PDT Europe 2017

October 18 —19, 2017 Gothenburg, Sweden
Clarion Hotel Post

Co-located with CIMdata´s PLM Road Map 2017 October 17

THEME PDT EUROPE 2017:
Continuous transformation of PLM
to support the Lifecycle Model-Based Enterprise

TWO DAYS OF GREAT PRESENTATIONS AND MEETINGS!

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of product data technologies.

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and to discuss with likeminded. The mix of great presentations
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has over the years become a landmark of PDT Europe.

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WELCOME TO PDT EUROPE 2017

**Theme 2017: Continuous transformation of PLM to support the
Lifecycle Model-Based Enterprise.**

Products are becoming systems with increased complexity. This development is driving the take up model based enterprise (MBE) approaches. These include digital twin, digital thread, digital enterprise and Industrial Internet of Things (IIoT), all of which need to work together.
This means increased interoperability, democratization and collaboration.

Everything and everyone is connected. Data must be reused across the systems lifecycle and business networks and this calls for a broad definition of MBE.
MBE is cross discipline and cross organization. Much more than 3D CAD, it includes processes up-stream, as well as down-stream of CAD.

In parallel, the competitive landscape is changing at an unprecedented pace with pressure on lead times, quality and cost. Competition, globalization, joint ventures, mergers & acquisitions force organizations to transform to survive. MBE must be implemented for agile processes and change.

*PDT Europe 2017 will look into strategies,
tactics and implementations moving towards MBE, anticipated and realized business benefits.*

We look forward to seeing you in Gothenburg, Sweden!

Peter Bilello, CIMdata, USA
Frederic Feru, Airbus, France
Jos Voskuil, TacIT, Netherlands
Håkan Kårdén, Eurostep, Sweden
Nigel Shaw, Eurostep, UK
Trond Zimmerman, Volvo AB, Sweden
Programme committee for PDT Europe 2017.

Agenda PDT Europe 2017| Day 1 - October 18

08.15-08.45	**Registration for PDT Europe 2017 open**
08.45-09.00	**Opening of PDT Europe 2017** Welcome by the Organizers - Introduction of sponsors
	Continuous transformation of PLM to support the Lifecycle Model-Based Enterprise
09.00-09.45	**Digitalization, Model-based X, PLM & the Digital Thread: Where do we go from here?** Product lifecycle management (PLM), Model-Based Engineering (MBE), Model-Based Enterprise (MBE), Model-Based Systems Engineering (MBSE), Model-Based Design (MBD), Model-Based Definition (MBD), etc. The alphabet soup of acronyms being used in industry today to define the digitalization of product related processes throughout the lifecycle is confusing and becoming counterproductive as industries move towards the adoption of model-centric processes. This presentation will attempt to highlight the differences and overlap of these current different viewpoints and discuss the challenges and standards-related opportunities to achieve the "digital thread" vision based on industry's PLM requirements and associated use cases. **Peter Bilello, President** **CIMdata, USA**
09.45-10.30	**Busting the Myth of Digital Twins and Planning Them Realistically** Digital twins have reached the peak of hype! Indeed, the vision is compelling enough that manufacturers and constructors should be carefully considering the investment – and the investment will be substantial. This presentations shares a practical approach to planning and executing such an initiative to minimize the risks. **Marc Halpern, Vice President, Research, Manufacturing Advisory Services** **Gartner, USA**
10.30-11.00	**BREAK IN THE EXHIBITION AREA**
	Industries investing in the Lifecycle Model-Based Enterprise
11.00-11.30	**The need for interoperability and open standards in the Architecture Engineering Construction (AEC) industry – how to integrate BIM and GIS with a life cycle view** BIM (Building Information Modelling) is targeting the use of models replacing or complementary to drawings, documents and file based information. The overall business case is compelling but the AEC industry is slow to move. With recent digitalization in AEC the move towards smart planning, design, construction and operation is within reach. All these processes need to take into account the whole life cycle related to the Digital Twin as well as the Digital Thread. The presentation "BIM and GIS standardisation and implementation in Sweden with a through life perspective" looks at the current state in Sweden regarding BIM and GIS over the life cycles of planning and building construction processes for the built environment. The presentation includes work on a test bed platform for the Swedish construction industry. **Väino Tarandi, Professor in IT in Construction** **KTH, the Royal Institute of Technology, Sweden**

