### Conference programme



## -eurostep- CIMdata

# MOST WELCOME TO PLM ROAD MAP AND PDT 2019

#### PLM for Professionals – Product Lifecycle Innovation.

As PLM is naturally expanding its coverage there are plenty of opportunities opening for innovation across a product's entire lifecycle. Any PLM professional needs to manage the complex PLM legacy, as well as understand where all new capabilities in and around PLM can and most likely will take us. *PLM Road Map and PDT 2019* is the meeting place where leaders will report on these two fronts—the classics of PLM and the upcoming PLM enablers. Pain points and trends!

In the camp of classic PLM are the pain points of understanding and deciding the borders between MBOM, EBOM, and SBOM—if the borders still exist! Configuration Management and Collaboration are additional areas that have been around where innovation can still provide significant advantages. New business models require rethinking. What was state of the art isn't anymore.

The PLM professional also needs to manage and plan for the introduction and democratization of Modeling & Simulation, Model Based Systems Engineering, Predictive Maintenance, Additive Manufacturing, Augmented Reality, and Cloud. Investment and training need to go where the best pay-off is, but PLM professionals must make sure recent and promising technologies are seamlessly integrated parts of the total PLM solution. Standardization at the right levels can enable an architecture where old and new will co-exist for the benefit of all in transformed digital networks.

Today, PLM is a topic that is hotter than ever with a lot of recent VC investments, as well as a long list of mergers & acquisitions.

PLM is definitely a major part of any organization's Digital Transformation.

### Agenda | Day 1 - November 13

8:00 – 8:30	Registration & Continental Breakfast in the PLM Collaboration Café	
8:30 - 8:40	Welcome	
	Peter Bilello, President, CIMdata & Håkan Kårdén, Director of Marketing, Eurostep	
8:40 – 9:25	KEYNOTE: The State of PLM: Today's Market & Leading Trends	
	This presentation will review the current state of the PLM industry with emphasis on key trends and issues, including augmented intelligence and other emerging trends that are critical to the success of PLM implementation and adoption. CIMdata will share its views on these trends and the impact they have on companies implementing PLM and the PLM professional community in this increasingly challenging global business environment.	
	Peter Bilello, President, CIMdata	
9:25 - 10:00	Towards a Global, Digital Innovation Practice	
	Although a vision of the completely distributed economy is here already, there remain both challenges and opportunities for manufacturing.	
	This presentation will look at how to enable individualized design and configuration in combination with additive manufacturing technologies. Both end-user customers and manufacturers use automated and intelligent design and evaluation tools to predict the behavior of different design, manufacturing, and distribution options. One example is used to clarify the digital-, multi-partner—information processes that are needed to ensure consistency and traceable decisions along the development logic. A critical discussion is raised on how to support, enable, and ultimately realize the ambition of next generation digital information practices when deploying additive manufacturing technologies on an industrial scale.	
	Professor Ola Isaksson, Leader of the Systems Engineering Design Group, Chalmers University	
10:00 – 10:10	Sponsor Thought-Leadership Vignettes	
10.10-10.40	Networking Break & PLM Collaboration Café	
10:40 – 11:15	Multi-view Bill of Materials – A Collaboration Between Aerospace Manufacturers to Improve PLM Solutionfor Multi-view BOM Management	
	Most Aerospace and Defense (A&D) companies have developed heavily customized PLM solutions for design and manufacturing because current commercial PLM solutions do not offer complete and efficient out-of-the-box capability for managing accountability between Bill of Materials (BOM) structures. Ten airframe and propulsion OEMs, all members of the A&D PLM Action Group, along with five invited Tier 1 suppliers jointly sponsored and staffed a Multi-view BOM project to reduce the pain associated with managing and reusing data in long lifecycle products by defining and adopting industry standards and best practices, thereby avoiding PLM solution customizations.	
	This presentation will show how the team reached a consensus to publish the Multi-view BOM Position Paper and review the paper's main conclusions and requirements concerning Engineering BOM to Manufacturing BOM restructuring, effectivity management, and collaboration with suppliers.	
	Fred Feru, Senior Expert, Airbus	

