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CIMdata News

CIMdata Announces the First Public Product Lifecycle Management Certificate Program of 2022

CIMdata, Inc., the leading global PLM strategic consulting and research firm, announces the first public CIMdata Product Lifecycle Management (PLM) Certificate program of 2022. The program will take place in Ann Arbor, Michigan, from March 14-18.

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. A team of CIMdata experts facilitates the program. Successful completion of the program and assessments leads to a Certificate of PLM Leadership.

Drawing 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 considering embarking on a PLM journey or those already implementing PLM. PLM solution providers will also find the program useful for recent hires as part of the onboarding process and seasoned professionals alike.

According to CIMdata's president and CEO, Peter Bilello, "For the past two years, we have pivoted our in-person classes to a virtual platform, which the PLM community has well received. We believe the time is right to return to an in-person education model that allows for essential networking between attendees and CIMdata faculty members."

Additional programs are available in Amsterdam, The Netherlands, from June 20-24; Boston, Massachusetts, from September 26-30; and Santa Clara, California, from December 5-9.

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>.

Digital Enterprise Society: Podcast Episode 133: Navigating Disruptions and Improving Resiliency with PLM

10 December 2021

On this episode of the Digital Enterprise Society podcast, Thom Singer and Craig Brown are joined by CIMdata's President and CEO Peter Bilello for a discussion about the role of PLM in thriving companies, the intersection of AI and PLM, and market trends that successful companies need to take note of and pivot toward today. Listen to the podcast at

<https://www.digitalenterprisesociety.org/blogpost/1788278/386792/133-Navigating-Disruptions-and-Improving-Resiliency-with-PLM>

CIMdata PLM Industry Summary

Mendix and MindSphere: Integrating IT and OT to Deliver Business Performance – a CIMdata Commentary

8 December 2021

Key takeaways:

- Information and Operational Technologies (IT and OT) provide different, complementary capabilities essential to every business.
- IT and OT integration used to be difficult because legacy applications were developed, managed, and used separately, but modern technology and solutions make it much easier to integrate IT and OT.
- Integrating selected capabilities within these two domains can deliver significant improvements in business performance by improving data quality and reducing time to find needed information.
- Mendix and MindSphere solutions from Siemens Xcelerator portfolio provide one way to achieve flexible, adaptable, and sustainable integration of IT and OT capabilities.

Introduction

Manufacturing enterprises in every industry are working in complex, fast changing times. They are under continuous pressure to evolve and improve how they operate and are being challenged to develop, produce, and service increasingly more personalized, complex, smarter, connected, and eco-friendly products. Additionally, industry initiatives (e.g., Industry 4.0) are driving higher levels of automation of traditional manufacturing and industrial practices, through the use of modern smart technology. Addressing these challenges requires companies to digitally transform themselves and how they work. Companies must integrate information from more sources across the product and production lifecycles so they can make faster, better informed business decisions. [\[1\]](#)

In a manufacturing enterprise, product design and development and product manufacturing environments complement and define each other. Product design impacts how a product must be manufactured (e.g., machine tools, materials, and processes), while the capabilities and performance of the manufacturing environment establish constraints on design parameters (e.g., tolerances, supplied components). Modern product design and development is primarily a subset of the enterprise Information Technology environment consisting of software tools such as 3D modeling, simulation and analysis, software development, process planning, and electrical/electronic design, as well as the related data management and collaboration applications. Product manufacturing manages the operation of physical processes and the machinery and workers that carry them out—primarily an Operational Technology environment.

Definitions

Information Technology (IT) includes any use of computers, storage, networking devices, other related devices, and software, as well as processes to create, process, store, secure, and exchange all forms of electronic data representing product-related information.

Operational Technology (OT) refers to the hardware and software used to change, monitor, or control physical devices, processes, and events within a company or organization used to convert raw material into physical products, based on product data developed within the IT domain.

As part of their digital transformation, companies need to dissolve the boundaries between their IT and OT solutions and other critical enterprise applications. Users and systems in both domains need to be able to easily connect to, and transfer/transform data from diverse repositories into a form appropriate for their intended use. This blending of information across domains is called IT/OT convergence. IT/OT

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convergence connects IT systems with OT systems, allowing them to share information with each other. IT/OT convergence is a key driver for Industry 4.0; the combined data and contextual understanding enhances the value these systems can deliver to a business.

Today's smart, connected devices, machines, and systems (and workers) are providing product, production, and service performance data in near-real time that can be consumed in both operational (MES, service, etc.) and informational (design, engineering, process planning, supply chain) applications for improved business performance.

However, IT systems can include middleware and other integrations built on brittle (difficult to maintain) code, that do not have needed connectivity with other systems. Before modern architectures and application development solutions became available, it was difficult to update and maintain integrations between IT systems with OT systems.

Companies need modern, easy-to-use development and integration tools that can create the IT/OT convergence required for their specific business needs. These tools must include both IT capabilities (e.g., APIs, microservices, etc.) and OT capabilities (i.e., sensors, controllers and IoT/IIoT connectivity, e.g., smart machine tools).

Siemens Mendix

The Siemens Mendix™ platform is not just a development tool—it is a comprehensive, modern, low-code application development and integration platform. Mendix is designed to make it easy for both business and professional developers to create and deploy personalized applications and processes. Mendix is also architected in a cloud-native microservices-based environment that enables data integration across diverse, distributed information repositories, applications, and platforms spanning both IT and OT domains.

Mendix is an integral part of Siemens' Xcelerator solution portfolio and the Xcelerator cloud architecture. It is used to integrate, develop, and extend the components of the portfolio and integrate with non-Siemens (in-house and third-party developed) applications and environments. It can also be used as a standalone tool by any company that needs to develop tailored IT and OT applications and integrate data and processes across their extended value chain.

Mendix integration capabilities are effective in helping companies define and create the digital threads and comprehensive digital twins required to support a given business use case, and as part of establishing a modern, digitally driven enterprise. Mendix is cloud-native for easy application development, connectivity, and deployment. Connectors are available for many Siemens solutions and hundreds of non-Siemens solutions, and there is a Mendix app store with both free and paid apps created by its global community of over 100,000 developers.

Key to any application is its ability to connect with data. The Mendix Data Hub is an open, standards-based metadata repository that enables all users to find and explore data resources throughout their connected ecosystem. At the same time, Data Hub Connectors enable enterprises to connect multiple data sources to the Data Hub, populating a catalog and making that data available to developers. Users can connect to other Mendix application data, Siemens Teamcenter, Siemens MindSphere, Siemens Opcenter, SAP, and numerous other common enterprise data sources (including operational data). The Data Hub can also be extended using the eQube Data as a Service solution that has over 60 smart connectors, providing support for industrial data and system integrations such as Teamcenter with SAP. Leveraging Xcelerator's modern, microservices-based architecture, the Mendix Data Hub and its connectors provide a foundation upon which to build and evolve applications and integrations that enable IT/OT convergence.

