NORSEC Norway Chapter Updates Spring 2025

Systems Engineering Study Group (SESG) on 13th Feb.

NORSEC in collaboration with University of South-Eastern Norway (USN) has been regularly holding Systems Engineering Study Group (SESG) events at the University of South-Eastern Norway, Kongsberg, Norway. The objective of the meetings is to exchange experience between people who are interested in systems engineering or who have the intent to become a systems engineer. The SESG discusses one theme per meeting.

SESG theme for Spring 2025: **Where are we on the digital journey**

There were thirty-five Systems Engineers who joined the session. We divide Spring 2025 SESG activities into three parts.

Part I

In connection with SESG, NORSEC arranged a paper-based INCOSE certification Knowledge Exam for its members on 12th Feb., marking the second time this has been held in Norway. Satya Kokkula CSEP, Chapter President of NORSEC proctored the exam. We look forward to increased SEP certifications from NORSEC.

Part II

The University of South-Eastern Norway proudly received the INCOSE Academic Equivalency (AcEq) at IW2025 in Seville, Spain. The achievement was celebrated with a delightful gathering featuring cake and coffee, attended by faculty members, students, alumni, and network partners. The event was graced by Elisabet Syverud, Dean of the Faculty of Technology, Natural Science and Maritime Sciences (TNM), and the leadership team. This milestone was supported by **kta naval systems**, with Sebastian Schröder, Chief Financial Officer, presenting a Systems Engineering Professional (SEP) "pillow" to Elisabet Syverud, see Fig. 1.

Fig. 1 Celebration of INCOSE Academic Equivalency at the start of SESG session.

Before the festivities, Nils Wouter from kta naval systems delivered an insightful presentation on their Systems Engineering initiatives for submarine construction, see Fig. 2.

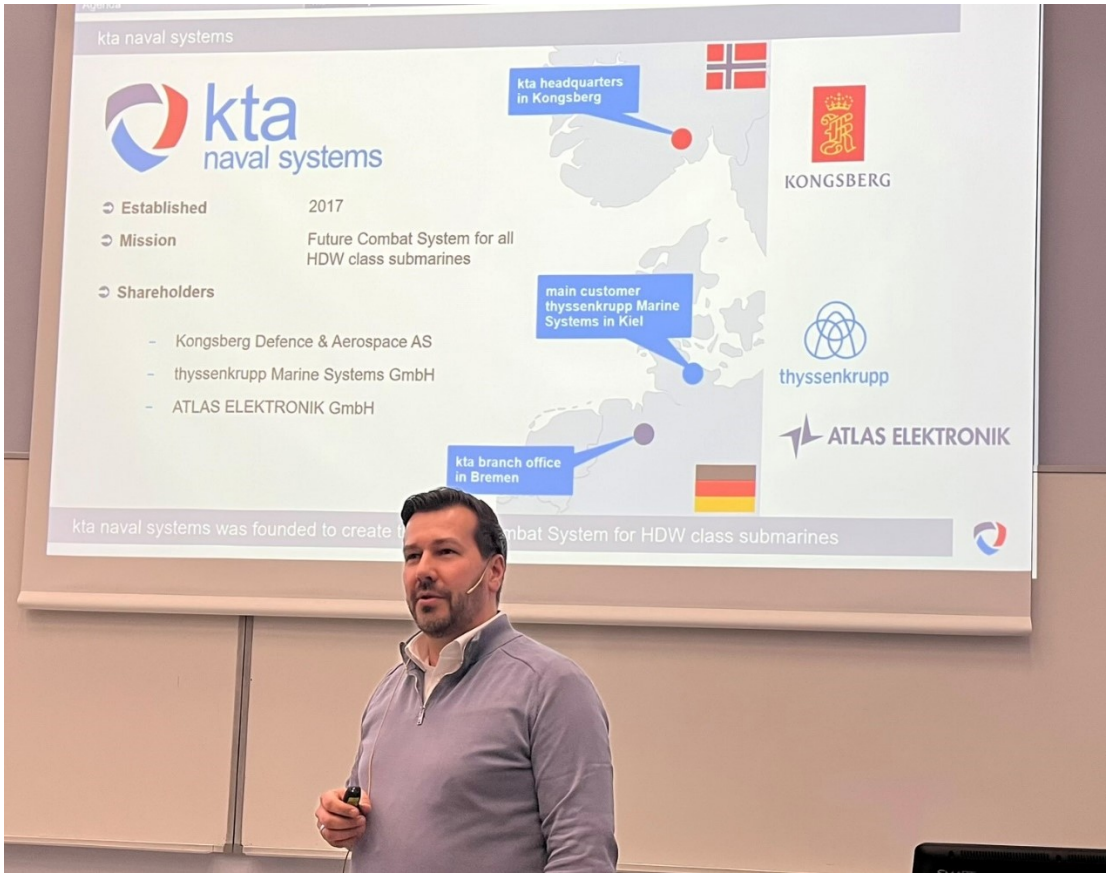

Fig. 2. Nils Wolter presenting about kta naval systems

Part III

The SESG session started @15:00, featuring four distinguished speakers who shared their insights on their digital journeys from different domains. Fig. 3 presents the speakers at SESG.

