Nordic Model-Based Enterprise Forum 2026

📍 **Västerås, Sweden** 🗓️ **7–8 October 2026**

🟦 Day 1 – Wednesday

The Journey to the Model-Based Enterprise – Vision, Workflows, Tools & Challenges

08:00 – 08:30 **Registration & Morning coffee**

08:30 – 08:50 🎤 **Opening Remarks – Miroslaw Chamera, ARIADNE Engineering**
Introduction to the forum and vision for Model-Based Enterprise adoption.
Attendees will be introduced to the conference theme, keynote presentations, expert speakers, interactive workshops, and networking opportunities, setting the stage for a day of learning, knowledge sharing, and industry collaboration.

08:50 – 09:35 ⭐ **MBD, Who's Thread is it? – David Hook, Rolls-Royce**
The presentation explores the use of a thread and how it has evolved to become the digital thread. Sharing insights and examples from Rolls-Royce's own experience from early MBD pilots right up to its current programmes and the latest learning. Creating an MBD is an important step in transforming product design but an MBD on its own will not allow the benefits and full potential in product quality and efficiencies that may be possible from automation. By understanding the stakeholders in the digital thread, we will understand who can benefit from MBD and how MBD may impact them and what steps should be taken to ensure that MBD works beyond of the Design office. The presentation will cover a series of assessments to help establish supply chain readiness and appropriate steps to implement improvement.

09:35 – 10:05 ⚙️ **Unlocking MBE: Our Path from Concept to Implementation – Fredrik Montelius, Hitachi Energy**
This presentation describes the implementation of Model-Based Definition (MBD) as a foundation for a Model-Based Enterprise. It covers the reasons behind the initiative, the approach used to transition from drawing-based documentation to model-based product definition, and the key steps taken from pilot projects to broader deployment. The presentation focuses on practical experiences and challenges related to process transformation, model quality, organizational adoption, and integration with existing workflows. It also looks ahead to the next stages of the journey, outlining future priorities and the continued development of a more connected, efficient, and model-based way of working supported by a stronger digital thread.

10:05 – 10:35 **Coffee Break**

10:35 – 11:05 🧩 **The State of MBE: Challenges, Advancements, and Solutions - Hanna Svenson & Evan Kessick Elysium Inc**
This presentation highlights how advancements in Model-Based Definition (MBD) technologies, standards, and best practices are enabling organizations to successfully transition toward a Model-Based Enterprise (MBE). It examines common digital transformation challenges and demonstrates how improvements in interoperability, data quality, validation, technical data packages, and digital thread standards are helping establish trusted, traceable, and connected model-based workflows. Attendees will gain practical insight into creating, validating, exchanging, and consuming product definition data to improve digital continuity across engineering, manufacturing, quality, inspection, supply chain, and sustainment.

11:05 – 11:35 ⚙️ **Streamline Quality Tracking Across the Enterprise with Designcenter NX – Scott Felber, Siemens**
Manually tracking quality characteristics across design, quality, and manufacturing consumes valuable time and creates disconnected workflows. Designcenter Inspector streamlines this process by maintaining characteristics and semantic data across the enterprise—from requirements and design through quality planning and manufacturing.

11:35 – 12:05 ⚙️ **Create MBD Workflow in Your CAD System - Karl-Henrik Ryttersson, ARIADNE Engineering**

Defining product requirements in a clear, unambiguous, and semantic way is essential to capture product functionality and enable downstream MBD processes.
This session explores how standardized MBD workflows can support automation in quality control, tolerance analysis, and Technical Data Package (TDP) creation, based on real-world implementation experience. Standardized CAD workflows enabling automation and downstream reuse.

12:05 – 13:05 Lunch

13:05 – 13:35 🧩 **QIF: A Standard for Unambiguous Engineering Content Exchange Between OEMs and Suppliers Tomasz Luniewski, Capvidia**

This presentation introduces QIF, its development by the Digital Metrology Standards Consortium, and its harmonization as ISO 23952. Unlike traditional documents designed primarily for human interpretation, QIF uses an open XML structure to represent exact 3D geometry, topology, semantic product manufacturing information (PMI), characteristics, attributes, resources, measurement plans, inspection results, statistics, and revision data. Persistent unique identifiers maintain associations between product requirements and downstream results across systems, organizations, and revisions. The presentation explains how these capabilities make QIF a practical foundation for the digital thread. QIF can connect CAD and PLM with manufacturing, ERP, metrology, quality, and supplier systems without requiring every application to interpret proprietary CAD data or rely on custom point-to-point integrations. Engineering requirements can flow from the OEM to the supplier as an unambiguous model-based technical data package, while inspection results and revision information return through the same connected framework.

