PLM Road Map 2019 and PDT 2019
The must-attend event for PLM professionals

**USA**
29-30 May | Washington D.C.
The Marriott Hotel | Tysons Corner

**FRANCE**
13-14 November | Paris
Renaissance Hotel | La Defense

THEME 2019:
PLM for Professionals – Product Lifecycle Innovation
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 North America* 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.*
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<tr>
<td>7:30 a.m. – 8:30 a.m.</td>
<td><strong>Registration &amp; Continental Breakfast in the PLM Collaboration Café</strong></td>
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| 8:30 a.m. – 8:40 a.m. | **Welcome**  
*Peter Bilello, President, CIMdata & Håkan Kårdén, Director of Marketing, Eurostep* |
| 8:40 a.m. – 9:25 a.m. | **Opening presentation: 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 a.m. – 10:00 a.m. | **Integrating “Smart Documents” into PLM and the Digital Thread**  
We have all encountered documents which “refer” to other documents. What if one document could actually “talk” to another document? A document which talks could tell others that reference it that something changed! That table copied into a drawing would “know” that the values in the source document have changed! What if the manufacturing BOM or bill of process could raise a flag when the material specification for that widget has changed? Think of the time, frustration, and money that can be saved. Making documents talk to each other is the definition of “Smart Connected Documents” and when coupled with PLM is a game changing combination. This presentation will relate details of Northrop Grumman’s experience with the application of a Smart Connected Documents engine to product definition and manufacturing instruction documentation. The presentation will start with the challenge, describe the journey, and will finish with a summary of the benefits received and lessons learned from the experience.  
*Bruce Mayer, Engineering Application Technology and Strategy Manager, Northrop Grumman* |
| 10:00 a.m. – 10:30 a.m. | **Networking Break & PLM Collaboration Café** |
| 10:30 a.m. – 11:00 a.m. | **Sponsor Thought-Leadership Vignettes**  
*Aras Corporation: Marc Lind, Global Collaboration in Systems Engineering & Multiple View BOM for Digital Thread.*  
*Configit: Garrett Clark, Configuration management in addition to your PLM system.*  
| 11:00 a.m. – 11:35 p.m. | **An Executive Perspective: Selling an IT Transformation Strategy**  
What are the key systems that are needed to be successful as you digitally transform your business? What are the main reasons for investing in systems like Product Lifecycle Management (PLM) and Internet of Things platforms? How do you sell those benefits to be successful in leading the change required to be competitive? Now more than ever it’s critical to have a top down view of where you are going and why you need to get there in order to lead digital transformation. This presentation will explore how to visualize key enterprise systems, including PLM, and discuss the elements of a transformation strategy that will lead to successful enterprise evolution over time.  
*David Sherburne, Consultant, ex-Carestream* |
| 11:35 a.m. – 11:55 a.m. | **Sponsor Thought-Leadership Vignettes**  
*Vertex: Craig Brown & Matt, Elevating 3D Collaboration.*  
*XSB: Rupert Hopkins, Modeling Unstructured, Non-geometric Information for the Digital Thread.* |
11:55 a.m. – 12:00 p.m. | Welcome to Lunch from our day 1 lunch sponsor CMstat

12:00 p.m. – 1:15 p.m. | Networking Lunch & PLM Collaboration Café

1:15 p.m. – 2:00 p.m. | KEYNOTE: A Flagship Data Integration Project in Support of the Royal Navy’s New Carriers
The United Kingdom’s Royal Navy commissioned the new aircraft carrier HMS Queen Elizabeth in late 2017. An aircraft carrier system is one of the most complex pieces of engineering one can imagine and any number associated with the carrier is mind-blowing. This presentation will consider the project from a product information management viewpoint, with all its complexity, diversity of stakeholders, and the value of data over time. Attendees will hear about the challenges and approaches for managing and maintaining data for this flagship project in order to support an operation meeting high standards for performance, availability, and safety.

Roger Hobley, Technology Development Manager Maritime Services IS&S Surface Ships, BAE Systems

2:00 p.m. – 2:35 p.m. | 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

2:35 p.m. – 3:00 p.m. | Networking Break & PLM Collaboration Café

3:00 p.m. – 3:45 p.m. | 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

3:45 p.m. – 4:20 p.m. | The Challenges of Model-Based Systems Engineering (MBSE) for NASA
NASA is investigating methods and tools to shift away from legacy document-centric systems engineering toward Model-Based Systems Engineering (MBSE) solutions. While the legacy Systems Engineering (SE) approach provides a robust and proven methodology appropriate to systems that may be unprecedented, mission or safety critical, and operating in extreme environments, the agency seeks to adopt new model-based strategies capable of supporting distributed development, model reuse, and a more comprehensive analytical environment. This presentation will provide an overview of NASA SE processes, recent MBSE initiatives, and remaining challenges in interoperability and model integration yet to be addressed.