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Siemens MindSphere

MindSphere, Siemens' industrial IoT as a service solution within the Xcelerator portfolio, manages and connects machines, plants, and systems and powers IoT solutions from the edge to the cloud. It provides connectivity to data and advanced analytics services that enable manufacturers to understand that data by leveraging reduced-order simulation models, modern analysis capabilities for predictive learning, and advanced analytical capabilities.

The MindSphere edge-to-cloud asset connectivity capabilities enable asset performance analysis, rapid and informed operational and service decisions, and autonomous actions to be taken by devices directly. MindSphere Analytics Services provide basic and advanced APIs for time series data that can support calculations related to KPIs, signal processing, trend prediction, and anomaly identification. From a product lifecycle perspective, IT/OT convergence is enabled with MindSphere through its extensive connectivity capabilities across the extended product lifecycle ecosystem (such as with Teamcenter). For example, machine tool data that is used to analyze and manage device performance can also be used in the design environment to improve the design of new products. MindSphere's connectivity also allows data contextualization so information from enterprise systems can be analyzed and made sense of with machine learning and artificial intelligence.

Mendix and MindSphere: Working Together

Mendix and MindSphere are integral parts of Siemens' Xcelerator portfolio. Working together they enable businesses to create innovative solutions that connect extended value chain ecosystems incorporating any device, from any location, on any cloud platform.

With this combination, companies can more easily create comprehensive feedback loops among product development, supply chain, production operations, service/maintenance, and many other business workflows and digital threads. Mendix and MindSphere support using critical intelligence from edge devices to be part of the data and information feedback loops, analysis, decision making and action taking. Closing information loops in this way also enables companies to create and leverage comprehensive digital twins of their products as well as their production and service processes.

Siemens provides numerous pre-built connectors for common tools and data sources used by businesses (e.g., Siemens Teamcenter, SAP ERP, IBM Maximo). Working together, Mendix and MindSphere empower the convergence of IT and OT in specific use cases by providing a bridge to connect previously siloed OT data with the data being generated by IT systems. Combining and contextualizing IT and OT data gives a company the ability to extract new insights and provides a huge opportunity to increase efficiency, productivity, and competitive advantage. Furthermore, such pre-built connectors in the Xcelerator portfolio speed solution development and enable citizen and professional developers to focus on solving business problems rather than dealing with non-core IT issues.

Conclusion

Maintaining competitiveness requires continuous adaptability, improvement, and innovation. While technology has been used in industry for decades, it historically has operated in silos across the enterprise: IT to support skilled workers in the business domain and OT to support those in production operations. In recent years, companies have started to integrate the silos to improve business performance. This task has been made easier thanks to modern technology architectures and configurable solution sets.

Siemens is at the forefront of this technology shift. Mendix and MindSphere, two key solutions within the Siemens Xcelerator portfolio, can enable IT/OT convergence in many scenarios. Mendix is used to develop for-purpose, personalized applications that leverage its data integration capabilities.

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MindSphere brings batch or real-time production data to the enterprise. CIMdata has been following the evolution and expanding integration of these solutions. We continue to be impressed with Siemens' vision and execution. Industrial companies that strive to grow and improve should review Siemens' Xcelerator portfolio and specifically consider Mendix and MindSphere to support their IT/OT integration and digital transformation requirements.

[1] Research for this commentary was partially supported by Siemens Digital Industries Software.

PLM Industry Veteran, John Jenkins, Joins CIMdata

6 December 2021

CIMdata, Inc., the leading global Product Lifecycle Management (PLM) strategic management consulting and research firm, announces that John Jenkins has joined the firm as a Senior Business Development Manager.

Mr. Jenkins is an accomplished enterprise account executive with 35 years of experience in engineering software sales, technology commercialization business development for research, engineering, and manufacturing organizations, and engineering research in academia. During his career, Mr. Jenkins has developed customer/partner relationships in several industries, including automotive (e.g., Ford, Honda, Visteon, BorgWarner, Garrett Motion, Meritor, Harley Davidson), aerospace (Boeing, Lockheed Martin, Pratt & Whitney, Gulfstream, Sikorsky, Embraer), industrial (Caterpillar, John Deere), consumer packaged goods/consumer products (e.g., Johnson & Johnson, Whirlpool), medical devices/pharmaceutical (e.g., Janssen Pharmaceuticals, Alcon) among others.

Most recently, Mr. Jenkins was a Strategic Enterprise Account Executive at Physna Inc., where he played a key role in that company securing over US\$70 million in VC funding. Before being recruited to Physna, he served as the North American sales lead for Noesis Solutions, a Belgian Process Integration and Design Optimization (PIDO) solution; Tridiagonal Solutions, a software developer and engineering consultancy based in Pune, India; and Optimal Solutions, developer of Sculptor, a real-time CFD mesh morpher.

Mr. Jenkins also created a company leveraging Lockheed Martin Skunk Works technology via the U.S. Department of Energy's Idaho National Laboratory. He acquired US\$5 million in private equity investment for this company, leading to creating the first fully distributed CAD solution.

Peter Bilello, President & CEO of CIMdata, stated, "John is a proven veteran of the Simulation & Analysis (S&A) software and services industry. He brings a rich perspective and deep experience base that extends to the early days of CAD/CAE/PDM at General Electric, Lockheed Corporation, and the U.S. Department of Energy's Idaho National Laboratory. He has extensive global experience in the development, go-to-market planning, and deployment of advanced technologies and processes within many of the different industry sectors that CIMdata presently serves."

Mr. Jenkins holds a Bachelor of Science degree in Design Engineering Technology (Mechanical Engineering) from Brigham Young University, Provo, Utah. He has also spoken at several CAD/CAE/PLM-focused conferences in North and South America, Japan, and India.

Sprint to the finish

10 December 2021

A&D products are complex, have long service lives, and must function in a wide range of harsh and demanding environments. Driven by today's development challenges and the DOD initiative, A&D companies are moving to modern, agile approaches offering greater flexibility and more responsiveness as mission scope and market demands change. By leveraging comprehensive digital twin and digital thread, a company can transform how it operates, collaborates, and shares information across the product development process. Once an agile development process is in place, backed by a digitalized enterprise, development teams can work in smaller, more parallel phases. Complex problems, approaches with no clear solution, and changing product requirements can be embraced and successfully engineered. Teams can work together with greater flexibility and be more responsive as market demands change. Read more at <http://magazine.aerospacemanufacturinganddesign.com/article/november-december-2021/sprint-to-the-finish.aspx>

Taking to the Cloud: Accenture's Cloud-Powered Product Engineering – a CIMdata Commentary

9 December 2021

Bringing Siemens Xcelerator Portfolio to Microsoft Azure

Key takeaways:

- Interest in and adoption of cloud-based enterprise software is accelerating, but rates vary by segment. Just as in on-premises software, industrial customers want a choice of Infrastructure-as-a-Service (IaaS) providers to support their own cloud strategies.
- Accenture leveraged work with their industrial clients to support Siemens Digital Industries Software offerings on Microsoft Azure to create new capabilities in cloud-powered engineering for those clients.
- Their strategic consulting approach is powered by accelerators and reference architectures jointly developed with Microsoft and Siemens that speed implementation while also limiting risk. Interest in their approach is high and early returns promising.

