PLM Weekly Summary

Editor: CIMdata News Team

13 December 2019

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CIMdata News

CIMdata Announces its 2020 PLM Market & Industry Forum Series

11 December 2019

CIMdata, Inc., the leading global Product Lifecycle Management (PLM) consulting and research firm, announces its 2020 PLM Market & Industry Forum schedule and theme. The one-day events will be held in Ann Arbor, Michigan, USA on March 25; Frankfurt, Germany on April 2; Pune, India on April 6; Shanghai, China on April 10; and Tokyo, Japan on April 14.

CIMdata's PLM Market & Industry Forum is designed exclusively for PLM software providers, PLM service providers, PLM systems integrators, and PLM channel partners of all sizes. Forum attendees will explore the challenges currently facing the PLM market. Presentations will offer insights into the current economic climate, leading trends, and their effects on the PLM economy. There will be a detailed look at the state and trends of current and future PLM markets, and the eagerly awaited first public release of CIMdata's 2019 PLM market analysis results.

The theme for 2020 is "Products, Smartly Connected." In this industry-leading forum, CIMdata will explore best practices and identify gaps in the processes and tools for developing smart, connected products. Many of the enabling technologies, like the Internet of Things (IoT) and Augmented Intelligence (AI)/Machine Learning (ML), are early in their adoption lifecycle so there is still a lot of experimentation driving learning. With these talks, CIMdata hopes to kickstart the conversation on engineering smart, connected products that meet and exceed customer and market requirements.

According to Stan Przybylinski, CIMdata's Vice President and Head of Research, "The phrase 'smart, connected products' has been in vogue for the last five years, but the idea has been a reality in some industries for many more. The advent of cheap sensors, computing, and ubiquitous networks helped foster the explosion of smart, connected products in many industries. In a recent CIMdata survey of industrial manufacturers, 28% said smart, connected products were 'Very Important' to their company today, jumping to 72% in three years. Another 24% said that they will be 'Important' in three years, a total of 96%! But are industrial companies ready to thrive in this smart, connected world? CIMdata believes that the work to date barely scratches the surface of what is possible."

Presentations will be made on the following topics:

The current state of PLM

PLM global market analysis for the 2019 calendar year

Synching Siloed Development

xBOM Management Across the Lifecycle

Closed-Loop Product Development

A&D Action Group Research Update

Agile Methodologies & PLM

Closing the Smart, Connected Lifecycle Loop with IoT

For more information on the presentations please visit: https://www.cimdata.com/en/education/plm-market-industry-forums/north-american-plm-market-industry-forum-agenda.

Participants will gain a solid understanding of the current and emerging PLM market, of the dynamics impacting it, and of the expectations for its continued evolution. Attendees will also learn more about opportunities and approaches they can use to navigate the PLM economy in the year to come.

To learn more or to register for a 2020 PLM Market & Industry Forum event, please go to: https://cimdata.com/en/education/plm-market-industry-forums.

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CIMdata Announces the First Public Product Lifecycle Management Certificate Program of 2020
12 December 2019

CIMdata, Inc., the leading global PLM strategic consulting and research firm, announces that the first public CIMdata Product Lifecycle Management (PLM) Certificate program of 2020 will take place at the Kensington Hotel in Ann Arbor, Michigan from March 2-6. The program is recognized as the PLM industry's most comprehensive solution-agnostic education offering.

The program effectively prepares PLM professionals to address the challenges commonly faced in PLM strategy development and implementation enabling them to help their organizations realize the benefits of PLM and its enabling technologies. The assessment-based program includes a personalized classroom experience, individual and team-based exercises, and evaluations of achievement. The program is facilitated by a team of CIMdata experts. On successfully completing the program, participants will receive a CIMdata PLM Certificate and are invited to join CIMdata's global PLM Leadership community, a group of like-minded PLM Certificate Program graduates.

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 embarking on a PLM journey or those already implementing PLM. PLM solution providers will also find the program to be of use for recent hires as part of the on-boarding process and for seasoned professionals alike.

Since the program was introduced in 2009, close to 1,200 PLM professionals have received their PLM Leadership certificate from CIMdata. Additional programs will be held in Amsterdam, The Netherlands from June 15-19; Boston, Massachusetts from September 28 - October 2; and Santa Clara, California from December 7-11.

The class is available in a 3- or 5-day format. CIMdata's one-day Executive Short Course and two-day PLM Fundamentals for Solution Providers Short Course will also be offered at this time.

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

Digitally Transforming Product Quality -A CIMdata Commentary
10 December 2019

Key takeaways:

Trends like digital transformation and Industry 4.0 require rethinking the fundamental relationship between the product lifecycle and supply chains, thus pushing quality requirements to the forefront in the drive to deliver strategic and incremental business value.

While product quality has always had an impact on a company's revenue, it was often difficult to measure the direct impact. With the shift from products to smart, connected products with embedded services, it will now to possible to directly link customer experience, satisfaction, and revenue.

The Internet of Things (IoT) offers an unprecedented opportunity to proactively translate product data into knowledge leveraged across the product lifecycle. At the same time, the social web provides the ability to proactively monitor products' customer sentiment as news of missed customer expectations travels quickly across the global internet.

Oracle PLM Cloud offers a unitary digital thread—their enterprise product record spans ideation through the entire product lifecycle—powering their suite's closed-loop quality capabilities. Oracle's cloud-based Quality Management is integrated throughout the Supply Chain processes and leverages IoT and social feeds to providing new opportunities to drive quality improvement, product enhancements, and new innovations.

Introduction

The demands for smart, connected products have forced companies to rethink how they remain viable in their markets. A market offering increasingly requires a combination of the product, software, and services which provide differentiating value. Consistently delivering high-quality smart, connected products through global value networks has created new pressures for manufacturers. With social transparency as a barometer, Quality has become a key aspect of the corporate strategy and culture—one that is not defined as the responsibility of a single department—it is owned across each process spanning every stage of a product lifecycle.[1]

Navigating a Smart, Connected World

Access to automation, the Internet of Things (IoT), data exchange, mobile devices, big data/analytics, and smart, connected products have fueled digital transformation and Industry 4.0 initiatives which, in turn, have forced a redefinition of the relationship between the product lifecycle and supply chains. The resulting explosion of data has companies searching for the best ways to harness that knowledge to benefit the product lifecycle and the company as a whole. Gartner defines digital business transformation as the process of exploiting digital technologies and supporting capabilities to create a robust new digital business model.[2] While CIMdata agrees with this definition in general, many companies hindered from adopting these new business models and failing to apply digital technologies to the product development lifecycle are running the risk of being left behind in their markets.

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[1] Research for this commentary was partially supported by Oracle.
[2] https://www.gartner.com/it-glossary/digital-business-transformation/

CIMdata recommends that product companies pursue their Industry 4.0 vision and digital transformation initiatives along-side of a robust sustainable strategy for connected PLM-enabling applications. To CIMdata, product lifecycle management (PLM) is not a solution that you buy, rather it is a strategic business approach enabled by a consistent set of enabling technologies and connected processes. While the PLM market space has promoted digitalization for nearly two decades, recent CIMdata research reveals that many companies remain stuck at product data management (PDM), the basic blocking and tackling of managing intellectual property, bills of materials, and engineering change and release processes. Digital transformation is the next level of evolution in defining a PLM vision and requires an effective balance of business strategy, enabling technologies, people, and processes to accelerate their business benefits.

This strategic transformation must support a digital thread, which is a communication and knowledge framework for an integrated and connected view of an asset's data (i.e., its Digital Twin) throughout a product's lifecycle and closing the gaps across what traditionally have been siloed processes and data. Using connected process knowledge can truly deliver results through the lifecycle optimization of multiple engineering and business metrics.

One major data source that can enhance the digital thread is the Internet of Things (IoT). Historically, companies have had limited access to key information about fielded products. There are returns, warranty claims, and repairs, but the data collected was about the effects of usage, not how the products were actually being used. Today, companies are looking to instrument their products to capture usage data for an unprecedented opportunity to understand how customers are using their products and, in turn, leverage that knowledge across the product lifecycle to enable successful product evolution, innovation, and predictive maintenance.

Much of a product's value is brand equity, an intangible asset that can go up and down based on sentiment in the market. The prominence of social networks allows consumers to provide ratings and research public commentaries on product and service experiences. In a transparent market, poor quality can quickly damage both product reputation and brand equity so it's critical to deliver quality products and services, starting at their market introduction, that both meet expectations and deliver continuous improvements to retain their customers' loyalty.

Many companies pursue digital transformation strategies to implement new business models and sources of revenue, like shifting from selling just products towards a focus on field service or product-as-a-service offerings. These new business models demand better product and service quality. You won't be profitable or have successful products if you are delivering poor, untimely product service. And you can't make money on your service level agreements (SLAs) if your products do not deliver against agreed-upon performance metrics. Most companies have a long way to go from their PDM reality to this digital transformation. It begins with a broader PLM vision and implementation which supports these new business models.

Achieving these quality expectations becomes more complicated in an Industry 4.0 initiative. Supply chains are being revamped and moving more toward a value network approach. Building new relationships while maintaining quality is an enormous challenge, especially without the advantage of a digital thread of connected processes and systems.

Oracle believes their fully integrated cloud is a big differentiator. Oracle PLM Cloud provides a connected, traceable end-to-end solution which tracks products from cradle to grave and is connected to all related supply chain and quality processes to help companies achieve their Industry 4.0 objectives.

