AEROSPACE & DEFENSE PLM ACTION GROUP

Transforming the Industrial System Lifecycle and Product Industrialization across the Extended A&D Ecosystem

Rebeca ARISTA , Airbus (ME4CoDev WG Co-Lead)

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PLM Road Map™ & PDT EMEA 2026

AI in PLM: A Disruptive Opportunity and Challenge

Turning AI disruption into enterprise value:
Strategic insights for the PLM professional

4-5 November 2026

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Presenters Bio



Rebeca ARISTA, PhD.

Industrial Modelling & Simulation Expert

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Airbus Expert on Industrial Modelling & Simulation within the Industrial System Modelling for Co-Development Department of Airbus Commercial Aircraft. Based in Toulouse, France.

15 years of experience in three Airbus divisions, maturing and industrializing different commercial and defense aircraft programs: A400M, A330 MRTT, A320neo, 737 MAX, A350 and A350F.

Within Manufacturing Engineering, in charge of building Modelling & Simulation frameworks including PLM/ERP/MES digital continuity for product and manufacturing system collaborative development including supply chain for operational excellence.

Active R&T activities in MBSE, Semantic and Digital Twin technologies include: Ontology-based Engineering, Knowledge Management, AI, Complex Assembly Simulations, Tolerancing and Robotics.

Outline

1. Aerospace & Defense PLM Action Group
2. Manufacturing Engineering Working Group (ME4CoDev)
3. ME4CoDev Problem Statement
4. Next steps & Call for Action

1. Aerospace & Defense PLM Action Group

Founded in February 2014

Mission

An association of aerospace & defense companies within CIMdata's globally recognized PLM Community Program, which functions as a ***PLM advocacy group***

Members

AIRBUS, BOEING, Bombardier, EATON, GE Aviation, GKN AEROSPACE, Gulfstream A GENERAL DYNAMICS COMPANY, HondaJet, MOOG, ROLLS ROYCE, RTX COLLINS AEROSPACE PRATT & WHITNEY RAYTHEON, SAFRAN

Project Workstreams

- PLM Technology Obsolescence Management
- Global Collaboration
- Model-based Definition (MBD)
- Multiple View Bill of Material (Multi-view BoM)
- Interoperability Standards
- Model-Based Systems Engineering (MBSE)
- Digital Twin/Digital Thread
- ***Manufacturing Engineering Co-development***
- PLM for In Service

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2. Manufacturing Engineering for Co-Dev WG

Context, Motivation, Objectives & Core Team

Context

17,000 commercial aircraft waiting to be produced (~14 years at current rates) and over **$747 billion in defense** commitments.

Need to **boost our Industrial System(s) operational efficiency** to meet demand, while maintaining safety and compliance.

Motivation

1. Collaborate on common A&D pain points across Manuf Eng processes, methods, tools, leveraging on PLM/MBE/MBSE.

2. Improve our A&D supply chain integration and resilience.

3. Speak with a unified A&D voice, to drive standards, digital technologies and federated/sovereign platforms towards operationally efficient solutions.

Objectives

- **Break the Co-Development wall:**, practical implementation of concurrent engineering remains immature and inconsistent, often **sidelining manufacturing engineering**.
- **Eliminate Operational Impact:** disconnects between design and manufacturing are a key driver of **financial overruns, operational inefficiencies, and supply chain risks**.
- **Holistic A&D Extended Enterprise Strategy:** considering the fact that A&D supply chain is shared among OEMs, the solution must be a **holistic multi-faceted strategy suitable for all A&D players.**