11.30-12.00	**Automotive industry** TBA
12.00-12.30	**Transforming IT in Defence with society as one of many stakeholders** IT systems at Swedish Defence play a vital role if the defence of Sweden. IT systems have to be responsive, agile and supporting the mission of saving lives. At the same time they need to be secure, meeting the increasing volumes of cyber threats. In this presentation, Rebecca Ihrfors, CIO at FMV, will describe challenges and rewards from a holistic perspective with developing this IT support in times more demandning than ever. **Rebecca Ihrfors, CIO** **Swedish Defence Materiel Administration (FMV), Sweden**
12.30-14.00	**LUNCH**
	End user stories: **Moving forward in complex organizations towards interoperability and openness**
14.00-14.30	**Industry Case 1** **TBA**
14.30-15.00	**A capability based enterprise architecture unlocks the value of the Model Based Enterprise** The Model Based Enterprise, coupled with concepts like Digital Thread and Digital Twin, is all the rage with industry leading industrial companies and particularly with software providers looking to capitalize on the excitement. Yet, how many are actually structured to take advantage of the opportunity? Legacy implementations, existing product lines, contradictory best practices and organizational culture all stand in the way of fully appreciating the potential of model based enterprise. To combat this inertia, Boeing is undertaking an approach to implement model based through a capability driven enterprise architecture. In this talk, we will examine the capability driven approach and its implications to model based enterprise realization. **Kenny Swope, Senior Manager, Business Capability Integration** **Boeing, USA**
15.00-15.30	**Managing Installed Base to Unlock Service Opportunities** Outotec delivers complete plants and equipment which have decades of use life. Whilst the company is delivering several plants fully engineered in-house, there are still occasions when they are engineered by others, contracted by the owner/operator, and will contain some key technologies and equipment from Outotec. Furthermore, there is a long and wide legacy; thousands of processing plants where the information is not existing or is incomplete and unstructured. In order to engage and serve the customers better, and drive business growth from digital assets, Outotec is embarking on a journey of modeling the Installed Base. It will consist of Plants, Plant Units and Equipment, containing multiple layers of data, systems, connected processes and people. This presentation will describe the efforts and challenges with gathering data on-site, assessing and validating it, combining it with existing engineering and transactional data, and enriching it into a Digital Twin of the plant. **Sami Grönstrand**, **VP Operations & Processes** **Outotec, Finland**
15.30-16.00	**BREAK IN THE EXHIBITION AREA**

	Designing a future for lifecycle management
16.00-16.30	**System Lifecycle Management as a bimodal IT approach** The complexity of a todays PLM strategy is already very high, and the suggested increase in the complexity of cybertronic product and production systems will continue to accelerate. Traceability across the product lifecycle, the disciplines and the supply chain must be ensured at all times in order to manage this complexity. As an extension of PLM, system lifecycle management (SysLM) is the next step. SysLM is the engineering backbone concept for product development and lifecycle management in the context of the Industrial Internet and for integrated and interdisciplinary Model Based Systems Engineering (MBSE), product line engineering, and service lifecycle engineering. **Martin Eigner** **University of Kaiserslautern, Germany**
16.30-17.00	**Why PLCS is a good fit for the MBE and the MBEE (Model Based <u>Extended</u> Enterprise) and Systems Lifecycle Management** Concepts such as digital twin and digital thread are aimed at enabling the real product to be simulated, recorded and managed through life. PLCS is a standard designed to meet a key problem: How to keep the information needed to operate and maintain a product aligned with the changing product over its life cycle in a heterogeneous organization, process and system environment? The digital thread is the information needed to, and coming from, the design, operation and maintenance of the product. The presentation will examine the fit between PLCS and the digital thread, including model based approaches, the extended enterprise and management of change. **Nigel Shaw, Managing Director** **Eurostep Limited, UK**
17.00-17.45	**Panel discussion**
17.45-18.30	**Socializing - Welcome reception in exhibition area**
19.00	**Socializing – PDT Dinner**