Optimizing Enterprise Quality with Oracle PLM Cloud

Oracle has been a leader in the PLM market since their acquisition of Agile in 2007. Their Oracle Agile, Oracle e6, and Oracle PLM for Process on-premises offerings are used by hundreds of customers and Oracle's "Applications Unlimited" pledge has maintained a roadmap for these products (and many others in the Oracle portfolio). But Oracle Corporation, and the enterprise software market, are committed to the cloud as the means to deliver easy configurability of the latest innovations to customers without lengthy upgrade cycles. Oracle's way forward in PLM is Oracle PLM Cloud which enables five connected capabilities including Innovation Management, Quality Management, Product Development, Configuration Modeling, and Product Data Hub. Oracle's enterprise product record, their digital thread, natively spans more of the product lifecycle than many of their PLM competitors. One strength of their medical device heritage gives them a leg up on understanding the needs and depths of closed-loop quality.

Oracle believes in the critical value proposition of the digital thread and digital twins, CIMdata also promotes this as an imperative for industry to embrace and will be a baseline for companies embarking on transformation initiatives. Oracle is using visualization technology to support innovations and collaboration, but physics-based twins are not an emphasis, which makes sense given that Oracle does not provide design data authoring or engineering-oriented simulation tools. But the digital thread and digital twins are essential to their vision for "Digitally Connected PLM" as shown in **Error! Reference source not found.**. Their digital thread extends from the fuzzy front end of innovation, all the way to fielded connected products/assets and back. In developing their Quality Management capabilities, Oracle brought together the quality management development teams from Oracle Agile PLM, Oracle E-Business Suite, and other Oracle enterprise applications to ensure that the new cloud-native offering could meet or exceed the capabilities of their existing on-premise solutions.
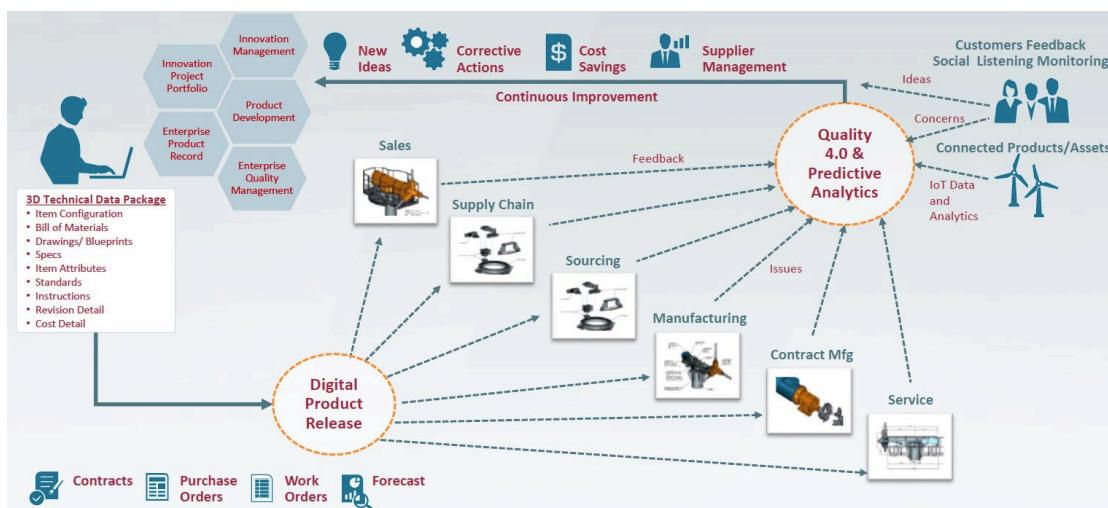
Figure 1—Digitally Connected PLM with Oracle PLM Cloud
(Courtesy of Oracle Corporation)

To help direct their development team, Oracle relied on customer input to steer this new offering, with seven companies across a range of industries including a conglomerate, aerospace & defense, consumer goods, lifesciences, high-tech, semiconductor, and medical devices to help validate of the initial design and evolution, and to provide guidance for incremental innovations and additional integrations of the capabilities. Their release process brings new features to the market quarterly and Oracle claims their roadmap is chock full of new innovations planned to fulfill their connected Quality 4.0 vision.

Oracle's Quality Management capabilities span across product development, and change management. They integrate with Oracle solutions for IoT, artificial intelligence/machine learning (AI/ML), inspection processes, manufacturing, project management, human resource management, supplier management, and monitoring the voice of the customer using Oracle Customer Experience Cloud. This helps Oracle deliver the connected digital thread from idea through life by capturing knowledge about both the voice of the product and the voice of the customer to drive continuous product and service improvement activities.

Oracle claims over 200 customers for their Quality Management cloud capabilities, including some well-known companies in addition to their own internal hardware organization. Oracle reports that long-time Oracle Agile customers looking to expand their PLM strategy and coverage are increasingly migrating to Oracle PLM Cloud to support connected business transformation. Oracle believes this will help customers gain a strategic advantage across all of their quality processes. As Oracle continues to expand the capabilities of Oracle PLM Cloud it will be more and more difficult for customers to resist the market advantages it can help provide.

Conclusion

Product companies must evolve to survive in a world of smart, connected products. Readily available access to emerging technologies such as IoT, machine learning, and digital assistants are increasingly used to help companies deal with competitive pressures. The need to adopt digital transformation initiatives and Industry 4.0 strategies have forced a change in how these firms create and deliver value to market, requiring a fundamental rethinking of the product lifecycle and their value networks. Maintaining quality in this complex environment is more difficult and needs to take advantage of new technologies like the IoT and the social web. While very different, these two technologies combined provide visibility to more deeply understand product usage that can be leveraged to improve products and the value they deliver.

The Oracle PLM Cloud and their enterprise product record offer a broad lifecycle view that can power digital twins, helping optimize enterprise product quality. Their innovative use of IoT and customer experience data bring something new to quality management—a capability that seems to be drawing significant interest from Oracle's customer base and prospects. As companies finally decide to make the move to the cloud, the broad capabilities of the Oracle PLM Cloud offering merit some consideration.

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Acquisitions

Belcan Acquires Base2 Solutions: Brings New Tech Capabilities to the Belcan Systems and Software Engineering Group

13 December 2019

Belcan, LLC ("Belcan"), a global supplier of engineering, supply chain, technical recruiting, and information technology (IT) services to the Aerospace, Defense, Automotive, Industrial, and Government services markets, today announced the acquisition of Base2 Solutions ("Base2" or "The Company"), a premier provider of software and systems engineering consulting services to customers in highly-regulated industries such as Aerospace, Defense, and Medical Devices.

Terms of the transaction were not disclosed. Belcan is a portfolio company of AE Industrial Partners, LP ("AEI"), a private equity firm specializing in Aerospace, Defense & Government Services, Power Generation, and Specialty Industrial markets.

Base2 specializes in developing custom solutions to solve complex business problems in industries that require specialized technical knowledge. The Company's services include software development, DevOps, security, and systems engineering, which are managed throughout the entire product lifecycle, from roadmap development through production. Headquartered in Bellevue, Washington, Base2 has an additional office in Brea, California. Base2 is being sold by Safran as part of their ongoing portfolio optimization efforts following the acquisition of Zodiac Aerospace in 2018.

"Base2 is an excellent fit within our disciplined growth strategy, expanding our geographic footprint in major US aerospace hubs," said Lance Kwasniewski, CEO of Belcan. "This addition brings high demand capability in digital systems and software, a key customer base, and exceptionally talented leadership and technical teams. We are extremely excited to bring Base2's capabilities and culture into the Belcan family."

"Being part of Belcan introduces our services to a broader audience within our specialized industries and provides us with an opportunity to offer more solutions to our customers," said Ron Hopkins, CEO of Base2 Solutions. "We are excited to join the Belcan and AEI team to continue our track record of delivering the strongest value to our customers while also being a great place to work for our employees."

Belcan, LLC is a global supplier of engineering, supply chain, technical recruiting, and IT services to customers in the aerospace, defense, automotive, industrial, and government sectors. Belcan engineers better outcomes for customers – from jet engines, airframe, and avionics to heavy vehicles, automobiles, and cybersecurity, Belcan takes a partnering approach to provide solutions that are adaptable, integrated, and value added. Belcan has been earning the trust of our customers for 60 years and counting. For more information, please visit www.belcan.com.

Base2 Solutions assists companies in highly regulated industries give form to Digital Innovation by delivering the processes and practices needed to develop highly reliable and complex interconnected systems. The Company helps its customers solve challenging problems by taking a whole systems approach to designing and developing solutions using technology, processes, security, and systems engineering. A current, multi-year Best Places to Work finalist in Washington State and Orange County, California, Base2 Solutions is headquartered in Bellevue, Washington with offices in Brea, California. Clients include The Boeing Company, Thales, Horizon Air, BioLife Solutions, Halyard, and L3Harris, among others. For more information, visit http://www.base2s.com.

Company News

Ansys Granta - New battery metrics project applies Artificial Intelligence

13 December 2019

A collaboration between ANSYS Granta, Cambridge AI startup Intellegens, and the University of Birmingham has secured funding from the Faraday Battery Challenge to optimise battery manufacturing processes, helping to ensure that the UK leads the world in the transition to a low carbon economy

Innovate UK, part of the UK Research and Innovation organization, is investing £246 million in innovation projects over 4 years. The Faraday Battery Challenge: Innovation for Feasibility Studies Round 3 is aimed at supporting business-led R&D for the design and development of batteries for electric vehicles. The collaborative grant was awarded to ANSYS Granta, Intellegens, and the University of Birmingham to apply artificial intelligence solutions to predict optimum process parameters for complex interdependencies in the battery manufacturing process.

