

# **PLM Industry Summary**

Sara Vos, Editor

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#### CIMdata News

# CIMdata to Bring the PLM Industry's Premier Education and Training Program to Southern California

26 September 2019

CIMdata, Inc., the leading global PLM strategic consulting and research firm, will bring its highly acclaimed Product Lifecycle Management (PLM) Certificate Program to Cypress, California from December 2-6. The program is recognized as the industry's most comprehensive solution-agnostic education offering focused on PLM and the digital transformation it enables.

The program helps prepare PLM professionals to successfully address the challenges commonly faced in PLM strategy development and implementation. The assessment-based certificate program includes a personalized classroom experience, individual and team-based exercises, and individual evaluations of achievement. The program is facilitated by a team of CIMdata experts. Upon successful completion of the program, participants receive a CIMdata PLM Certificate and are invited to join CIMdata's global PLM Leadership community.

The program is built on CIMdata's over 35 years of experience guiding industrial companies in successfully defining and implementing best-in-class PLM strategies and tactics. The program is appropriate for industrial companies that are considering PLM or are already implementing PLM, and to PLM solution providers.

Attendees may choose between a five-day program which earns a Standard Certificate of PLM Leadership or a three-day program which earns a Core Certificate of PLM Leadership. Additionally, CIMdata's one-day Executive Short Course and two-day PLM Fundamentals for Solution Providers Short Course will be offered at this time.

For more information on CIMdata's PLM Certificate Program visit our website at https://www.cimdata.com/en/education/plm-certificate-program.

#### **About CIMdata**

CIMdata, a leading independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM) solutions. Since its founding in 1983, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on PLM solutions. These solutions incorporate both business processes and a wide-ranging set of PLM-enabling technologies.

CIMdata works with both industrial organizations and providers of technologies and services seeking competitive advantage in the global economy. In addition to consulting, CIMdata conducts research, provides PLM-focused subscription services, and produces several commercial publications. The company also provides industry education through PLM certificate programs, seminars, and conferences worldwide. CIMdata serves clients around the world from offices in North America, Europe, and Asia-Pacific. To learn more about CIMdata's services, visit our website at www.CIMdata.com, follow us on Twitter: <a href="http://twitter.com/CIMdataPLMNews">http://twitter.com/CIMdataPLMNews</a>, or contact CIMdata at: 3909 Research Park Drive, Ann

Arbor, MI 48108, USA, Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands, Tel: +31 (0) 495.533.666.

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#### CIMdata Executive Consultant, Frank Popielas, to Present at the MEVEA Seminar

25 September 2019

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces that Frank Popielas, Executive Consultant, will make a presentation at the MEVEA Seminar entitled, "Challenges Implementing Digital Twin Capabilities and Methodologies." The MEVEA Seminar will take place at the Scandic Helsinki Aviacongress on October 3, 2019.

Companies need to understand the various maturity levels of the digital twin to implement it properly and which industries are potential leaders in this field. This presentation will discuss the digital twin as part of the current engineering trends of the overall digital transformation that is happening across industries. It will also get to the bottom of the hype surrounding the digital twin and its associated challenges. The presentation will show how companies can benefit from the implementation of this capability and how the digital twin is linked to other emerging technologies like IIoT, AI, predictive analytics, and autonomous driving.

Mr. Popielas has over 20 years of global experience in product engineering, R&D, and IP management, as well as testing and materials development, with a specific focus on the development and application of multi-physics and multi-domain modeling and simulation tools. His expertise includes technology exchange and transfer, business assessments in engineering and manufacturing, focusing on virtual product engineering, as well as process development and the democratization of software applications in this area. Mr. Popielas has been a member of the NAFEMS Americas Steering Committee since 2011 and founding chairman of the joint System Modeling and Simulation Working Group between NAFEMS and INCOSE since 2013. His activities and achievements include over 35 patents, over 30 publications, and numerous presentations and speaking engagements at industry conferences.

For more information about this event, please visit: <a href="https://www.cimdata.com/en/events/cimdata-supported-events/event/500-mevea-seminar">https://www.cimdata.com/en/events/cimdata-supported-events/event/500-mevea-seminar</a>.

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Pacific. To learn more about CIMdata's services, visit our website at <a href="www.CIMdata.com">www.CIMdata.com</a>, follow us on Twitter: <a href="http://twitter.com/CIMdataPLMNews">http://twitter.com/CIMdataPLMNews</a>, or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA, Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands, Tel: +31 (0) 495.533.666.

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# CIMdata's Vice President, Stan Przybylinski, to Participate in an upcoming Webinar on the Cloud 24 September 2019

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces that its Vice President, Stan Przybylinski, will take part in a webinar that will discuss the new cloud offering from Eurostep AB.

In this webinar, "Are you having a hard time with your supply chain & product data management?" Mr. Przybylinski will be part of a discussion that will highlight ways to:

- More easily control and manage the supply chain.
- Securely share and organize product data with multiple suppliers and partners.
- Manage change that affects suppliers.
- Have structured data in Bill-of-Materials.

Mr. Przybylinski has over 30 years of experience in the development of business-enabling IT solutions for research, engineering, and manufacturing organizations worldwide. He has worked in R&D, marketing, and communications with both Fortune 100 companies and small organizations. Stan is responsible for CIMdata's research agenda, including the CIMdata PLM Market Analysis Report series. He has been directly involved with the selection, consulting, integration, and implementation of large-scale PLM solutions, and has worked on projects for both PLM solution providers and end-user organizations in the automotive, aerospace, consumer packaged goods, high-tech, and medical devices industries. He has spoken on PLM-related topics in Europe, North America, and Asia.

The webinar, which is hosted by Eurostep, will take place on Tuesday, 22 October at 10:00 a.m. EDT. To learn more or to register for this free webinar, visit <a href="https://www.cimdata.com/en/events/plm-industry-events/event/499-webinar-are-you-having-a-hard-time-with-your-supply-chain-product-data-management">https://www.cimdata.com/en/events/plm-industry-events/event/499-webinar-are-you-having-a-hard-time-with-your-supply-chain-product-data-management</a>.

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# "Where Today Meets Tomorrow" - The 2019 Siemens Digital Industries Software Media & Analyst Conference (CIMdata Commentary)

24 September 2019

*Key takeaways:* 

- Siemens PLM Software, now Siemens Digital Industries Software, a name that represents the growth of the company and the scope of its solutions, introduced Xcelerator, the new name of their integrated portfolio of software, services, and application development.
- Mendix, both an application development platform and an integration mechanism, is being widely used within and across the Siemens product suite to significantly reduce the time and cost to create personalized solutions by both Siemens and its customers.
- Simcenter Flex is a new, token-based, licensing model that provides access to any module within the Simcenter STAR-CCM+, Simcenter 3D base, Simcenter Testlab base, and Simcenter Amesim base product suites.
- Siemens Opcenter integrates Siemens' manufacturing operations management solutions and now extends closed-loop manufacturing to quality.
- Siemens and Bentley Systems announced availability of Capital Asset Lifecycle Management for Teamcenter—a solution to help companies consolidate asset data and weave a digital thread from project delivery into operations.
- Siemens is pursuing an aggressive cloud strategy supporting Amazon Web Services, Azure, and Alibaba (for China) and enabling customers to decide how each wants to use both cloud and onpremise solutions singularly or in hybrid combinations.

CIMdata, and over 100 other industry analysts and journalists, recently attended Siemens Digital Industries Software's 12<sup>th</sup> annual analyst conference in Brooklyn, New York from September 3 through 6, 2019. At this event, Siemens PLM Software announced a name change to Siemens Digital Industries Software (Siemens). Siemens stated that this new name better reflects its position inside the core operating company of Siemens Digital Industries, and also their evolution beyond an industry leader in Product Lifecycle Management (PLM) to a company with a very broad portfolio of industrial software and services that is the technical foundation for digitalization strategies at companies around the world. PLM solution areas provided by this new group include Product Data Management (PDM), Computer-Aided Design (CAD), Simulation and Analysis (S&A), Application Lifecycle Management (ALM), Electronic Design Automation (EDA), and embedded software development tools and services. Other

solutions include Manufacturing Operations Management (MOM). the MindSphere cloud-based, open IoT operating system, the Mendix application development platform, and performance analytics software.

#### **Keynotes**

The opening keynote was delivered by Mr. Tony Hemmelgarn, President and CEO, who stated the theme of the conference was "Where Today Meets Tomorrow." He discussed the explosion of product and systems complexity, and stressed that the ability to manage complexity can provide companies a competitive advantage. He also noted that the information explosion is not always a positive—too much information acts like very little information. Mr. Hemmelgarn went on to describe the three pillars of Siemens' solution strategy:

- Comprehensive Digital Twin
- Personalized, Adaptable, Modern
- Flexible, Open Ecosystem

In sessions throughout the conference, the presenters provided several illustrations of how Siemens was delivering against these three pillars.

To encompass this three-pillar strategy, Hemmelgarn introduced Xcelerator, their describe their integrated portfolio of services and application development that solutions for PLM, EDA, ALM, MOM, of Things (IoT)—and more. According to Hemmelgarn, Xcelerator combines portfolio of software with the low-code experience application development MindSphere open IoT Ecosystem.



Mr.
new term to
software,
integrates
and the Internet
Mr.
Siemens' full
Mendix multiplatform and the

Mr. Hemmelgarn noted that Siemens believes that a comprehensive digital twin is a necessity to support an effective digitalization transformation strategy. He further described how companies can use their Mendix low-code/no-code development environment to accelerate innovation and create personalized solutions. In another example, Mr. Hemmelgarn said that Siemens technologies, like their artificial intelligence (AI) driven adaptive user interface in NX, can help increase personalization of a solution. To emphasize Siemens' commitment to an open ecosystem, Mr. Hemmelgarn stated that there are over 4 million Parasolid solid modeling kernel users (including many running on solutions provided by Siemens' competitors), 130 JT Open members, and over 90,000 developers for Siemens software solutions. To illustrate how open Siemens remains, he described the case of convergent modeling, which supports both facets and B-rep design data. This advanced capability is based on Parasolid and adding it to the Parasolid kernel offering made it available to all Parasolid users, including designers using SOLIDWORKS from Dassault Systèmes. CIMdata is pleased to see Siemens' continued commitment to openness even when it means providing core, differentiating capabilities for use by a competitor.

Additionally, he briefly described two partnerships Siemens has established to help companies better

https://blogs.plm.automation.siemens.com/t5/NX-Design-Blog/New-Adaptive-UI/ba-p/567780

<sup>&</sup>lt;sup>2</sup> https://www.plm.automation.siemens.com/global/en/our-story/glossary/convergent-modeling/24461

manage physical assets and asset-intensive projects:

- IBM with the integration of Maximo and Teamcenter
- Bentley Systems with Capital Lifecycle Asset Management (CALM) for Teamcenter

CIMdata thinks the name change to Siemens Digital Industries Software and the definition of the Xcelerator portfolio show the growth Siemens software solutions beyond the traditional PLM boundaries and correctly emphasizes how the digital thread and comprehensive digital twin are essential to successful digitalization of the extended enterprise. CIMdata believes the three pillars of Siemens' strategy articulated by Mr. Hemmelgarn provide a strong foundation for the creation of comprehensive, future-proof business solutions. CIMdata was also pleased to see Siemens continue to partner with other industry leading companies thereby fully leveraging and complementing Siemens' own capabilities.

#### Siemens' Cloud Strategy and Solutions

A topic of major interest from many of the attendees, and one addressed in several sessions, was Siemens' cloud strategy and status. Mr. Ray Kok, VP Technology Office, presented an overview of Siemens cloud strategy and associated solutions. He stated that Siemens is offering a mix of cloud ready solutions (e.g., Teamcenter and Simcenter), application platform solutions, and cloud-based applications. He noted that Siemens is also developing some cloud-native solutions. Figure 1 illustrates Siemens cloud strategy and its focus on Connect, Access, and Build-Integrate-Extend.



Figure 1—Siemens Cloud Strategy (Courtesy of Siemens)

Figure 2 graphically presents Siemens cloud platform strategy.