Introduction

While on-premises software powered Industry 3.0, the digitalization of product platforms and manufacturing of Industry 4.0 is focused on the cloud. Product lifecycle management (PLM) implementations most often rely on offerings from multiple solution providers and can be heterogenous in the extreme. In a cloud-centric future, this means that industrial companies will have workloads that span multiple cloud infrastructure providers, often desiring support on a cloud environment that is not the focus of their chosen PLM solution provider. To help address this issue, Accenture created their Cloud Powered Product Engineering (CPPE) initiative that leverages capabilities in their Industry X practice and other centers of excellence within the company. This commentary focuses on their Siemens Xcelerator on Azure capabilities, which bring much of the Siemens Digital Industries Software Xcelerator portfolio to the Microsoft Azure cloud. Their early results are impressive and their approach should help their customers move to the cloud more quickly, consistently, and with a more rapid time to value. [1]

Taking to the Cloud

From a historical perspective, the application of digital technology to the product lifecycle has been a

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small blip, dating to the 1940s with early numerical control (NC) machining solutions. The bounty of Moore's law, the notion that the speed and capability of computers can be expected to double every two years, as a result of increases in the number of transistors a microchip can contain, powered a computing revolution over the following decades with the creations and widespread adoption of minicomputers, workstations, and PCs, putting computing power literally in the hands of users with modern mobile devices.

Over the last decade, these same technologies were used to power a new computing paradigm, the cloud, where the resources are again distant from the users, while at the same time offering a wide range of technical and business benefits. Today, the global cloud infrastructure market is dominated by Amazon Web Services (AWS) with Microsoft Azure continuing to gain market strength. Other cloud infrastructure leaders include Google, Alibaba, and Huawei.[\[2\]](#)

Some categories of enterprise software are leading the charge to the cloud, most notably Salesforce in customer relationship management (CRM). The evolution in PLM offerings on the cloud was somewhat slower. In fact, in 2017, CIMdata executed research focused on this differential rate of adoption, and repeated this study in 2020. In the earlier 2017 research, users were hesitant to embrace the cloud, as were their main independent software vendors (ISVs). The results of our 2020 research saw both more adoption of cloud-based offerings and significantly more interest in them. Our research showed that end users expected to lower infrastructure costs but were still reticent about the security implications. At the same time, they hoped to better support more use cases that are complex in an on-premises world, such as enabling the digital thread, leveraging vast data sources using artificial intelligence (AI), and better support for sustainability objectives across global value chains.

Clearly the future of computing is on the cloud. CIMdata expects that just as the on-premises PLM world is heterogenous in terms of software adopted and used, so will the cloud, but with a twist. In our cloud future both the applications and the cloud infrastructure used will be heterogeneous, with an emphasis on multi-cloud support.

Today leading PLM ISVs focus on at least one IaaS provider, with AWS being the most common choice. Some ISVs rely on proprietary clouds. But their industrial customers are on different timelines and have often made different cloud infrastructure decisions. Accenture, a leading global professional services and technology company, helped some of their leading customers on their cloud PLM journey and built upon their successes to create a new approach to enabling PLM on the cloud.

Cloud-Powered Engineering at Accenture

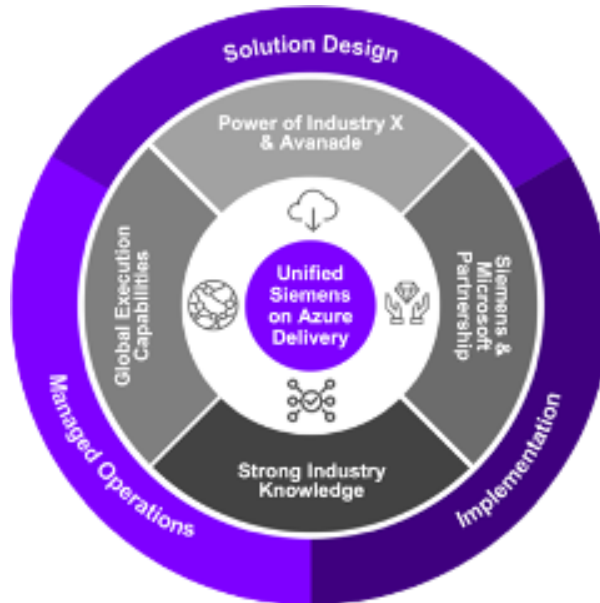
Accenture's support for PLM is focused within their Industry X practice. According to Accenture "With our global team of experts in design, engineering, technology, consulting, and operations, we work together at speed to find solutions to our clients' challenges with a focus on Intelligent Products and Platforms."[\[3\]](#) Their Industry X practice is part of a much larger Accenture commitment to the cloud. In September 2020, Accenture announced their cloud-first initiative, planning to invest \$3 billion over three years "to help clients across all industries rapidly become 'cloud first' businesses and accelerate their digital transformation to realize greater value at speed and scale."[\[4\]](#)

In CIMdata's discussions with Accenture, they stated that it can be difficult to get executives at industrial companies to understand the potential offered by moving to the cloud. The most common refrain is "my current approach is working for me; I do not have a need to make that change." Accenture believes, and CIMdata agrees, that most industrial companies do not fully comprehend that moving to the cloud can offer a step change improvement in supporting their current use cases and offers many additional capabilities that are impractical in an on-premises environment.

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Accenture partners with many of the leading PLM ISVs. This commentary focuses on their joint partnership with Siemens Digital Industries Software (Siemens) and Microsoft Azure to bring Siemens' offerings to the Microsoft Azure cloud. This three-way collaboration helped ensure that Siemens offerings perform well on Microsoft Azure. This includes work by the three partners to co-develop a Siemens-on-Azure reference architecture which underpins their joint offering delivery.

As often happens with such initiatives, it began with some Accenture customer engagements to implement Teamcenter and other Siemens offerings on Microsoft Azure, which is not the default cloud infrastructure choice offered by Siemens. Helping a large European automotive original equipment manufacturer (OEM) was their first such project, followed by work with a large European energy company. Other engagements with small- and medium-sized manufacturers quickly followed. As part of their efforts, Accenture created a framework to help support their customers' requirements more consistently and to deploy the needed capabilities more rapidly. Today, Accenture's Siemens Xcelerator on Azure enables 35 Siemens applications and toolsets on Microsoft Azure, a large part of the full Siemens Xcelerator portfolio, as highlighted in Figure 1.