It is estimated that around 50% of the value of future vehicles will be associated to the battery and the systems that support it. By 2022, the UK battery demand will be sufficient to support one UK gigafactory (large battery manufacturing plant that produces cells and modules used in electric vehicles). This presents a major global opportunity for the UK, since the complete supply chain for batteries for electrified vehicles at the scale seen in the automotive sector does not yet exist. Lithium-ion battery (LIB) manufacturing is in its early days in the UK. The development of new battery technologies is slow, taking many years both in terms of new technologies and , more importantly, the substantial manufacturing challenges needed to be scale up production. The Faraday Battery Challenge aims to ensure that the UK spearheads the research in the design, development and manufacture of batteries which will allow businesses to kickstart the transition to a low carbon economy. The future widespread adoption of electric vehicles will result in reduced harmful emissions and cleaner air, among other social and economic benefits.

A consortium comprised of ANSYS Granta, Intellegens and the University of Birmingham (UB, Prof. Emma Kendrick), won the Faraday Battery Challenge: Innovation for Feasibility Studies Round 3 to develop new tools to speed up the manufacturing processes of batteries. The project titled Intelligent Battery Data Management Platform(IDMBAT), proposes to use artificial intelligence to reduce fabrication and development costs while improving key battery metrics. Intellegens' role is to provide their cutting-edge deep learning predictive models (Alchemite™) for process parameter prediction. ANSYS Granta will build and test the data platform and the University of Birmingham will bring battery technical leadership and will host a small-scale manufacturing facility to generate data. The new intelligent data management platform will enable battery technology manufacturers to overcome technical and commercial barriers.

Dr Alex Cazacu, Project Lead at ANSYS Granta, comments "the project will enable us to extend established best practices in materials data management to support the application of smart algorithms and to empower innovation in battery materials – two areas of great technical and commercial significance."

 Professor Kendrick at UoB, explains"this work is extremely important for battery manufacturing. Currently a lot of the manufacturing optimisation is done by trial and error, with a large matrix of experiments. If we are able to predict the change in performance of an electrode resulting from changes

in the manufacturing processes this will reduce the development time for a new battery chemistry cell significantly."

Ben Pellegrini, CEO at Intellegens added, "The Intellegens team are very excited to be using our technology to help revolutionise industrial manufacturing processes and enabling the UK to lead the way in the scale up of new battery technologies. Speeding up the production of these new battery technologies is critical in addressing the urgent need for climate action."

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Autodesk honors companies at the third annual Design & Manufacturing Excellence Awards

10 December 2019

At Autodesk, we're continually amazed by the many companies who are leading and transforming design and manufacturing processes in a positive way, and we recently honored several companies for their achievements at the third annual Design & Manufacturing Excellence Awards, held at Autodesk University in Las Vegas.

Category: Innovator of the Year

Winner: Volkswagen Group of America

To celebrate the 20-year anniversary of its largest vehicle research facility outside of Germany, the team at Volkswagen's Innovation and Engineering Center reimagined the VW bus — an iconic symbol of the company's heritage and values.

With a focus on maximizing strength while minimizing weight, the VW team collaborated with Autodesk by applying generative design to the wheels to reduce the overall weight and rolling resistance on the tires.

The new wheels are 18 percent lighter than a standard set, and the overall development time from design to manufacture was cut from 1.5 years to a matter of months.

Generative design was also used to reconceptualize the steering wheel, as well as the support structure for the rear bench seating and the external side mirror mounts.

The Type 20 electric-infused showcase vehicle combines classic Volkswagen design with new technologies that are shaping the future of the automotive industry.

Using Fusion 360, the VW team rapidly developed options for reducing mass in the wheels while exploring multiple manufacturing methods.

Category: Industry Disruptor

Winner: Airbus

Innovators at Airbus headquarters in Germany are pushing the boundaries of generative design technology to change the way things are manufactured and built in the aerospace industry.

The team continues to make advances with its Bionic Partition project. Using new constraints made available in generative design technology, Airbus optimized a new partition that is significantly lighter, yet just as strong, and can be manufactured at a fraction of the cost using a casting process.

In addition, the team is applying generative design to other structural aircraft components such as the

vertical tail plane of its A320 aircraft, targeting mass, stiffness, and impact resistance.

Finally, Airbus innovators are looking into generative design for the layout of a new production facility that meets the highest standards for sustainability, and ultimately enables its workforce to assemble engines more quickly with more efficient logistical flows.

Category: Engineering the Impossible

Winner: Dynamic Attractions

Dynamic Attractions is pushing the boundaries of design and manufacturing.

From complex bridges — to observatories that house the world's largest telescopes — to thrilling theme park rides, this century-old company has rightfully earned the award for "Engineering the Impossible."

Using tools in the Product Design & Manufacturing Collection to create cutting-edge designs, enhance workflows, and increase productivity, Dynamic Attractions' engineers are the secret ingredient behind numerous award-winning projects.

With a reputation for ground-breaking innovation, Dynamic Attractions is staying true to its motto, "Anything you can dream, we can build."

Category: Industry Collaboration

Winner: LASIMM

Paving the way for giant metal parts and structures to be 3d printed for construction, the Large Additive Subtractive Integrated Modular Machine (LASIMM) is a groundbreaking project led by 10 partners from across Europe. Its goal is to build one of the world's largest hybrid manufacturing machines.

The LASIMM machine features unique metal additive and subtractive capabilities, with abilities to 3D print metal parts and structures as large as 20 feet by 6 feet, and up to 4500 pounds.

The machine was recently tested to manufacture demo parts, such as large beam structures, airplane panels, and wind turbine parts, designed by leading industrial end-users including Foster & Partners.

Powered by Autodesk Fusion 360 and Autodesk PowerMill, the LASIMM project brings hybrid manufacturing to a truly global and industrial scale.

LASIMM provides additive and subtractive capability that, in some cases, can lead to major cost and production savings compared to multiple separate machines.

Category: Making a Better World

Winner: KickStart International

Africa is a continent with a large population of farmers who are struggling to feed their communities, even though it holds more than one-quarter of the world's arable land. This challenge contributes to rampant poverty, malnutrition, and unfortunate yet avoidable health and education outcomes.

KickStart International is a non-profit social enterprise focused on lifting millions of African farmers out of poverty.

By designing low-cost, high-quality irrigation pumps, KickStart makes irrigation affordable by significantly increasing crop yields, incomes, and helping farmers establish profitable

businesses.

Through a partnership with the Autodesk Foundation, Kickstart recently finalized key design elements for its MoneyMaker Solar Pump. Designed using Autodesk Fusion 360, the pump is currently being tested in Kenya, and is the lowest cost solar pump available in Africa.

Since inception, KickStart has sold more than 330,000 irrigation pumps, created a quarter million businesses, and has helped nearly 1.5 million people out of poverty.

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Bentley Systems Wins Downstream Award for Digitalization

11 December 2019

Bentley Systems, Incorporated and Digital Construction Works (DCW), a Bentley Systems and Topcon Positioning Group joint venture providing digital automation, integration, and "twinning" services, around fit-for-purpose software and cloud services, announced that Bentley Systems was named a winner at the Downstream Awards. Bentley won in the Innovation in Downstream Digitalization category for Dow Chemical Company's (Dow) use of its ConstructSim application.

The awards celebrate the best of the downstream industry and are organized by Petrochemical Update, a division of Reuters Events. Awards were announced in 11 categories, with winners chosen by a panel of 10 judges representing the industry.

Anne-Marie Walters, industry marketing director, oil and gas and manufacturing at Bentley Systems, said, "We are honored to have received this award, which recognizes Bentley as a provider of digital construction workflows, for the advancement of infrastructure projects, and specifically for Dow's outstanding work of integrating advanced work packaging (AWP) into its global project methodology."

"Dow is applying AWP as a program on capital projects of all sizes," said Susan Brandt, vice president, business development at DCW. "After evaluating several other software packages, Dow selected Bentley's ConstructSim to automate AWP on a programmatic basis. The team architected its methodology to make AWP via ConstructSim scalable, targeting its implementation on any project valued at more than USD 10 million."

The implementation of AWP methods with ConstructSim helped Dow achieve amazing tool time results for piping and structural steel. Structural steel wrench time performance improved to 70% and piping wrench time performance rose to 63%, while the industry average wrench time is 37%. Other non-quantifiable benefits were the transparency of construction progress, as Dow was able to use the ConstructSim model in weekly construction status meetings.

"This award demonstrates how Bentley Systems is leading the way in the downstream industry. The entire team at Bentley Systems should be so proud to be acknowledged for their great success in 2019, and we are already looking forward to seeing how Bentley Systems, and all the other winners and finalists, continue to build on their success in 2020," said Jonathan Witherspoon, sector head of Petrochemical Update.

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Elisa Smart Factory and TCS Partner to Deliver Advanced Analytics Solutions to the Manufacturing Sector

12 December 2019

Tata Consultancy Services announced a new partnership with Elisa Smart Factory, part of the Finnish telecommunications company Elisa, to market and deploy the latter's industrial IoT (IIoT) and advanced analytics solutions to a wide range of manufacturers across the world.