11:25-12.10	PLM Success Story: Data Strategy for Managing an Installed Base of Complex Configured Products
	How to provide centralized, up-to-date and easy-to-access data and documentation for complex configurable products that are installed and operating in a global environment?
	KONE delivers highly configurable products globally and the need for traceability has become more and more important. Data for these products are formed by many processes and tools and building a comprehensive view of the data was a major challenge. KONE's PLM story is about taking control of complicated equipment data with additional focus on usability and accessibility. In this presentation we will talk about KONE's PLM architecture and data strategy for utilizing and enriching existing equipment data, exploiting long-term product information for service and maintenance, and resolving traceability challenges in the global supply chain and maintenance network.
	Teppo Toivonen, Solution Owner, TracePDM, KONE
12:10 – 12:20	Sponsor Thought-Leadership Vignettes
12:20-13.30	Networking Lunch & PLM Collaboration Café
13:30 – 14:15	KEYNOTE: Doing Right and Doing Well: Enabling the Circular Economy for Long Term Prosperity
	In recent years the immense potential of moving toward circular value chains has been touted by politicians, academics, and entrepreneurs. New approaches to how we design, produce, sell, and cycle products have been shown to impart several benefits for the economy, society, and the environment – perhaps most notably for coming generations. Strong actions are needed throughout political and business landscapes for such long term, circular value creation to become the incentivized norm instead of the exception. Specifically, PLM in concert with innovation and proactive policy formulation can assist in alleviating barriers such as post-consumer product/material information and value disconnect, the discounting of critical future resource needs, and market mechanisms that encourage linear (over circular) design.
	By raising these issues and a few concrete cases, we hope to encourage discussion and further collaboration with the PLM community, the misnamed "end of life/waste management industry" and broader industrial ecosystems.
	Graham Aid, Ph.D., Strategy and Innovation Coordinator, Ragn-Sells Group
14.15-14.50	The Fundamental Role of PLM in Data-driven Product Portfolio Management
	This presentation will focus on the current challenges and preconditions regarding data-driven, fact-based product portfolio management (PPM) that is based on commercial and technical product structures in PLM, critical business processes, the corporate business IT, and company data assets. The supporting role of corporate-level data governance will also be considered. The basis for the presentation is a combination of a literature review and the qualitative analysis of empirical data collected from eight international companies of varying sizes that trust PLM solutions during the entire product lifecycle. Key takeaways highlight several preconditions for data-driven, fact-based PPM.
	Mutual understanding of company products is needed to establish a consistent commercial and technical product structure in PLM, where more than 90% of the original product master data is created. Product classification for strategic, supportive, and non-strategic products is necessary to connect commercial and technical product structures with a company's (product) strategy. Furthermore, a holistic, corporate-level data model may have a crucial role in adjusting the company business IT to support product portfolio visualization via a company's digital backbone (e.g., cloud computing platform) for real-time reporting and analytics.
	Hannu Hanilla, Head of PDM/PLM, Polar
14:50 – 15:00	Sponsor Thought-Leadership Vignettes
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15:25 – 16:00	The Minimum Digital Thread for Aircraft Certification
	The use of multiple software tools to create and consume model-based definition (MBD) data in different, often proprietary, formats results in substantial non-value-added integration costs and data interoperability issues. An open, vendor-neutral standard format as the common language is critical. Members of an A&D multi-company project team are defining the minimum data content in MBD type design required to meet manufacture, inspection, and regulatory certification requirements. The Group has focused on ISO 10303-242 (STEP AP242), ISO 14306 (JT), and ISO 32000/14739 (PRC for 3D PDF), and commercial translation tools that support data exchange and interoperability requirements for existing MBD design processes.
	This presentation will describe the status of their work, and their plan to present detailed requirements, promote adoption, and achieve compliance within the PLM ecosystem.
	Dr. Ken Versprille, Executive Consultant, CIMdata
16:00 – 16:10	Sponsor Thought-Leadership Vignettes
16.10-16.40	Panel Discussion: PLM and Complexity
	In this panel discussion we will consider PLM and complexity.
	We will consider the following questions:
	- What can we all do to make PLM simpler?
	- When is PLM as simple as possible?
	- Where should we invest for success: In technology, people, or processes?
	Facilitated by Håkan Kårdén, Director of Marketing, Eurostep
16:40 – 16:50	Sponsor Thought-Leadership Vignettes
16.50-17.25	A Flagship Data Integration Project in Support of the Royal Navy's New Carriers
	In the new world of digital ship design, it is essential that the digital thread is maintained and exploited across the whole lifecycle of the complex asset. This presentation will highlight the challenges, features, and benefits of transitioning a major engineering program from build to support. The Queen Elizabeth Class Aircraft Carriers are one of the most complex pieces of engineering ever built in the world and this presentation will consider the program from a product information management viewpoint, with all its complexity, diversity of stakeholders, and the value of data over time.
	Attendees will learn how a data integration platform was utilized to deliver a safe, available, and capable platform to the Royal Navy, whilst exploiting the power of connected and truly integrated data across the support enterprise.
	Luigi Sidoli, Customer Solutions Manager, BAE Systems Maritime
17.25-17.30	First day summary
17.30	Conference Adjourns for the Day
17.30 –19.00	Pre-dinner drinks in the PLM Collaboration Café followed by optional dinner at 19:00.