*Figure 1—Siemens Xcelerator on Azure
(Courtesy of Accenture)*

To more effectively promote their approach to management at their industrial clients, Accenture is driving their Cloud Powered Product Engineering (CPPE) initiative. Their approach is to conduct a value assessment as the first step, quickly followed by proving technical feasibility. In Accenture's opinion, these are the two most important things to communicate to cross the barrier of cloud adoption. Their engagement model relies on Accenture Industry X teams to deploy and configure the necessary engineering platforms, working with Accenture Technology/Avenade to help migrate workloads to the cloud.[\[5\]](#)

A key element to their approach is Accenture's Siemens Xcelerator on Azure Proof-of-Concept Accelerator. This Accelerator echoes key Siemens' lifecycle concepts: support for the digital product, digital production, and real production. It is used to help validate a customer's PLM use cases, to highlight key cloud capabilities, and to verify integration scenarios. It includes a range of best practice templates to quickly implement the needed capabilities on a turnkey architecture. This focuses on

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configuring the Azure-based solution, including high performance computing (HPC) and Engineering Desktop support, the Internet of Things (IoT), Infrastructure Monitoring, Development Operations (DevOps) capabilities that are critical for IT support teams, and security. Key capabilities in their Microsoft Azure-based solutions include Engineering On Cloud, Unified BOM Management, Industrial IoT (MindSphere), PLM-MES-ERP integration, and Mendix.

Accenture claims significant benefits from their Siemens Xcelerator on Azure approach, including up to 60% savings on infrastructure operations and a 15-20% reduction in security efforts. They also believe that their delivery approach is 40% faster due to their tools and accelerators enabling the process, and up to 30% savings on provisioning and builds. CIMdata reviewed Accenture's Siemens Xcelerator on Azure solution and it demonstrates the promise of reinventing a wide range of PLM-enabling solutions for cloud deployment. It incorporates powerful DevOps solutions and infrastructure automation capabilities, bringing much-needed efficiency in how organizations deliver engineering capabilities. CIMdata is impressed by the results to date and is excited to learn more as their customer base expands.

While this commentary focuses on Accenture's work around PLM solutions deployed on Microsoft Azure's cloud solution, Accenture has created parallel solutions/accelerators for deploying on the AWS cloud as well. This is critical in a multi-cloud world where each customer may want to support an IT infrastructure spanning many cloud infrastructure providers.

Conclusion

On-premises computing has served industrial companies well, powering the Industry 3.0 revolution and evolving to Industry 4.0 today. But that Industry 4.0 vision relies on the cloud to animate global value chains and our increasingly smart, connected world. For most companies, cloud migration is not a question of if but when. The path to the cloud varies widely by company and cloud infrastructure enables most PLM use cases as well as an exciting range of new capabilities. While many ISVs rely on a narrow set of cloud infrastructure providers, including both public and private cloud offerings, industrial companies want to leverage multi-cloud infrastructure. To support their industrial clients, Accenture developed their CPPE initiative. This commentary focuses on one instance of CPPE, Siemens Xcelerator on Azure, which supports a wide range of solutions that are part of Siemens Xcelerator portfolio. Their results to date are impressive and, as the move to cloud accelerates, their approach will help their clients to consistently achieve rapid time to value for their key PLM use cases and workloads.

[1] Research for this commentary was partially supported by Accenture.

[2] <https://www.gartner.com/en/newsroom/press-releases/2021-06-28-gartner-says-worldwide-iaas-public-cloud-services-market-grew-40-7-percent-in-2020>

[3] <https://www.accenture.com/us-en/services/industry-x-index>

[4] <https://newsroom.accenture.com/news/accenture-cloud-first-launches-with-3-billion-investment-to-accelerate-clients-move-to-cloud-and-digital-transformation.htm>

[5] <https://www.avanade.com/en-us/about-avanade/partnerships/accenture-avanade-microsoft-alliance> – Formed in 2000, “Avanade is Accenture’s engine for innovation and solutions with Microsoft. Whether improving customer experiences with artificial intelligence or addressing the unique needs of industries, we partner closely with Avanade to deliver cloud to edge solutions and services that maximize the value and impact that customers realize from their Microsoft investments.”

Acquisitions

Atos to acquire Cloudreach to boost its multi-cloud and security capabilities

7 December 2021

Atos announced an agreement to acquire Cloudreach, a leading multi-cloud services company specializing in cloud application development and cloud migration, capitalizing on strong partnerships with all three hyperscalers. The company employs more than 600 highly skilled employees in cloud platforms, applications, and security. Revenue is expected at c.€100 million in calendar year 2021. Cloudreach was incorporated in 2009 and is headquartered in London with additional offices in the USA, Canada, the Netherlands, Germany, France, Switzerland and India.

Cloudreach is a Premier Consulting Partner of Amazon Web Services (AWS), a Microsoft Azure Expert Managed Services Provider (MSP), and a Google Cloud Premier Partner as well as a Google Cloud Security Partner. It recently won the AWS Consulting Partner of the Year Award for UK&I. It holds more than 1,000 certifications across AWS, Microsoft Azure and Google Cloud Platform.

Through this acquisition, Cloudreach's strengths in consulting, transforming and building digital solutions for customers, using cloud-based applications, data and analytics, and machine learning, are embedded in hybrid and multi-cloud platforms with Atos' proven leadership in Hybrid Cloud, SAP HANA, Application Modernization, Digital Workplace, Edge Computing, Cybersecurity and IoT.

“The future acquisition of Cloudreach has strong synergetic potential with the existing Atos expertise in Cloud, notably in Europe, and enhances the value of our past acquisitions of Syntel, Maven Wave, Edifixio and more recently VisualBI and AppCentrica. Coupled with Cloudreach, Atos grows its position as the multi-cloud powerhouse, especially strengthening our global leadership position delivering AWS solutions. Further, as the company's largest region, Atos Northern Europe now has a potent combination to deepen the development and delivery speed of digital services for our customers. Atos will also allow Cloudreach to extend its excellence into North America and other regions of the Group. Finally, Cloudreach perfectly represents the company's acquisition strategy, by reinforcing a key expertise of the Group to serve its organic growth acceleration,” said **Adrian Gregory, Acting co-CEO of Atos.**

Recently, Cloudreach and AWS signed a Strategic Collaboration Agreement to accelerate global cloud adoption. The wide-ranging agreement drives an acceleration of the joint go-to-market proposition, along with investments in Cloudreach software innovation, geographical expansion, and the launch of a Talent Academy.

“We are excited to take Cloudreach on the next step of its mission to deliver the promise of cloud and drive extraordinary value for our customers. Our partnerships with Amazon, Microsoft and Google will be accelerated by the combination we are announcing today. Atos offers an impressive global platform of technology assets and deep expertise enabling clients to drive digital capabilities at an entirely new scale and speed, while providing our people with exciting new challenges and career growth.” said **Brooks Borcharding, Cloudreach CEO.**

The closing of the transaction is subject to regulatory approvals and expected early Q1 2022.

HCL Technologies and apoBank Come Together to Acquire German IT Consulting Company gbs

8 December 2021

HCL Technologies (HCL), a leading global technology company, and Deutsche Apotheker- und Ärztebank eG (apoBank), the largest cooperative primary bank in Germany, have signed with Atruvia AG an agreement to acquire IT consulting company Gesellschaft für Bankssysteme GmbH (gbs).