TCS works with some of the leading manufacturers globally, helping them scale up product innovation and pursue their growth and transformation initiatives. It offers a comprehensive suite of services and solutions to help manufacturers build future-ready operations. The partnership with Elisa Smart Factory adds an expanded range of IIoT and smart factory solutions to this portfolio. TCS will customize, deploy and maintain these solutions for its customers, leveraging its deep contextual knowledge of their operations. These bespoke solutions will enable smarter decision-making across the supply chain, optimize product and operating costs, improve quality, and increase uptime, productivity and throughput.

"Elisa Smart Factory solutions represent a tremendous opportunity for industry manufacturers, especially for companies in the process and discrete manufacturing," said Kari Terho, General Manager, Elisa Smart Factory. "With its global presence, wide-ranging industry experience and consultative approach, TCS is the ideal partner for us as we look to build and scale our IIoT offering. By partnering with TCS, manufacturers will be able to enjoy benefits like increased quality, yield and machine uptime that are enabled by real-time monitoring, 3D visualization and advanced analytics."

"TCS' IoT business framework Bringing Life to ThingsTM and smart manufacturing capabilities along with Elisa Smart Factory solutions will enable industrial customers to transform their manufacturing operations and improve operational excellence and flexibility," said Regu Ayyaswamy, Global Head, IoT & Engineering Services, TCS. "Our commitment and investment in smart manufacturing initiatives will enable customers to transform themselves by leveraging the best solutions across the world."

TCS has been partnering with leading Fortune 1000 corporations in their business transformation initiatives, leveraging its deep contextual knowledge of their businesses, and expertise in IoT, AI and digital-twin technologies to build custom-tailored solutions that provide competitive differentiation and create value. It offers a comprehensive portfolio of IoT-related intellectual property, industry-specific solutions and professional services spanning strategic planning, systems design, implementation, technical and business integration services, and post-deployment support and maintenance. The company has been ranked among the Top 3 global IoT service providers in 2019 by an independent research firm, and as a Leader in the NelsonHall NEAT for IoT in Business Transformation.

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Kubotek3D Joins PDES, Inc. Model-based Standards for the Digital Enterprise Consortium

10 December 2019

PDES, Inc. welcomes Kubotek3D to its international model-based standards consortium as an Industry 6 Participant. Kubotek3D delivers core precision 3D technologies and easy-to-use software to help engineers speed time-to-market, reduce costs, and improve quality.

By taking part in the consortium, Kubotek will be able to provide real-time feedback to the standards

based on the actual requirements of their customers. This will ensure that Kubotek will be on the forefront of implementation of the manufacturing standards supported by PDES, Inc., resulting in a more robust product for Kubotek's customers.

"Kubotek brings significant capabilities and a great vision for their products to the PDES Inc. Team. They will be a strong addition to the CAx-IF organization," noted Jack Harris, General Manager of PDES, Inc.

"Supporting product definition data mobility across design and manufacturing is at the core of all Kubotek software," adds Ram Eswaran, COO & CTO, Kubotek3D. "Partnering with PDES will strengthen our development of advanced CAD file translations, especially PMI support in formats like STEP AP242."

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Organizations Must Rethink their Fundamentals -New Report from Accenture

10 December 2019

Following an unprecedented streak of fast-paced growth and profitability, businesses are beginning to feel the need for deep soul searching. As a new decade approaches, they must look inwards for a total re-examination of their purpose and place in the world, says a new report by Accenture Now in its 13th year, Fjord Trends 2020 takes its annual look ahead to the future of business, technology and design, according to Fjord, design and innovation from Accenture Interactive.

2019 has been a year of climate crisis activism, Big Tech accountability, the booms and busts of the gig economy, and the commitment of 181 top CEOs to redefine the Statement of Purpose of a Corporation. Changing mindsets, accelerated by rising digital adoption, have reached the C-suite, forcing leaders to reconsider the very principles their organizations are built on. The report notes that economics and politics, capitalism and resources, and technology and society have long been entwined, but only now have the consequences of their entanglement burst into the public consciousness.

"Protests about capitalism's trajectory of endless growth defined by profit alone are moving from shouting in the streets to conversations in the boardroom. With this comes an imperative to find new ways to measure growth," said Mark Curtis, co-founder and chief client officer at Fjord. "These new values may change how we perceive the meaning of business in the decade ahead. One thing is clear: winners will be those organizations with sustainable business models and a long-term view of themselves and their impact on the world."

Brian Whipple, CEO, Accenture Interactive added: "We're starting to see our clients reorienting towards purposeful transformation. The decade ahead will see a challenging of fundamentals, which provides an opportunity for businesses to transform their offerings into something more mindful, meaningful and forward-thinking. The shift from a 'me' to a 'we' mindset will prompt a need for design to switch from a user-centered to a life-centered approach."

Fjord Trends 2020 examines seven emerging trends expected to shape the business of experience and provides practical advice on how organizations can embrace the new era ahead.

Many faces of growth: Capitalism is facing a mid-life crisis. Success no longer solely equates to growth and organizations must start reassessing corporate purpose and recalibrate how they see their role in the world around them.

Money changers: How we perceive money and pay for things is rapidly changing. These tectonic shifts create numerous opportunities for a host of new products and players.

Walking barcodes: Our physical bodies are becoming as trackable as our digital selves. When it comes to facial and body recognition technology, what is the trade-off between privacy and convenience?

Liquid people: Consumption habits are changing as people perceive and define their identity in ever more liquid ways. Considerable opportunity exists in providing new experiences of consuming.

Designing intelligence: The human experience is growing increasingly complex. The next step for AI is to move beyond automation to designing systems that blend human and artificial intelligence and enhance the interplay between both.

Digital doubles: Make way for your digital double who works for you and knows what you want. Digital twins are evolving beyond industry and into our daily lives.

Life-centered design: The focus of desirability, viability, and feasibility is moving from "me" to "we." Can design extend beyond its own ecosystem, shifting from a user-centered to a life-centered approach?

Fjord Trends 2020 draws upon the collective thinking of Fjord's 1,200+ designers and developers in 33 studios around the world. The annual crowdsourced report is based on first-hand observations, evidenced-based research and client work. This year, the contributions from Fjord's studio and the acquisition INSITUM have added another 250 points of view from Japan and across Latin America, making this the most globally diverse set of Fjord Trends ever. To read the report, visit: accenture.com/Fjordtrends2020 or trends.fjordnet.com and discuss on Twitter #FjordTrends.

PTC Partnering with Magic Leap to Further Expand Augmented Reality in the Enterprise
11 December 2019

PTC announced a strategic alliance with Magic Leap that will allow enterprise and industrial customers to combine the augmented reality (AR) capabilities of its market-leading Vuforia® Engine solution with the powerful Magic Leap 1 wearable headset.

Vuforia Engine provides users with advanced computer vision and cross-platform reach, and supports the broadest range of devices on the market. Beginning this month, PTC will offer Vuforia Engine to Magic Leap 1 customers, who will have access to the latest AR innovations of Vuforia Engine, including its differentiated artificial intelligence (AI) -based Model Target technology. The combination of this software with Magic Leap's robust hardware and leading spatial computing technology will offer

customers a value-rich solution for the enterprise.

"Industry leaders today need to have the flexibility to select the best hardware and software to fit their needs," said Michael Campbell, EVP and GM, augmented reality products, PTC. "This collaboration enables our many industrial customers to pair our powerful AR software with equally powerful hardware."

In the era of digital transformation, enterprises and industrial companies are turning to new technologies to help them prepare for shifting customer expectations, uncertain global trade, cost pressures, and workforce shortages. AR offers companies an innovative and effective way to connect people to digital content where and when they need it, thereby increasing efficiency, providing more-impactful training, and achieving greater overall cost savings.

"We're excited to announce our collaboration with PTC," said Omar Khan, chief product officer, Magic Leap. "The opportunity for AR across the enterprise is enormous, and we want all businesses to be able to leverage industry-leading technology that can enhance productivity throughout the digital workplace."

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RIZE Partners with Dassault Systèmes to Enable North American Customers to Accelerate Adoption of Additive Manufacturing

11 December 2019

RIZE, Inc., a next-generation additive manufacturing company dedicated to providing safe industrial 3D Printing to all users, announced that it will partner with Dassault Systèmes, the 3DEXPERIENCE Company, to offer North American customers a solution to support a diverse set of applications and services to design and manufacture 3D printed functional prototypes, production tooling and end use parts.

"We believe this will deliver smarter workflows in engineering and manufacturing and the adoption of Industry 4.0 methodologies. As a Dassault Systèmes customer we believe this solution delivers accelerated time to value to the industry."

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The jointly offered solution will enable users of Dassault Systèmes' 3DEXPERIENCE platform to seamlessly leverage RIZE 3D Printing technology to build intelligent parts with smarter workflows via connected, intelligent, interactive environments where hardware and software – in this case RIZE's 3D printers and the 3DEXPERIENCE platform – allow users to easily design and print full-color 3D parts using industry standard software. Using the 3DEXPERIENCE platform for design, and RIZE's 3D printer for part creation, these intelligent parts with smarter workflows help improve collaboration across design and manufacturing to accelerate the innovation process.

Through the joint offering, designers will be able to deploy and derive new value by integrating UL GREENGUARD 2904 certified RIZE 3D Printing solutions within their engineering workflows to accelerate design verification. Also manufacturing users can produce carbon composite parts that require high stiffness and strength for functional applications in custom tools, jigs and fixtures.