## Agenda | Day 2 - November 14

Registration & Continental Breakfast in the PLM Collaboration Café
Welcome
Peter Bilello, President, CIMdata & Håkan Kårdén, Director of Marketing, Eurostep
KEYNOTE: Chernobyl, the Megaproject with the New Arch (Novarka)
33 years after the accident the new Chernobyl confinement is complete, with a safe area around reactor N°4. It is the result of a 12-years international project, including R&D, design, testing, construction, and commissioning of the largest movable structure ever built. The project has been delivered despite the most challenging environment with an earthquake, snow, tornadoes, and of course radiation. In addition to the harsh environment, the requirements were extreme, with a confinement lifetime of 100 years without maintenance. Bouygues Construction was a leading player in the work with Novarka and will share with attendees how to take on the challenges associated with a project this complex, how to manage the challenges, the stakeholders, and deliver with success.
Christophe Portenseigne, Technical Director, Bouygues Travaux Publics, Bouygues Construction Group
Sponsor Thought-Leadership Vignettes
A Model Factory for the Efficient Development of High Performing Vehicles at Renault
Developing vehicles in an efficient manner is more and more challenging. New regulations, ever increasing customer expectations, decreased time-to-market targets, cost and mass reduction, and other demands are regularly putting pressure on engineering activities. Renault has found that digitalization, modeling, and simulation are the best responses to these challenges. To support this, a concept of a model factory has been developed at Renault. The organization, the process, the method, and tools that are deployed to deliver a complete and performing set of simulated data are all required. Issues detection, counter measures development, and decision-making can be achieved efficiently. Renault has found this to facilitate vehicle validation and achieve a high first-time level of performance measured on physical prototypes.  For example, on CLIO V, passive safety was at the top level the first-time, which was designed and expected.
Eric Landel, Expert Leader, Numerical Modeling and Simulation, Renault
Sponsor Thought-Leadership Vignettes
PLM, MBSE and the supply chain – challenges and opportunities
The typical current situation in many enterprises is that PLM and ALM are well established but distinct and the increasing take up of Model-Based Systems Engineering (MBSE) cuts across these domains.  There is an increased emphasis on simulation too, adding SDM. Many enterprises have document-based processes in place and the shift to go fully digitized and really apply MBSE presents real challenges and great opportunities. Including joint ventures and supply chain design partners adds to the mix. So does considering the full life cycle and the different views (BOMS) used through life. This presentation will look at the challenges and some of the initiatives currently addressing them, both in the standards arena and in commercial practice.
Nigel Shaw, Technical Fellow, Eurostep
Networking Break & PLM Collaboration Café

#### 11.10-11.45 Improving Collaboration within the Aerospace Partner Ecosystem Collaboration among Original Equipment Manufacturers (OEMs) and their product design and manufacturing engineering partners and suppliers is a key aspect of any major Aerospace and Defense (A&D) program execution. This presentation will explore the need to enable frictionless operation between OEMs and their suppliers. Process analysis by the A&D PLM Action Group (AD PAG) project team has shown that many different data formats, PLM software systems, and enabling infrastructure technologies exist across the OEMs and their supply base. In this presentation, we will focus on the classical CAD/DMU area for the AS-IS state and the pain points associated with asynchronous data exchange, such as data conversion, synchronization, and time delays. Taking these challenges into account, a desired TO-BE state is described and reflected onto an actual PLM system landscape. The presentation will conclude with the AD PAG project team's go forward plan to expand their scope of work to comprehend End-2-End PLM, within which product data is not only used in the traditional domains of engineering and manufacturing, but from first idea until end of life. This broader scope includes additional collaboration partners such as Airlines, Design Agencies, and Customer Service for Maintenance and Retrofitting, and additional product data such as requirements and reflecting functions for Model-Based System Engineering. Bernd Feldvoss, Service Package Manager, PLM Data Exchange, Airbus 11.45-12.20 The ISO AP239 ed3 Project and the Through-file Cycle Interoperability Challenge This presentation will provide an update on the ISO 10303-239 (PLCS) ed3 project. This project has significantly contributed to the ISO "STEP Extended Architecture" development, with the objective to enable interoperability between STEP Application Protocols, starting with AP242 and AP239. This STEP Extended Architecture reuses several of the methods and processes developed in OASIS PLCS. The grand challenge is to propose a backbone of STEP standards enabling interoperability through the lifecycle, from early design phases to operation and disposal. AP239 ed3, which will be delivered as an International Standard by ISO in 2020, is

proposed as the overarching standard for Product Support specifications, including the AIA-ASD ILS

Specifications. This approach is supported by ASD (the European trade association for Aerospace and Defence)

Yves Baudier, PLM interoperability & Systems Engineering Expert, AFNET

12.20-13.30 Networking Lunch & PLM Collaboration Café

13.30-14.05 | INMASYST - Managing the Complexity of Large Infrastructure Projects

and by other stakeholders – like the French Ministry of Defence.

