

SE-MBSYS-02 **Practical Model Based Systems Engineering** with SysML and Cameo Systems Modeler Information and Agenda

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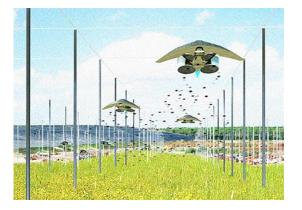
Goals of the training



- Learn a practical MBSE approach from gathering stakeholder needs down to the physical architecture definition
 - Based on the ISO 15288:2015 technical processes
 - Using the SysML notation for global system definition (requirements and architecture)

- Case study for practice
 - UAV for agriculture as System of Interest
 - Initial requirements from Excel
 - Exercises on the case study
 - Use of the modeling tool
 Cameo Systems Modeler









- Prerequisites:
 - None; basic knowledge of requirements engineering and the ISO:15288 technical processes is recommended
- Operational objectives at the end of the training the participants will be able to:
 - Create a system model using Cameo Systems Modeler with an approach based on five of the technical processes in the ISO 15288:2015 standard
 - Use the main concepts and diagrams of the SysML notation to support the system model development
 - Use several of the main features of Cameo Systems Modeler to support the system model development
- Target public:
 - Systems Engineers, Architects, Designers and Project Managers who want to deploy MBSE in their team



About the training



- Duration:
 - 4 days (28 hours), can be split into 8 half-days of 3,5 hours
- Sanction at the end of completed training:
 - Attestation of completed training
- Training methods used:
 - Lectures, practical exercises with the tool, discussions
- Evaluation methods used:
 - Questionnaires to check the acquisition of essential notions
 - Final evaluation based on the result of practical exercises
- Required materials:
 - Each trainee is required to bring their own computer. We provide the tool and the necessary licences for the training.

Accessibility



- The supports are in English
 - The instructor can present in English or in French, according to demand
- Location:
 - In person, in Blagnac or Toulouse (France)
 - Intra-company training on site is possible with extra cost for travel expenses
 - This training is also available as a distance training, using Teams or Zoom
- Delay:
 - 2 weeks minimum before the training starts, in order to process the request
- Our training rooms are accessible for people with reduced mobility
- This training can be adapted for other disabilities
 - Provided we are given notice at least 2 weeks before the start of the training



Pricing and Contact information



- Price (excluding taxes):
 - 2300 € per trainee
 - For intra-company pricing, please contact us directly
- Possible instructors: Ida Electra Dahl, Raphael Faudou
 - Ida Electra Dahl, mail: ida-electra.dahl@samares-engineering.com
 - Raphael Faudou, mail: <u>raphael.faudou@samares-engineering.com</u>
- For more information and intra-company pricing, contact us at:
 - Mail: training@samares-engineering.com
 - Phone: +33 610 535 044
 - Web: Samares-engineering.com
 - Address:
 - 2 av. escadrille Normandie Niemen, Ethics Biotope 31700 Blagnac, France



Agenda



Introduction:

- Overview of SysML
- Introduction to the tool
- Introduction to the Case Study
- Project structure

Business and Mission Analysis process:

• Capture Business Requirements

Stakeholder needs and requirements definition process:

- Capture stakeholder requirements
- Identify External Entities
- Identify key properties to evaluate solution viability
- Define System Context
- Detail Operational Scenarios

System Requirements Definition Process:

- Formalize Functions
- Define Operational Modes
- System Requirements and traceability

Architecture Definition Process:

- Sub-systems Identification
- Functional Architecture Definition
- Physical Architecture Definition
- Architecture Traceability

Design Definition Process:

 Detailing the design of each logical (physical) component

System Analysis Process:

 Verification of properties, comparison of solutions

Other Tool Capabilities:

- Profiles
- Traceability
- Project Usage
- Document generation
- Validation Suites
- Simulation

Conclusion



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