Customers can learn more about this innovative solution through Dassault Systèmes' Value Solutions Channel Partners and RIZE, Inc. and discover how to improve the design and manufacture of 3D printed prototypes, tooling and parts. Dassault Systèmes will provide design, simulation and manufacturing software suited for additive manufacturing needs while RIZE will provide the 3D Printing system - including the printer and materials – that is connected via industry standards such as 3MF.

The transformational impact of the joint solution is already evident. "NIAR-WSU is at the forefront of innovation in additive manufacturing, and we have built the first Smart Space on the 3DEXPERIENCE platform – combining additive manufacturing and AR/VR applications from Dassault Systèmes, RIZE full color and composite 3D Printing Systems and the NIAR additive consulting and training expertise," said Shawn Ehrstein, Director, Emerging Technologies and CAD/CAM National Institute for Aviation Research, Wichita State University. "We believe this will deliver smarter workflows in engineering and manufacturing and the adoption of Industry 4.0 methodologies. As a Dassault Systèmes customer we believe this solution delivers accelerated time to value to the industry."

"Our customers are focused on using Additive Manufacturing and are looking for ways to accelerate the business value. The combination of RIZE's Smart Spaces and the 3DEXPERIENCE platform provides a strong package to help customers better realize the value of this transformative technology," said Noam Ktalav, Director Partner Excellence, Global Value Solutions, Dassault Systèmes.

"Dassault Systèmes is our trusted strategic partner and we are delighted to serve its customers through a unique set of offerings from RIZE's Smart Spaces program which will enable them to get higher value from their existing investments, and leverage the industry's latest advances in productivity and safety," said Andy Kalambi, President and CEO of RIZE. "At the same time, RIZE customers will enjoy new benefits leveraging Dassault Systèmes applications along with Smart Spaces as well. It's a win-win for all."

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Sigmetrix joins the Siemens Digital Industries Software Solution Partner Program

13 December 2019

Sigmetrix, global experts in GD&T and mechanical variation, announced a partnership agreement within the Siemens Digital Industries Software Solution Partner Program as a Software and Technology Partner.

As part of the partnership, Sigmetrix will be able to augment its current tolerance analysis offerings with Siemens Digital Industries Software's Teamcenter® portfolio, the world's most widely used digital lifecycle management software, and NX™ software, a leading integrated solution for computer-aided design, manufacturing, and engineering (CAD/CAM/CAE).

"We are excited to join Siemens Digital Industries Software's partner community," said James Stoddard, President of Sigmetrix. "Siemens Digital Industries Software is driving transformation to enable a digital enterprise where engineering, manufacturing and electronics design meet tomorrow, and the strength of our two organizations working together will deliver significant value to our customers."

 "We are pleased that Sigmetrix has joined the Siemens Solution Partner Program as a Software & Technology Partner. Sigmetrix and its CETOL 6σ tolerance analysis software provides our customers complimentary solutions that can add value to their PLM software investment," said Andrew Swiecki, Senior Director of Strategy at Siemens Digital Industries Software.

Sigmetrix continues to improve its technology offerings through new partnerships, new products, and continued enhancements. These relationships have helped Sigmetrix become recognized globally for providing software solutions that analyze mechanical variation ranging in complexity from simple 1D stack-ups to mathematically complex 3D analyses. Their precise, easy-to-use software solutions are utilized by companies in the automotive, aerospace, consumer products, energy, industrial equipment, marine and medical products markets to verify functionality and optimize designs helping them be robust to variation. They also offer comprehensive training in the subjects of GD&T, tolerance analysis,

Model-Based Definition, and Model-Based Enterprise.

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TCS Advanced Drug Development Suite Wins the India Pharma Award 2019

09 December 2019

Tata Consultancy Services announced that its cloud-based clinical solutions and services suite, TCS Advanced Drug Development (ADD), has won an award in the category Excellence in Ancillary Pharma Services, at the India Pharma Awards 2019.

The India Pharma Awards bring together industry pioneers and recognize outstanding examples of innovation that improve the pharma industry. TCS was recognized for its leadership in leveraging automation, artificial intelligence (AI) and IoT through its intellectual property and commercial-off-the-shelf offerings, to digitize and transform patient engagement, metadata management and regulatory submissions for life sciences organizations.

"We are building future-proof technology platforms to transform drug development by harnessing our deep knowledge of the life sciences industry, coupled with expertise in digital and AI technologies," said Debashis Ghosh, Global Head, Life Sciences and Healthcare, TCS. "This award is a testament to the advanced capabilities of our TCS ADD suite that digitally transforms clinical trials and delivers increased speed to market, improved regulatory compliance and enhanced patient experiences."

TCS ADD is a suite of cloud-based platforms adopted by 18 leading global life sciences companies to transform their product innovation initiatives. It streamlines the entire clinical R&D value chain, spanning clinical data management, metadata management, pharmacovigilance, patient engagement, clinical operations, and data analytics and insights. The suite fosters optimized study planning, accelerates study setup and execution, manages comprehensive and new data sources, derives meaningful insights, enables adherence to safety and regulatory needs, improves patient engagement, and supports adaptive trials.

The suite is powered by a cognitive engine called 'Decision Fabric' that enables the automation of complex business processes. It leverages cloud architecture and intuitive user experience design and aligns to the Good Clinical Practice guidelines and privacy regulations.

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Vectorworks, Inc. Wins the Construction Computing Awards' Editor's Choice Award

13 December 2019

The Construction Computing Awards results are in and global design and BIM software provider, Vectorworks, Inc. is the winner of the 2019 Editor's Choice Award selected by Construction Computing Magazine Editor David Chadwick. Additionally, Vectorworks Architect 2020 was a runner-up in the Architectural Design Product of the Year category.

The fourteenth annual Construction Computing Awards, also known as "The Hammers," took place on November 14 at The Grand Connaught Rooms in Covent Garden. Over 220 guests gathered to see the outcome of the readers' online voting and judging panel's deliberations.

"Having attended the awards for a number of years, Vectorworks UK was delighted to receive the coveted Editor's Choice Award," said Adrian Slatter, Vectorworks UK director of sales. "David was

very gracious in his introduction of the award, explaining how the growth of Vectorworks and its transformation in the UK was very impressive. That coupled with the innovations in Vectorworks 2020, particularly the incorporation of enhanced GIS integration, made the decision for him. We are so pleased to see the efforts of our company recognized."

With over 25 categories, the awards are structured to showcase and reward the technology, tools and solutions for the effective design, construction, maintenance and modification of commercial buildings, residential and social housing and civil engineering projects of all sizes.

"Moving from one design solution to another is a major step for any company in difficult times with Brexit, environmental concerns and other issues to deal with; Vectorworks is to credit for having the capability to move from one design solution to another," said Chadwick. "The recent steps they have taken, such as becoming more directly involved in the UK market to support their users, releasing enhanced versions of their software which major heavily in information management and now adding GIS integration to its comprehensive range of design solutions, has resulted in a significant increase in their market share. There were a dozen contestants in individual applications, hardware and other recent additions to the market, but Vectorworks was an obvious choice this year."

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Events

ESI will be at CES 2020

10 December 2019

ESI Group will attend for the 4th consecutive year CES in Las Vegas, from January 7 to 10, 2020. ESI will showcase its virtual prototyping solutions, alongside some of its customers – suppliers and car manufacturers (Farasis Energy, Gazelle Tech, GAC R&D Center Silicon Valley Inc). Demonstrations will illustrate the key role played by simulation in the digital industrial transformation.

Manufacturers, particularly in the automotive sector, are facing increasing complexity, combining the need for transition to new mobility solutions, shorter time to market, global competition, cost pressure, as well as regulatory, safety and environmental constraints. Thanks to its expertise in virtual prototyping based on the physics of materials, ESI provides solutions that meet these transformation challenges and boost the performance of industrial products throughout their lifecycle. With the addition of virtual reality, these solutions are immersive and human-centric, accelerating collaborative decision-making from the design phase of the project.

Several ESI customers, namely car manufacturer GAC R&D Center Silicon Valley Inc, the Chinese-American battery supplier Farasis Energy, and Gazelle Tech, a start-up that developed an innovative mobility solution based on micro-factories and a new ultra-light vehicle prototype, will demonstrate the unique value offered by virtual prototypes, alongside ESI's management team represented by:

Cristel de Rouvray, Chief Executive Officer

Mike Salari, Executive Vice President for Innovation, Value Discovery & Services, Americas Region

Director

Fouad El Khaldi, General Manager of Industry Strategy

Caroline Borot, Strategic Marketing & Business Development Manager Engineering Solutions

Eric Kam, Manufacturing Business Channel Marketing Manager

Peiran Ding, Center of Competence Leader for Electric Cars

Serge Laverdure, Autonomous Driving Solution Director

Four main themes will punctuate the discussions:

How to accelerate vehicle development?

How to guarantee the highest performance and safety of electric vehicles?

How to improve passenger experience onboard autonomous vehicles?

How to build and test the next generation of vehicles thanks to augmented, virtual, immersive reality, and human-centric solutions?

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Financial News

Infor to Hold Investor Conference Call to Discuss Q2 Fiscal Year 2020 Results on Wednesday, December 11, 2019

09 December 2019

Infor announced it will host an investor conference call to discuss Q2 fiscal year 2020 results for current holders of Infor securities and other interested parties on Wednesday, Dec. 11, at 11 a.m. Eastern Time. Materials and dial-in details will be available at https://www.infor.com/about/in... after 9 a.m. Eastern Time on Wednesday, Dec. 11.