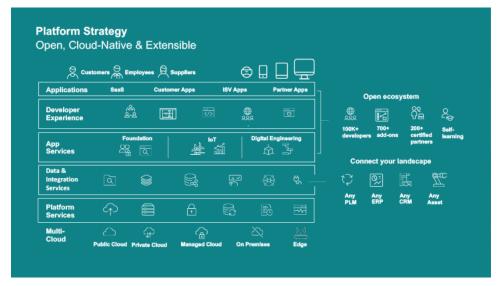


Figure 2—Siemens Cloud Platform Strategy (Courtesy of Siemens)

Mr. Kok stated that Siemens is currently delivering their solutions on three public cloud service providers: AWS, Azure and Alibaba (for China). He stated that their customers could implement a combination of on premise and three cloud-delivered options:

- Cloud streamed—solutions residing in the cloud, i.e., MindSphere, Mendix, NX, Teamcenter, Simcenter, etc.
- Cloud connected—purchase through the Siemens store, get automated deployment and updates
- Managed services—Siemens manages the applications and infrastructure (the cloud environment)

Mr. Kok noted that Siemens currently has over 1,000 cloud customers, 650+ partners, and their cloud business is delivering 40%+ annual rate of return.

CIMdata is impressed with Siemens cloud strategy and how they are implementing it. Cloud implementation and integration continues to be more and more important and CIMdata believes that Siemens is taking a pragmatic approach to both their strategy and how they let their customers select what is best for them at any given time.

#### Mendix

Joining Mr. Kok during the Cloud Strategy session, was Mr. Derek Roos, CEO, Mendix, who described how the Mendix technology and solutions are used to deliver the Build-Integrate-Extend element of Siemens' cloud strategy. He noted that companies are using Mendix to build apps that extend any of their systems, not just product development or PLM-specific applications. According to Mr. Roos, Mendix applications are designed to sit on top of the "platform" and support multiple experiences, running on any device both online and offline. Mr. Roos stated that Mendix applications can connect to any data source and any system, including structured and real-time data.

According to Siemens, the use of Mendix continues to grow within and across the Siemens portfolio. As illustrated by many speakers throughout the event, it is an application development platform used to accelerate innovation and enable Siemens and its customers to quickly create tailored, personalized

applications and solutions. Key characteristics of the Mendix platform include:

- No-code/low-code development
- Designed for use by domain, process, and engineering experts as well as professional software developers
- Multi-experience—creating applications for use on any device both on and off-line
- Connect to any data source including Teamcenter, MindSphere, ERP, CRM, etc.
- Deep integration with Siemens portfolio to build applications that enable a comprehensive Digital Twin

In a session titled "Building IoT Applications with MindSphere and Mendix," Mr. Dave Mitchell, VP MindSphere Products, showed examples of how Mendix is being used to develop MindSphere and integrate IoT apps to expand the MindSphere operational environment and solution.

CIMdata thinks that Mendix, by enabling subject matter experts to develop their own applications, will help ensure those new applications meet their needs and can be delivered at the pace needed to support digital transformation initiatives. Mendix is also providing Siemens the ability to rapidly extend their solutions to meet new and changing customer requirements.

#### **Teamcenter**

Mr. Joe Bohman, SVP Lifecycle Collaboration Services, delivered a session on "Where the Smart Product Lifecycle Meets Tomorrow." He stated that Teamcenter is the underlying foundation for product management and collaboration providing the digital thread used to create and connect the comprehensive digital twin throughout the enterprise. Teamcenter is used throughout the Siemens portfolio and some solutions within Simcenter and Opcenter are developed using it. One of the key factors discussed by Mr. Bohman for successfully embracing complexity was the need to break down barriers between business and functional domains and make them fit together. He described the need for connected engineering between the mechanical, electronic, electrical, software, and network domains as each defines the features and functional and non-functional requirements pertinent to their domain. He said a multi-domain architecture is required to deliver these capabilities and that Siemens is continuing to build out such an architecture.

Mr. Bohman introduced a new Teamcenter capability called Integrated Program Planning and Execution (IPPE). With it, companies can create work breakdowns (e.g., a work BOM) and define templates for reuse. He stated that IPPE incorporates agile methodology that can be used to organize work. Mr. Bohman also announced Teamcenter for Contract Manufacturing, a new Teamcenter module that is part of their overall supplier collaboration capability. He noted that it incorporates controlled access to IP, seamless change and redline facilities, and provides up-to-date status and information on mechanical, electrical, and software activities.

Mr. Bohman described the concept of the Engineering Digital Mockup (EDU), which he thought could do for Engineering what DMU did for CAD. While a DMU can help answer questions like "what does it weigh?" and "will anything interfere?" EDU will enable companies to answer questions like "what function am I performing?," "how might it fail?," "why was this decision made?," and "does it work?" The EDU concept is supported using a combination of Siemens solutions. CIMdata thinks that the EDU concept is both overdue and needed to deal with the systems engineering issues of today's complex products.

Mr. Bohman then announced the availability of CALM for Teamcenter, a new solution developed collaboratively by Siemens and Bentley Systems to address the challenges typically faced across an enterprise's greenfield and brownfield capital projects, including rampant delays and cost overruns, which can be caused by lack of system interoperability and a failure to appropriately leverage digitalization. The Teamcenter CALM solution has been designed to help companies consolidate asset data and weave a digital thread from project delivery into operations, enabling the creation of a closed-loop digital twin—the virtual representation of a physical asset—to visualize and simulate project designs, construction execution, and operational performance. CIMdata believes that CALM for Teamcenter addresses an important missing capability in the asset management domain and we are pleased to see Siemens and Bentley Systems working together to deliver a solution that aggregates, manages, and traces capital project and operational data at an enterprise level.

#### Simcenter

Mr. Willy Bakkers, VP Simulation and Test Solutions, and Mr. Jean-Claude Ercolanelli, VP Simulation and Test Solutions, Computational Continuum Mechanics, led a session on Predictive Performance Engineering. Mr. Bakkers and Mr. Ercolanelli described how Simcenter integrates systems simulation, CAE simulation, and physical testing to enable performance engineering and comprehensive design space exploration, while using Teamcenter to maintain digital continuity for multi-domain traceability and change and configuration management. They presented how Simcenter is providing electrical system simulation including capabilities like Simcenter Battery Design Studio. Mr. Bakkers noted that the acquisition of Saab Medav NVH has helped Siemens deliver capabilities for end-of-line quality testing for engines, transmissions, electric motors, and motor-driven components and systems.

The speakers announced a new licensing option, Simcenter Flex. This new licensing scheme applies to several Simcenter applications. Based on a token/credit paradigm, customers will be able to use any module (subject to restrictions) within the Simcenter STAR-CCM+, Simcenter 3D, Simcenter Testlab base, and Simcenter Amesim base product suites without having to license each module individually. A base product license is required to be purchased and tokens/credits are applied toward additional products within the product family. CIMdata believes that Simcenter Flex will enable Siemens customers to have better access to the different simulation tools they need to do their work without requiring more cumbersome licensing contracts.

#### **Smart Manufacturing and Opcenter**

Ms. Tali Segal, VP Innovation, Mr. Rene Wolf, SVP Manufacturing Operations Management Software, and Mr. Zvi Feuer, SVP Manufacturing Engineering Software delivered a session titled "Where Smart Manufacturing Meets Tomorrow." They described how increasingly complex products are driving change in manufacturing and it must innovate at the rate of the new smart connected products. This is driving increased complexity in manufacturing processes and systems. Smart manufacturing requires flexible, autonomous, re-configurable production systems. The speakers described how Siemens was using the comprehensive digital twin to integrate the information and processes across both R&D and manufacturing to help companies move from fixed, manual manufacturing operations to flexible, autonomous operations that are smart and self-adjusting.

The speakers stated that the digital twin of manufacturing process is critical to get from innovative ideas and raw materials to real products. It provides a bridge between product design, production planning and engineering, and production execution. This Production Digital Twin incorporates the digital twin of the manufacturing process and the digital twin of the plant. The speakers described how Siemens Opcenter is designed to be the digital brain of the factory, as a holistic MOM solution that supports digitalization

of manufacturing operations. Built on the Teamcenter foundation, Opcenter delivers multiple capabilities including solutions for:

- Advanced Planning and Scheduling
- Manufacturing Execution
- Quality Management
- Manufacturing Intelligence and Performance
- Research, Development, and Laboratory

Siemens Opcenter is designed to enable companies to create continuous closed-loops between asplanned and as-is manufacturing data, transform production systems' real-time data into IoT actionable information (smart data), and provide data analytics and reporting for operational and enterprise intelligence. It can also be used to extend closed-loop manufacturing to quality. CIMdata thinks that Siemens Opcenter, with its integration of multiple manufacturing functions and information and closed-loop feedback, can help companies improve their operational efficiency, agility and effectiveness.

#### **MindSphere**

In many sessions throughout the event Siemens referenced MindSphere and how it was being used to create IoT/IIoT solutions and help companies create closed-loop development and operating environments. Friday of the conference, the sessions were devoted to MindSphere and provided a good update on the MindSphere product suites and where and how Siemens is using and selling this technology. Siemens continues to expand the MindSphere technologies and solution suite. As part of its commitment to MindSphere, Siemens has established 70 MindSphere Application Centers in 17 countries, staffed with over 1,000 software developers, data specialists, and engineers. Supporting 20 different industry markets, the objective of the application centers is to co-create solutions with their customers.

In addition to the "standard" IoT connectivity, MindSphere is also used to integrate and manage edge applications and devices to create a cloud-to-edge ecosystem. New MindSphere solutions include a MindSphere Integrated Data Lake (IDL), and Semantic Data Interconnect (SDI). The SDI supports automated schema discovery, ability to semantically correlate data from multiple systems, and query semantically correlated data. The IDL provides secure storage of data and metadata, direct access to the lake via cloud provider tools, and allows customers to include their own data stores.

Siemens stated that organizations move through multiple phases of digital maturity during their Digital IIoT journey, as shown in Figure 3.

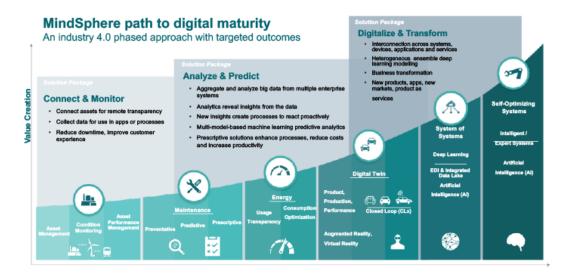


Figure 3—The Path to Digital Maturity

(Courtesy of Siemens)

Siemens has created the following three solution packages that combine a set of tailored software, hardware, and services to help companies on their IIoT digital journey.

- Connect and Monitor—helps businesses connect critical assets, gain operational transparency, and take actions to optimize performance and health to maximize production and profits.
- Analyze and Predict—provides solutions that enable manufacturers to use integrated data sets and modern data analysis to derive deep, predictive insights about asset health and performance.
- Digitalize and Transform—helps manufacturers already realizing many of the benefits of IoT to take the next step in their digital transformation journey by building targeted applications that are key to developing new business models and products, such as asset-as-a-service offerings.

Siemens also noted that drivers for MindSphere investments are:

- Edge Analytics—deliver a highly secure edge computing, control and analytics framework.
- Data Federation and Sharing—manage data of various types by providing extensive connectivity across diverse data sources.
- Digital Twin Closed Loop—continuous integration and management of in-context semantic-rich representations.
- Application Lifecycle—efficiently develop, test, and operate IoT solutions supported by streamlined application development capabilities.
- Marketplace—provide a streamlined experience for all participants focusing on ease-oftransaction.
- Applications & Solutions—build and deliver industry-tailored applications and solutions that solve business challenges.

CIMdata believes that the MindSphere suite, coupled with the Mendix low-code development tools can

provide significant capabilities for companies to address the growing and complex environments of cloud-to-edge smart connected devices and closed loop integration from R&D through service.

#### **Design Solutions**

Mr. George Rendell, Senior Director, Design Product Management, Product Marketing, and Business Development joined Mr. Dan Staples, VP of Mainstream Engineering, R&D in a breakout session to discuss the evolution of model-based definition (MBD) to model-based engineering (MBE). Of particular note, they described Siemens' selection of the 3D PDF file format for technical data packages (TDPs) used in company-to-company data exchange. While not diminishing their emphasis on the JT lightweight data format, CIMdata sees their choice of 3D PDF and the product representation compact (PRC) format<sup>3</sup> for 3D model geometry an interesting and balanced approach.

#### **Customer Presentations**

Customer success presentations are always a highlight and Siemens delivered this year with their choices. Mr. Marco Suvilaakso, Chief Strategy Officer Polar Electro, described the scale and scope of their use of Siemens products throughout their design and manufacturing processes for smart watches. Mr. Brian Sniegocki, Sr. Business Analysis, Global Quality Systems Dana Corporation, described the importance of closed loop manufacturing with closed loop quality at a tier 1 automotive supplier. Mr. Lateef Khan, General Manager and Business Development Executive Mercury Digital Services at Mercury Marine, described their broad use of Siemens technology including supplier relationship management with 3D data sharing, and how MindSphere was used to solve a casting issue with their boat engines.