The transaction is expected to close in Jan. 2022, subject to closing conditions, including regulatory approvals. Post-closing, HCL will own 51%, while apoBank will own 49% stake of gbs. apoBank is currently a 10% shareholder and is increasing its stake in gbs from 10% to 49%.

This strategic acquisition will add an edge to HCL's existing capabilities to accelerate digital transformation and further enhance HCL's scale in Germany. HCL's existing strengths, combined with gbs' portfolio, will enable HCL to expand within the German financial services sector. HCL and apoBank will leverage gbs' in-depth knowledge of the cooperative banking sector and regulatory expertise to offer next-generation services to its clients. This collaboration is in line with HCL's investments in a local delivery model supported by a highly skilled German workforce.

"Germany is one of the largest economies in Europe and is, therefore, a strategic region for HCL," said Sudip Lahiri, Senior Vice President and Head of Financial Services, Europe, HCL Technologies. "We're excited to welcome gbs to HCL and look forward to playing a significant role in shaping the digital transformation journey and providing next-generation services to our German clients leveraging Fenix 2.0 (HCL's industry leading digital transformation framework). There's a great alignment between both organizations and together with gbs, HCL will further augment expertise in the financial services portfolio which will expand our footprint in the region."

"HCL's innovative delivery models and financial services expertise, along with gbs' knowledge of the cooperative banking sector, local IT and regulatory requirements is a winning combination," said Johannes Kermer, Divisional Board Member for IT and Operations at apoBank. "HCL is already a trusted apoBank IT services partner and this strengthens our relationship further."

"We are confident HCL and apoBank are the ideal owners of gbs," said Martin Beyer, Board Spokesman and Head of Corporate Development, Atruvia. "gbs will continue to be part of the IT ecosystem to service the cooperative banking sector and will support and collaborate with Atruvia to service our joint clients."

HCL Technologies has eight offices in Germany, including its regional headquarters in Eschborn. Its more than 1,800 employees serve 18 of DAX 40 companies. HCL's state-of-the-art banking innovation center in Eschborn and an upcoming fintech lab in Berlin offer technology expertise to organizations globally.

Xometry Acquires Thomas, Accelerating the Manufacturing Industry's Digital Transformation

8 December 2021

Xometry, the global marketplace for on-demand manufacturing, announced the acquisition of Thomas (Thomasnet.com®), a leader in product sourcing, supplier selection and digital marketing solutions. The cash and stock transaction, valued at \$300 million, is expected to close this week. Xometry's rapidly growing digital marketplace provides real-time access to global manufacturing capacity and demand, helping accelerate the digitization of the manufacturing industry.

CIMdata PLM Industry Summary

The acquisition of Thomas is expected to rapidly expand Xometry’s buyer and seller base, significantly enhancing Xometry’s global digital marketplace for manufacturers. Xometry also expects to leverage Thomas’ marketing and data services to deliver an unmatched suite of end-to-end services for sellers with additional fintech and digital marketing products.

“Xometry and Thomas share a common mission of championing the digital transformation of the manufacturing industry, one of the largest sectors of the global economy and the foundation for innovation everywhere,” said Randy Altschuler, CEO of Xometry. “Thomas brings strong brand equity, trusted and extensive relationships, proprietary data and advanced full-funnel marketing services – assets that perfectly complement our digital marketplace. Together, we will introduce new services, cross-sell to our combined base and expand our suite of products, particularly in fintech and digital marketing.”

“Thomas has a long and proud history of bringing active buyers and sellers together on our Thomasnet.com platform and providing the data and marketing services that inform decision-making,” said Tony Uphoff, President and Chief Executive Officer of Thomas. “In joining forces with Xometry, we’re uniting our products with the power of the Xometry marketplace so we can do even more for industry together.”

An industry leader in on-demand manufacturing, Xometry connects enterprise buyers across industries such as aerospace, consumer products, defense, industrial, automotive, medical, energy, robotics, green-tech and more with sellers of custom-manufactured parts worldwide. At the end of Q3 2021, Xometry had 26,187 active buyers, including nearly 30% of the Fortune 500. Leveraging AI and machine-learning technology, the Xometry marketplace provides immediate pricing, delivery lead times and quality assurance in a highly fragmented environment, as well as a suite of financial products that enable manufacturers to grow their businesses.

Thomas brings deep relationships with highly qualified enterprise buyers and engineers. The company’s industry leading Thomasnet.com platform boasts more than 1.3 million registered users (including 93 percent of Fortune 1000 companies) and more than 500,000 commercial and industrial sellers, including 45,000 diversity certified sellers. Every year, more than 20 million sourcing sessions are initiated on Thomasnet.com, generating extensive first-party buyer intent data across multiple sectors.

Transaction Details

Under the terms of the deal, Xometry is acquiring Thomas on a cash-free, debt-free basis for \$300 million subject to customary adjustments – approximately \$198.5 million in cash and \$101.5 million in Xometry’s Class A common stock.

The acquisition is expected to be immediately accretive to gross margin and Adjusted EBITDA margin. We expect the deal to accelerate our path to profitability and expect full year profitability in 2023. Based on anticipated revenue synergies, we expect the pro forma company revenue growth rate to be consistent with Xometry’s expected revenue growth on a standalone basis in 2022.

Goldman Sachs & Co. LLC acted as the financial advisor and BakerHostetler acted as the legal advisor to Xometry. DC Advisory US acted as the financial advisor and Winston & Strawn LLP as the legal advisor to Thomas.

Investor Presentation & Conference Call

Xometry has published a presentation to its investor relations website.

Xometry management will host a conference call at 8:30 a.m. Dec. 8, to discuss the acquisition.

Conference Dial-In Numbers:

Conference ID: **1193859**

Participant Toll-Free Dial-In Number: **18773132061**

Participant International Dial-In Number: **14704959537**

Company News

3D Systems Names Claudia Napal Drayton to Board of Directors

2 December 2021

3D Systems announced the appointment of Ms. Claudia Napal Drayton to its Board of Directors, effective immediately. Ms. Drayton currently serves as the Chief Financial Officer of Quantum-Si, a life sciences company focused on technology related to protein sequencing and genomics for the healthcare industry.

“We are delighted to welcome Claudia to our Board of Directors,” said Chip McClure, chairman of the board of 3D Systems. “Her outstanding career as a finance leader, in roles ranging from public accounting to sophisticated medical devices and, in recent years, biotech companies, will prove invaluable to both our Audit Committee and our Board in general.”

In commenting on Ms. Drayton’s appointment, Dr. Jeffrey Graves, president and chief executive officer of 3D Systems added, “Claudia brings additional depth to our Board in key areas of healthcare and biotechnology that will serve us well as we continue to accelerate our efforts in medical devices, orthopedics and the increasingly exciting new arena of regenerative medicine.”