Agenda PDT Europe 2017 | Day 2 — October 19

08.45-09.00	**OPENING DAY 2**
	Continuous transformation of PLM to support the Lifecycle Model-Based Enterprise
09.00-09.45	End user story TBA
09.45-10.30	**Closing the life cycle loop** The Digital Thread needs to moce away from the linear notion and represent the circular way of viewing products and systems. This means more agility and flexibility supporting today's business environments but also requirements in using a total information architecture, with standards and interfaces. Hardwired processes will have to be replaced with a knowledge based system, with information accessible when and where needed in an understandeble way. This presentation will describe the current state-of-the-art thinking in industry, progress in standards development including interoperability between standards It will include pragmatic examples of the impact of initiatives like IoT, Digital Thread and Twin and Circularity. **Torbjörn Holm** **Eurostep, Sweden**
10.30-11.00	**BREAK IN THE EXHIBITION AREA**
11.00-11.30	**Digital Twin realities, progress and technologies shaping the future** Over the past 12 months many OEMs have embraced a Digital Twin strategy to facilitate key business functions and create new digital services that add value, create differentiation and increase profitability. The term, Digital Twin, has consequently undergone an expansion. It's now defined by its business application and a range of virtual representations from raw telemetry to 3D mixed reality. This presentation will discuss the progress to date backed up by real numbers and the future as influenced by the emergence of technologies such as mixed reality and cognitive services. **Simon Floyd, Worldwide Industry Lead, Manufacturing Practice** **Microsoft Services, USA**
11.30-12.00	**PLM – something has to change** Digitalization has been and is still changing our day-to-day life, faster and more radical than before. New concepts and business models are forcing companies to act (as reacting might be too slow). Change is inevitable for organizations whether they like it or not. Jos will share observations and present ideas how companies are trying to make the change into a digital reality. Many times, the organization's structure and culture combined with risk avoidance lead to tensions with the outside world. Something has to change – for sure PLM is impacted. **Jos Voskuil – PLM Consultant, coach & blogger** **The Netherlands**
12.00-13.30	**LUNCH**

	TRACK 1 Standards for MBE inter operability and openness	TRACK 2 Design optimization for value, circular and re-use	TRACK 3 Towards the MBE
13.30-13.55	**The new Web for PLM** As the Web is now increasingly becoming a Web of data, in addition to a Web of documents, it may transform data management solutions such as PLM solutions. This talk will introduce Linked Data, related standards such as OSLC, and existing solutions which display potential application for PLM. The talk will also address how existing standardization efforts in the STEP community could make their standards ready for the new Web. **Brian King, Koneksys, Slovenia**	**Emerging product development practices using Value Driven Design** Value driven design (VDD) is a systems engineering design strategy which enables multidisciplinary design optimization and seeking to maintain the overall design rationale through the requirements establishment process. In value driven design, choices are made to maximize system value rather than to meet performance requirements. This presentation will present results from the TOICA FP7 project, where a methodology for VDD has been developed and how they map to trends I PLM. **Ola Isaksson, Professor Systems Engineering and Engineering Design Chalmers University, Sweden**	**Role, Challenge, and Value of Configuration Management in a model based enterprise** Model Based Enterprise (MBE) is a key paradigm shift where the model (not CAD, not BoM) becomes the nucleus of the product information across its lifecycle. Connections amongst product elements (Parts, CAD Attributes etc) and between product elements and elements beyond engineering (service instructions, data from IoT devices etc) are all dependent on configuration management (CM). This paper aims to highlight CM challenges in MBE and give examples what to do. **Badari Panuganti, HCL, USA**
13.55-14.20	**MoSSEC: a standard for sharing Modelling and Simulation information in a collaborative Systems Engineering Context** There are many mature standards for exchange of the modelling and simulation technical data, but these either do not include traceability to the systems engineering and product data management context, or are inefficient for data sharing. This context information can be summarized as "who", "what", "where", "when", "how", "why", and the goal of the MoSSEC project is to provide the standard for sharing this information. This presentation will describe the rationale and context for the work, as well as providing the status and future plans. **TBA**	**Product design strategies for the circular economy** Circular economy models can help companies capture the value and resources of products that are currently lost when products are discarded. The transition to circular business is challenging for manufacturers, as it requires changes in business models, design and the supply chain. The EU-ResCoM project identified that implementing circular design requires strategic decisions to be made during the very first product development stages. This session will showcase and demonstrate tools to support manufacturers in these strategic stages to design and optimise products for circular economy business models. **Ingrid de Pauw and Bram van der Grinten, IDEAL&CO, The Netherlands**	**Applying Systems Engineering for Smarter Product Development** Systems Engineering emerged from the need to conceptually understand a product and to ensure an adequate design early in the development phase. Due to the increasing complexity and need for development speed, systems engineers started to employ models. Modern PLM platforms are expected to leverage Systems Engineering approaches and support smart manufacturing, the Industrial Internet of Things (IIoT) and Industry 4.0. This presentation will elaborate on how MBSE and PLM are expected to converge toward true model-based engineering. **Lionel Grealou, Vice President, PLM Europe, Tata Technologies, UK**