The highlight of the customer presentations and arguably the entire event was the presentation delivered by Mr. Dave Lyon, Chief Designer, Vinfast. He described why and how the Vin Group in Vietnam decided to become a car manufacturer. Without any prior auto experience, the Vin Group reclaimed land, built a 250,000 car per year capacity factory, designed a luxury sedan and SUV, used social media to select from the design options, and launched production all within a two-year time period. The speed at which this entire process was executed was stunning and showed what could be accomplished with the right determination, strategy, tools, technology, and suppliers. Mr. Lyon stated that their full commitment and trust in Siemens digital tools and processes was key to success.

#### Conclusion

While this commentary is longer than usual, in some ways it is only scratching the surface of the information provided during this 2.5-day analyst event. Siemens' solution portfolio has become so broad that one such event is really not large enough to describe it. Organizing the event around strategic themes helped show how different parts of the Siemens portfolio can be used in combination to address those themes. CIMdata thinks Siemens' three portfolio strategy pillars (Comprehensive Digital Twin; Personalized, Adaptable, Modern; Flexible Open Ecosystem) are excellent foundational characteristics for solutions that need to integrate and span an extended enterprise. Siemens continues to make rapid progress integrating the technologies and capabilities of the various products they have acquired. This is delivering new, expanded solutions that address integration of mechanical, electrical, electronic, and software elements of today's complex smart products. Other solutions address generative engineering, hybrid manufacturing, and the integration of the engineering and manufacturing domains of the enterprise.

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<sup>3</sup> www.pdf3d.com/about-prc/

CIMdata was impressed by the continued expansion of the MindSphere ecosystem and the customer examples shown. Siemens has made great strides in developing and delivering IoT technology and solutions in a short time. In a related note, MindSphere and the MindSphere community have already benefited from adding Mendix to the development environment. Mashups are a key element in IoT applications, and, with Mendix Siemens obtained a globally deployable enterprise-grade solution to build these applications and many more capabilities. The Teamcenter user and development community are also able to use this capability to provide and enhance personalized solutions. The benefits are starting to accrue across the Xcelerator portfolio, with more to come.

The customer presentations support the name change to Siemens Digital Industries Software while the customer success stories, built using advanced PLM, EDA, MOM, and IoT software to meet business objectives, showed why Siemens is so successful in the marketplace. They know how to get things done and take care of their customers.

Travel and other expenses were provided by Siemens Digital Industries Software.

#### **About CIMdata**

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at http://www.CIMdata.com or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.

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### Company News

#### Altair Names Andrea Siudara New Chief Information Officer

23 September 2019

Altair today announced that Andrea Siudara has joined as Chief Information Officer.

Siudara will lead Altair's global information technology team, overseeing Altair's IT systems, enterprise business systems and IT business strategy globally. Additionally, she will support strategic company initiatives as a member of the Altair executive leadership team.

Siudara brings nearly 20 years of experience in leading large-scale, global IT organizations for major companies. Most recently she was global director, sales and marketing IT for Ford Motor Company. She has held previous executive roles at Delphi, Dell and General Motors.

"Andrea's customer-centric approach to technology will be an asset as we expand our global footprint," said James Scapa, Altair founder and chief executive officer. "As we continue our pace of growth, organic and through acquisition, we will draw on her expertise to lead our organization through transformational change, connecting IT to the needs of the business and aligning IT costs. She also

brings the perspective of enterprise customers to Altair as we position our data analytics offerings to drive digital transformation."

Siudara has an acknowledged track record of aligning information technology with business goals to reduce complexity, accelerate growth, facilitate change, and improve operations.

"I am honored to be joining Jim and the Altair family," said Siudara. "Altair solutions are helping drive true engineering and data intelligence innovation across industries worldwide. I'm looking forward to advancing our ability to positively impact so many customers and enabling our internal systems to be a platform for Altair's growth."

Siudara holds a bachelor's degree from the University of Michigan and a master's degree in business administration from Michigan State University.

Siudara succeeds Martin Nichols, who has been named chief purchasing officer and will be responsible for global purchasing, budget tracking and facilities management.

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#### CADMATIC and PROSTEP agree on development cooperation

23 September 2019

CADMATIC and PROSTEP AG are intensifying their cooperation delivering end-to-end digital shipbuilding and shipping solutions.

Building on many years of successful and trustworthy cooperation in integration projects with renowned customers like MEYER Group, both companies have signed a Letter of Intent to enter into a closer development partnership. The intention of the partners is to further develop and maintain the existing CADMATIC connectivity in the context of PROSTEP's integration platform OpenPDM SHIP.

Based on PROSTEP's proven OpenPDM technology, which is used by many companies in the automotive and other sectors to support integration, migration and collaboration scenarios, OpenPDM SHIP is an integration platform specially designed for the marine industry. It connects shipbuilding specific development systems via standardized connectors with common PDM/PLM and ERP systems as well as with mechanical CAD applications and thus creates the prerequisite for integrated digital processes and information flows in shipbuilding and shipping.

PROSTEP is one of the leading experts for PLM integration, migration and supplier collaboration in the marine industry, as Jukka Rantala, CEO of CADMATIC, points out. "Through this partnership, we can provide our customers with digital information management solutions for the entire shipbuilding life cycle. CADMATIC software itself provides PDM / PLM functionality for multiple customer needs, but now it can be flexibly integrated also with different PDM / PLM software applications. PROSTEP has already demonstrated its capability to integrate data from various sources in a consistent digital ship model."

"Integration with CADMATIC is the key to enable end-to-end digital processes and information flows in shipbuilding", says Matthias Grau, Product Manager OpenPDM SHIP in Hamburg. "We are happy to enter a closer development partnership with CADMATIC to be able to offer CADMATIC customers enhanced connectivity with standard enterprise PDM / ERP environments as well as upstream and downstream in the ship development process. It is a win for customers, CADMATIC and for us."

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#### CONTACT Software certifies outstanding partners

26 September 2019

The CONTACT Global Ecosystem gets a new certification system that makes it easier for customers to choose a suitable service provider. Two partners based in China and India have already been certified by CONTACT Software: EUCI Software and Robert Bosch Engineering and Business Solutions.

CONTACT Software has started a program with which the company makes the quality level of its partners recognizable. "Our international network is growing rapidly," says Michael S. Murgai, the manager responsible for the CONTACT Global Ecosystem. "This is why customers are increasingly asking for support in their search for a suitable service provider." The rating "Certified Service Partner" now offers them a transparent decision-making aid.

CONTACT Software defines the performance profile of its partners via a matrix with various criteria: What industry knowledge, PLM or IoT expertise does the partner have? How large and competent is his team around the CONTACT Elements platform and its solutions? How many customer projects has he completed or contributed to their success? Each certification is checked annually to ensure that it is still appropriate.

In 2019, CONTACT Software has so far honored two companies as "Certified Service Partners". EUCI Software, based in Shanghai, has contributed its many years of PLM know-how to the CIM database introduction at <u>Sundiro Honda</u> and <u>Yanfeng Visteon</u> and has led both projects to go-live. The global strategic cooperation with <u>Robert Bosch Engineering and Business Solutions</u>, which has proven itself today in more than 25 PLM and IoT customer projects, is also running excellently.

"With the certification we ensure a certain level of quality for our customers, create trust and thus lay the foundation for successful projects," emphasizes CONTACT's Service Partner Manager Philip Phu Nguyen.

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#### Farsoon Technologies and Siemens China to collaborate on developing AM solutions

10 September 2019

Farsoon Technologies, headquartered in Hunan, China, and Siemens Ltd., China, the Chinese division of Germany's Siemens AG, have signed a collaboration agreement to produce industrial solutions for Additive Manufacturing. The agreement was signed during the 21st China International Industry Fair (CIIF). As part of the collaboration, the companies will reportedly implement Siemens' end-to-end software and Digital Twin solutions with Farsoon's open platform industrial AM systems.

Dr Xu Xiaoshu, Founder and CEO of Farsoon, stated, "We are very excited to start this collaboration with Siemens. Over the years, Farsoon has seen an increasing application of AM technology in the aerospace, industry manufacturing, medical, automotive and moulds. With joint efforts with Siemens, we will be able to offer high-performance and streamlined workflow AM solutions for industrial customers in China and overseas."

"Additive technology is driving the next revolution of industrial manufacturing, it changes our mindsets from products design, manufacturing process to business models," commented Wang Haibin, Executive Vice President of Siemens Ltd., China, and General Manager of Digital Industries Siemens Greater China. "We are glad to collaborate with Farsoon to expand the industrial applications of Additive Manufacturing."

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#### FEops Selected by Dassault Systèmes to Join the 3DEXPERIENCE Lab

23 September 2019

<u>FEops</u> announced its selection into <u>Dassault Systèmes</u>' <u>3DEXPERIENCE Lab</u>, an initiative to nurture and empower disruptive projects transforming society with a positive impact by leveraging collective intelligence.

"It's a privilege and honor to be selected for this prestigious program but moreover a recognition for the innovative aspect of FEops HEARTguide predictive planning technology and its alignment with Dassault Systèmes' vision that life science is going through an accelerated digitization. With direct access to Dassault Systèmes' most advanced and best-in-class 3D modeling and simulation software on the 3DEXPERIENCE platform and experts we will accelerate further developments of FEops HEARTguide significantly" said Matthieu De Beule, co-founder and CEO FEops.

FEops HEARTguideTM, which received CE mark earlier this year, is a one-in-its-kind procedure planning environment for structural heart interventions that provides physicians unique insights to evaluate device sizing and positioning pre-operatively using novel computational modeling and simulation technology. The current release includes workflows for transcatheter aortic valve implantation (TAVI) and left atrial appendage occlusion (LAAO) procedures.

The 3DEXPERIENCE Lab, in addition to giving access to professional applications on the cloud-based 3DEXPERIENCE platform, will provide FEops with expert mentoring that will be essential for improving scalability and further developing FEops' HEARTguide such as the incorporation of novel simulation technologies and machine learning to foster faster and more accurate personalized predictive pre-procedural insights and thereby significantly reducing turnaround times.

"We're very pleased to welcome FEops into the 3DEXPERIENCE Lab program," said Frédéric Vacher, Head of Innovation - 3DEXPERIENCE Lab, Dassault Systèmes. "FEops reflects the types of innovative companies that we are looking to nurture in building our digital healthcare ecosystem. We've embraced the opportunity to collaborate with them to change the landscape of cardiovascular clinical care."

<u>FEops HEARTguideTM</u> cloud-based procedure planning environment uses advanced personalized computational modeling and simulation to provide clinicians and medical device manufacturers with first-ever insights into the interaction between transcatheter structural heart devices and specific patient anatomy – preoperatively. The current release includes TAVI and LAAO workflows. Such insights have the power to accelerate research and development of novel device-based solutions, as well as ultimately help to improve clinical outcomes in real-world hospital settings.

#### MBX Adds Lanner Partnership for Taiwan-Based System Manufacturing

#### 23 September 2019

Custom server hardware manufacturer MBX Systems announced a partnership with Lanner Electronics, a Taiwan-based provider of advanced whitebox solutions that also offers hardware/software integration for turnkey delivery of finished systems. The partnership enables MBX customers to have their Lanner-based platforms imaged, tested, configured and shipped directly from Lanner's Taiwan plant for fast turnaround, while also giving Lanner and its customers full access to MBX's unique manufacturing controls, inventory management programs, and global logistics and export compliance capabilities.

The faster time to market is achieved by consolidating base server build and imaging operations in Taiwan as well as eliminating extra touch time required to box, ship and unbox base units sent from Taiwan to MBX's manufacturing headquarters in the U.S.

Lanner is the first MBX partner authorized to use MBX Forge, an award-winning manufacturing image, test and verification platform designed to support complex assembly and testing needs as well as both high-variability and volume production. Forge onboards each customer platform without the time and expense of a custom setup and also automates manufacturing processes with quality control, security and scalability features unavailable from any other hardware integrator.

#### Both MBX and Lanner customers also benefit from:

- End-to-end MBX support services, including consultative engineering, product lifecycle
  management, build-to-stock or build-to-forecast inventory management, global logistics, and an
  extensive menu of warranty options
- Centralized hardware program management with MBX Hatch, an exclusive cloud-based toolset that combines order and inventory tracking with features such as work-in-progress status by work center, manufacturing test results, engineering change management, and easy configuration of even the most complex platforms in a single interface for the first time
- The option to stock finished product at MBX facilities in Chicago, MBX Netherlands for pan-European orders, or other forward stocking depots to meet global needs

"This partnership offers an efficient fulfillment model for customers who use Lanner whitebox solutions, particularly those in the IoT, telecom, embedded and utility sectors where Lanner specializes," said Justin Formella, MBX Chief Strategy Officer. "Technology providers using this option still get the full complement of MBX-exclusive manufacturing orchestration tools and high-touch support services while also taking advantage of shorter turnaround times made possible by integrating systems in Taiwan."

