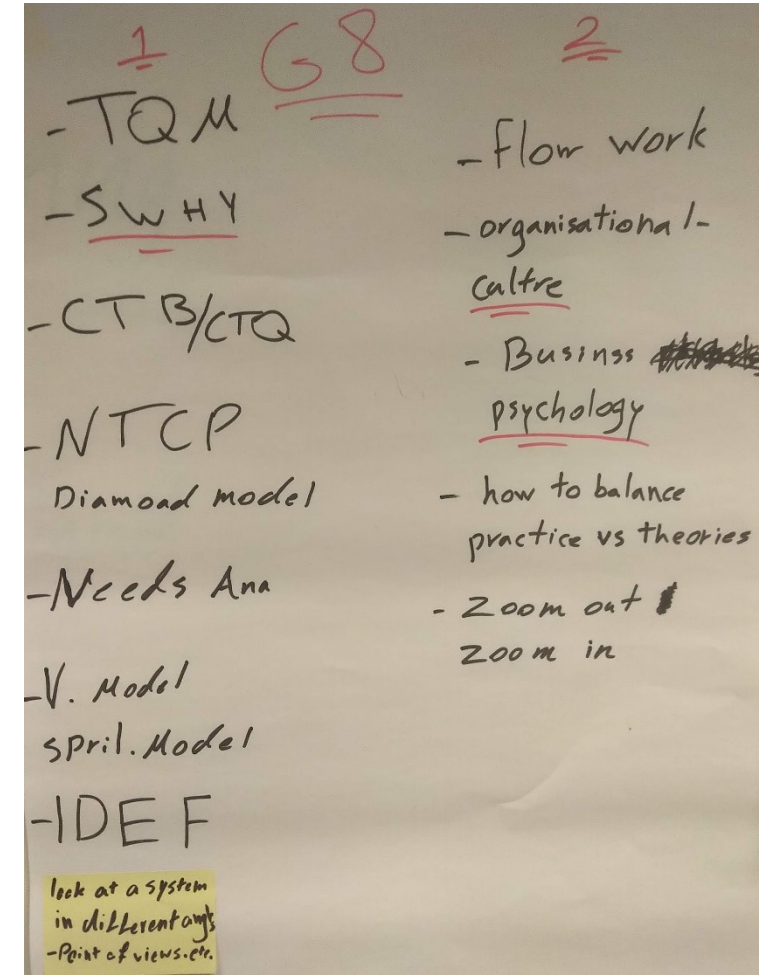
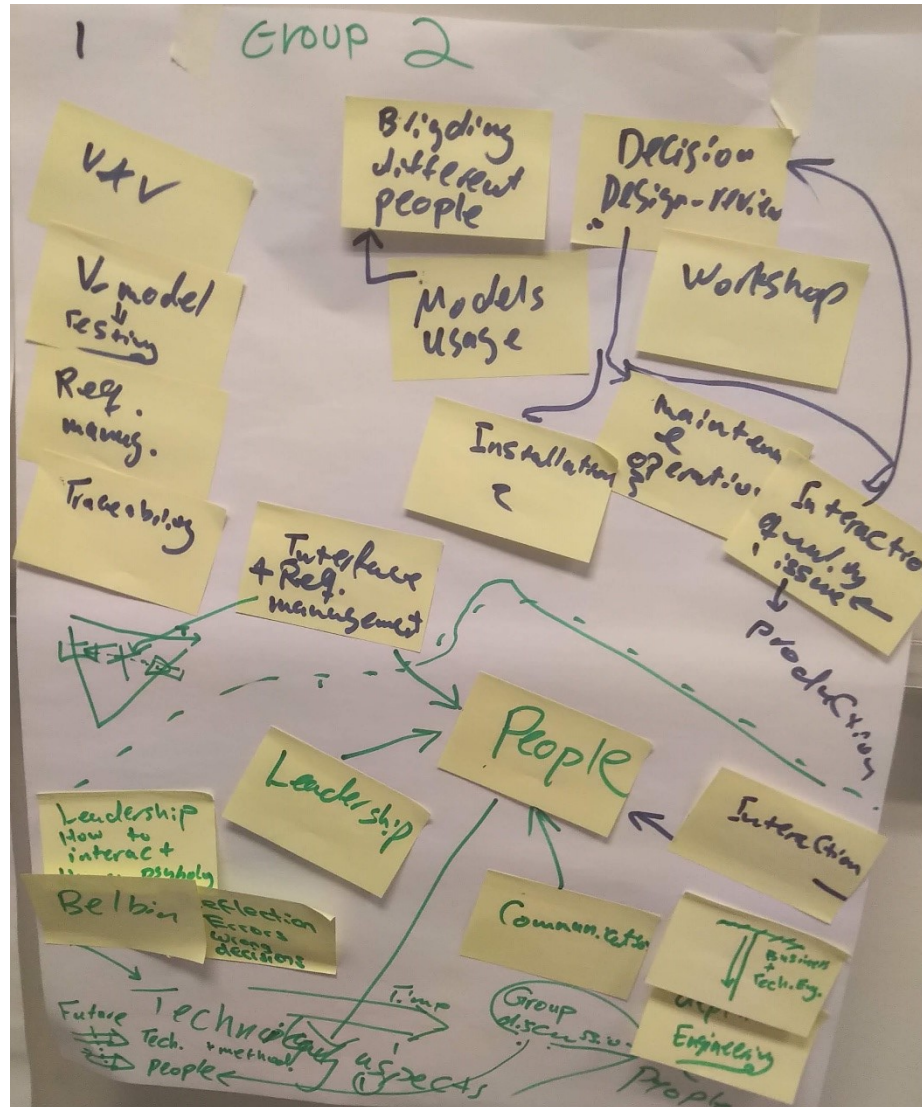
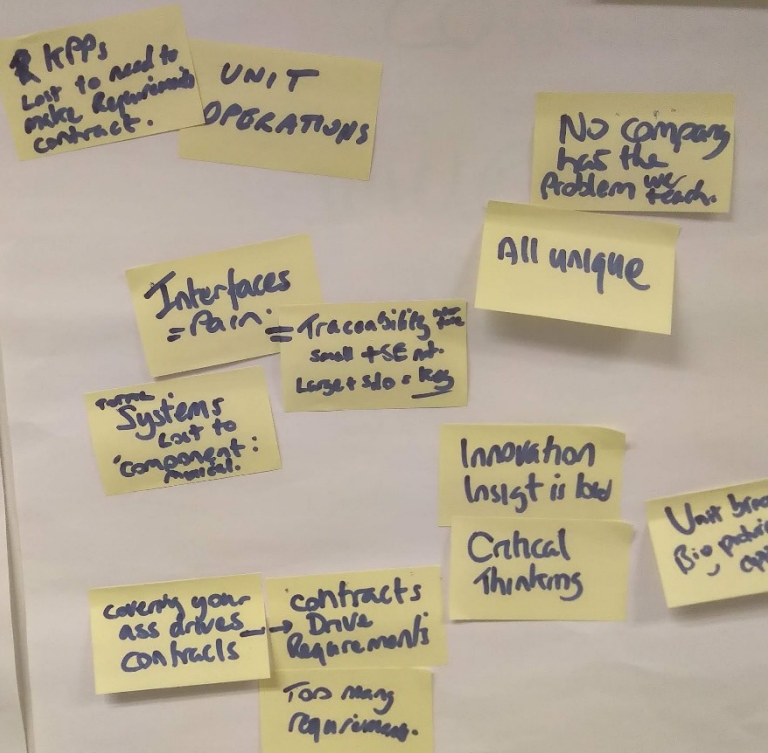
Next slides show the flips of the breakout teams