Ms. Drayton began her career in public accounting with Arthur Andersen and then moved to Medtronic, a global leader in medical devices, where she held positions of increasing responsibility in the finance organization over her 15-year tenure. These included Chief Financial Officer for both the Peripheral Vascular and the Integrated Health Solutions business units. In 2015, Ms. Drayton left Medtronic to assume the role of Chief Financial Officer of Nuwellis, and, more recently, of Quantum-Si, an emerging biotech company. These leadership roles have provided tremendous exposure to all aspects of a successful and disciplined healthcare business, including international operations gained through her expatriot assignment in Europe with Medtronic. As an active public company CFO, Claudia is intimately familiar with all aspects of financial controls and SEC reporting, as well as the unique requirements of the global healthcare industry.

“It’s an honor to join the 3D Systems Board of Directors at this point in the company’s transformation,” said Ms. Drayton. “I’m excited about 3D Systems’ history of innovation, and the success it has clearly demonstrated through its focus on the healthcare industry. The potential for 3D printing in medical device applications, as well as a tremendous range of biological applications within the human body, offer outstanding opportunities for growth and value creation as new solutions are brought to patients in need around the world.”

Accenture and UiPath Join Forces to Help Organizations Accelerate Transformation through Intelligent Automation

8 December 2021

Accenture and UiPath, a leading enterprise automation software company, announced an expanded business collaboration to help companies boost the adoption of enterprise-wide automation, accelerate technology transformation efforts and create new growth opportunities.

CIMdata PLM Industry Summary

As businesses reframe their future in a post-pandemic world, organizations that have been able to scale automation across the enterprise are empowering employees to innovate and drive value in new ways. Initially announced at the UiPath FORWARD IV conference in October, Accenture and UiPath are growing their longstanding alliance to combine robust automation solutions from UiPath with Accenture's complementary services and industry expertise. This will help clients benefit from intelligent automation to increase productivity as well as create a catalyst for the reinvention of business processes to be more efficient and adaptable to change.

Accenture and UiPath have been jointly serving clients around the world, helping support their automation journeys, including at Uber and the University of Chicago Medical Center.

"At Uber, it's about how we can apply technology and innovation to serve our customers," said Chad Aronson, global head of Intelligent Automation at Uber. "Partnering with UiPath and Accenture enabled us to take advantage of market-leading automation technology from UiPath and the digital and industry expertise of Accenture. This powerful combination has helped Uber achieve unparalleled results in its digital transformation journey to enhance internal operations productivity, quality, performance and user experience."

At the University of Chicago Medical Center, the Accenture team has harnessed the power of the UiPath Intelligent Automation platform to drive innovation and improve employee and patient experiences in this time of a global pandemic. In just six months, UChicago Medicine successfully transitioned from a pilot program to a fully operational Bot Center of Excellence that will run, manage and update robotic process automation initiatives.

"Working with Accenture, we have brought automation technology across our supply chain, pharmacy and revenue cycle departments, resulting in cost savings and improvements in both employee and patient experiences. The team is currently exploring and delivering further automation in epic test automation, IT operational optimization and contact center operations," said Shariq Ata, executive director for Data Analytics, Architecture, Integration and Innovation at the University of Chicago Medical Center. "Accenture brings the right mix of technical and healthcare expertise to quickly identify, assess and implement UiPath automation solutions."

"Increased collaboration with UiPath will help our clients realize more benefits from automation and achieve even greater value from the compressed transformations they are making," said Paul Daugherty, group chief executive — Technology and chief technology officer at Accenture. "When we automate the ordinary, we can unleash the extraordinary. Our expanded work with UiPath marks an important step forward in advancing the business and human potential of automation, combining UiPath's powerful automation platform with Accenture's expertise in driving transformational outcomes for its clients."

"Accenture and UiPath together bring unique capabilities that are unsurpassed, and we believe this will be transformative for clients in every industry," said Daniel Dines, UiPath co-founder and Chief Executive Officer. "These days, speed goes hand in hand with success. Enterprises can't afford to wait and hire someone tomorrow to build the solution they need today. Together, UiPath and Accenture can help enterprises realize the full potential of automation at scale as it reaches maturity."

Atos and Dassault Systèmes to Deliver Trusted Sovereign Cloud Platform Experience for Critical Industries

9 December 2021

Atos and Dassault Systèmes announce a global partnership to offer the 3DEXPERIENCE SaaS platform in a sovereign environment for critical and sensitive industries, notably in the defense and healthcare

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sectors. This highly secure deployment enables collaborative cloud experiences while providing full control of data, processes, and intellectual property. The platform can be set up in any country, with respect to industry and local regulations.

Many industries operate their businesses through virtual twins and require dedicated secure environments to deliver trusted experiences to citizens, patients, consumers, students, and business stakeholders.

The 3DEXPERIENCE platform provides organizations with a holistic real-time view of their business activity and ecosystem, in a single collaborative and interactive environment. Customers will benefit from the cloud platform in a dedicated sovereign environment, which will be managed and secured by Atos. Atos' services rely on the Atos OneCloud Sovereign Shield, a set of methodologies, products and cloud services. To this end, Atos brings its cybersecurity expertise and solutions, as number 2 worldwide in cybersecurity services, to meet the specific needs of critical infrastructures. This includes a Security Operation Center (SOC) and cybersecurity services to secure maintenance and administration activities.

To ensure the highest levels of data privacy, the platform is compliant with the French CIIP¹ law and the European NIS² directive, in particular for security incident detection and administration information systems. This offer addresses the specific needs of defense administrations, public entities, and entities known as "Operators of critical services" and "Operators of vital importance".

Atos and Dassault Systèmes will explore further opportunities to expand their partnership, leveraging Atos cybersecurity products, Atos' expertise in High Performance Computing (HPC), and in critical systems development, in combination with the 3DEXPERIENCE platform solution.

"We are pleased to bring the Atos OneCloud Sovereign Shield to the SaaS applications domain, so we can offer a sovereign deployment of the 3DEXPERIENCE platform to critical industries worldwide. The partnership between Atos and Dassault Systèmes confirms our shared ambitions to bring a unique offering to the market to improve the level of control that clients have over the usage of the data they produce and exchange", said Pierre Barnabé, Interim co-CEO and Head of Big Data and Security, Atos.

"The growing adoption of virtual twins for product innovation as well as manufacturing and business operations, in all industries, elevates companies' and administrations' needs for hyper trusted platforms. To unleash the power of cloud, the whole stack – from IT infrastructure to business experiences – requires holistic, consistent cybersecurity operations", said Bernard Charlès, Vice Chairman and CEO, Dassault Systèmes. "This alliance between Atos and Dassault Systèmes provides the highest level of experience-based security and sovereignty, using the collaborative power of the 3DEXPERIENCE platform. It opens new possibilities for trusted collaboration in domains where it has become critical, like healthcare and defense. This Virtual Twin Cyber Experience approach will also be applied to the joint solution itself."

Aurigo Software Announces Industry Strategy Group to Help U.S. Infrastructure Owners Build Better

7 December 2021

Aurigo Software, North America's leading capital planning and construction management software company, announced that it had established an industry strategy group to help infrastructure owners.