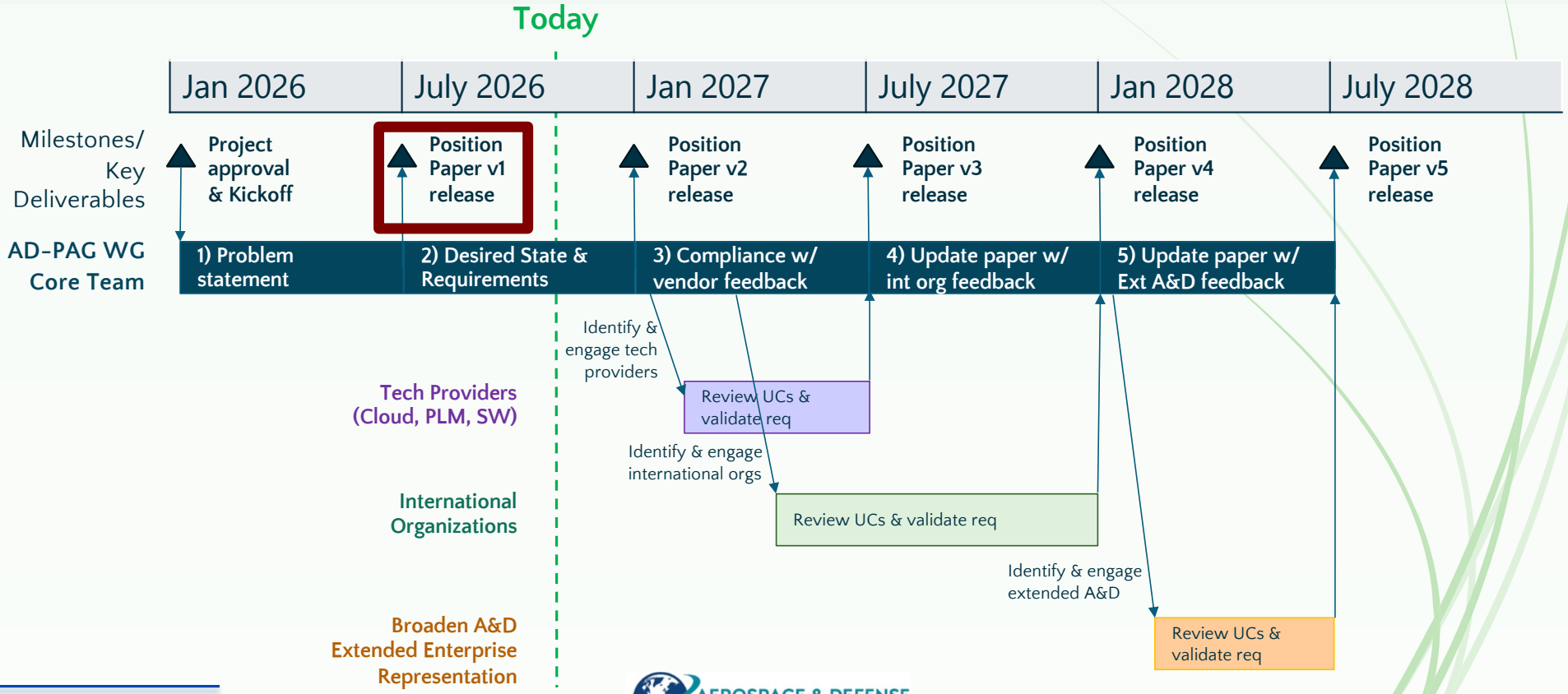
Active Core Team

20 Manufacturing Engineering Experts from 14 A&D Companies actively participate in working group activities (as of Nov 2026).



2. Manufacturing Engineering for Co-Dev WG

Project Timeline and Deliverables



3. Problem Statement Position Paper

Core Business Problems | Business Consequences | Causal Analysis

- **Industrial System Architecture & System-of-Systems view:** ME is systematically undervalued and left without multi-domain modeling in concurrent engineering.
- **Extended Enterprise Silos:** Unidirectional "TDPs over the wall" restricts suppliers roles and locks collaboration with correct IP mng.
- **Broken CAD-to-CAM Thread:** translations as one-way street, destroying semantic design intent and digital thread traceability.
- **Stranded Shop Floor Data:** Producibility feedback is blocked by a semantic disconnect between time-based machine data and geometry-based inspection standards.
- **Reactive Industrial V&V:** Manual As-Built reconciliation and conformity validation rather than predictive evaluation.
- **Modernization of core digital infrastructure:** impeded by heavy IT technical debt created over years and fragmented legacy platforms.



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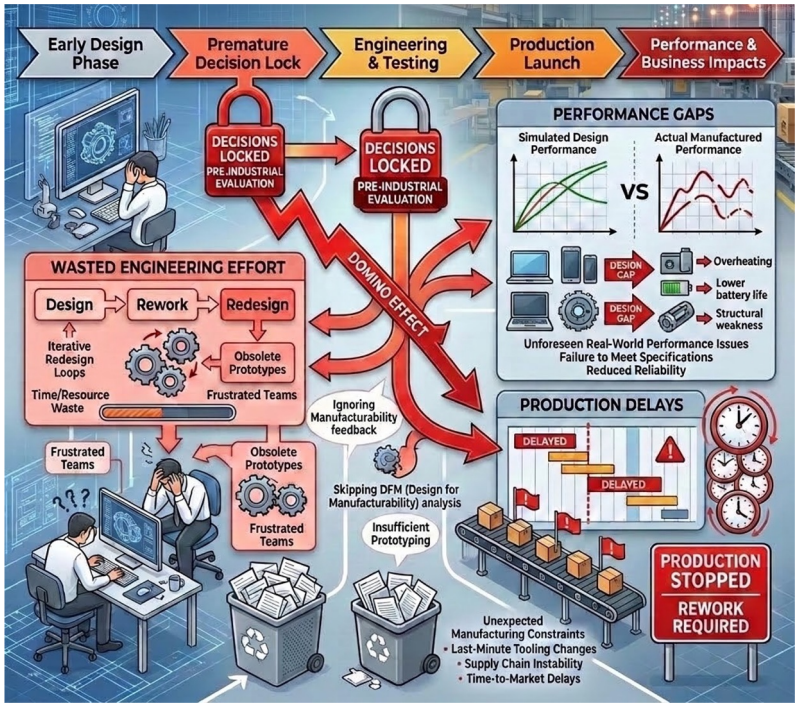
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Position Paper available at: https://www.cimdata.com/en/aerospace-and-defense/publications/co-dev