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Oracle announces fiscal 2020 Q2 results

13 December 2019

Oracle Corporation announced fiscal 2020 Q2 results. Total Revenues were $9.6 billion, up 1% in USD and in constant currency compared to Q2 last year. Cloud Services and License Support revenues were $6.8 billion, while Cloud License and On-Premise License revenues were $1.1 billion.

GAAP Operating Income was up 3% to $3.2 billion, and GAAP Operating Margin was 33%. Non-GAAP Operating Income was $4.0 billion, and non-GAAP Operating Margin was 42%. GAAP Net

Income was $2.3 billion, and non-GAAP Net Income was $3.0 billion. GAAP Earnings Per Share was up 14% to $0.69, while non-GAAP Earnings Per Share was up 12% to $0.90.

Short-term deferred revenues were $8.1 billion. Operating Cash Flow was $13.8 billion during the trailing twelve months.

"We had another strong quarter in our Fusion and NetSuite cloud applications businesses with Fusion ERP revenues growing 37% and NetSuite ERP revenues growing 29%," said Oracle CEO, Safra Catz. "This consistent rapid growth in the now multibillion dollar ERP segment of our cloud applications business has enabled Oracle to deliver a double-digit EPS growth rate year-after-year. I fully expect we will do that again this year."

"It's still early days, but the Oracle Autonomous Database already has thousands of customers running in our Gen2 Public Cloud," said Oracle CTO, Larry Ellison. "Currently, our Autonomous Database running in our Public Cloud business is growing at a rate of over 100%. We expect that growth rate to increase dramatically as we release our Autonomous Database running on our Gen2 Cloud@Customer into our huge on-premise installed base over the next several months."

The Board of Directors also declared a quarterly cash dividend of $0.24 per share of outstanding common stock. This dividend will be paid to stockholders of record as of the close of business on January 9, 2020, with a payment date of January 23, 2020.

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Summary from Hexagon's Capital Markets Day 2019

12 December 2019

Hexagon AB held its Capital Markets Day in Cobham, UK. President and CEO Ola Rollén and other members of Group Management provided an overview of Hexagon's growth opportunities and strategy, presenting how Hexagon will continue building on its legacy of making data actionable through integrated hardware and software solutions to drive autonomy, efficiency, productivity, quality and sustainability across a wide range of industries.

By combining its core capabilities in reality capture, positioning, design and simulation, location intelligence and autonomous technologies, Hexagon has the unique leverage of being able to converge the physical and digital worlds. Hexagon's divisional leads showcased real-world examples of how the company's solutions are used in infrastructure, construction, mining, aerospace, automotive, and other industries.

The financial targets - revenues of 4.6-5.1 billion EUR and an EBIT margin of 27-28 per cent by 2021 - first introduced at the Capital Markets Day in 2016, were reiterated.

Presentations from the Capital Markets Day are available for download at Hexagon's webpage www.hexagon.com, and the on-demand webcast will be available from 12 December.

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Implementation Investments

ANSYS Accelerates Electronic Product Design and Signoff for Global Custom Asic Leader

10 December 2019

Global Unichip Corp. , the global custom application-specific integrated circuit (ASIC) leader, has adopted ANSYS to support its unmatched combination of advanced technology, low-power and embedded CPU design capabilities.

Providing advanced ASIC services that meet the needs of today's innovative technology enterprises requires a fast introduction, timely resolution to customer problems and successful signoff. GUC selected ANSYS® RedHawk-SC™ to support the significant needs of its customers by effectively executing designs with more than one billion device instances and completing the full-chip systems-on-chip (SoC) power integrity and reliability signoff in less than two days.

ANSYS RedHawk-SC is built on ANSYS® SeaScape™ — the world's first custom-designed, big data architecture for electronic system design and simulation. ANSYS SeaScape features big data architecture for electronic system design and simulation and provides elastic compute scalability to enable rapid design iteration, increased scenario coverage and greater accuracy for full-chip SoC signoff for advanced nodes. ANSYS RedHawk-SC's actionable analytics provide designers with key insights to prioritize design fixes and enable easy viewing and querying of large design databases in minutes for faster debugging. Efficient hardware utilization makes the platform ideally suited for high-performance computing, artificial intelligence and datacenter applications.

"GUC is committed to providing world-class custom ASICs to help elevate prospective systems and integrated circuit (IC) companies' market-leading positions," said Louis Lin, senior vice president, GUC. "As IC manufacturing processes become more complex, there are more elements to simulate and compute during chip design and verification to ensure reliability and minimize power loss. ANSYS helps us minimize this complexity, speed our time to market and reduce development costs. Our partnership with ANSYS has been a cornerstone in helping our clients succeed in the IC market."

"As a custom ASIC leader, GUC requires cutting-edge solutions for fast and accurate results," said John Lee, vice president and general manager, semiconductor business unit at ANSYS. "RedHawk-SC meets the market's unique needs for addressing multiphysics challenges — we are seeing an influx of customers deploying RedHawk-SC for the most complex product and design signoff."

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BIONIK Laboratories Selects Propel

11 December 2019

BIONIK Laboratories Corp., a robotics company focused on providing rehabilitation and assistive technology solutions to individuals with neurological and mobility challenges from hospital to home, y announced it has selected Propel, the product success platform built on Salesforce, to be its Product Lifecycle Management and Quality Management System solutions provider to accelerate new product development and manufacturing of InMotion™ products and services.

Propel, based in Santa Clara, California, offers an integrated solution that uniquely combines next-gen Product Lifecycle Management (PLM) and Quality Management System (QMS) on a single platform. Completely built on Salesforce, the industry's top-rated SaaS platform, Propel helps companies compete

in different market and regulatory environments, and deliver quality products to market faster — all while reducing costs. BIONIK expects that Propel will help extend the definition of product success from concept to customer by configuring and deploying a secure, flexible, and compliant platform designed to enhance the delivery of BIONIK's key offerings, such as its InMotion™ robotic devices and InMotion Connect™ software platform.

Over the past two years of growth, BIONIK has reimagined its portfolio of products, software, and data-management solutions. BIONIK sought to collaborate with a technology partner who is a leader in getting new products from the lab to the clinic. Propel's modern cloud-based product lifecycle and quality management solutions is expected to enable BIONIK to quickly introduce its robotic systems and capabilities to accelerate and enhance its commercial agility. BIONIK provides industry-leading therapeutic solutions through its suite of InMotionTM robotic devices and InMotion ConnectTM data solutions.

"Moving forward, we want to ensure our teams can efficiently bring products and solutions from concept to commercialization," said Malcolm Bock, VP Engineering, BIONIK. "We chose to partner with Propel for our product lifecycle management solution due to their extensive track record of developing configurable cloud-based PLM and QMS systems for the healthcare sector that are compliant within the highly regulated medical device environment, enabling high quality products and efficient service and maintenance. In addition, we believe that this will help us work more efficiently with our contract manufacturers and partners as we continue to grow."

"We are excited to work closely with BIONIK to meet their product lifecycle and quality management requirements," said Dario Ambrosini, Chief Marketing Officer, Propel. "Our highly configurable and collaborative platform will connect PLM and QMS with their CRM system, enabling a true closed feedback loop to manage product realization, quality processes, and customer feedback."

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Calterah Semiconductors Automotive Radar SoC Enters Mass Production Using Synopsys DesignWare ARC Processor IP

13 December 2019

Synopsys, Inc. and Calterah Semiconductor announced that Calterah's new-generation advanced CMOS millimeter wave (MMW) radar system-on-chip (SoC) integrating Synopsys' DesignWare® ARC® EM Processor IP has entered mass production. Calterah implemented an ISO 26262 functional safety development process to help ensure the Alps chip series met the standard's ASIL B requirements for automotive safety. This included conducting functional safety-related monitoring and detection on more than 190 blocks in the design and analyzing over 1,000 failure modes, leading to the development of dozens of chip-level safety mechanisms. By using Synopsys' ASIL-compliant ARC EM6 Processor, Calterah successfully reached its target functional safety ASIL level while enhancing overall processing performance and power efficiency for its Alps automotive radar SoC.

"Calterah's new-generation Alps 77/79 GHz chip series boasts higher speed, flexibility, user-friendliness and reliability to deliver more competitive chip solutions for automotive millimeter wave radar," said Hongquan Liu, chief marketing officer at Calterah Semiconductor. "With Synopsys' functional safety-compliant ARC EM Processor IP, Calterah will continue providing its global users with higher-performance, easier-to-use and lower-power MMW radar technology to create a safer, smarter environment for drivers and their passengers."

Calterah's Alps chip series includes four transmitter channels at most, four receiver channels, a highly configurable waveform generator, and an analog-to-digital converter with sampling rates of up to 50 million of samples per second (MSPS). The complete, efficient signal processing baseband implements classical radar algorithms in hardware, saving development resources and delivering a solution with lower power consumption and higher performance. In addition to the conventional embedded wafer-level ball grid array (eWLB) package, the Alps chip series also includes an Antenna in Package (AiP) solution, which greatly reduces the difficulty and cost of radar development by integrating the antenna onto the chip packaging layer. This diverse lineup of next-generation products provides users with a complete set of solutions covering long-range, medium-range, short-range, and ultra-short-range radar solutions.