"The fact that we offer both hardware manufacturing and integration services under the same roof streamlines the delivery of finished systems. Units can be imaged as they are built. That's a big plus," said Geoffrey Egger, Vice President and General Manager IoT BU at Lanner Electronics. "This expanded strategic relationship with MBX combines the strengths of both companies to create a time-saving alternative that increases competitiveness for both MBX and Lanner customers."

# MSC Software and MIG Accelerate Additive Manufacturing with Microstructure Simulation 23 September 2019

MSC Software Corporation (MSC) announced a new research collaboration to advance additive manufacturing (AM) techniques for high performance and high reliability applications with the Materials Innovation Guild (MIG) at the University of Louisville, USA.

Additive manufacturing is moving from prototyping to production, where it will have a transformative impact on many aspects of product design, manufacturing, materials, supply chain and workforce implementation, but there remain many new issues and opportunities. Through MIG, the University of Louisville helps organizations such as NASA and Boeing develop additive programs and trains future engineers in new design and production techniques.

Under the partnership, MSC Software will support the University's on-site and distance learning by supplying software and training. Startups in its 3D Printing Business Incubator will also utilize MSC software products in conjunction with education in techno-economic aspects AM to enhance their competitiveness in product and manufacturing design.

Dr. Sundar Atre, Endowed Chair of Manufacturing and Materials, MIG commented: "By integrating MSC's Simufact and Digimat platforms into MIG's research and teaching initiatives, I believe we will provide the opportunity to introduce new material, design and product innovations in healthcare, defense and transportation."

Consistency of material properties in new designs remains a barrier to the adoption of additive manufacturing in high performance and high reliability applications. MIG research will use MSC Software's Simufact and Digimat modeling and simulation platforms to understand the fundamental materials properties and microstructure in metal powders, polymers and composites, and how to exploit the new materials-designprocess relationship. These new materials and properties will help the industry define a common language for additive manufacturing and enhance the additive manufacturing capabilities of MSC Software tools.

The MIG Is collaborating with NASA on a new additive manufacturing technology called Metal Fused Filament Fabrication (MF3), that will be simulated within the Digimat-AM product as part of the collaboration. Dr. Kunal Kate, Assistant Professor at UofL, explained why: "MF3 or similar powder-binder based 3D printing processes require post processing steps of debinding and sintering, that are currently subject to trial-and-error experiments. Combining experimental research with capabilities of MSC Software can develop new tools that predict 3D printed part material properties and effectively capture post debinding and sintering effects for powder-polymer based 3D printing."

MSC Software is the latest of several industrial partners that have chosen to collaborate with the MIG. The partnership includes, Digimat and Simufact software licenses and training that will help in research, capabilities development, resident and online degrees. The partnership also supports the activities of the Louisville Additive Manufacturing Business Development Alliance (LAMBDA), that provides training and consultancy to advance innovation in local industry.

#### Nexa3D Welcomes Frank S. Sklarsky to Board of Directors

24 September 2019

<u>Nexa3D</u> announced that former PPG Industries and Tyco International Chief Financial Officer Frank S. Sklarsky has joined its board of directors.

Among the many leadership roles he has held, Sklarsky served as Executive Vice President and Chief Financial Officer of PPG Industries (PPG), a Fortune 500 leading provider of paints, coatings and specialty materials. Previously Frank served as Executive Vice President and Chief Financial Officer of Tyco International, a global provider of security, fire protection and flow control solutions. Prior to Tyco, Sklarsky spent 20 years with Chrysler and DaimlerChrysler, in progressively senior roles culminating as a Corporate Vice President, Finance. Sklarsky held senior leadership roles at Dell and served as EVP and CFO of ConAgra Foods and Kodak.

Sklarsky currently serves on the Board of Trustees of the Rochester Institute of Technology and on the Board of Directors of Cenveo Worldwide Ltd. He served on the Board of Directors of Harman International (HAR) until its successful sale to Samsung Electronics in 2017.

Frank began his career as a CPA with Ernst & Young and holds an MBA from Harvard University. He was a licensed Certified Public Accountant in New York State from January 1980 through December 2017.

"We are thrilled and honored to welcome Frank to our board of directors," said Nexa3D Chairman & CEO Avi Reichental. "Frank has been providing sound leadership and guidance on strategic, business and financial matters to several world class tech companies for decades and we are fortunate to attract a director of his caliber to our company. His wide range of experiences at some of the world's top specialty materials, automotive and high-tech publicly traded corporations will invariably help guide Nexa3D as we rapidly expand our market reach and operations around the world."

"I'm very excited to join Nexa3D's board of directors given the company's huge potential to disrupt the 3D printing industry and manufacturing as we know it," said Sklarsky. "As manufacturers seek to compete globally by harnessing Industry 4.0 capabilities, Nexa3D is well positioned to deliver a clear advantage for companies looking to compress their new products' time to market and boost productivity. I'm grateful for this opportunity and look forward to the journey ahead as Nexa3D expands the use of additive manufacturing in mission critical automotive, medical and consumer products around the world."

Comparatively speaking, Nexa3D's flagship NXE400 printer makes the leap in printing speeds in the same way internet access moved from dialup to broadband, printing up to 16 liters of part volume at speeds of up to 1Z centimeter per minute. It features full factory automation compatibility as well as optional washing and curing units that together reduce the time to produce functional prototypes and production parts from hours to just minutes. The fastest 3D printer on the market, Nexa3D's prints at up to six times the speed and 2.5 times the build volume of all other comparable products. Nexa3D printers are powered by the company's proprietary Lubricant Sublayer Photo-curing (LSPc) technology and patented structured light matrix that in combination can reach speeds of 1Z centimeter per minute.

#### Oracle Recognized Top Cloud Innovators at OpenWorld

19 September 2019

Oracle honored a diverse set of customers and partners for outstanding and innovative use of Oracle technologies. Culled from hundreds of nominees across industries and around the world, those selected were recognized as Excellence Award recipients at Oracle OpenWorld 2019.

The winners selected all had one thing in common. They excelled in their use of Oracle solutions to accelerate innovation, drive business transformation and create value by increasing agility, lowering costs and reducing IT complexity. Oracle is honored to congratulate each and every one of this year's winners.

#### Oracle recognized winners in eight customer categories:

Chief Information Officer of the Year – awarded to individuals for excellent performance and vision in the role of a CIO of an enterprise that uses Oracle products and services. This year's winners include:

- Akash Khurana, GVP, CIO and chief digital officer, McDermott International, Inc.
- Cinthya Carolina Sanchez, CIO, Universidad de los Andes
- Sally Gilligan, CIO, GAP, Inc.

**Cloud Platform Innovation** – awarded to organizations for their leading-edge solutions using the Oracle Cloud Platform to drive business transformation and value by increasing agility, lowering costs and reducing IT complexity. This year's winners include:

4Ward Servicos e Comercio de Equipamentos Ltda, 7-Eleven, American Axle & Manufacturing Holding Inc., Australian Finance Group (AFG), Autostrade per l'Italia, Aviva, Banco Daycoval S.A., Caesars Entertainment, Central Research Institute of Electric Power Industry (CRIEPI), City of Las Vegas, Comcast, Comptroller of Public Accounts, CoreLogic, Datalynx, Educational Testing Service (ETS), Exelon, FabIndia, Ferrari, FireEye, Gallaudet University, Globo, HighJump Software Inc., Hindalco, Honeywell, IFFCO, Illycaffè S.p.A., JASCI Software, PT. Tiki Jalur Nugraha Ekakurir (JNE), Laureate International Universities, Maritz, McMaster University, Nationwide Insurance, NRMA, Office Depot, Oi Telecom, OUTFRONT Media, Panasonic Manufacturing Limited, Pioneer Natural Resources, Qatar Foundation, Rabobank, Ricoh USA Inc., Riverbed Technology Inc., Rosendin Electric, Ruralco Holdings Ltd, Skanska Group HQ, Southern Company, Standard Chartered Bank, Stitch Fix, Teachers Insurance and Annuity Association, The Co-op, The University of Adelaide, TIA Technology, Tokyo Gas i Net Corp, Underwriters Laboratories (UL LLC), Unicoop Firenze, UST Global, Veritas Technologies, Vertiv, Western Digital, and Youngone Outdoor.

Chief Data Officer of the Year – awarded to individuals for their outstanding ability to recognize and successfully use data as a key asset within their organization. This year's winners include:

- Alberto Camardelli, CIO, SKY Brasil
- Alexander Ryabov, head of data services, Wargaming.net
- Pencho Tzonev, head of data analytics and development, Europe, PaySafe

• Richard Kudakwashe Bururu, managing director and regional head, Decision Management Group Consumer, CIMB Bank

Cloud Architect of the Year – awarded to leaders on the front lines of driving successful cloud deployments, specifically in data management and analytics, through their strong technical skills, adaptability and strategic thinking. This year's winners include:

Hernan Antolini, enterprise architecture - technology manager, DIRECTV LATAM

Mangesh Deo, senior director, Global Corporate Solutions Technology, TIAA

Oscar Jalón Arias, IT director, Casa Santiveri S.L.

ZhiLiang Yang, CIO, ChinaGas Holdings Ltd.

**Data Warehouse and Big Data Leader of the Year** – awarded to individuals for their technical ability and superior knowledge of Oracle data warehouse, big data and analytics implementations within their organizations. This year's winners include:

- Alain Fuhrer, head of databases, Die Mobiliar
- Derek Hayden, VP, data strategy and analytics, OUTFRONT Media
- Jesus Ramirez, big data, BI and automation director, Ripley
- Pawarit Ruengsuksilp, business development analyst, Forth Corporation PCL

Leadership in Infrastructure Transformation – awarded to leaders who deliver value to their company by leveraging multiple Oracle technologies to reduce the cost of IT operations, improve time to deployment, and benefit from performance gains and enhanced end-user productivity. This year's winners include:

- Jan-Pier Loonstra, enterprise infrastructure architect, KPN
- Laszlo Beres, engineering manager, GVC Holdings
- Prasanta Kumar Nayak, deputy general manager (systems), State Bank of India
- Ryan Lea, solution consultant, CCL: Together with Revera
- Sumesh Vadassary, software development director, PayPal, Inc.
- Suping Dong, CEO, Bowmicro Ltd.
- Yasushi Taki, CEO, CTO and founder, JustPlayer Co., Ltd.
- Vivek Jaiswal, group general manager DevSpecOps Shared Services, National Roads and Motorist Association Australia

**Proactive Support Champion** – awarded to Oracle customers or partners who advocate for the adoption and effective use of proactive support tools and resources within their enterprises, or for their

clients. Recipients are selected for the breadth and depth of proactive support tool usage, the demonstrable business benefits they achieve, and the level of impact they realize relative to the size of their organizations. This year's winners include:

- Hiroyuki Ishino, president and CEO, Ricoh IT Solutions Co., LTD.
- Renata Fontana, Group CIO, Grupo Arcor S.A.
- Jerry Ames, IT functional excellence and quality leader, Cummins Inc.

**Sustainability Innovation** – awarded to organizations for excellence in environmental leadership, cost reduction and improvement of business efficiencies through the use of Oracle products, thus ensuring that sustainability remains a fundamental tenet of enterprise social responsibility. This year's winners include:

- BSH Hausgeräte GmbH
- BSES Rajdhani Power Limited
- Consolidated Edison Company of New York
- Evreka
- Greengo Car Europe
- Hrvatska elektroprivreda d.d.
- Land O'Lakes
- LiDestri
- Recology
- Southern California Edison
- Southern California Gas Company

#### Oracle recognized Oracle PartnerNetwork (OPN) members across four global award categories:

Partners were recognized for their excellence in the development and delivery of solutions that demonstrate customer success. The global award categories included the Cloud Transformation Global Partner Solution award, Oracle Cloud ISV Partner of the Year award, Partner of the Year VAD award, and the Partner of the Year Solution awards. This year's winners include:

- Accenture, Partner of the Year: CX Marketing Global
- Amberleaf, Partner of the Year: CX Service Global
- BIAS Corporation, Partner of the Year: OCI Global
- Deloitte, Cloud Transformation Global Partner Solution
- Deloitte, Partner of the Year: SCM Cloud Global
- Digital China (China) Limited, Partner of the Year: VAD Global

- Evolutionary Systems Company Limited (Evosys), Partner of the Year: HCM Cloud Global
- HighJump, Oracle Cloud ISV Partner of the Year Global
- Infosys, Partner of the Year: CX Sales Global
- InterRel Consulting, Partner of the Year: Business Analytics-Global
- Inspirage B.V., Partner of the Year: ERP Cloud Global
- K.K. Ashisuto, Partner of the Year: ODA Global
- KPMG, Partner of the Year: EPM Cloud Global
- Mannai Trading Company, Partner of the Year: Engineered System Global
- OneGlobe Systems, Partner of the Year: Autonomous Database Global
- Services & Processes Solutions SA DE CV, Partner of the Year: Emerging Technologies Global

Oracle Excellence Award winners represent a wide range of customers and partners, from small-to-medium businesses to the largest global enterprises. For more information, visit https://www.oracle.com/corporate/awards.

