

Lean & Agile Systems Engineering

Seminar on 23th November 2010 at KTH in Stockholm

Since quite some time, "lean" approaches have shown significant improvements in development and manufacturing environments and "agile" approaches have successfully improved the processes in software-intensive and requirements volatile environments. Today, there is a great interest in applying those approaches at the system level and over the complete system life-cycle.

Therefore, INCOSE Sweden dedicates the entire Fall Seminar 2010 to the theme "Lean & Agile Systems Engineering". The seminar intends to provide background information, current trends in academia and industry, lessons learned from the practice and networking opportunities in order to evaluate lean and agile approaches for your daily work.

You are cordially invited to participate in this event, which is organized by INCOSE Sweden (www.incose.se) in cooperation with ICES (www.kth.se/en/itm/centra/ices).

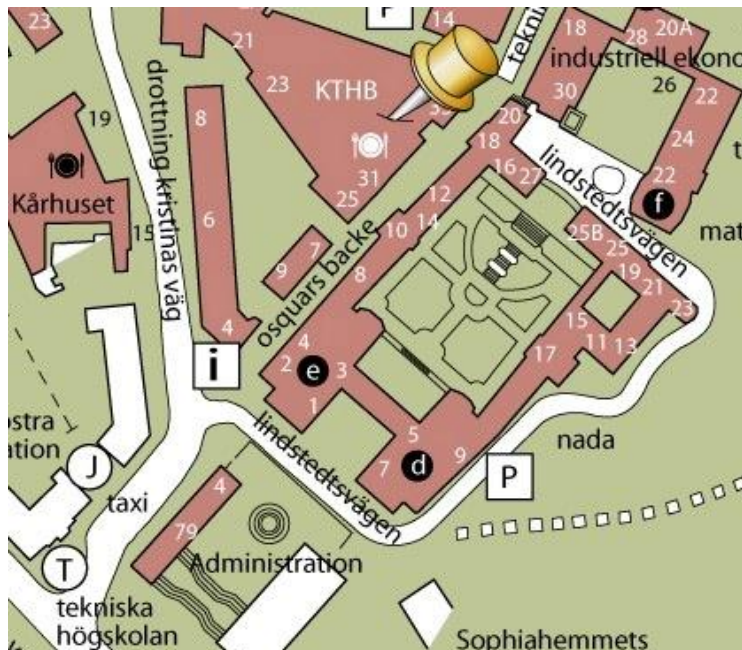
Summary Information

Date & Time:	Tuesday, 23th November 2010, 08:30 - 17:00
Location:	KTH, Campus Valhallavägen, Room KTHB (library) Osquars backe 31, Stockholm
Fee:	800 SEK for INCOSE and ICES members 400 SEK for students 1200 SEK for all others; please consider to become INCOSE member to be eligible to the reduced member fee! Payable to Plusgiro 48 30 56 - 8
Registration:	Ulrik Franke, sekretariat@incose.se Please consider registering soonest, the number of participants is limited to 50.

Agenda

Time	Topic
08:30	Gathering and coffee
09:00	Welcome and introduction
09:15	Lean & Agile Primer, Niels Malotaux
10:00	<i>Coffee break</i>
10:15	Practical Approaches to Implementing Lean - A, Niels Malotaux
11:00	Lean in System Development & Production, Staffan Persson, Scania
11:45	<i>Lunch break</i>
13:00	Practical Approaches to Implementing Lean – B (continued)
13:45	Report on Lean Practices in Japan, Dag Bergjö, Chalmers
14:30	<i>Coffee break</i>
15:00	Agile Documentation in the Skeldar System Development, Ulrik Pettersson, Saab
15:45	Panel diskussion: "Lean & Agile SE - What works? What not? Where are we going?"
16:45	Wrap-Up and Closing

Map



KTH
Campus Valhallavägen
Room KTHB (library)
Osquars backe 31
Stockholm

Topics

Lean & Agile Primer, Niels Malotaux

What is the essence of Lean (1990) and Agile (2001) and should we mind? Will all our problems be solved, or is there still a catch? An introduction.

Practical Approaches to Implementing Lean, Niels Malotaux

Part A: How is it possible that most organizations still survive while their competitors are applying Lean?

Lean and Agile? Isn't that what engineers had to be in the first place? Organizations applying Lean principles like eliminating waste and optimizing value, can save 50 to 70% of cost and time while increasing the delivered quality, compared with their current practice.

How is it possible that most organizations still survive while their competitors are applying Lean? Because they aren't. Once there are competitors who learn how to apply Lean and reap the benefits, then we'd better be one of them before we perish in incomprehension.