Aurigo's Industry strategy group, headed by Mike Tooley, former Director of Montana DOT, announced the appointments of Jennifer Cohan, former transportation secretary, Delaware DOT, and Tim Pratt, former technology leader, City of Lincoln, Nebraska. The group advises public agencies across America on the most optimal technology implementation and business strategies that support the newly passed

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\$1.2 Trillion Infrastructure Investment and Jobs Act.

“We’re excited to bring on board two industry heavyweights in Jennifer Cohan and Tim Pratt to support our industry strategy group headed by Mike Tooley, a well-known infrastructure leader,” said Balaji Sreenivasan founder and CEO of Aurigo Software. “Together, the group brings with it over eight decades of public sector experience helping Aurigo’s customers maximize the impact of our historic infrastructure bill.”

“Their firsthand knowledge of how best to plan, fund, and deliver major capital initiatives is invaluable to Aurigo’s community as we build back our nation’s infrastructure,” said Mike Tooley, Senior Director, Industry Strategy Group at Aurigo Software. “I am excited to work with Jennifer and Tim in the newly formed group at Aurigo, advocating for the modernizing of U.S. infrastructure programs through digitization.”

Jennifer Cohan is now Aurigo’s Industry Leader, federal and state agencies. Before her roles, Cohan led the Delaware Department of Transportation (DelDOT) under two governors. She led agency-wide reforms and produced the most extensive capital program in the state’s history. Before she was appointed Secretary, Cohan served as the Director of the Delaware Division of Motor Vehicles as the first woman to do so. Her state public service career spanned more than 31 years. Cohan graduated summa cum laude from Wilmington University with a Bachelor of Science in Business Management and a Master of Science in Public Administration and attended the Fels Institute of Government at the University of Pennsylvania.

Tim Pratt is now Aurigo’s Industry Leader, local government. Pratt is a technology leader with forty years of experience helping local government agencies select, implement, and support solutions for project management, asset maintenance, construction design, and GIS. In addition to technology projects, Pratt has worked as a designer, project manager, and administrator for many public infrastructure projects. He attended Southeast Community College and graduated with a bachelor’s degree in Public Administration from Doane University.

Capgemini reinforces its Cyber Defense Center network with the opening of a new center in Katowice, Poland

2 December 2021

Capgemini has opened a new Cyber Defense Center (CDC) in Eastern Europe, in Poland, expanding the Group’s CDC network. This new CDC in Poland draws on Capgemini’s global expertise in high-end services focused on data protection and threat intelligence to support organizations, in Europe and across the world, in securing their digital and cloud transformation processes, improving IT resources and operational safety. As the first Capgemini’ CDC of its type in Eastern Europe, the facility will play a key role in protecting critical infrastructures across the region, as well as those of a global nature.

Capgemini’s Eastern Europe CDC will focus on securing the systems of infrastructures from a number of sectors. Capgemini’s experts will provide end-to-end support for projects, from the transition and migration of cybersecurity processes, through the configuration of systems and handover of projects to ongoing support aimed at protecting organizations’ data, assets and identities. To maximize analyst efficiency, reduce mean time to recover (MTTR), and enable economical scaling, the CDC is powered by cutting-edge technologies and solutions, such as cloud-native security and also Artificial Intelligence and embedded machine learning on top of orchestration, for advanced hunting and investigating capabilities.

“To keep our clients’ data and assets protected against constantly evolving threats, Capgemini’s Cyber

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Defense Centers are designed to equip organizations with the best components and resources they need to prevent, detect, and respond to security incidents. Powered by innovative solutions, Capgemini's pools of certified cybersecurity experts across the world provide clients with improved resilience, and comprehensive intelligence to secure their critical infrastructures," said Geert van der Linden, Cybersecurity Business Lead at Capgemini.

The new Cyber Defense Center in Poland complements Capgemini's existing network of thirteen CDCs, including the Asturias (Spain) CDC specializing in cloud and industrial solutions, the Inverness (UK) CDC specializing in pharmaceutical solutions and forensics, the CDC in Bangalore and Mumbai (India), which is the Group's largest and includes identity and access management (IAM) factory too, the CDC in San Diego (NA), as well as satellite CDCs in important regions such as Australia (Melbourne) and Europe (Paris in France; Utrecht in the Netherlands). These CDCs support Capgemini's delivery capabilities in Managed Security Services by offering a local and regional presence, with a commitment to sharing knowledge and information on global cybersecurity trends, threats, and the most effective response. As with other CDCs in the global network, the new center will work alongside a number of specialist partners under the global agreements in place with Capgemini.

Capgemini sets its ESG objectives to reinforce the impact of its sustainable development strategy

6 December 2021

In accordance with commitments made earlier this year, Capgemini unveiled today a framework of 8 priorities and 11 ambitious objectives, that are gathered into a new ESG policy (Environment, Social and Governance). This marks a new concrete milestone for the Group's responsible approach.

Capgemini believes that digital transformation should benefit all of humanity and intends to be a benchmark in terms of its contribution to society, beyond its commitments to employees, clients and investors. In line with the Group's purpose ("Unleashing human energy through technology for an inclusive and sustainable future"), Capgemini's ESG strategy covers fighting climate change, investing in human capital, as well as responsible governance.

"In these challenging times for our planet and our communities, the Group is mobilized to speed up the transition to more sustainable and inclusive economies," said Aiman Ezzat, Chief Executive Officer of the Capgemini Group. *"There has never been a better time to leverage technology and human energy to tackle Environmental, Social and Governance (ESG) challenges. This framework will help us unite our 300,000 employees with our clients and partners around achieving these quantified and transparent objectives, to leverage the potential of technology for the benefit of society."*

Building on a long history of societal commitments, Capgemini has set a framework of priorities and ambitious objectives through this ESG policy, covering each of the three ESG pillars and impacting the 11 United Nations' Sustainable Development Goals that are relevant to its business.

Most of the objectives are building on efforts initiated several years ago by the Group, such as the examples below:

- Capgemini was one of the first players in its sector, as early as 2016, to set targets in terms of carbon emission reductions (which were reached in January 2020, ten years earlier than targeted and ahead of COVID lockdowns). In 2020, the Group set a significantly more ambitious framework.
- Capgemini has for several years made diversity and inclusion a priority, increasing the

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proportion of women in its headcount from 29.5% in 2015 to 33.7% at the end of 2020[2].

- Finally, in 2021, Capgemini was recognized by Ethisphere as one of the World's Most Ethical Companies for the 9th consecutive year.

Capgemini will communicate on a regular basis and in a transparent manner on its extra-financial performance, in line with the GRI and SASB standards, and the TCFD recommendations.

HCL Technologies Announces Plan to Create 12,000 New Jobs in the United States

6 December 2021

HCL Technologies (HCL), a leading global technology company, announced plans to create 12,000 new jobs in the United States in the next five years.

