



WORKSHOP WELCOME

Chaired by mr. Christophe Ducamp (Airbus)

Tuesday 22 November – 8h30 / 8h50



WORKSHOP OBJECTIVES

mrs. Agnès Mestreau (ESA)

Tuesday 22 November – 8h50 / 9h10

Welcome

On behalf of Steering committee:

- ✓ Benedicte Girouart: Head of GNC, AOCS and pointing division
- ✓ Joachim Fuchs: Head of software systems division
- ✓ Agnès Mestreau: Head of systems engineering division

System Department

Directorate of Technology, Engineering and Quality

European Space Agency ESA ESTEC (NL)

Welcome

Many thanks to:

- Airbus Group for hosting the workshop: Christophe Ducamp, Jean Baptiste Bernaudin and Marco Ferrogali
- Organization committee: Kathleen Gerlo (ESA) , Marcel Verhoef (ESA), Christophe Ducamp (Airbus), Leonor Maire (Airbus), Claire Villeras (Airbus), Laura Nguyen (Airbus)
- Programme committee
 - ✓ Chairs: Nathalie Corporal (CNES), Jean-Loup Terraillon (ESA)
 - ✓ Co chairs : Mr. Jean-Luc Marty (Airbus), Mr. Julien Rey (CNES), Mr. Marcel Verhoef (ESA/ESTEC), Mr. Alper Akarsu (OHB), Mr. Gérald Garcia (Thales Alenia Space)
 - ✓ 35 members
- Hackathon committee: Julien Rey (CNES), Clement Goujon (Thales Alenia Space)
 - ✓ Participation of 49 Students of engineering school and universities in Occitanie (France)
 - ✓ Held between 1 Nov – 15 Nov
 - ✓ Award ceremony: this afternoon at 16:50

Objectives

3 days to exchange on MBSE :

- ✓ Practical experiences of applications of MBSE
- ✓ Lessons learned from practical applications of MBSE in space mission design and development
- ✓ Practical experiences of sharing of models across projects, across engineering domains, across life cycle phases, with customers and suppliers

Programme Tuesday

- 3 keynote speeches: Ralf Hartmann (INCOSE), Jean-Luc Voirin (Thales Alenia Space), Marco Ferrogali (Airbus)
- Session 1 strategy: deployment of MBSE, Lessons learned, extended MBSE environment

Lunch

- Session 2: extended enterprise
- Tool vendor pitches
- Hackathon results
- Session 3: panel session, with interactive exchange of ideas, convener: Joachim Fuchs (ESA)

Programme Wednesday

- Sessions 4 &5: Osmose (space systems ontology) workshop
- Lunch
- Session 6: Software
 - Session 7: Technology for MBSE

Programme Thursday

- Keynote: Pierrick Vuilleumier (ESA)
- Session 8: Applications

Lunch

- Session 9: Systems
- Session 10: interactive session
- Wrap up: Jean Loup Terrailon (ESA)
- Closing: Florence Dufrasnes (Airbus Group)

My message

- ✓ MBSE Tools, Technologies, processes : developed, development on-going, in road maps
- ✓ MBSE: Model Based **Systems Engineering**
- ✓ Need further attention to **Users**: Systems Engineers, Project manager, etc.
 → **Interfaces of tools, trainings etc.**
- ✓ Need further attention to **Usage**: to support systems engineering tasks
 → **Different views of the models, dashboards, visualization of data, views of different configurations etc.**
- ✓ Need further attention to **the different Disciplines**

*These are enablers for the adoption and usage of MBSE
in the space systems engineering community*

Let's start





KEYNOTE SPEAKERS

Chaired and introduced by mrs. Agnès Mestreau





Ralf Hartmann (INCOSE)

The Systems Engineering Vision 2035 - Towards
the Future of Systems Engineering

Tuesday 22 November – 09h10 / 09h40



Jean-Luc Voirin (Thales)

A vision on Engineering Challenges and
Need for Tooling Support

Tuesday 22 November – 9h40 / 10h10



Marco Ferrogalini (Airbus)

MBSE at the heart of the Airbus
Digital Transformation

Tuesday 22 November – 10h10 / 10h40