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# PDES, Inc. Welcomes Elysium to Model-based Standards for the Digital Enterprise Consortium 16 September 2019

PDES, Inc. has welcomed Elysium to its international model-based standards for the digital enterprise consortium as an Industry 6 Participant. Elysium's expertise in three-dimensional geometry, validation, and extensive understanding of various CAD formats will enhance the organization's interoperability efforts.

By taking part in the consortium, Elysium can pursue the latest trends in STEP activities, enabling the company to enhance their software solutions, innovate to meet future challenges and increase user-friendliness.

"Elysium will be a welcome addition to the PDES Inc. CAx-IF and a great resource to the PDES Inc. industrial members," stated Jack Harris, General Manager of PDES, Inc.

Annalise Suzuki, Director at Elysium Inc., stated, "We look forward to closely aligning with industry on both strategy and technical requirements to ensure Elysium offerings support the goals and needs of the extended enterprise. In parallel, we expect Elysium can contribute valuable insight as part of our vast multi-CAx technical knowledge and experience."

# SmartBIM Announces Platform Innovation; Changes Name to Concora and Launches New Website 18 September 2019

In order to reflect the company's enhanced product offerings, the team at Concora (formerly SmartBIM) is pleased to announce its new company name and market positioning. This change comes after a series of rapid-fire platform innovations that transformed the company's legacy aggregate content library offering into the Design Studio.

The first of its kind on the market, Concora's Design Studio is an Amazon-like product showcase engineered to help manufacturers of building products optimize the commercial buyer's journey by prioritizing the needs of architects, engineers, and contractors (AECs). The platform also includes the Design Manager, a comprehensive content management and analytics solution built to increase productivity and lend transparency to the commercial specifier's design journey.

Several manufacturing industry leaders, including Kohler, CertainTeed, USG and others, have embraced the big ideas behind the new platform as a way to connect with the design community and facilitate AECs' complex workflows.

"Our architect and designer customers expect outstanding service when they work with Kohler," said Elisabeth Sutton, Director – Marketing Builder, Projects & Specifications at Kohler Co. "As part of that experience, we give them fast access to high-quality, up-to-date product information in a variety of formats through a convenient portal on our website. Our partnership with Concora will empower Kohler's product teams to enhance how we deliver technical product information, in turn making us even easier to do business with."

The change from SmartBIM to Concora also stemmed from an expansion of the company's mission and philosophies. As surmised by Colin Daymude, Concora's VP of Marketing, "Our value proposition goes way beyond BIM."

"We have a collective 30 years of experience supplying relevant data to the construction industry, and our company has come a long way from where we started," Daymude said. "We aren't just 'the BIM guys' anymore, we're thinking bigger than that. Our mission is to deliver on the promise of digital transformation in the industry by creating greater efficiencies for manufacturers as well as their commercial customers. Our partners are seeing dramatic improvements in traffic and brand loyalty as a result."

The company launched its new website on Wednesday, September 18. Learn more about Concora by visiting concora.com.

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#### Supervisory Board makes personnel decisions to set course for next-generation Siemens

18 September 2019

At its regular meeting, the Supervisory Board of Siemens AG made the first personnel decisions required to set the course for the company's future. Managing Board member Michael Sen – whose current duties include responsibility for the company's equity investment in Siemens Gamesa Renewable Energy (SGRE) – will be proposed as CEO of the new company in the energy and electricity sector. Plans call for publicly listing the business in September 2020. Michael Sen has also been

appointed Co-CEO with Lisa Davis of Siemens' Gas and Power (GP) Operating Company, effective October 1, 2019. Lisa Davis previously informed the Supervisory Board that, for personal reasons, she did not wish to further extend her present contract. Until the ordinary Annual Shareholders' Meeting in 2020, she will ensure an orderly handover of her leadership responsibilities to Michael Sen. Lisa Davis will subsequently support the President and CEO of Siemens AG in an advisory capacity until her contract expires.

The Supervisory Board also appointed Managing Board member Roland Busch Deputy Chief Executive Officer, effective October 1, 2019, and Labor Director of Siemens AG, effective December 1, 2019. Roland Busch will also be responsible for the implementation of the Vision 2020+ strategy. Janina Kugel, Chief Human Resources Officer and Labor Director of Siemens AG, will support the change process until her contract expires at the end of January 2020. In the summer of 2020, the Supervisory Board will make the decision regarding the successor and timing of succession to Joe Kaeser as President and CEO of Siemens AG.

"We're reinventing Siemens from a position of strength, and our transformation is following a clear plan. We established the strategic basis for the future of our business by creating Vision 2020+. We then decided on the structure, which laid the foundation for two new Siemens companies. Now is the right time to make the initial personnel decisions that will set the leadership for the future," said Jim Hagemann Snabe, Chairman of the Supervisory Board of Siemens AG.

"Employees, customers and future shareholders are rightfully interested in knowing early who will be leading Siemens' energy business," continued Snabe. "Michael Sen's appointment as CEO will put a strong, strategic leader at the helm of the future energy business. During his time at E.ON, he gained broad experience in the energy industry on both the customer and supplier sides. The Supervisory Board is convinced that Michael Sen and his team will seize the opportunities that a public listing provides and lead GP to sustainable success."

"By appointing Roland Busch Deputy CEO, we're emphasizing the importance of the industrial digitalization of the company for the next generation," added Jim Hagemann Snabe.

"Over the past five years, Lisa Davis has achieved outstanding results for GP. In the face of the drastic structural market changes, she initiated the required reorganization and the important capacity adjustments that accompanied these changes in a difficult environment. The Supervisory Board expressly thanks Lisa Davis for her leadership and accomplishments. We respect her personal decision, and we're very pleased that she'll be supporting Michael Sen as Co-CEO during the transition phase," said Snabe.

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## U.S. CAD Expands Portfolio with New Partnership with MSUITE Technologies, Inc., Developer of Cloud-Based Construction Management Solutions

23 September 2019

U.S. CAD announced it has entered into a strategic relationship with MSUITE Technologies, Inc., developer of FABPro and BIMPro, productivity and status tracking solutions for the construction industry, enabling the company to offer these solutions to its customers and markets it serves.

**NEWS FACTS:** 

- General and trade contractors are rapidly embracing cloud-based construction technology to increase productivity, meet increasingly complex project demands on-time and on-budget, and gain a competitive advantage.
- FABPro is a cloud-based fabrication shop management solution that focuses on granular real-time tracking of the entire fabrication process from model import to assembly helping to ensure job accuracy, maximum resource productivity, and greater visibility across project stakeholders. The application includes key features such as integration with leading CAD/BIM software, cutting optimization solutions, and BIMPro, automated spooling software, as well as mobile access for shop, field, and office personnel, configurable workflows, automated reporting, live online PDF annotation, and time-tracking.
- BIMPro is a cloud-based plug-in solution for Autodesk Revit® that automates the spooling process making it up to 90 times faster than manual methods. The solution features automated spooling, mapping, sheet creation, and seamless integration to FABPro to help track productivity, progress, resources, and to collaborate more effectively and efficiently.
- Introducing the FabPro and BIMPro solutions into U.S. CAD's portfolio of products will help the company's large and growing base of construction-related customers meet their project requirements. Additionally, these solutions are an excellent complement to U.S. CAD's existing product portfolio comprised of leading AEC solutions including Autodesk, manufacturer of 3D, engineering, and construction software, Bluebeam, developer of markup and collaboration software, and Leica, provider of 3D laser scanning technology.
- U.S. CAD is one of the largest Autodesk Platinum Partners in North America, including the designation of Autodesk construction-specialized, and is a Bluebeam Platinum Partner recognized as the 2018 and 2019 North America Partner of the Year.
- U.S. CAD is one the largest AEC technology and consulting firms in the United States with more than 100 employees across ten offices located in major metropolitan cities, and more than 13,000 customers.
- MSUITE Technologies, Inc., based in Cedar Rapids, Iowa, is a software company focused on productivity and status tracking in the construction industry.

#### **SUPPORTING QUOTES:**

#### Jeff Rachel, President, U.S. CAD

"We are extremely pleased that MSUITE Technologies has selected U.S. CAD as its exclusive partner for its construction management solutions. The addition of FABPro and BIMPro to the U.S. CAD product ecosystem demonstrates our commitment to digitizing construction work processes to help industry professionals improve productivity, achieve job accuracy, and complete projects on-time and within budget."

#### Britton Langdon, President, MSUITE, Technologies, Inc.

"U.S. CAD is one of the construction industry's premier value-added resellers as well as solutions providers. We are excited to partner with such a well-respected organization and look forward to spreading the MSUITE solution to an ever-growing marketplace."

### **Events News**

#### CONTACT at the PM Forum 2019: accelerate engineering projects agile and hybrid

26 September 2019

As main sponsor of the 36th Project Management Forum, CONTACT Software shows how companies can benefit from agile and hybrid methods with the Project Office project management solution and implement engineering projects faster.

The most important conference for project management in Europe will take place in Nuremberg from the 22nd to the 23rd of October 2019. Around 1,000 decision-makers and project managers will be discussing the most important trends and topics in the industry. CONTACT Software presents the latest version of its project management solution Project Office to the public. The focus is on agile and hybrid methods for engineering organizations and efficient product development. CONTACT thus underlines its position as a leading provider of professional solutions for value-adding project and process management.

#### Consistency instead of data silos

The goal of bringing products onto the market within the set cost and time frame that inspire customers is often far from reality in many companies. "The reason for this is often a deep gap between the management and execution levels in the projects. This is extremely hindering for product development. Project Office closes this gap", explains Udo Leischner, Product Manager for Project Office at CONTACT Software

Project Office supports the consistent linking of task and result structures. Expected results can, for example, be registered as document templates in the project plan and automatically defined as documents and deliverables in the project. The company Weidmüller explains the advantages in its customer presentation "Fast delivery". The specialist for industrial connection technology has been able to automate its project processes for customer-specific offers to such an extent that calculations only take a few seconds instead of several days.

#### Implement innovations faster

The development of innovative, smart products is becoming increasingly complex. Agile methods are the key to accelerating engineering projects and implementing new requirements faster. Project Office combines classical methods with agile methods like task boards in connection with iterative methods like Scrum and continuous practices like Kanban or interval-controlled boards to hybrid project management. Project organizations are thus able to directly link binding plan specifications with self-organized detailed planning on the basis of milestones and quality gates.

How companies benefit from Project Office and agile methods will be demonstrated by Udo Leischner in his lecture "Hybrid Project Management: Adaptation of agile Methods for Product Development Organizations".

Learn more about agile approaches in engineering Projects in <u>this recent White Paper</u> on hybrid project management.

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### Implementation Investments

# Backbone Partners with Shinola to Bring Modern Design and Production Process to Leading Luxury Design Brand

25 September 2019

Backbone announces a new partnership with Shinola to revolutionize the Detroit brand's product design, product development, and Product Lifecycle Management (PLM) processes.

Widely known for their prominence in the global watch market, Shinola employs local artisans and craftspeople who produce high-end luxury products including premium watches, leather goods, audio equipment, and bicycles. The company sought out Backbone's SaaS platform and ability to streamline the complex product development process. This process will allow Shinola to increase their offerings with new and creative product lines.

"We continue to seek out new and effective tools to improve Shinola's processes for bringing products to market," said Shinola CEO Tom Lewand. "We are looking forward to partnering with Backbone and utilizing their impressive platform to enhance our company's performance across categories."

Shinola is one of many digitally native brands looking for innovative ways to improve efficiency, both in terms of product development and profitability. These leading companies shaping the retail and fashion industries are increasingly finding value in Backbone's data-driven and intuitive cloud-based platform, which allows them to expand their offerings and business.