13:35 – 14:05 ⚙️ **Digital Characteristic Management Across Engineering, Manufacturing, and Quality – Daniel Campbell, Rubypoint**

Drawing-based workflows rely on repeated human interpretation and reconstruction of product characteristics across planning, manufacturing, and inspection. MBD provides a richer semantic source, but many downstream processes continue to use the same drawing-era handoffs. This presentation explains how persistent characteristic identity and a governed Bill of Characteristics can connect MBD to plans, results, and analytics.

14:05 – 14:35 ⚙️ **Mapping Your Way to a Model-Based Implementation – Dan Feighery, Action Engineering**

Before embarking on your model-based journey, understand the art of the possible when model-based definition establishes the foundation of a model-based enterprise. Focusing on how MBD data elements flow throughout business processes minimizes risk and subjectivity while maximizing the efficiencies of connected data and automated workflows in a model-based implementation.
By identifying information needs and mapping the pathway of current data consumption throughout the product realization lifecycle, organizations can use their existing processes as a blueprint to close gaps and establish the digital thread of their model-based future state

14:35 – 15:05 🧩 **How a smart approach to AI can help companies overcome Challenges to MBD Adoption for Mechanical Variation Management – Ed Walsh, Sigmetrix**

Many companies continue to face challenges when adopting MBD, even when the technology itself is available. This presentation will revisit some of the common barriers to MBD adoption and explore how a combination of AI and rules-based engineering can provide better results than relying on AI alone. We will discuss how AI can take on the perspective of different stakeholders across the organization, such as manufacturing, quality, and inspection, to guide design engineers through relevant questions and decisions. The session will also highlight the importance of considering a part within its system or assembly context when creating dimensions and tolerances, ensuring that AI-supported workflows generate information that is meaningful and usable throughout the product lifecycle.

15:05 – 15:35 **Coffee Break**

15:35 – 16:35 **Workshops:**

From Unambiguous 3D Specification to Automized QiF based Quality Control

ARIADNE Engineering AB, Andreas Nilsson

Polyworks Scandinavia AB, Nicklas Johansson

In this workshop you will discuss functional, semantic and machine-readable ISO GPS based product specification in CAD. QIF will be generated by MBDVidia and consumed by Polyworks. A measurement plan will be created with one push of the button. Later the 3D printed components will be scanned with portable scanner. The results will be evaluated in Polyworks. The inspection results in the MBD flow will make it easy to evaluate, improve the product and secure traceability. Evaluation based on drawings with linear tolerancing vs geometrical tolerances will be compared. Which of them will identify non-functional parts? The leader of the workshop will discuss with you and highlight the importance of functional definition of your requirement with ISO GPS and benefits of QiF.

Challenges with and benefits of adoption of new disruptive MBD technology

Sigmetrix, Ed Walsh

Sigmetrix president, Ed Walsh talk about my experience getting CAT to move from their 2D CAD system to Pro/E 25 years ago the similarities that he is seeing today with the MBD initiatives and the struggles with adoption. Making that change was not solved by technology alone. It required educating and being diplomatic with the users and mid-level managers (people), changing or defining processes, and some politics at the executive level between the different business units.

QIF Hack-a-Tahon

Rubypoint, Daniel Campbell

A deeper dive into the QIF format. The basics of QIF will be presented and a number of practical examples will be done by the participants, including building a simple software tool for analysis of inspection results.
Engineers are already sophisticated users and builders of digital tools. As manufacturing data grows richer and agentic coding makes software easier to build, their own simpler tools should complement commercial platforms, extending what engineers can do with their data. QIF, the open standard for model-based quality data, makes that data usable. In this session, we'll walk through tools built on real QIF inspection data and show you how to start hacking on your own.

MBD Characteristics with NX Designcenter

Siemens, Scott Felber

Learn how Siemens supports MBE processes with DesignCenter (NX), from creating semantic, machine-readable 3D PMI to the concept of MBD characteristics and using data downstream in manufacturing and quality control. The current version and future development plans will be presented. A must to see if you run NX.

Solve Your Engineering Problem Using Modern Collaboration Tools

ANARK, Patrick Dunfey

In this workshop you will learn how to use modern content-based collaboration tools to cooperate and solve an engineering problem. You will use your creativity and work in a group using computers, tablets and phones. You will exchange ideas, discuss with other engineers, document the process and save all the sessions in a digital thread with the help of ANARK Collaborate. Design, quality, purchasing, production and suppliers will participate. The workshop will be moderated by Patrick Dunfey, ANARK.