Large infrastructure projects consist of many subsystems which need to be integrated with other subsystems and consolidated into the final delivery. Any clash and lead time extension will have a negative impact on work plans and introduce additional cost and delays. EGIS has developed a solution that enables Interface Managers to support the collaborative process between all the stakeholders in the design phase and building phase. The solution is based on standards and encompasses the complete vision of the interface – i.e the construction elements, the zone of context, the stakeholders, and the operations that need to be performed up to the closure of the project. This presentation will demonstrate the complexity of infrastructure projects and a way to address the management of interfaces. It will also elaborate on business benefits and way forward.

Christophe Castaing, Director of Digital Engineering, EGIS

14.05-14.40	MINnD, the French Research Initiative for Civil Infrastructure	
	The MINnD project (Modeling of INteroperable INformation for sustainable INfrastructures in nD) is a French research project dedicated to the deployment of BIM and digital engineering in the infrastructure sector.	
	MINnD brings together a representative community of stakeholders in this sector (more than 70 members) and displays an ambitious research program, based on experiments, technological and procedural perspectives, as well as reflections on the contractual and legal aspects engendered by this new collaborative environment. MINnD is now finished and in this presentation the results of this project will be summarized, put into perspective in an international context, and then the issues of MINnD Season 2 will be considered.	
	Pierre Benning, IT Director, Bouygues Public Works	
14.40-15.00	Networking Break & PLM Collaboration Café	
15.00-15.35	Digital Transformation for PLM is not an Evolution	
	Configuration Management and PLM have evolved over the past 60 years, from manual to electronic, an evolutionary process lead by the automotive and aerospace industry. Processes and systems have been tuned and coded around best practices for the last 30 years, and we are still implementing them, as they require no significant business change. With digitalization, new and disruptive ways of working are becoming possible but incompatible formats and data architectures are still significant obstacles. The traditional way of progressing for established organizations has been an evolutionary path but that has turned out to be hard, in particular for PLM. Should organizations move towards a hybrid model instead? This presentation will explain why an evolutionary approach is difficult, based on working examples, and why a hybrid approach should be considered.	
	Jos Voskuil, Industry Expert, Tacit	
15.35-16.05	Fireplace Discussion: Bringing all the Trends Together, What's Next	
	PLM is continuously changing and evolving as new technology and business trends come into play. The moderator of this informal discussion will alternately pose questions to Mr. Bilello and Mr. Voskuil for their opinion on the impact a number of important new trends will have on PLM in the coming years. Among the topics to be addressed are "the growing complexity of products" and "product as a service."	
	Peter Bilello, President & CEO, CIMdata Jos Voskuil, Industry Expert, Tacit	
16.05-16.15	Conference summary	
16.15	Conference Adjourns	

Cost to Attend	
Industrial End-Users	995 EUR
Government & DoD	495 EUR
Solution Providers	1,495 EUR

CIMdata PLM Action Group Members and CIMdata PLM Community Members: Check to see if you qualify for a free ticket!

#### Who Should Attend?

- Systems Engineers
- Certification Engineers
- PLM Program Managers
- PLM Solution Architects
- PLM Solution Planners
- Supply Chain Managers
- Chief Architects
- Chief Engineers and Engineering Managers
- Chief Innovation Officers
- Chief Technology Officers
- Design Engineers
- Engineering IT Executives
- Information Strategy Managers
- IT Professionals
- Mechatronics Experts
- NPD Leaders
- PLM Champions
- Process Designers and Improvement Experts
- Procurement Managers
- Product Development Innovation Experts
- Product Platform Managers
- Product Portfolio Managers
- Software & Service Professionals
- Solution Managers & Providers

#### What are the Benefits of Attending?

#### It's about MEANINGFUL TRANSFORMATION

How do you develop a meaningful global transformation and implementation framework for your company? You will take away a road map of actionable items that will enable the meaningful transformation of your enterprise.

#### It's about NETWORKING

How often are you able to spend meaningful time away from the day-to-day distractions of work while having the opportunity to network with a large group of like-minded peers? You will have plenty of time to focus on the tough issues while making valuable connections and additions to your network.

#### It's about CONTINUING YOUR EDUCATION

Product development continues to evolve at a rapid pace but how do you keep up with all the trends and changes? At PLM Road Map & PDT you will have the opportunity to listen to our top-of-class speakers and world class experts as they share with you their successes and experiences of making the technology work.

#### It's about COMMUNITY

Do you ever feel that the PLM events you attend leave you out in the cold after they end? At PLM Road Map & PDT this will not happen as attendees are part of our wider PLM community.

#### It's about INNOVATION

Do you feel vulnerable to competitor innovation challenges and want information on what will be available tomorrow – today? You will have the opportunity to meet with the industry's top solution providers from your space to find out what is available now, and what to expect in the future, allowing you to make innovative choices ahead of the