14.20-14.45	**PLCS in use** PLCS is a standard for the information used in the support through life of complex products. Whilst there are processes (even several standards) for designing a support system, the feed-back loops need to work better. The data model was designed to allow the creation of an integrated view of the asset's data covering its lifecycle across traditionally siloed functional perspectives. In other words to provide a Digital Thread but from a Life Cycle Support viewpoint. The presentation will to some detail walk through PLCS in relation to Digital Twin and Digital Thread, and give practical examples of use. It will also elaborate on how implementations of PLCS can be used to address data quality issues. **Magnus Färneland,** **Director Product Unit, Eurostep, Sweden**	**Towards circular economy implementation using a multi-method simulation approach to link design and business strategy** The recent circular economy movement has raised awareness and interest about untapped environmental and economic potential in the manufacturing industry. One of the crucial aspects in the implementation of circular or closed loop manufacturing approach is the design of circular products. It is enormously challenging to choose "the right" strategy during the early design stage and especially at the single component level. This presentation will propose and demonstrate decision support at the intersection of multiple lifecycle design and business models in the circular economy context to identify effects on cost and CO_2 emissions. **Michael Lieder, Senior researcher** **KTH Royal Institute of Technology Sweden**	**What is new with MBE and how do succeed in implementations (and what to avoid)** PLM is in a constant transition as concept and in its implementations. This presentation will share some thoughts, and customer related experience, on how to move to MBE, focusing on challenges and benefits. Examples are mostly based on digital continuity, across the enterprises, using some projects as examples from Civil Engineering and Aerospace. **Max Fouache, CEO aXem,** **France**
14.45-15.00	**Discussion around theme - Standards for MBE interoperability and openness.**	**Discussion around theme - Design optimization for value, circular and re-use.**	**Discussion around theme - Towards the MBE.**

15.00-15.30	**BREAK IN THE EXHIBITION AREA**
15.30-16.00	**Defining & Managing the Digital Twin throughout the Lifecycle** For years the vision of product lifecycle management (PLM) has been on defining and managing the virtual product and its related processes throughout the entire lifecycle—from concept through life. But for most companies this has been a struggle at best. Recently, a significant amount of press coverage and time has been dedicated to a relatively new phrase, the "digital twin." For many this is a new name for what they have been trying to accomplish for decades. And for some, this has brought PLM to a higher level in their organization. This presentation will address this evolving PLM focus, the expanded need for standards, as well as showing how newer technologies, e.g., IoT, are being used to enable the complete digital twin throughout the entire lifecycle. **Peter Bilello, President** **CIMdata, USA**
16.00-16.30	**Navigating the Journey to Next Generation PLM** As PLM software enters its fourth generation, manufacturers are challenged to make the migration from on-premise monolithic PLM applications to the new generation of more agile PLM software that can be cloud-based. This research explores the best practices to make the transition and avoid similar future challenges. **Marc Halpern, Vice President, Research, Manufacturing Advisory Services** **Gartner, USA**
16.30	**CLOSING PDT EUROPE 2017**

CONFERENCE FEES - Industrial End User and Academic	
PLM RM 2017 and PDT Europe 2017 Earlybird-price until Sept 1 - then 1500 EUR	1295 EUR
PDT Europe 2017 Earlybird-price until Sept 1 - then 1200 EUR	990 EUR
PDT Europe 2017 Academic	395 EUR
PDT Dinner Evening October 18	70 EUR

CONFERENCE FEES - Solution Providers	
PLM RM 2017 and PDT Europe 2017 Earlybird-price until Sept 1 - then 1795 EUR	1495 EUR
PDT Europe 2017 Earlybird-price until Sept 1 - then 1 495 EUR	995 EUR
PDT Dinner Evening October 18	70 EUR

PDT Europe is the one conference to attend.

To learn about progress in using STEP and PLCS and network with others who look to make the adoption of PLM standards a success. Attendees come from all around the world because this conference is unique. Participants are typically managers and decision makers, program- and project managers, IT architects, technical leaders and technical specialists from different industries who meet up and exchange ideas.

We expect to attract 100+ delegates from major engineering business sectors of Aerospace, Automotive, Building and Construction, Defence, HighTech, Telecom, Ship Building, Energy, Pharmaceuti-cal, Process & Plant and Manufacturing as well as from Research and Academia!

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The organizer reserves the right to make changes to the program.