

## Introduction

The INCOSE UK Agile systems engineering working group has been set up to address questions around the topic of Agile systems engineering. There is an INCOSE International working group of which we are aware, and we will work to complement this group's activities. The group will be run as a set of projects, with each project having a leadership team. This approach means that any commitment is for a short duration, and energy levels can remain high. Our first project is to carry out a soft systems perspectives analysis. The group is still very new and we are exploring what the term 'Agile Systems Engineering' means to us. We have 13 Weltanschauungen from our perspectives analysis.

Some of the initial ideas emerging from that work are captured here in the Overview and Activities and Outputs.

Ask at the registration desk to find group members who are at ASEC14

## Overview

### We were talking at different levels

- Doing agile for different reasons (different whys)
- Applying it to different levels of system (different whats)
- Using different underpinning approaches (different hows)
- Some elements line up, some don't

### Different whys

- The SE process is time-consuming and boring, we want to start building stuff immediately
- I need to deliver something within my length of tour – and agile is the only possible way to get something!
- The system's environment will change after we deploy the solution, we need to keep updating the system to remain effective
- The customer and users are unable to define the requirements up front as their understanding of what they need will change as we develop the system
- Getting something out there early Deliver a new product using SE with the non value added and time-consuming elements removed is better than waiting the for perfect solution late
- Because it is the next 'silver bullet' we need to be doing

### Different whats

What is the system of interest?

- The 'user interface' / mission software
- All the software
- A subsystem
- The product system
- The operational capability

### Different hows

- Ignore the formal SE process, it's just useless bureaucracy
- Selectively 'value engineer'/tailor the SE process to focus effort on the greatest value adding elements of SE
- Buy of the shelf kit
- Split the development into different stages and develop each stage within a fixed timebox, progressively integrate each stage as they are developed, confirm it works prior to final acceptance
- Split the development into different stages, develop, deploy and evaluate each stage within a fixed timebox
- Split technology development and product development.
  - Develop a high-level 'integration architecture'
  - Develop sub-systems/technologies as stand alone workstreams
  - Launch products at defined points driven by marketing/planners. At a fixed pointy prior to product release selecting the most mature/relevant technology available. Undertake system integration, manufacture and launch.

## Core Objectives

To improve understanding by clients, executive, managers and practitioners of Agile for systems engineering in a European context.

## Activities & Outputs

	The 'user interface' / mission software	All the software	A subsystem	The product system	The operational capability
The SE process is time-consuming and boring, we want to start building stuff immediately	Supports	Supports	Supports	Supports	Supports
I need to deliver something within my length of tour – and agile is the only possible way to get something!	Supports	Supports	Supports	Supports	Supports
The system's environment will change after we deploy the solution, we need to keep updating the system to remain effective	Doesn't support	Doesn't support	Doesn't support	Supports	Supports
The customer and users are unable to define the requirements up front as their understanding of what they need will change as we develop the system	Supports?	Doesn't support	Doesn't support	Supports	Supports
Getting something out there early Deliver a new product using SE with the non value added and time-consuming elements removed is better than waiting the for perfect solution late	Supports?	Doesn't support	Doesn't support	Supports	Supports
Because it is the next 'silver bullet' we need to be doing	Supports	Supports	Supports	Supports	Supports

	The SE process is time-consuming and boring, we want to start building stuff immediately	I need to deliver something within my length of tour – and agile is the only possible way to get something!	The system's environment will change after we deploy the solution, we need to keep updating the system to remain effective	The customer and users are unable to define the requirements up front as their understanding of what they need will change as we develop the system	Getting something out there early Deliver a new product using SE with the non value added and time-consuming elements removed is better than waiting the for perfect solution late	Because it is the next 'silver bullet' we need to be doing
Ignore the formal SE process, it's just useless bureaucracy	Supports	Supports	Doesn't support	Doesn't support	Doesn't support	Supports
Selectively 'value engineer'/tailor the SE process to focus effort on the greatest value adding elements of SE	Supports	Supports	Doesn't support	Doesn't support	Supports	Supports
Buy of the shelf kit	Supports	Supports	Doesn't support	Doesn't support	Supports	Supports
Split the development into different stages and develop each stage within a fixed timebox, progressively integrate each stage as they are developed, confirm it works prior to final acceptance	Doesn't support	Doesn't support?	Doesn't support	Supports	Doesn't support	Supports
Split the development into different stages, develop, deploy and evaluate each stage within a fixed timebox	Supports?	Supports	Supports	Supports	Supports	Supports
Split technology development and product development	Doesn't support	Doesn't support?	Supports	Supports	Supports	Supports

## How to get Involved

Log on to the INCOSE UK website and register your interest in the group. You will then receive group emails. You can also follow our activities on the group wiki.