Kurt Woodham, NASA and Nigel Shaw, Technical Fellow, Eurostep

4:20 p.m. – 4:25 p.m. | Welcome to Happy Hour from our sponsor ArcherGrey

4:25 p.m. – 4:30 p.m. | First day summary

4:30 p.m. | Conference Adjourns for the Day

4:30 p.m. – 6:00 p.m. | Happy Hour - avoid the traffic and join us for drinks and snacks in the PLM Collaboration Café
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<td>8:40 a.m. – 9:25 a.m.</td>
<td>KEYNOTE: Navigating the Journey to Industrie 4.0. The Good, The Bad, and Making the Ugly – Less Ugly!</td>
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<td>Manufacturing IT infrastructure has evolved in an adaptive emergent way for more than 30 years. Today, Industrie 4.0 represents the greatest disruption in business models and platform-based technology opportunities in more than a generation. This presentation will share insight based on recent surveys and discussions with leading manufacturers about the journey to Industrie 4.0 and ideas about how to mitigate key risks during that journey.</td>
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<td>Dr. Marc Halpern, P.E., Vice President, Gartner</td>
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<td>Identifying Value in Product Lifecycle Innovation using Integrated Product, Process, and Logistics Viewpoints</td>
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<td>The world of manufacturing is complex and is made up of countless distributed pieces that must come together to deliver goods. SMEs cannot afford to completely redesign their manufacturing systems. SMEs need ways to leverage the capabilities in which they have already invested and add the appropriate new technologies that will increase their productivity and profits. This presentation will show that technology alone cannot solve these challenges, nor is technology the hardest challenge to address.</td>
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<td>Thomas Hedberg, Jr., Ph.D., P.E., Research Mechanical Engineer, NIST</td>
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<td>10:30 a.m. – 11:05 a.m.</td>
<td>Global Supply Chain Collaboration Practices</td>
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<td>Ten A&amp;D PLM Action Group (AD PAG) member companies have funded a joint project to define common global collaboration practices between Original Equipment Manufacturers (OEMs), product design suppliers, and manufacturing partners for data integration/exchange processes and protocols that are consistent with industry standards. Separately, as part of the Boeing global collaboration strategy, Supplier Requirements eXchange (SRX) is being deployed to support supply chain interoperability through an environment that enables collaboration between OEMs, partners, and suppliers. SRX revolutionizes how Boeing collaborates, packages requirements, and exchanges design models while maintaining configuration control and digital thread integrity. This presentation will describe the AD PAG project and the Boeing SRX value driven system elements to extend the digital thread and requirements traceability across the supply chain and the product lifecycle.</td>
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<td>Neil Lichty, Project Engineer, The Boeing Company</td>
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| 11:05 a.m. – 11:50 a.m. | **KEYNOTE: DoD Digital Engineering Initiative**  
In June 2018, the Office of the Under Secretary of Defense for Research and Engineering (USD(R&E) released the Digital Engineering Strategy. This strategy encapsulates the goals to shift the engineering practices to computational tools and model-based artifacts. This keynote presentation will provide an overview of the Digital Engineering strategy, and the implementation progress to date.  

*Philomena “Phil” Zimmerman, Deputy Director of Engineering Tools and Environments, Office of the Deputy Assistant Secretary of Defense for Systems Engineering* |
| 11:50 a.m. – 1:00 p.m. | **Networking Lunch & PLM Collaboration Café**  
**PLM, Model-Based Systems Engineering, 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 lifecycle 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*  
**Enabling Model-Based Systems Engineering Data Interoperability**  
The digitization of the product development process from the early conceptual design stage all the way through the entire product lifecycle is a major business goal across all manufacturing industries today. This is especially true in aerospace and defense programs due to the design complexities of cyber-physical systems with ever-increasing amounts of embedded software and electronics. Members of an A&D multi-company project team evaluated current data interoperability standards, enabling a Model-Based Systems Engineering (MBSE) conceptual design process. The activity was to assess the feasibility of exchanging digital requirements and systems architecture models instead of documents within a collaborative product development activity. In this presentation the team will discuss their findings and recommendations for the short and longer term.  

*Don Tolle, Director Simulation-Driven Systems Development Consulting Practice, CIMdata, Inc.* |
| 2:10 p.m. – 2:30 p.m. | **Networking Break & PLM Collaboration Café**  
**Speed to Value - Driving PLM Strategy to Execution**  
Speed to value is about optimizing and delivering strategic programs across the entire PLM lifecycle such that the PLM portfolio will realize maximum value in the shortest amount of time. The approach developed for General Motors and described in this presentation aligns the key process disciplines for project portfolio management and program delivery into a single framework with elements of agile for software development and solution delivery. The combined approach enables rapid mobilization for program execution while ensuring benefits are maximized through the prioritization, planning, and alignment of key business initiatives with solution releases. This approach is specifically designed for PLM portfolios containing innovation, product development, and digital transformation initiatives and it has been proven successful at General Motors for programs and projects of various sizes and complexity.  

*Craig Brown, General Motors (retired)* |
| 3:05 p.m. – 3:15 p.m. | **KEYNOTE: 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 Dr. Halpern and Mr. Bilello 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 is “the growing complexity of products” and “product as a service.”  

*Peter Bilello, President and CIMdata Dr. Marc Halpern, P.E., Vice President, Gartner* |
| 3:45 p.m. – 4:00 p.m. | **Conference summary**  
**Conference Adjourns** |
**Cost to Attend**

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<tr>
<td>Industrial End-Users</td>
<td>US$995</td>
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<tr>
<td>Government &amp; DoD</td>
<td>US$495</td>
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<tr>
<td>Solution Providers</td>
<td>US$1,495</td>
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*CIMdata PLM Action Group Members and CIMdata PLM Community Members: Check to see if you qualify for a free ticket!*

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**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

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**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...