"Shinola is a dynamic player across so many industries, which affords us an exciting chance to see the versatility in applications that the Backbone platform can provide in the hands of an established and exceptional brand," says Backbone CEO and co-founder Matthew Klein. "I also really love the mission and ethos behind the Shinola brand. We couldn't be more thrilled to partner with someone doing so much for their community, and whose values so directly align with ours at Backbone. Our hope is that Shinola's growth will continue at an increased, exponential rate by enhancing and streamlining their entire production process."

The Backbone platform provides single-source, end-to-end solutions to empower brands who, like Shinola, are growing in highly competitive and evolving markets. Backbone recently finished its round of Series A funding with \$18 million in investments and is rapidly winning over brands from the D2C scene, including new partners like Shinola and long-time partners like Warby Parker, Allbirds, and Parachute Home.

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#### Global leader of neuro and vascular solutions selects Siemens' manufacturing software

25 September 2019

Penumbra Inc. has selected Siemens Opcenter<sup>TM</sup> Execution Medical Device and Diagnostics (formerly

known as Camstar Medical Device Suite) from Siemens Digital Industries Software to support its growing business and innovation goals. The solution, which enables paperless manufacturing in an FDA-regulated environment, will be the foundation for an operational excellence platform designed to establish a more predictable manufacturing process and supply chain, while also providing the foundation for continued, rapid growth.

"When we embarked on this journey I was mainly interested in four areas; in-line data verification, elimination of paper storage, reduction of resources doing DHR review, and the ability to collect and respond to real time data. The implementation resulted in process improvements and efficiencies that were not anticipated, and the user interface has had a significant impact on quality of life for the product builders. Siemens has been an excellent partner and the system has met all my expectations in regard to ease of use and time to implement," said Ryan Powers, VP of Operations at Penumbra. "With Siemens' MES, we will have even better enforcement and visibility into our existing processes, which will in turn help to improve efficiencies, reduce costs and improve the reliability and quality of manufacturing."

Like many rapidly growing companies in the medical device industry, Penumbra needed a scalable solution to replace paper DHRs, while also managing regulatory requirements. Utilizing Siemens Opcenter can help the company achieve lower costs of compliance, better control of the manufacturing process and overall efficiency gains associated with paperless manufacturing.

"We're impressed with the modern platform and out of the box capabilities for medical devices from Siemens Opcenter that can easily be configured to mold to our manufacturing operations," said Pankaj Tiwari, VP of Information Technology at Penumbra. "The Siemens team did a great job in guiding and helping us to best leverage system to meet our needs. I look forward to our partnership to further automate our manufacturing and quality processes."

"Penumbra has an exceptionally fast growing, innovative product line, including recent FDA clearance for our REAL Immersive System," said Penumbra Chairman and CEO, Adam Elsesser. "To empower our great employees who are driving this growth, innovation, and exceptional quality, we have partnered with Siemens who serves the best medical device manufacturers in the world."

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## Lonati Reduces Product Development Cost by 50% with Selection of 3D Systems' Additive Manufacturing Solutions

18 September 2019

Lonati has selected <u>3D Systems</u>' additive manufacturing solutions to redefine its production workflow. Through the power of 3D Systems' <u>ProX® SLS 6100</u> and <u>Figure 4® Standalone</u> 3D printers, comprehensive materials portfolio and unparalleled applications expertise, Lonati has been able to accelerate innovation, improve time to market and reduce product development costs by 50%.

Lonati SPA, headquartered in Brescia, Italy, is a 150€ million global textile machinery manufacturer with more than 70 years' experience. They are viewed as an industry leader that is constantly looking for ways to improve their processes to provide high quality, reliable products. The manufacturer produces 8,000 machines annually for 60 countries. The machinery Lonati creates requires extremely precise parts with very thin walls that can function at rapid speeds. They looked to 3D printing to enable production of high quality, precise and reliable components for its machinery.

"We work in a highly competitive global market," said Marco Gavazzi, senior R&D designer, Lonati. "To remain an industry leader, we are constantly searching for new ways to deliver the best products possible. The machinery we produce undergoes highly-pressured pneumatics and we need to produce parts with the highest standard of mechanical properties to withstand these stresses. After multiple tests against similar products, we found the best results using 3D Systems' solutions."

Lonati is using 3D Systems' ProX SLS 6100 for prototyping as well as production of jigs and fixtures. They are printing final parts for assemblies using a combination of the ProX SLS 6100 and Figure 4 Standalone using both <a href="DuraForm® ProX AF+">DuraForm® ProX AF+</a> and <a href="Figure 4 TOUGH-GRY 10">Figure 4 TOUGH-GRY 10</a>. In a side-by-side comparison with other currently available materials, Lonati has found that the 3D System's materials have a 2X improved tensile strength, which is critical for durability in high stress environments.

"Using 3D Systems' solutions as part of our product development cycle, we are realizing tremendous efficiencies," said Michele Faini, designer, Lonati. "We initially purchased one 3D printer to produce one component for our machinery. However, because of the results we're seeing, we have not only expanded to additional printers and materials, but also are creating more parts and assemblies. We're fortunate to have partners like 3D Systems and 3DZ who are providing unparalleled applications expertise and support."

"Lonati is a leading innovator in their category," said Matteo Marcellini, channel manager, 3D Systems. "The way they have incorporated additive technologies into their production workflow and the results they are realizing provides compelling proof that 3D printing technology can meet high quality standards with improved efficiencies – all at a reduced cost. I'm inspired by our collaboration, and look forward to helping Lonati continue to expand AM's role in its business."

Ivan Zannol, 3DZ country manager added, "It's very motivating to see the progress Lonati's R&D team is making on a weekly basis. The experience of partnering with 3D Systems, and our collaboration with Lonati to design the right solution to meet their application needs, is very rewarding."

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#### VT Garment Picks Up the Pace with Centric PLM

26 September 2019

VT Garment, an outdoor and sports apparel manufacturer in Thailand, has successfully adopted Centric Software's Product Lifecycle Management (PLM) solution.

Founded in 1981, VT Garment is a leader in Thailand's innovative textile manufacturing industry, designing and manufacturing sportswear and outerwear for names such as Patagonia, Jack Wolfskin, Montbell and Adidas. VT Garment takes pride in being one of the largest manufacturers in the world to have earned Fair Trade certification.

Responding to industry pressure to increase speed to market, VT Garment selected Centric 8 PLM. VT Garment became Centric's first customer in Thailand, and successfully implemented the solution in just eight months.

"We were very happy with the Agile DeploymentSM process as it enabled us to visualize and learn about the system quickly," says Mingkwan Lotharukpong, Product Development Division Manager at VT Garment. "The Centric team provided solutions to every scenario we face. The consultants are professional and always respond within 24 hours."

As Mingkwan continues, "Centric PLM provides a real-time single source of truth for product-related data using an Excel-like interface, which is familiar to our users. We have standardized the product development process and removed the problem of duplicate data entry. It's easier to plan actions and manage sample stock. We expect Centric PLM to save time and increase accuracy in costing, improve accuracy in sample-making and reduce the time spent preparing material to create samples."

"Centric PLM has already changed our way of working. Employees can concentrate more on the product and offering services to customers, rather than data entry," concludes Mingkwan.

"We are happy to announce that VT Garment has successfully implemented Centric PLM," says Chris Groves, President and CEO of Centric Software. "VT Garment is already enjoying benefits such as greater speed, a single source of truth and improved visibility into product development. We are proud to partner with them now and in the future."

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#### **Product News**

Apttus Enhances Agility, Intelligence of Industry-leading CPQ, CLM Solutions To Help Enterprises Overcome Complexity Challenges in the Digital Economy

24 September 2019

<u>Apttus</u> announced updates to some of the most prominent, differentiable features of its Quote-to-Cash and Contract Lifecycle Management solutions, overcoming traditional enterprise challenges related to quoting complexity, contract cycle time, and risk management in the digital economy.

The updates, which are being showcased at the company's <u>Reimagine</u> customer event in San Diego, CA, advance key functional and artificial intelligence-based capabilities of Apttus' <u>Configure-Price-Quote</u> (CPQ) and <u>Contract Lifecycle Management</u> (CLM) solutions. The two solutions are key cornerstones of the company's Middle Office Quote-to-Cash portfolio, helping enterprises automate, optimize, and apply AI to their most critical business processes – revenue generation and management of commercial relationships.

#### Apttus CPQ's SmartCart Spares Customers From Complexity-Scale Tradeoff

Apttus CPQ automates historically inefficient, disjointed selling functions like product configuration, pricing, and quoting as one seamless process on one single data model. The highlight of Apttus' latest CPQ release involves SmartCart, a feature that provides greater quoting flexibility for sales reps while avoiding challenges from increased complexity in how companies go to market. With SmartCart, sales reps can dramatically accelerate complex quote generation from days or hours down to minutes,

overcoming traditional tradeoffs between volume of lines and limitations of processing scalability.

- Location-based Quotes: Provides flexibility to map to how customers want to buy from companies.
- Intellisplit: Removes guesswork on how to break down complex quotes in a manageable format.
- SNAP Performance: Enables sales reps to spend more time building relationships with customers instead of waiting for quotes to be completed including scaling up to quotes of 10,000 line items.

"Our customers are looking for flexibility and agility in their solutions to gain advantage over their competitors," said Apttus Senior Vice President of Product Eric Carrasquilla. "SmartCart allows sales reps to address the way their customers want to buy, and they can do it at scale with incredible performance."

#### **Apttus Evolves Collaborative Nature of Contract Lifecycle Management**

Today's updates drive toward more intelligent, collaborative contract management across legal teams. Today's CLM updates are especially beneficial for legal teams that oversee countless agreements and wade through dense contract libraries to find information supporting revenue opportunities, reduce contract cycles, and manage risk.

- Parallel Review: Cuts review times in half compared to traditional serial review processes, providing updates to agreements concurrently while reconciling redlines, updates, and other changes from multiple reviewers.
- In-Document View: Provides an updated, user-friendly format that lets users work in an actual document instead of having to back and forth between an agreement and the application.
- Progress Dashboards: Shows real-time view into the progress of different streams, allowing teams to identify areas needing faster execution or support.

"Extended time to execute and lack of visibility are the top challenges our customers raise to us when we first meet," Carrasquilla said. "Apttus CLM eliminates the need for contract owners to chaperone the redlining process by turning a time-consuming serial review into a collaborative one. We are putting the power of contract discovery and lifecycle management into the hands of our customers so they can support their business operations at the pace required in today's service-based, SLA-driven digital economy."

#### Apttus Increases Sophistication of AI for Greater CPQ, CLM Value

Apttus is progressing the conversational sophistication of its award-winning AI solution, <u>MAX</u>, which is a virtual assistant that helps sales and legal teams execute important tasks with Apttus CPQ and CLM.

- Natural Language Understanding (NLU): Advanced, intelligent understanding of what users
  actually imply beyond what they literally say, avoiding awkward, inaccurate, or misguided
  response to verbal commands.
- "Out-of-the-Box" Conversation Libraries: Prebuilt collection of common conversations for sales and legal users help accelerate task execution, such as providing budgetary quotes and sending policy-adhering NDAs on the spot when interacting with customers.
- Where Collaboration Happens: Seamlessly embedded with common collaboration tools like Slack, Microsoft Teams, and Salesforce1 Mobile.

#### Resources

Learn more about Apttus <u>CPQ</u>, <u>CLM</u>, <u>MAX</u>, and the solution updates at <u>www.apttus.com</u> See them live at <u>Reimagine</u> Miami from October 21-23.

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## AVEVA Launches Integrated Engineering, Procurement and Construction Software Solutions to Improve Return on Capital Projects

24 September 2019

AVEVA announced the introduction of integrated engineering software designed to help customers transform the way capital projects are engineered, executed and integrated into operations and maintenance.

The integrated portfolio comprises three software solutions. AVEVA Unified Engineering seamlessly integrates process design with front-end engineering and detailed 3D based design. AVEVA Unified Project Execution links and streamlines procurement and construction processes for capital projects. AVEVA Enterprise Learning enables the rapid skilling of operators and engineers using Extended Reality (XR) and simulation tools, to ensure efficient startups and shutdowns, normal operations, and the ability to handle abnormal situations.

"This launch builds on the recent news describing AVEVA's capabilities as the first company in the engineering and industrial software market to comprehensively address the end-to-end digital transformation imperatives with an integrated portfolio of solutions that deliver efficiency, unlock value and empower people across the lifecycle of capital assets and operational value chains," commented Craig Hayman, CEO, AVEVA. "It changes the way that owner operators engage with Engineering, Procurement and Construction (EPC) companies in designing, building, commissioning, and operating their capital assets."