Synopsys offers a broad portfolio of automotive-grade DesignWare IP that is ASIL ready, is ISO 26262 certified, meets stringent AEC-Q100 reliability standards, and supports automotive quality management to help accelerate the development of ADAS, connected vehicle and infotainment, and MCU designs. The ASIL-compliant DesignWare ARC EM Processor integrates hardware safety features and safety monitors to detect system errors.

"Advanced automotive ADAS SoCs require massive amounts of data processing to accommodate a range of functions such as radar, LiDAR and sensor," said John Koeter, senior vice president of marketing for IP at Synopsys. "Synopsys provides companies such as Calterah with the industry's broadest portfolio of silicon-proven, ASIL Ready IP including differentiated ARC Processors that address the functional safety, reliability and quality requirements of automotive systems."

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Global Unichip Corporation Uses Cadence Digital Implementation and Signoff Flow to Deliver Advanced-Node Designs for AI and HPC Applications

10 December 2019

Cadence Design Systems, Inc. announced that Global Unichip Corporation successfully deployed the Cadence® digital implementation and signoff flow and delivered advanced-node (N16, N12 and N7) designs for artificial intelligence (AI) and high-performance computing (HPC) applications. Through use of the Cadence Innovus™ Implementation System and the Voltus™ IC Power Integrity Solution, GUC achieved first-pass silicon success and met its GHz performance target for its multi-billion gate designs.

Traditional digital implementation and signoff tools lack the capacity GUC required for their multi-billion gate designs during the implementation and signoff stages. Alternative solutions on the market must be greatly scripted because they don't offer a shared data model-level integration, requiring more manual work with increased design margins and limited performance. Where the traditional tools fall short, the tightly integrated Cadence solution helped GUC meet power, performance and area (PPA) targets and deliver their large-capacity, advanced designs on time.

The Innovus Implementation System improved the GUC design team's productivity through its efficient hierarchical partitioning flow, advanced top-level floorplanning and block implementation and closure capabilities. The Voltus IC Power Integrity Solution enabled GUC to accurately analyze the top-level full-chip static/dynamic power, IR drop and electro-migration through its distributed processing capability using innovative extensive parallelism technology. The seamless shared data model-level integration between the Cadence tools provides GUC with an efficient way to close signoff EM-IR issues during block implementation, reducing costly iterations and engineering change orders (ECOs).

"As a leader in ASIC design, we need to deliver highly complex designs to customers quickly, particularly for emerging application areas like AI and HPC," said Louis Lin, senior vice president of Design Services at GUC. "Through our deep collaboration with Cadence, we deployed their digital implementation and signoff tools quickly and easily, and the Cadence team also provided prompt support to further optimize our delivery cycle time and achieve our PPA targets."

The Cadence Innovus Implementation System and Voltus IC Power Integrity Solution are part of the broader digital implementation and signoff full flow and provide customers with a faster path to design closure. The tools in the flow support the company's Intelligent System Design™ strategy, enabling advanced-node system-on-chip (SoC) design excellence for AI and HPC applications.

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Ground-breaking New Battery Development Centre Selects Infor

13 December 2019

Infor announced that ground-breaking UK Battery Industrialisation Centre (UKBIC), which is under construction in the West Midlands, has selected Infor Cloudsuite Industrial Enterprise. The ERP platform will underpin business and manufacturing processes at the new centre, which is the most advanced facility of its kind ever created in the UK.

As part of the government's Faraday Battery Challenge, the £129 million UKBIC near Coventry aims to help industrial partners design, test and commercialise next-generation battery technologies when it officially opens in spring 2020. Initially focused on partnerships in the automotive sector, the centre is expected to expand into other industries over time.

UKBIC selected the cloud ERP solution from Infor following a rigorous tender. The decision was based on Infor's ability to provide a single platform to support all aspects of the business — from quality control, traceability, production and finance to HR, talent management and analytics — as well as its long-term partnership approach. The fact that Infor MES, a solution to manage shop floor operations, could be deployed on-premise and work seamlessly with Infor CloudSuite Industrial Enterprise, was also a huge benefit.

The platform will be implemented by leading global technology company HCL Technologies, which has more than 20 years of experience with Infor products and servicing customers.

Steve Hill, IT lead at UKBIC, said: "Embarking upon a genuinely green field project like this is rare and affords us a huge opportunity to select partners that share our innovative vision, and will support the complex nature of our facility. Of the providers we looked at, Infor could support every business process from a single platform to provide us with full visibility, capabilities to manage multi-faceted, highly sensitive data and new capabilities and tools as the organisation expands."

Simon Quinton, Infor's vice president and GM for UK & Ireland, added: "UKBIC really is at the leading edge of UK manufacturing, fostering innovation to attract new skills and investment in this crucial and developing field. We are proud to be supporting this innovation, alongside our alliance partner HCL, providing best-in-class cloud ERP capabilities to deliver robust processes, expedite decision-making, and to foster close stakeholder engagement."

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KIRCHHOFF Automotive selects CONTACT Product Costing

09 December 2019

With many strategic applications, CIM Database is the global PLM platform at KIRCHHOFF Automotive. The company is now adding another solution from the CONTACT Elements portfolio in order to create its offers for OEMs with CONTACT Product Costing.

A reliable cost calculation is the basis for the profitability of products. This applies even more if their production requires high investments in equipment, materials and operating processes – and this is the case at KIRCHHOFF Automotive: As a global development partner of the automotive OEMs, the company manufactures complex body components that give vehicles stability and safety.

To date, KIRCHHOFF Automotive uses an in-house developed software for the calculation of its offers. It can no longer be expanded and can only be maintained with great effort. Therefore, the company has evaluated leading calculation programs and selected Product Costing from CONTACT Software.

"CONTACT's solution is cost-efficient and offers clear functional advantages," says Heiko Engels, Global Executive Vice President Technical Development at KIRCHHOFF Automotive. "We supply the global quotation processes via CIM Database with all data relevant for the calculation, do not have another system under maintenance and do not have to maintain another PLM interface".

A further plus of Product Costing is that KIRCHHOFF Automotive can base engineering changes on the first calculation instead of carrying out a completely new one. The company also sees advantages in the flexibility with which the CONTACT Elements modules can be adapted to its processes, and in the planned connection of the material database to the PLM platform.

CIM Database already controls the quotation process and provides the sales figures for new vehicle models and other calculation-relevant information via its sales database. With Product Costing, the calculators at KIRCHHOFF Automotive will have a globally available and uniformly designed application that provides them with all the data they need for their work.

KIRCHHOFF Automotive is the largest business unit of the KIRCHHOFF Group with over 9,000 employees and around 30 production plants in 11 countries. Since 2012, CIM Database has been productive and is comprehensively integrated into the company-wide process landscape with a wide range of PLM applications. Development, sales, project management, advance quality planning, production planning, purchasing, costing and controlling use the PLM platform for their tasks worldwide.

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NAADAM Sets for Sustainable Growth with Centric Fashion PLM

11 December 2019

NAADAM, the ethical cashmere brand, has selected Centric Software's Product Lifecycle Management (PLM) solution. Centric Software® provides the most innovative enterprise solutions to fashion, retail, footwear, outdoor, luxury, consumer goods and home décor companies to achieve strategic and operational digital transformation goals.

What started as an unexpected visit to the Mongolian countryside turned into creating the fairest, most sustainable and affordable top-of-the-line cashmere the world as ever seen. Founded in 2013 by

Matthew Scanlan and Diederik Rijsemus, NAADAM has a direct-to-consumer business model that keeps prices affordable while ensuring that goat herders in Mongolia who produce their cashmere are fairly rewarded and supported. NAADAM is growing rapidly and recently expanded its brands with the relaunch of the Thakoon designer womenswear brand.

Previously, NAADAM had a PLM system, but needed a more all-encompassing solution to achieve transparency, improve vendor collaboration and sustain rapid growth.

"We want to grow in a healthy manner, maintaining consistency across our entire supply chain and brand offering," says Noah Roswig, Senior Vice President of Operations at NAADAM. "Our existing PLM system couldn't handle the level of complexity, standardization and organization necessary to expand our brands, channels, geographies, categories and teams while keeping standards high."

NAADAM selected Centric Fashion PLM because of its user-friendly approach and ability to comprehensively handle every aspect of the product lifecycle.

"Centric offers a complete package with a great reputation in the industry and features that will help us achieve our end goals, such as clear milestones and calendarization across multiple brands and channels, complex historical change-tracking of product attributes across seasons and real-time vendor portal communication," says Roswig.

"NAADAM expects to scale the business significantly with Centric Fashion PLM as a digital foundation," adds Roswig.

"We will gain greater oversight and control of a hectic and multi-faceted process. We expect that Centric will allow us to scale our business upwards to many multiples of where we are now, while maintaining a consistent approach to every product. Centric's organized and user-friendly platform will make it easier to onboard new team members as we grow."

"We are delighted to welcome NAADAM as our latest customer," says Chris Groves, President and CEO of Centric Software. "We are confident that Centric Fashion PLM will enable NAADAM to continue on a path of sustainable and healthy growth, and we look forward to partnering with them over the long term."

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Yazaki Unifies Digital Supply Chain Collaboration with OpenText
12 December 2019

OpenText announced Yazaki, a leading independent automotive component maker, has selected OpenText Business Network to unify digital collaboration with its customers and suppliers in North and Central America and Europe.

