

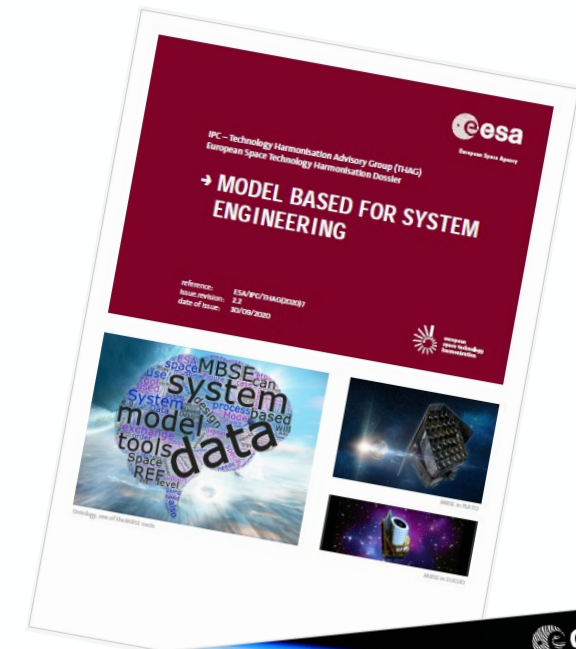
Model-based for Systems Engineering - harmonisation dossier and roadmap update

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ESA ESTEC

13/11/2023

- Current dossier and roadmap dates from September 2020
 - rapid evolution of the MBSE technologies in the marketplace, emerging new standards and lessons learned from MBSE applications in the space industry and the agencies;
 - first results from the existing harmonisation roadmap have reached implementation stage in ESA projects which requires roadmap tailoring to increase business impact;
 - digitalisation of engineering workflow is high on the ESA 2025 agenda of the Director General, and embedded in industries strategies;
 - the MB4SE advisory group between the Agency and European industry has been successfully established in the last years and has provided highly relevant input for the evolution of the roadmap.
- IPC-THAG agreed to move update of harmonisation dossier forward from **2025 cycle 1** to **2024 cycle 2**
- Internal kick-off with TEC-H took place on 27 Oct 2023



- Book captains:
 - **CD09** (Digitalisation / MBSE) : Marcel Verhoef (TEC-SYE)
 - **CD08** (Ground systems and mission operations) : Petros Pissias (OPS-GDA)
- Scope: *Model-based Systems Engineering, including relevant parts of data governance and interoperability*
 - Alignment with other harmonisation dossiers under CD09 : big data, functional verification
 - Alignment with key CD08 topics : ground segment engineering framework, ground segment data systems
 - Alignment with other harmonisation dossiers : CD03 avionics (incl. model-based software engineering)
 - Alignment with other CD09 topics that are not yet under formal harmonisation : AI/ML, AR/VR
- Community involvement (for preparation support) will be organised through the MB4SE advisory group
- Participation open to anyone, following normal harmonisation process and workflow

- Review of existing dossier and roadmap / preparations for update : Nov / Dec 2023
- First issue of updated harmonisation dossier : January 2024
- Dossier review (mapping consultation) phase : February / March 2024
- Mapping meeting : 9 – 11 April 2024 (TBC)
- Second issue of updated harmonisation dossier and draft roadmap : May 2024
- Dossier review and approval phase : May / June 2024
- Roadmap consultation phase : July – Sept
- Roadmap consultation meeting : Sept 2024 (exact date TBC)
- Final update of roadmap : Oct 2024
- Roadmap review and approval phase : Nov 2024
- Final roadmap approval (by IPC-THAG) : 27/28 Nov 2024 (exact date TBC)

ADCSS 2023
MBSE 2023

MBSE 2024

ADCSS 2024