The functionality provided in these integrated solutions enables the realization of an EPC 4.0 strategy for owner operators, central to digital transformation in the capital-intensive process sectors. This allows collaboration on a global scale, through hybrid cloud architectures and on a common platform. The entire manufacturing process can be traced, tracked, and linked - from engineering and design, through procurement and construction, to handover and to operations and maintenance, as a comprehensive Digital Twin for the capital asset.

"As competition in the business world accelerates the time has come for industrial organization to innovate to facilitate the transition from the manual, document-centric processes, towards a data-driven vision of project design, procurement, and execution in order to increase safety, reduce costs, and minimize delays, "commented Craig Hayman, CEO AVEVA. "With the launch of AVEVA Unified Engineering, a first of its kind solution, we are breaking down the silos between engineering disciplines and enabling our customers to turn conceptual designs into 3D models quickly, accelerating engineering to estimation and ensuring designs can be operated before committing billions of dollars."

Transforming Capital Projects to Deliver Safely on Time and Budget

New AVEVA Unified Engineering enables the integration of the process model and plant model lifecycles from concept to detailed design, delivering frictionless collaboration for multi-discipline engineers to collaborate in the cloud. The net result is a minimum 50% improvement in engineering efficiency in FEED and 30% in detail design, which can yield a 3% total installed cost improvement. These savings can be re-invested to ensure engineering quality, accuracy, and maturity for downstream project execution business processes.

AVEVA Unified Project Execution solutions integrate with AVEVA Unified Engineering to further break down the silos within Procurement and Construction by combining key disciplines covering Contract Risk Management, Materials and Supply Chain Control, and Construction Management into one cloud based digital project execution environment. AVEVA Unified Project Execution solutions deliver 15% reduction in material costs, 10% reduction in field labor costs and reduces unbudgeted supplier change orders by 50%, which translates to 10% total installed costs savings opportunities for our customers.

AVEVA's Enterprise Learning solutions combine traditional simulation-based learning with 3D connected learning management solutions. AVEVA's learning solutions extend process models and 3D models from AVEVA Unified Engineering to fast track DCS panel operator training, field operator training, process and maintenance procedural training, and process safety situational awareness training using cloud and Extended Reality (XR) technology to deliver 2% Total Installed Cost reduction by improved operations readiness.

"Our Engineering portfolio enhancements will deliver increased agility for our customers, enabling them to reduce cost, risk, and delays, minimizing errors and driving rapid capital project execution. The cost savings are realized by mitigating capital investment risks at the process design stage, cutting engineering man-hours by 30% in plant design, reducing material costs in procurement by 15% as well as reducing field labor costs in construction by 10%," commented Amish Sabharwal, SVP, Engineering Business, AVEVA. "With these new solutions AVEVA is providing integration across all stages of the capital project, from conceptual design to handover, to optimize collaboration and break down silos between both engineering disciplines and project stages."

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#### Creform introduces newly designed, low profile bi-directional AGV

24 September 2019

Creform has introduced the model, CA-B50100-NSI AGV, the newest edition to the company's lineup of materials handling AGV systems. The new model is a bi-directional AGV that provides more flexibility for movement along its guidepath as it can travel in both directions and when necessary rotate in place. The dual drive wheels also give this AGV higher load capacity and the ability to travel laterally.

Both ends of the AGV are guided as each of the dual drive wheels independently follows the guidepath. This high level of control reduces the amount of space that the AGV requires when routing especially in turns or space restrictive areas. It can optionally be controlled remotely via a smart phone, tablet or

ProFace Remote HMI and can travel at speeds up to 50 m/min. and has an estimated towing capacity of 2,222 lb. (1,000 kg).

The CA-B50100-NSI measures 10" H x 20" W x 78" L (272 mm x 505 mm x 1986 mm) and follows a magnetic guidepath that is surface mounted or embedded in floor. The unit has an electro-mechanical emergency and parking braking system and has a minimum turning radius of 31.5 in. (800 mm) and 11.8 in. (300 mm) only in the lateral direction traveling at a slow speed. AGV is powered by 24V batteries.

The unit meets safety CAT3 requirements, comes with 16-view laser scanners for obstacle detection, flashing lights, E-stops and an audible warning to alert nearby associates.

The AGV provides for a 50-course programming capability using HMI screen located at one end of the AGV. This unit includes I/O monitoring, course programming, error messages and error log. The unit reads floor mounted RFID tags for position feedback as well as command tapes adjacent to the magnetic tape guidepath.

AGV features a single or dual spring-loaded tow pins that can interface with a variety of carts. The towed carts will have all swivel casters and the dual tow pins will securely and precisely connect the cart/AGV together as they navigate the system.

Additional optional equipment includes an opportunity charging system and an industrial radio to communicate with offboard devices. The opportunity charging system minimizes the need for an associate to manually charge the batteries. Auto charging takes place at set locations along the guidepath that AGVs automatically engage as they travel through their daily tasks. A common use for the onboard radio is to communicate with Creform's AGV traffic management system that keeps all the AGVs running smoothly.

Creform System is used to create an array of material handling and efficiency enhancing devices and is a proven component in continuous improvement and lean manufacturing programs. The company partners with customers in developing and implementing these programs.

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## Gerber Pushes End-to-End Integrated Platform to the Next Level with New AccuMark® 2D/3D Release

24 September 2019

Gerber Technology pushes boundaries of innovation with a single, unique platform that fully connects the supply chain from design to production leveraging 2D/3D CAD, PLM and Industry 4.0 enabled Smart Machines. With the release of <u>AccuMark 12.2</u>, which has more than 46,000 users worldwide, the 50-year-old pioneer will solidify its position as the leading end-to-end platform by effectively streamlining the workflow through the ability to increase productivity, identify fit issues, and decrease the lead time from an average of 57 weeks to as little as a few days. This covers not only the area of digital product development but also the connection to both mass automated and on-demand production.

"A seamlessly integrated platform will allow users to not only see pretty pictures but be able to produce garments right away, drastically reducing the development cycle times," said Mary McFadden, Vice President of CAD Product Management at Gerber Technology. "Our customers can use their own

patterns to simulate in 3D, make as many fit adjustments as needed without having to use any DXF, which is a real game changer. With 12.2, we've added required features that are going to strengthen the connection with not only <u>YuniquePLM®</u> and our Smart Machines, but also with digital printers, enabling our customers to meet every challenge."

"Our integrated platform uniquely offers the flexibility, speed, and agility that our customers need now in order to compete and thrive," said Karsten Newbury, Chief Digital Strategy Officer, Gerber Technology. "Our focus is singularly on the success of our customers so they can tackle the burning topics in the industry including fit, sustainability, and the need for personalization. This requires a tightly-integrated data solution. We're continuing our aggressive roadmap with the release of AccuMark 12.2, which is going to add great value to our end-to-end platform."

AccuMark 12.2 has been designed to fully empower the industry by enhancing Gerber's end-to-end platform through an improved digital print workflow, several new 3D capabilities that will improve fit assessment, and offer better communication among partners and team members.

<u>AccuMark 3D 12.2</u> also includes major improvements in 3D simulations. Our integrated 2D/3D solution provides the most efficient workflow for validating patterns during fit and style development. Patternmakers can seamlessly simulate patterns while making pattern corrections, even on graded sizes.

In order to combat the need for on-demand, personalized products, many companies are starting to leverage digital printing. AccuMark 12.2 offers new enhancements that will improve the digital printing process including the ability to apply barcodes and QR codes to seam allowances and PDF image option that supports spot colors.

The latest installment of the industry-leading CAD solution will also feature major updates to their cut planning software, <u>AccuPlan<sup>TM</sup></u>, which will further enable their customers to take on the challenges of mass production. AccuPlan 12.2 not only makes it simple to get a precise cut but, when combined with Gerber's powerful nesting software, <u>AccuNest<sup>TM</sup></u>, is able to drastically reduce costs and material waste.

"Our pre-press process is at least five times more productive than it was before the AccuMark digital print workflow and we've gained, on average, 15% yield using marker making to layout the pieces for the print file," said Jon Hickson of Digital Performance Gear. "Our art team will be twice as efficient with 12.2 since they won't have to wait for simulations to finish every time they want to send out a concept with different art."

With AccuMark 12.2, users will be able to:

- Reduce time spent grading by 50% with the ability to grade proportionally.
- Double their productivity when adding notches by using the Double Notch and Notch All Positioned functions.
- Increase their development speed up to 5 times faster and see a 15% fabric savings when using the AccuMark digital print development workflow.

Those interested can learn all about the new features and functionalities in AccuMark 12.2 by attending Gerber's annual ideation conference in NYC October 23-25.

#### Infor Delivers Coleman AI Platform

24 September 2019

<u>Infor</u> announced the general availability (GA) of its Infor Coleman AI (Artificial Intelligence) Platform for embedded machine learning models. The platform provides the speed, repeatability and personalization needed for enterprises to fully operationalize AI – and it serves as a key building block for Infor's Intelligent CloudSuite.

Today's enterprise AI environment is characterized by a myriad of developer-centric tools, which are designed primarily for experimental projects. With these tools, it is difficult to implement complete projects — and services quality and speed are painfully slow. As a result, the practical use of AI and machine learning in the enterprise remains low.

With the <u>Infor Coleman AI Platform</u>, enterprises can take advantage of industry-specific starter packs (templates) to accelerate development of repeatable big data, machine learning-based AI projects. These templates are highly personalized and tailored to specific customer data and usage patterns. Further, they are designed for use by "citizen developers," who don't need extensive data modeling skills.

When combined with <u>Infor OS</u> (Operating Service), enterprises can simplify and speed up the entire implementation process — giving them the ability to roll out complete, production AI projects in less than six weeks. Infor OS is a cloud operating service designed to bring business processes and AI together and offer operational insights that were never accessible to a business before.

Through its Infor Coleman AI Platform and Infor OS, Infor delivers the Intelligent CloudSuite, a complete solution to automate, anticipate, predict and inform. This gives enterprise customers the business insights they need, when they need them.

<u>Flint Hills Resources</u>, which produces a diverse range of fuels and ingredient products for many household goods, is starting to use the Infor Coleman AI Platform to better manage its inventory by relating predictive maintenance on its refining and manufacturing equipment to better cost-effective stocking patterns — all the way down to the part and component level.

Chris Dahl, CIO of Flint Hills Resources, said, "The combination of the Infor Coleman AI Platform and Infor EAM (Enterprise Asset Management) can give us better insights into our asset health and help transform the way we do maintenance at our facilities."

Rick Rider, Infor senior director of product management, Infor OS and the Coleman AI Platform, said, "With other solutions, you have to figure out how to use AI with a multitude of other technologies. We bring an enterprise AI ensemble together in a single platform — through which we can provide a complete Intelligent CloudSuite."

In addition, Rider said, "the Infor Coleman AI Platform is unique in that it is designed specifically for business users and is built upon a foundation of industry-specific data. At any given moment, it can help with executing tasks and recommending next-best sales offers, or predicting maintenance issues and adjusting production schedules accordingly."

#### The Infor Coleman AI Platform value proposition

The Infor Coleman AI Platform is a pervasive machine learning platform that operates below an application's surface. It mines data and uses powerful machine learning to help improve processes such as inventory management, transportation routing, and predictive maintenance.

The Infor Coleman AI Platform represents a giant leap forward for AI at scale — incorporating deep

reservoirs of network data to help serve the needs of human workers and to help make connected devices smarter.

The platform is specifically designed for non-technical, business users and is built upon a foundation of industry-specific data, and it also provides the extensive tooling needed for a well-established machine learning practice. The Infor Coleman AI Platform modeling environment is "digestible," in that it doesn't require as complex a skillset as other AI tooling, nor is it designed to require an exhaustive service engagement. Customers can better understand, relate, and trust the output, given the focus on user experience and embedded connectivity to the entire applicable enterprise suite.

Organizations can work to gain a competitive advantage by creating models from their proprietary data and experiences, and the Infor Coleman AI Platform enables them to pass along advantages, up and down stream, using their AI insights.

The Infor Coleman AI Platform is named after the inspiring physicist and mathematician Katherine Coleman Johnson, whose trail-blazing work at NASA helped humans land on the moon.

#### **Additional Infor Coleman resources**

For more information about Infor Coleman AI capabilities, visit https://www.infor.com/products/coleman.

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#### Kubotek Announces All-New Model Revision Comparison Product

24 September 2019

Kubotek3D announced the K-Compare Revision program, a new stand-alone CAD model comparison software built on the universal CAD architecture of the Kubotek Kosmos 3D framework. The new program assures effective communication during the critical hand-off of engineering changes between product design and manufacturing.