Mixing methods tool
Psychosocial



SKILLS 7 FROM EDUCATION



1

Group 6

TOOL BOX

- Abstractions
- Visualizations
- Dynamic Behaviours
- modelling

- Almost daily I use my previous education insight.

2

- Transforming
- Thinking process
- Alternative style
- Anticipation
- Communication

Problem / Agent

- Collaboration / Cooperation
- Control Awareness

Group 5

1.

CAFCR

THE NTCP
"DIAMOND
APPROACH"

TAGUCHI
METHOD

Rank Concepts
(Pugh)

General
systems
Thinking

2.

SOFT SKILLS
"BELBIN"

System vs. SW
relation

PASS ALONGS.

FUNDAMENTALS
AS
DISCIPLINE

KISS THEORY
IN WRITING
REQUIREMENTS

Process
is not

It's Inter
and not just
system int

INTEREST
INSIGHT

Look beyond
The
DR

KPI's
ARE NOT KPIs

DATA MODELS
ARE NOT
ONTOLOGY

Company
ontology
trumps Theory

LEARN
TO
TRANSLATE

Gerrit's Conclusion(s)

Many **insights** that participants mention **for future (systems) engineers** go **beyond technical aspects**, e.g. **humans, organizations**, and **business**; this probably links to the repeated use of the terms **systems thinking and holistic**