Standards Update – MBD Activities

ASME, Fredric Constantino

Explore how ASME is advancing standards to support the transition from Model-Based Definition (MBD) to a connected Model-Based Enterprise (MBE). We will conduction an MBE & Y14 Harmonization Committee meeting to discuss MBD and MBE challenges, pain points, and solution pathways. In this workshop you will engage in industry gap development, analysis, and discussion. Fredric Constantino, Director of Standards Development at ASME, will also provide an update on ASME's MBE standards activities, the relationship between the MBE and Y14 standards communities, and current work to improve the interoperability, reuse, and traceability of digital product data across the product lifecycle.

17:30 – 19:00 **Guided Turbine House Tour or Hotel SPA**

20:00 – Late… **Conference Dinner & Networking**

🟩 Day 2 – Thursday

MBE Strategies – Design, Collaboration, Manufacturing, Quality & the Future of MBE

08:00 – 08:15 **Morning Coffee.**

08:15 – 09:00 ⭐ **Scaling Model-Based Definition: Driving Enterprise Adoption and Unlocking Cross-Engineering Value – Dennys Gomes, Vestas**

Building on previously presented foundations of Model-Based Definition (MBD), this work focuses on the practical scaling of MBD across a large engineering organization. Moving beyond initial implementation, the focus shifts to driving enterprise-wide adoption through disciplined CAD methodologies, robust design governance, and structured onboarding of engineers and suppliers. By mandating MBD for all new designs and Form-Fit-Function changes, a significant cultural and operational transformation is achieved. This enables consistent, high-quality Product Manufacturing Information (PMI), reducing manual CAD–FEA data transfer and unlocking broader reuse of engineering data. The result is a scalable digital thread that extends MBD benefits beyond manufacturing into simulation and across the full value chain.

09:00 – 09:30 🧩 **Content-Based Collaboration: Bridging the Gap – Patrick Dunfey, ANARK**

How do you move from model-based engineering to a Model-Based Enterprise that teams across the organization can actually use? Manufacturers are making steady progress toward model-based definition, digital product data, and connected engineering systems. But moving from model-based engineering to a true Model-Based Enterprise requires more than creating rich digital information. The broader organization has to be able to use it.Manufacturing, quality, suppliers, service, procurement, program teams, and other stakeholders all need trusted product context, yet they rarely work in the same CAD, PLM, quality, or enterprise systems. When that context becomes difficult to access or understand, people recreate information in drawings, screenshots, spreadsheets, PDFs, presentations, and email. The digital thread may exist technically, while everyday decisions happen around it. This session will share practical examples of how manufacturers are applying content-based collaboration to real MBE use cases today, along with best practices for getting similar solutions started in your own organization. Attendees will leave with concrete examples of where manufacturers are creating value and practical ideas for their next step toward MBE.

09:30 – 10:00 🧩 **PTC's Creo MBD Update by 9A: Jessica Madlene Nielsen & Erik Wendelboe Nielsen, 9altitudes**

9altitudes, a PTC reseller, will present the Model-Based Definition (MBD) vision and the current state of the technology in Creo Parametric. The session will cover the latest developments in annotation tools, 3D PDF publishing, GD&T Advisor, and tolerance analysis, demonstrating how these solutions support a model-based engineering approach

10:00 – 10:30 **Coffee Break**

10:30 – 11:00 🧩 **From Design to Verification — simplifying manufacturing with Sandvik Manufacturing Lifecycle Management – Luca Sala, Sandvik**

Model-Based Enterprise promises one continuous thread from design to verification, anchored in Model-Based Definition — the 3D model carrying full product definition, PMI, tolerances, through every stage of the lifecycle. In practice, that thread breaks. PMI gets re-interpreted at each handoff. Inspection results come back as PDFs, detached from the features they measured. The digital thread exists on paper, but too often breaks down where it matters most.

This is where Sandvik works. Sandvik Manufacturing Lifecycle Management simplifies the chain by carrying MBD and persistent feature IDs from CAD through CAM, machining, and inspection as one governed intelligence layer between PLM and the shop floor. Not another point solution — the link that keeps design intent traceable to every cut and every measurement, so the feedback loop can close. There are fewer systems to reconcile, and more decisions are made on data. A manufacturing process that scales because it's simple enough to automate, and agnostic enough to adopt at every stage of manufacturing value chain.

11:00 – 11:30 ⚙️ **Model-Based Characteristics: PC Tags, UUIDs and Digital Augmentations – Mark Nielsen, TechAzul**

Model-Based Characteristics (MBC's), based on the Digital Metrology Standards Consortium (DMSC) standard, defines specific tags (symbols) to identify Product Characteristics for use by downstream stakeholders such as inspection. This is the basis to create a Bill of Characteristics (BOC) which defines items to be inspected at various stages of a product lifecycle. There are additional options (augmentations) to identify, classify, categorize, and verify product information such as related requirements, annotations critical to quality, and verification methods

11:30 – 12:00 🧩 **Closing the Digital Thread with measurement data, Simon Heroux, InnovMetric Software**

See how the PolyWorks digital thread solution connects MBD requirements coming from design and manufacturing teams, and measurement data to create end-to-end robust and modern digital engineering processes. By leveraging the digital twin of manufactured parts, organizations can improve quality, accelerate decision-making, and support continuous improvement throughout the product lifecycle.