Now, why is it so difficult to reap these benefits in the first place? Why do we wait until our competitiveness is ridiculed by our customers, by the environment, by climate change, or the availability of resources? Why do we wait until it may be too late?

The reason is, I think, that humans have certain behaviours, which probably were survival strategies in some way at some time, which now impede what we should do to achieve the vast improvement of results, as displayed when applying the Lean practices.

We will discuss some typical impedimental elements and see what we can do about them.

Part B: Practical approaches for becoming Lean and Agile

Although the Project Manager is supposed to manage the project, being responsible for delivering the right result at the right time, the Systems Engineer's work and decisions determine the result and the time it is delivered. This makes Systems Engineering implicitly as responsible for delivering the right result at the right time as Project Management.

In this presentation we will show some planning techniques we introduce in projects to help Project Managers and Systems Engineers, as well as Program/Portfolio/Resource Managers to understand better what they can do to secure predictable projects - delivering the right results at the right time, with minimum waste. We will show how these techniques are helping them to become Agile and Lean very quickly.

Lean in System Development & Production, Staffan Persson, Scania

Presentation of experiences from applying lean approaches at Scania, focusing on systems architecture.

Report on Lean Practices in Japan, Dag Bergsjö, Chalmers

(swedish)

I början av November 2010 genomfördes en studieresa till Japan i forskarskolan ProVikings regi. Vi besökte flera av de mest framstående japanska och svenska företag med verksamhet i Japan. Vi besökte också de främsta universiteten och experter från japanska forskningsinstitut. Vi fick lära oss mycket om japansk produktutveckling och de kulturella skillnaderna som också påverkat den japanska produktutvecklingsfilosofin. Föredraget ger en inblick i svenska och japanska företags syn på produktutveckling och hur japanska metoder påverkat och anpassats till svenska förhållanden. Skillnaderna i strategi och syn på produktutveckling och produktion tas också upp.

Agile Documentation in the Skeldar System Development, Ulrik Pettersson, Saab

The agile manifesto includes the statement "We value working software over comprehensive documentation". What does this mean when considering the amount, content and format of the information that we produce in software development projects? Is there an "agile way" to manage product information?

In this presentation I summarize some experiences and practices regarding "efficient product documentation" gained from the development of an Unmanned Aircraft Vehicle (Skeldar) at Saab Aeronautics.

Panel discussion: "Lean & Agile SE - What works? What not? Where are we going?"

The panelists initial the panel discussion with short statements about current practices in Systems Engineering that involve "lean" and "agile" approaches, which of those have proven to work well, whine ones are more difficult and how the "lean and agile future" will look like, according to their opinion. Then, the audience may ask questions to the panelists, hopefully leading to a fruitful discussion.

Presenters

Niels Malotaux, Malotaux Consulting

Niels Malotaux (niels@malotaux.nl) is an independent Project Coach and expert in optimizing project performance. He has some 35 years of experience in designing electronic and software systems, at Delft University, in the Dutch Army, at Philips Electronics and 20 years leading his own systems design company. Since 1998 he devotes his expertise to helping projects to deliver Quality On Time: delivering what the customer needs, when he needs it, to enable customer success. To this effect, Niels developed an approach for effectively teaching Evolutionary Project Management (Evo) Methods, Requirements Engineering, and Review and Inspection techniques. Since 2001, he taught and coached well over 100 projects in 25+ organizations in the Netherlands, Belgium, China, Germany, Ireland, India, Israel, Japan, Romania, South Africa and the US, which led to a wealth of experience in which approaches work better and which work less well in practice.

Staffan Persson, Scania

Scania has a long tradition of working with lean approaches, starting at the production stage but evaluating and applying lean also to other stages. Staffan works with lean approaches to architecture and their implementation, i.e. use by architects.

Dag Bergsjö, Chalmers

Dr Dag Bergsjö is currently employed by Chalmers University of Technology. He obtained his PhD from Chalmers in 2009. His research focuses on development methodologies and IT support for product development, Product Lifecycle Management (PLM). The results include new methods and tools for how to facilitate the development and introduction of PLM in product development. The research is currently focused on problems related to multidisciplinary engineering, in the automotive industry and technology and platform development within the aerospace industry.

Ulrik Pettersson, Saab

Ulrik Pettersson has worked 20 years in the systems and software engineering business taking on various roles such as system designer and project manager. For ten years Ulrik worked at Ericsson with the forming and establishment of Ericsson's system development strategies. Ulrik is now managing a unit at Saab Aeronautics responsible for strategies, methods and tools used to develop safety critical avionic systems.