One of the largest privately-owned automotive suppliers, Yazaki excels in research, development and delivery of vehicle power and data solutions to major automotive manufacturers around the world. The company chose OpenText Business Network Trading Grid Messaging Service (Trading Grid) to help synergize supply chain operations in two important regions to better serve customers.

With OpenText, Yazaki will accelerate customer and supplier onboarding by accessing the pre-connected OpenText community of more than 800,000 trading partners, the industry's largest B2B cloud network. Automated provisioning will significantly reduce time required to add new trading partners to the platform while self-service and mobile capabilities will allow partners to easily connect and

collaborate.

"We have built our business by delivering the right products in the right quantities at the right times, and by fostering long-term collaboration with our customers," said Yazaki Head of IT Ryan Spencer. "When we decided to synergize operations in the Americas and Europe, we chose the OpenText Business Network to ensure seamless digital communication between our trading partner ecosystems. It was clear OpenText Trading Grid would enable us to easily and securely integrate customers via the cloud and extend an effective digital experience to all customers in both regions."

"OpenText helps enterprises like Yazaki develop cloud-based business networks to empower customers and accelerate business growth," said Muhi Majzoub, OpenText EVP & Chief Product Officer. "We integrate people, systems and things to facilitate the uninterrupted flow of information, to streamline processes and to deliver new insights so that enterprises achieve an information advantage."

OpenText Business Network provides Yazaki with the comprehensive digital platform and real-time business visibility companies need to connect and enhance processes across an expanding network of customer and trading partner systems, internal systems, cloud applications, and devices. Yazaki will use OpenText Trading Grid to integrate and support communication and document exchange between more than 120 manufacturing, distribution and corporate locations and several hundred customers and suppliers in North and Central America and Europe.

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Product News

ANSYS Granta announces GRANTA MI 2020, delivering a new experience for enterprise materials information management

09 December 2019

Accurate materials information is essential for any product development organization. A single, gold-source of materials information ensures accuracy and traceability for simulation teams, product designers, and throughout the product development lifecycle.

The new GRANTA MI 2020 release meets this need with a significantly-improved user experience across the enterprise. GRANTA MI customers will see a faster, more intuitive, and easier-to-use system. If you're not yet using GRANTA MI, find out how you could benefit from shared, consistent, and reliable materials information across your engineering teams.

New features include: enhanced apps for accessing materials data with CAD and CAE, now including integration with ANSA simulation software; slicker search for all users; more flexible licensing options; new capabilities for charting data in GRANTA MI web apps; new data analysis features; and updated materials reference data.

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Centric 8 Software Powers Manufacturers & Manufacturing with PLM

12 December 2019

Centric Software is proud to announce market-driven, industry-first PLM technology for OEM and ODM manufacturers and their brand and retail partners. Centric 8 Product Lifecycle Management (PLM) streamlines the way manufacturers work by seamlessly connecting them to their brand and retail partners therefore dramatically improving efficiency and quality as well as shortening time to market. Centric Software provides the most innovative enterprise solutions to fashion, retail, footwear, outdoor, luxury, consumer goods, home décor and manufacturing companies to achieve strategic and operational digital transformation goals.

In response to demand from brands and private label retailers who conceptualize and sell products and the manufacturers that produce them, Centric's innovations in Manufacturing PLM fundamentally transform how brands, retailers and manufacturers share information and collaborate.

"We are the first on the market to offer a Manufacturing PLM solution that enables brands, private label retailers and manufacturers to seamlessly share and harmonize tech pack data even if multiple systems or PLM solutions from other vendors are in play," explains Ron Watson, VP of Products at Centric Software. "Directly connecting trusted trading partners is much faster and less error prone than either a traditional email or spreadsheet-based approach or even relying on a supplier portal to exchange data."

"The centralized tech pack information within Centric PLM enables manufacturers to receive data in a standardized, consistent format with systematic placement of specifications and units of measure from multiple brands and retailers. Centralized, harmonized information improves workflow, increases efficiency to ensure manufacturers can rapidly adjust to changes, maintain quality and make sure no time is lost for them to deliver products on-time and to spec," concludes Watson.

[Centric PLMTM for Manufacturers](#) was created in partnership with world-class OEM and ODM companies and is the digital foundation for manufacturers to manage constant change, an avalanche of communications with customers, shrinking deadlines and evolving compliance requirements. Modern and mobile, Centric PLM was created with Silicon Valley expertise and empowers manufacturers to manage complexity and gain a competitive advantage.

For brands and retailers, innovative PLM solutions for sharing technical product data with suppliers shrink manufacturing timelines so brands and retailers can get a higher variety of products to market, faster. Streamlined supplier collaboration builds closer relationships with trading partners, reduces questions and requests for technical clarification, decreases errors, increases the accuracy of costing and improves the quality of samples, prototypes and finished products.

"We are very proud to announce Centric's new innovations in PLM for Manufacturers to streamline brand, retail and manufacturer relationships," says Chris Groves, President and CEO of Centric Software. "Centric PLM for Manufacturers is truly transformational for the entire supply chain from producers to those companies who develop and sell products."

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JWI Software Continues to Redefine Industrial Software with Release of Device Mate 3.0

12 December 2019

JWI Software Ltd (www.jwisoftware.com), a provider of cloud native software that is challenging manufacturers to rethink their Digital Engineering, Digital Factory and PLM technology stack, announced today the availability of Device Mate 3.0, the first 'cloud to edge' smart factory solution that enables device apps to be created, configured and updated in the cloud and then loaded into the edge in real time - without having to stop any machines or systems.

Responding to the need of high-volume global manufacturers to digitalize their production processes to improve cost, quality, and delivery lead-times, Device Mate 3.0 enables digital twins to be easily configured for different devices (SMT/SMD, injection molding, sheet metal) as well as for the entire production line.

"After years of working with some of the world's largest manufacturers, we knew it was time to redefine the role, capabilities and future of industrial software," explained Per Johnsson, CEO of JWI. "That's what led us to build an entirely new platform, taking advantage of modern technology enablers to ease the implementation of smart factory, digital thread, digital twin and other future initiatives. Device Mate is a great example of this approach."

Device Mate 3.0 maps directly to the ISA95 model, equipping businesses with a competitive advantage and enabling them to:

Configure digital twins of different physical devices

Create a digital twin of the production line by defining machine-to-machine (M2M) relations

Support any IPC (Industrial PC) as Edge to process data and execute function close to the source (device)

Create, configure and update device apps in the cloud, then automatically load it into the edge - without have to stop the manufacturing device or the running system – to easily deploy new improvements with no downtime

Simulate edge performance, connections computation & storage from Cloud before deploying to Industrial PC to ensure any potential problems are resolved before production is impacted

Make any changes or updates without needing to build and deploy the entire stack at once (as with monolithic systems)

"But we're not stopping there," adds Mr. Johnsson. "The JWI platform was architected to evolve very quickly, and Device Mate shows how our customers can immediately take advantage of new engineering and manufacturing innovations as we roll them out."

Siemens updates Simcenter Portfolio with enhanced electromagnetic-vibro-acoustic analysis capabilities

10 December 2019

New releases of Simcenter MAGNET and Simcenter Motorsolve software provide a unique and seamless solution to resolve noise and vibration design issues targeting electric traction motors

Design engineers can now apply a wider range of real-world conditions for electro-vibro-acoustic

simulation analysis, with links to additional structural package tools

Siemens Digital Industries Software's Xcelerator portfolio is helping automotive companies accelerate the process of innovating and developing the complex systems required for today's vehicles

Siemens Digital Industries Software today announced new releases of Siemens Simcenter™ MAGNET™ software and Simcenter™ Motorsolve™ software for simulating electric motor design and electromagnetic fields at any stage of the design process. Electric traction motors must be durable and NVH-compliant, however, electromagnetic forces induce mechanical vibrations which may lead to failure. The Simcenter MAGNET and Simcenter Motorsolve solution calculates the behavior of electromagnetic forces on individual components, providing examination of the structure and materials integrities under multiple operating conditions during any phase of the design process. These new capabilities are important for implementing a realistic digital twin of electric and hybrid electric vehicle powertrains or for any application where NVH constraints are critical, such as aerospace, industrial and medical equipment.

Siemens' approach to NVH analysis is unique since the Simcenter Motorsolve tool uses smart 2.5D technology to generate a 3D nodal force mesh model based on 2D simulations, significantly accelerating analysis with accurate results. Net forces on components can be determined using Simcenter MAGNET software, even when they are in contact, including artificial component grouping. Simcenter SPEED PC-BDC models can be seamlessly imported into Simcenter Motorsolve software for higher-resolution finite element simulations, and Simcenter 3D electromagnetic software integration can provide optimal electric motor simulation performance results. Now, design engineers can apply a wider range of real-world conditions in their electro-vibro-acoustic simulation analysis.

Siemens provides the most comprehensive automotive and transportation software portfolio in the industry, combined with an application development platform to accelerate the efforts of engineering teams to innovate with confidence. Automotive manufacturers, suppliers, technology startups and industry leaders apply Siemens comprehensive digital twin to create the most robust digital representation of automotive systems and real-world environments, blurring the boundaries between engineering domains, and between the digital and physical worlds.

"Our Simcenter MAGNET and Simcenter Motorsolve solution addresses the key challenges electric motor designers face for NVH compliance," stated Roland Feldhinkel, Vice President Simulation and Test Solutions, Siemens Digital Industries Software. "As a leader in automotive software technologies, the new functionality in our latest release can quickly identify design problems so our customers can develop high-performance products with greater productivity."

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