3. Problem Statement Position Paper

Core Business Problems | **Business Consequences** | Causal Analysis

- ↓ Performance gaps and production delays
- ↓ Long development cycles with iterative negotiations and late-discovery of performance issues
- ↓ Wasted engineering effort and data traceability loss
- ↓ Difficulty to trace multi-tier field failures to root causes
- ↓ Permanent loss of critical manufacturing process knowledge and undocumented context
- ↓ High IT operational costs and ecosystem lock-in
- ↓ Extensive technical debt to cope with lack of interoperability across industry standards



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3. Problem Statement Position Paper

Core Business Problems | Business Consequences | **Causal Analysis**

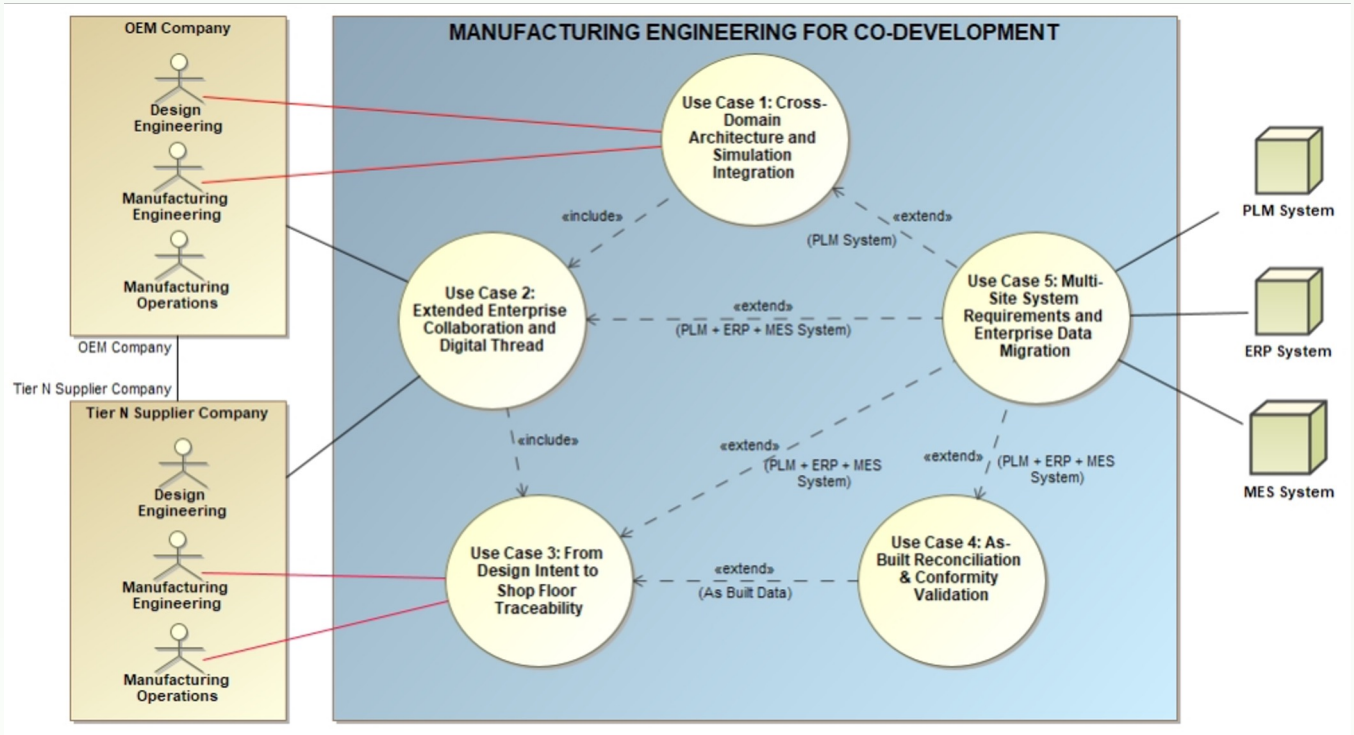
1. Legacy engineering paradigm that lead to different and non-interoperable PLM platforms.
2. OEM incompatible platforms burdening multi-OEM suppliers.
3. Model-Based Systems Engineering for manufacturing is immature and lacks industry adoption.
4. Inefficient Knowledge Management leading to a loss of critical tacit knowledge.
5. Manual and Ad-hoc Industrial System Configuration Management.
6. Severe data leverage gap in the Industrial Digital Thread for continuous improvement.
7. Lack of digital standards that holds traceability to integrate Product and Production Data across lifecycle domains.

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4. Next steps & Call for Action

Objectives, Desired state and Engaging Phase



Next steps:

- → **Release 2nd Position paper with Objectives and Desired State.**
- → Engage with Tech Providers.
- → Engage with Standards Organizations.
- → Engage with additional A&D companies.

Join us!

Questions & Answers

What's on Your Mind?





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Thank you for your attention

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