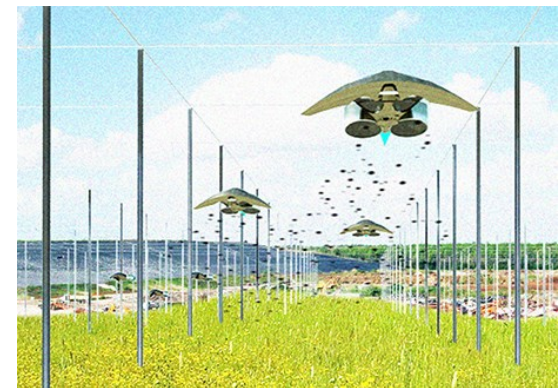


SE-SE-01  
System thinking, Systems Engineering concepts  
and standard processes – 3 Days  
Agenda

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Last update: **August 20**

- Learn and practice concepts and standard Systems Engineering technical processes
  - ISO 15288:2015 technical processes
  - Examples and practical cases coming from industry
- Case study for practice
  - UAV for agriculture as System of Interest
  - Initial requirements from DOORS or Excel
  - Exercises on case study



- Competencies to acquire
  - C1: Understand and learn to apply the "System Thinking" approach
  - C2: Learn the standard Systems Engineering concepts and processes
- Target public
  - Architects, Designers, V&V engineers and Project Managers who want to learn about Systems Engineering
- Prerequisites
  - Knowledge on requirement and function concepts



## Introduction

- Presentation of trainer and trainees
- Context and goals of Systems Engineering

## System thinking

## SE pillars (with quizz)

## Case study overview

## Business and Mission Analysis process

- Main Stakeholders (exercise)
- ConOps with operational scenarii (exercise)
- Measures of Effectiveness (exercise)



## Recall of Day 1

### Stakeholder needs and requirements definition

- System life cycle (exercise)
- Completed Stakeholders (exercise)
- Stakeholder needs and constraints (exercise)
- System scenarios and functional need analysis (exercise)
- Stakeholder requirements

## System Requirements Definition

- Writing good system requirements
- System Requirements and traceability with StReq (exercise)
- Notions of System, subsystem, equipment, product, physical configuration (exercise and quizz)
- Validation of system requirements (exercise)
- Preparation of system verification – IADT technics (exercise)



## Recall of Day 2

### Architecture definition

- Overview of functional/logical and physical architectures
- Identification of components (top down and bottom up)
- Allocation of functions on components
- Architecture trades and selection of the preferred architecture
- Allocation of system requirements to the components

## System Design Definition

- Identification of physical components – RFI and RFP
- Trade off for components

## From system to HW and SW – Summary

## Questions and training evaluation