K-Compare Revision software enables its users to:

- Identify all changes to the model and data
- Communicate detailed understanding of changes to all stakeholders
- Handle design files from any major source
- Quickly create complete reports

"Confidently identifying all the differences between two versions of a CAD model is the first of several valuable benefits of K-Compare Revision," says Andre Beaupre, General Manager of Sales and Support at Kubotek3D. "Our customers also need to be able to do this comparison with all different types of CAD files and quickly create detailed reports to clearly communicate the change."

K-Compare Revision replaces Kubotek ECO Manager, introduced in 2010. The new K-Compare Revision product provides a streamlined user interface and significantly faster operation over its predecessor. K-Compare Revision is the second product released under the K-Compare brand alongside K-Compare Validate, its sister product for checking model translation in the aerospace industry.

Kubotek3D will be demonstrating the K-Compare Revision software tomorrow at an open house event at its headquarters and the Design2Part show, both in Marlborough, MA. The first version of the software is expected to be released for download by the end of October.

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#### Maplesoft Updates MapleMBSE

18 September 2019

MapleMBSE is an Excel-based tool that makes it easy for every stakeholder to engage with the Systems Engineering (SE) project without requiring them to be an expert in your primary SE tools.

Systems engineering projects are much more likely to succeed if every stakeholder can easily contribute to the process, but most people don't have the training needed to use "traditional" SE tools. MapleMBSE makes broad engagement possible with Excel-based, task-specific interfaces for each activity in your SE project. By giving all stakeholders access to the process through a live, two-way connection to your systems model, you can ensure that all stakeholders can collaborate through the systems model, allowing them to work faster, avoid errors, and reduce unbudgeted costs.

Intuitive, Excel®-based interface allows all stakeholders to feed into the systems model with almost no learning curve

**Automatic population** of information between tools, ensuring that information will always be up to date in both MapleMBSE and your systems model

Integration with standard SysML-based MBSE platforms such as <a href="mailto:IBM@Rational@Rhapsody@">IBM@Rational@Rhapsody@</a> and <a href="mailto:Teamwork Cloud">Teamwork Cloud</a> from No Magic.

Rapid impact analysis of design decisions to test for conflicting requirements, all from within the intuitive MapleMBSE environment

**Optimized tool views** for common systems engineering tasks

- Impact analysis
- FMEA
- Trade-off studies
- Design structure matrix

#### Powerful Spreadsheet Features not found in your primary SE tool

- Flexible cut & paste with all style and value conversions
- Data validation and duplicate detection
- Excel-based formula capabilities
- Edit almost all of your systems model, not just dependencies
- Use bidirectional Query Path Expression (QPE) language to flexibly query model elements
- Simply add new rows or columns to create new model elements

**Customized implementations** provided by Maplesoft Engineering Solutions experts to ensure that MapleMBSE is tailored to your exact systems engineering process.

To learn more, please visit <a href="https://www.maplesoft.com/products/maplembse/">https://www.maplesoft.com/products/maplembse/</a>

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#### New Centralized Training Platform Available through Vectorworks University

26 September 2019

Initially previewed at the <u>2018 Vectorworks Design Summit</u>, global design and BIM software provider, <u>Vectorworks, Inc.</u>, has launched a centralized e-learning platform, Vectorworks University. As the main repository of training resources, Vectorworks University is a new platform for designers, educators and users across the architecture, landscape architecture and entertainment industries.

"Vectorworks University is a tremendous new learning platform that demonstrates our commitment to our customers' education," said Juan Almansa, customer success director at Vectorworks. "From new customers seeking to learn our software for the first time all the way to seasoned experts, they'll be able to master their skills in a centralized, self-paced and efficient way."

For many decades, Vectorworks has been well-known for its helpful training content, including the Getting Started Guides, webinars, manuals, <u>YouTube channel</u> and <u>Planet Vectorworks blog</u>. Taking things one step further, Vectorworks University offers users the opportunity to learn, navigate and excel in the software. Customers will be able to find free online classes, tutorials and webinars ranging from basic to advanced levels on topics such as BIM, site modeling, entertainment design and more.

"When we're onboarding employees new to Vectorworks software, or who need to practice their skills, we now have somewhere to send them," said Christiaan Briggs, senior technician at <u>Yurky Cross</u> Chartered Architects. "Clearly a lot of thought has gone into the web design as it works very well."

To date, the platform has over 110 hours of training and 200 pieces of content available. In the future, Vectorworks University will include localized content, multilingual support, learning paths and a certification program.

<u>Vectorworks Service Select</u> subscribers and those taking advantage of <u>Vectorworks Cloud Services</u> can use their current membership to log in by visiting <u>university.vectorworks.net</u>. Additionally, Vectorworks Service Select members can access exclusive training content such as our full core concept courses.

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#### NVIDIA announces Nsight Systems 2019.5

16 September 2019

NVIDIA Nsight Systems 2019.5 is now available for <u>download</u>. This release aims to refine the user experience with CLI sessions for simultaneous usage of more commands, improved GUI timeline zooming levels of detail, enhanced Vulkan API coloring, and Linux GPU context switch trace.

Nsight Systems is a system-wide performance analysis tool, designed to help developers tune and scale

software across CPUs and GPUs. Find out more at: https://developer.nvidia.com/nsight-systems

Nsight Systems is part of a larger <u>family of Nsight tools</u>. A developer can start with Nsight Systems to see the big picture and avoid picking less efficient optimizations based on assumptions and false-positive indicators.

If you are an nvprof or NVIDIA Visual Profiler user, be sure to read the <u>blog posts</u> [1] & [2] to learn about migrating to their successors, <u>Nsight Systems</u> and <u>Nsight Compute</u>. Subscribe to our <u>YouTube channel</u> for future release highlights and feature spotlights.

Contact us at our forums and visit our product page to download the latest release of Nsight Systems.

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#### SAP Makes Its Next Move in the Platform Game

24 September 2019

SAP announced more powerful platform capabilities and embedded intelligence in applications, setting customers on the fastest path to turn data into business value.

The announcement was made at the <u>SAP TechEd conference</u> being held September 24–26 in Las Vegas and the <u>Strata Data Conference</u> being held September 23–26 in New York City.

"There is growing demand from our customers and partners to easily extend and integrate their solutions as well as build completely new apps," said Juergen Mueller, chief technology officer and member of the Executive Board of SAP SE. "They also want to bring their infrastructure-as-a-service of choice. With the business technology platform, we will give customers the highest level of openness and flexibility to do this — also in terms of deployment models."

Mueller added: "By addressing the key technology markets of database and data management, analytics, application development and integration, and intelligence, SAP will deliver one of the best technological foundations customers have ever experienced."

#### Unique Platform and First Solutions Now Available to Turn Data into Business Value

Customers are free to focus on business needs rather than technical building blocks when they have a complete <u>business technology platform</u>. By connecting business processes and experiences, customers can make confident decisions with integrity and continue to drive innovation in the cloud, on premise, at the edge and in hybrid deployment models. By offering an open platform, SAP continues to grow its ecosystem and embrace partner solutions to offer complementary value to our customers.

**SAP Cloud Platform** is a key pillar of the business technology platform. It is SAP's integration and extension platform that helps bridge the gap between piloting intelligent technologies such as machine learning (ML) and the IoT and embedding them into core business processes.

• SAP Data Intelligence is the first enterprise cloud service with an end-to-end lifecycle for data management and machine learning. Technologies such as machine learning and data orchestration deliver a wealth of meaningful business insights — from understanding customer churn andconsumer behavior to manufacturing Harnessing this information is often challenging when it is spread across an array of disparate tools. Using SAP Data Intelligence, customers can transform data from different sources into critical insight to drive better business outcomes. It

also allows them to adapt the latest trends and technology by combining the SAP Data Hub solution and SAP Leonardo Machine Learning Foundation into one integrated cloud offering, making use of established open source frameworks such as TensorFlow. <u>Announced as a beta offering in May at the SAPPHIRE NOW</u> conference, SAP Data Intelligence is now generally available. Get more information here.

"With SAP Data Intelligence, we see huge potential to speed up development and operations of machine learning projects and manage the orchestration of complex data across our landscape," said Robert Kriehs, senior solution architect, Daimler AG. "We can ensure our AI/ML projects can make it into production, the data can be managed and our models can be easily retrained, and we can apply lifecycle management to the data and the models."

- The SAP Intelligent Business Processes Management (SAP Intelligent BPM) bundle of services helps customers transform paper-based processes into digital workflows. Customers can now use SAP Cloud Platform Workflow, SAP Cloud Platform Business Rules and SAP Cloud Platform Process Visibility services together to create process extensions on top of business applications, orchestrate tasks or build process-centric differentiating applications. With this new transparency on workflows, customers can extend their end-to-end process visibility toward observed business processes across SAP and non-SAP applications. SAP Intelligent BPM is integrated with the SAP Conversational AI service to guide customers through workflows, giving them automatic recommendations for actions. Get more information here.
- Built on SAP Cloud Platform, **business services** that use machine learning and the IoT to address specific business challenges are now available. These include the **Document Information Extraction service**, which applies machine learning to digitalize unstructured business documents by extracting information and matching it with relevant business data. Enhanced capabilities in **IoT edge and cloud hybrid scenarios** give customers the ability to "define once, run anywhere" so they are not dependent on network latency, bandwidth or connectivity. This hybrid approach offers flexibility and scalability for customers to easily define their IoT processing artifacts once and then choose to deploy in the cloud and/or at the edge to process data.

More than 1,400 partners are building on SAP Cloud Platform, with more than 750 SAP Cloud Platform—based <u>apps</u> available on <u>SAP App Center</u>.

The latest release of the **SAP Analytics Cloud** solution offers enhancements to augmented analytics and analytics designer capabilities to help customers make faster, more confident decisions. Updates include:

- Augmented analytics Updates to the search-to-insight extension give users a newly designed conversational analytics experience to better understand and use semantics across all business data. Users can now chat live with their data in SAP HANA applications and reveal key factors influencing positives or negatives in a table of metrics with "smart insights" algorithms enabled to mine data points.
- Analytics designer With the new data analyzer, users can now gain insights faster by using a ready-to-run service for queries in the SAP Business Warehouse application, allowing users to easily navigate and analyze information. Users can also build applications faster by creating and reusing customized widgets in a theme. Get more information here.

SAP Continues to Push Blockchain Boundaries by Joining Forces with Microsoft

SAP and Microsoft Corporation announce interoperability of blockchain services in the cloud with a new collaboration. Building on their long-standing partnership, the companies aim to empower customers to run their blockchain-based applications on SAP Cloud Platform directly connected to Azure Blockchain Service. With this interoperability customers can use the infrastructure and platform services of their choice embedded in SAP software systems in an easily consumable way. The cooperation aims to enable joint customers to bring the trust and transparency of blockchain to important business processes such as material traceability, fraud prevention and collaboration in life sciences. For more information on the partnership, read Microsoft's blog and the SAP TechEd News Guide.

#### Embedded Intelligence and Improved Usability for SAP S/4HANA

The <u>SAP Best Practices for SAP Intelligent Robotic Process Automation integration with SAP S/4HANA</u> package is now available to guide and accelerate customers' implementations with predefined automation skills, covering key business processes such as managing sales orders and purchase order confirmations. The package offers predefined robotic automation skills such as finance, sales distribution and procurement, as well as capabilities for industries such as professional services and manufacturing. Customers can use the package to help reduce labor-related costs and improve response time to market changes and other business requirements. <u>Get more information here</u>.

The latest release of SAP S/4HANA Cloud includes intelligent approval workflow in procurement for purchase requisitions. The service uses machine learning to classify important and unimportant purchase requisition approvals by weighting them with a confidence factor arrived at by analyzing the approval pattern history based on price, source of supply, material group, approvers and attachments. It also guides users to approval items that require immediate attention, which frees up time to focus on critical work items. Get more information here.

Quartz light, the new theme in the SAP Fiori 3 user experience, is used by the latest release of SAP S/4HANA Cloud and all other SAP applications. Designed and developed by all SAP product teams, **SAP Fiori 3** offers a more consistent and integrated experience across the entire SAP portfolio. This helps decrease training time, increases application effectiveness and provides consistency of use across devices from anywhere. Embedded artificial intelligence in SAP Fiori 3 provides intelligent home pages that show everything a user needs to focus on, and supports proactive business situation handling, which offers explanations, insights and proposed actions. Get more information here.

SAP solutions, including SAP Cloud Platform, SAP Analytics Cloud and SAP S/4HANA Cloud, <u>are available to try and buy online here</u>.

To learn more about these announcements and other news from SAP TechEd Las Vegas, visit <a href="https://www.sap.com/teched-news">www.sap.com/teched-news</a>.