1. John Pastor, Optime
   "So, what's all this about requirements, anyhow?"
2. Jose Pinto, Technip FMC
   "Digital Transformation Journey"
3. Todd Wohling, Intech
   "Digitalization of Standards"
4. Oluf Tonning, KDA
   "Digital Engineering is Amazing! Why aren't we doing it?"

Presentations can be accessed from gaudisite.nl

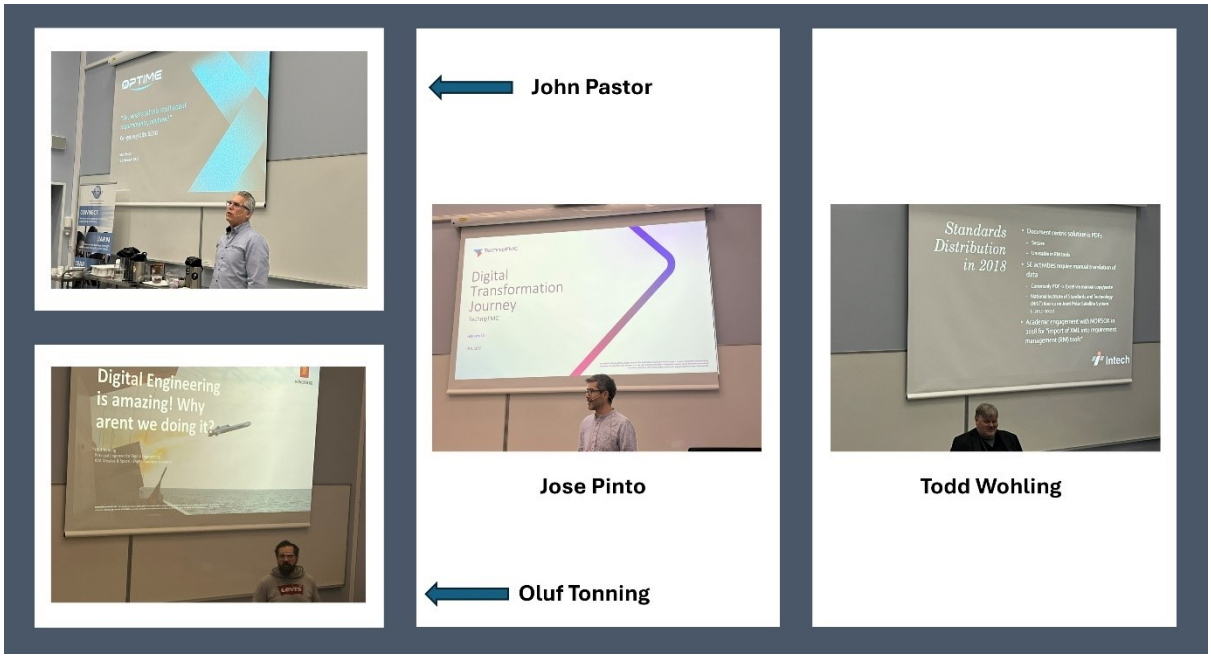

Fig. 3. Gallery of speakers at SESG Spring 2025.

After the presentations there was a networking break for 30 minutes. Before fetching tea/ coffee, we gathered for a group photo (see Fig. 4).

Fig. 4 SESG Spring 2025 participants

After the break we gathered again for the workshop session. During the break Prof. Kristin Falk and Satya Kokkula, came with the following questions