12:00 – 13:00 Lunch

13:00 – 13:40 🎤👥 **From Model to Value – Making MBD work in the real world - Expert Panel Discussion (RollsRoyce, TechAzul, Siemens, PTC, ANARK, Capvidia, Sigmetrix, PolyWorks)**

13:40 – 14:10 ⚙️ **MBD-Driven Weld Automation: From CAD to Robot Programming – Oggy Dragasevic, Capvidia**

Manual robotic weld programming slows production, increases interpretation risk, and makes design changes harder to manage. This presentation shows how a CAD-neutral, MBD-driven workflow connects semantic weld data, validated PMI, QIF/STEP-based interoperability, offline programming, and robot simulation. Attendees will see how engineering intent can move from CAD to OLP to production and QA without manual re-entry or disconnected files. Learn how Capvidia and partners help manufacturers reduce programming time, improve consistency, and create a stronger digital thread for automated robotic welding.

14:10 – 14:40 🧩 **MBD – The beauty and benefits of color coding .... and beyond – Jan Stothfang, B&W Software**

In this session you will learn how color coding (powered by SmartMBDTools for Creo) will help to easily (automatically) apply PMI to surfaces and reliably provide that information to dedicated downstream consumers. This technique can be used within the Creo process chain as well as in a neutral interface driven process. It is not limited to the usage of visual color information but can be extended to machine readable surface parameters and more.

14:40 – 15:10 **Coffee Break**

15:10 – 15:40 ⚙️ **Trustworthy Measurement Results: Protecting Model-Based Inspection Data Across the Digital Thread: Ercihan Kiraci, The University of Warwick**

Can we trust inspection data when it arrives? Model-Based Inspection closes the digital thread by turning design intent into measurement plans and structured quality information. But as data crosses systems and organizational boundaries, its integrity can be compromised without changing its format or failing conventional validation. This presentation explores integrity threats across the design-to-inspection workflow and introduces a practical, standards-independent approach using signed measurement results, provenance, and verification checkpoints. The message is simple: quality data is not only evidence of conformance, it is a critical trust mechanism for the digital thread, and its own integrity must be protected.

15:40 – 16:10 ⚙️ **Closing the Quality Loop using QIF MBE**

Luka Popovic, Capvidia & Simon Heroux, PolyWorks

Attendees will learn how to connect design, manufacturing, and quality through a closed-loop, model-based inspection workflow using the Quality Information Framework (QIF).
The presentation demonstrates how to validate CAD geometry and product manufacturing information, carry design intent into inspection, and return measurement results to engineering with traceability.
Through an OEM–supplier example, attendees will see how shared data and persistent characteristic identifiers support process adjustments, tolerance refinement, and verification across design revisions.
They will also learn how standards-based interoperability reduces ambiguity and improves collaboration, with practical guidance for advancing model-based enterprise adoption through focused pilots, documented best practices, and continuous improvement.

16:10 – 16:40 ⚙️ **Why Digital Thread matters: Enabling True Model-Based Enterprise Performance,**

Dr. Sven Kleiner, em engineering methods AG

Model Based Enterprises depend on consistent, connected engineering data, yet many still operate with fragmented information across tools and lifecycle stages. This presentation explains why Digital Thread is essential for enabling traceability, automation, and high-quality decision making in MBEs. It highlights how linking requirements, models, CAD, simulation, manufacturing, and service data reduces rework, improves change management, and accelerates certification. Practical examples from Industry show how organizations can implement Digital Thread capabilities incrementally and quantify the resulting business value

16:40 – 17:00 🎤 **Closing Remarks**

Symbols Used in Agenda:

🎤 **Opening, remarks and moderation**
Introductions, opening speeches, panel moderation, and closing remarks from hosts or organizers.

⭐ **Keynote industrial presentation**
High-profile strategic talk from industry leaders, focusing on vision, experience, and transformation in Model-Based Enterprise.

⚙️ **Industrial presentation**
Real-world implementation case studies from companies applying MBD/MBE in engineering, manufacturing, or quality processes.

🧩 **Sponsor / partner presentation**
Presentations from technology providers and ecosystem partners demonstrating tools, methods, and enabling technologies.

🎤👥 Panel Discussions