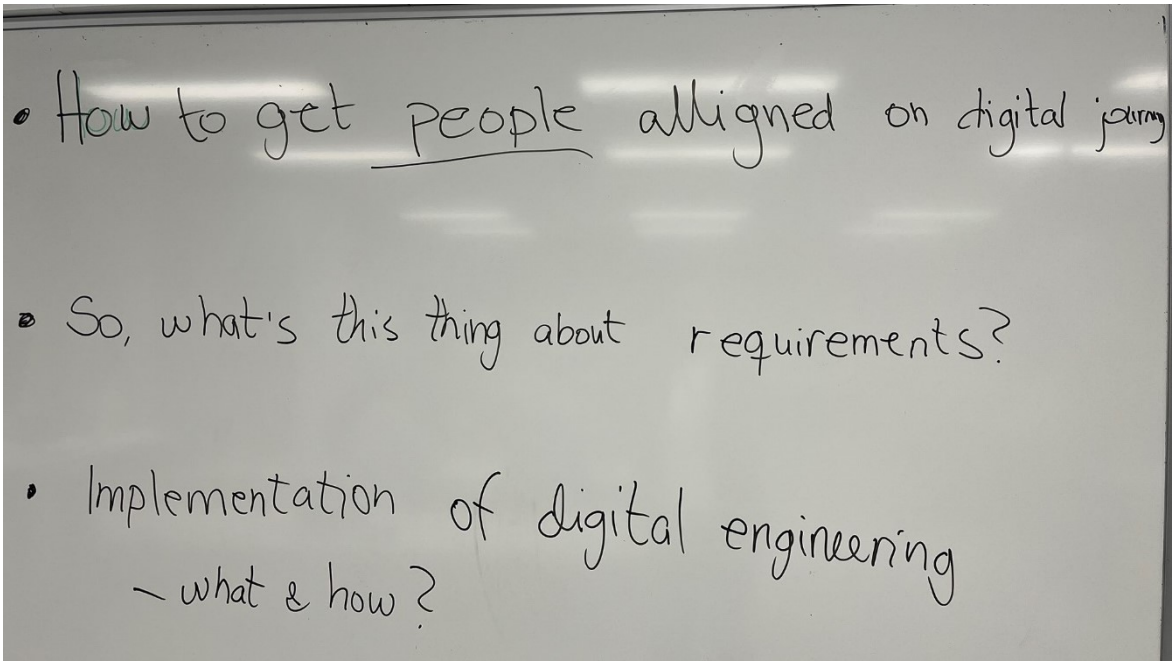

Fig. 5 Questions for workshop activity.

We divided the participants into three groups to work on the above questions (Fig. 5) and present the results in a plenary session before closing the session.

Fig. 6 SESG participants in action during the workshop and the results were presented by John Mulholland (group III), Cecilia Haskins (group II), and Todd Wohling (group I) (top row, from left to right).

Take aways from group work

Group I:

1. There is significant resistance to the adoption of new digital tools, especially among teams with long-tenured members.
2. Having heroes or champions for specific tools who use and promote the tool enthusiastically might help lower resistance.
3. The group favored taking baby steps when transitioning to digital engineering to make teammates more comfortable and reduce resistance.
4. There is a case to be made for allowing resistance to digitalization to taper off over time by either gradually introducing tools or addressing the resistance case-by-case.

Group II:

1. People's behaviors are targeted by policies to align with common objectives, but policies alone are often ineffective without external motivation and recognition for desirable results.
2. There is inherent resistance to change, particularly due to the comfort of operating in silos or fiefdoms of information. Overcoming this resistance requires addressing these negative aspects directly.
3. Willingness to align with new objectives may vary by career stage, with early and late-career engineers more open to change, while middle-career engineers might prefer maintaining the status quo. This hypothesis warrants further research.
4. Any company entering the transition should first evaluate where they already are in the digital journey timeline and assert the values held by the company that should be reinforced by the changes. This value can be determined by reviewing where success has been achieved in the past and honest assessment of where there may be hidden costs and missed schedules in the current workload. An unthreatening environment of non-blame and diverse employee representation is necessary to succeed in this assessment.

Group III:

1. To transition to digital engineering, secure management buy-in despite initial costs and unpredictable future savings. Engage Subject Matter Experts to support and defend the process for smoother implementation.
2. Clear requirements are essential for effective communication, allowing parties to negotiate and understand necessary compromises. Digital engineering adds significant value by facilitating impact analysis, helping identify the effects of requirement changes throughout the system hierarchy.
3. Ensure that the end goal and value of digital engineering are clear and measurable and educate employees to embrace the changes for improved competitiveness and profitability. While initial challenges are expected, industries that adopt early will likely reap significant rewards, depending on customer appetite for such innovations.

We were excited to see a number of employees from KTA Naval Systems joining our Academic Equivalency celebrations, along with USN faculty and network partners. Their presence added a special touch to the event, fostering a sense of community and shared achievement. We deeply appreciate the contributions and insights from the speakers and the engaging discussions during the workshop by the participants.

Future event

USN's annual Kongsberg Systems Engineering Event (KSEE) 2025 is scheduled for 11th June (start @15:00) to 12th June (ends @12:00). For more details see www.usn.No/KSEE2025.

Theme for KSEE2025: **Transdisciplinary collaboration is key to successful systems development**

Photo credit: Satya Kokkula and Maren H. Dahn