The company expects to recruit more than 2,000 graduates over the next 36 months as part of its U.S. early career and training program, Rise at HCL. This is part of the organization's global New Vistas program, which is designed to establish innovation and delivery centers in emerging cities around the world. The company also recently launched its HCL Apprenticeship Program, which offers full-time tech jobs and fully-funded higher education for high school graduates in the U.S.

HCL's U.S. recruitment efforts will focus on North Carolina, Texas, California, Michigan, Pennsylvania, Minnesota and its recently launched global delivery center in Hartford, Conn. Qualified candidates will work across roles in IT consulting and technology, including agile application development, cloud, IT infrastructure services, IoT, data analytics and digital engineering.

"HCL Technologies has been a true partner for economic growth and job prosperity in Connecticut and across the United States," said Ned Lamont, governor of Connecticut. "I congratulate HCL on their vision for tech job creation and plans for continued growth across the nation, and I look forward to their continued success."

"At HCL Technologies we're committed to finding and nurturing the next generation of technology leadership," said C Vijayakumar, CEO and Managing Director of HCL Technologies. "With 'Rise at HCL,' we offer a program that is focused on intensive training, from on-the-job learning to soft skills development. We are excited to work with recent and soon-to-be graduates to drive their advancement in the exciting tech space."

HCL Technologies, which employs more than 187,000 people globally, has continued to expand its footprint outside of India to bolster its now 32-year 22,000-person strong U.S. presence across 15 offices and multiple global delivery centers. HCL's employees are active collaborators in the growth and technological excellence of hundreds of blue-chip American companies, working to bring growth and impact to the IP portfolios, R&D legacies and IT landscapes of HCL's customers and partners.

HCL Technologies Appoints Global Leader to Drive and Expand its Commitment to Sustainability

9 December 2021

HCL Technologies (HCL), a leading global technology company, has named Santhosh Jayaram Global Head of Sustainability, reaffirming the organization's commitment to integrating sustainability as a key element of its business and growth.

Jayaram's appointment will help HCL refine and focus its existing agenda and strategy in the critical areas of Environmental, Social and Governance, and it will be instrumental in strengthening and scaling its current and future sustainability initiatives. He will also facilitate the integration of sustainability into

CIMdata PLM Industry Summary

existing business practices and within HCL's stakeholder value creation.

Before joining HCL, he led the sustainability and climate change practices at KPMG and Det Norske Veritas. With more than two decades of experience in various facets of sustainability, including developing best practices and standards, Jayaram will now spearhead the execution and incorporation of this agenda into HCL's corporate growth roadmap. He will help lead HCL in its commitment to grow in a sustainable manner by focusing inward and outward, as innovative technological solutions will play a key part in driving sustainability initiatives. The aim is to limit greenhouse gas emissions aligned to the 1.5C pathway by 2030 and to achieve net-zero by 2040.

"I am delighted to be part of a fast-growing and dynamic organization like HCL," Jayaram said. "HCL has already established an impressive sustainability program, and I look forward to building on that strong base."

As a member of the United Nations Global Compact, HCL views sustainability through three lenses: economic, social and environmental impact. HCL Technologies was awarded the 2021 ESG Industry Top Rated Badge by Sustainalytics and was ranked 15th out of 167 companies in the sub-industry IT consulting category. HCL was also recognized as the leader in the Edelweiss ESG Scorecard & Ratings and received the highest overall score among India's Top NSE 100 companies.

In his new role, Jayaram will work closely with HCL's global leadership team in the Office of the CEO.

Infosys BPM to Create 250 Jobs in Ireland, With a New State-of-the-Art Delivery Center in Waterford

8 December 2021

Infosys BPM, the business process management arm of Infosys, announced that it is expanding its presence in Ireland, creating 250 jobs locally with the development of a new delivery center in Waterford.

Infosys BPM started its Ireland operations in Dublin in 2014, delivering exceptional service offerings across telecommunications, manufacturing, social media, healthcare, edtech, and fintech sectors. The company has since then, further expanded in Ireland through its offices in Waterford, Wexford, Clonmel, and Craigavon.

The new center in Waterford will provide voice support, customer service and technical support operations for large global enterprises. The new roles will cover several functions across various job levels, spanning a multitude of skills from customer and technical support roles to subject-matter-experts in the areas of finance, HR, planning, and capacity management.

The employees will be working at the cutting edge of innovation in the digital space, consistently providing anytime-anywhere experiences to empower some of the world's largest organizations in navigating their digital transformation journeys. In line with the company's mission to develop the workforce through continuous learning, Infosys will provide critical training and growth opportunities to nurture the next generation of digital talent.

The 250 new roles in Ireland will build on Infosys' recently announced 1,000 jobs in the UK, reinforcing the company's commitment to supporting post-pandemic economic growth in the region.

Leo Varadkar TD, Tánaiste and Minister for Enterprise, Trade and Employment, Ireland, said: "Congratulations to the entire Infosys BPM team, on this impressive expansion which will result in the creation of 250 new jobs in Waterford. This is a great boost for the South East and demonstrates the attractiveness of Ireland as a location for investment from leading companies from around the world."

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The best of luck to the team, I trust you will be very happy in Waterford.”

Anantha Radhakrishnan, MD & CEO, Infosys BPM, said, “The launch of the new center is a testament to our continued focus on the workplace of the future, grounded in building a robust talent pool with strong digital skills. This investment in Ireland builds on our long-standing commitment to developing a highly skilled workforce in Ireland and our focus on achieving breakthrough innovation for our clients in a collaborative environment. Hiring the best of talent will not only offer a significant boost to the regional economy, but also substantially enhance growth opportunities for us. This will further enable us to deliver amplified business value for our clients with agility and a superior stakeholder experience.”

Martin Shanahan, CEO, IDA Ireland, said, “As one of the largest employers in the South East, this announcement by Infosys BPM for 250 new roles at its new delivery centre in Waterford is very welcome. Infosys’ continued investment in their site in Waterford, as well as their other sites in Wexford and Clonmel, represents a strong endorsement of the talent available in the South East region - particularly in the IT sector. It should serve also as an example for other large international IT companies looking to expand into Europe that Ireland remains a premier location for doing so. I wish Infosys BPM the utmost success with their future operations.”

Nexar Announces Partnership with OnlineComponents.com

7 December 2021

Altium LLC announced that OnlineComponents.com, an authorized e-commerce distributor of electronic components, has joined the Nexar ecosystem of companies that provide solutions needed to help design, source, and manufacture a printed circuit board (PCB).

One of the most tedious and time-consuming tasks in the electronic design-to-assembly process is researching availability and pricing for each part individually from numerous distributors.

To address this challenge, Nexar, an Altium Business Unit, has launched a Bill of Materials (BOM) Tool embed, powered by Octopart’s real-time data intelligence. By implementing the tool as an embed on their website, OnlineComponents.com analyzes user BOMs to display a wide array of relevant part information in a single, easily sortable view.

“The electronics industry is in the middle of serious supply chain challenges, making it difficult for designers to obtain the electronic parts they need,” explains Ted Pawela, Chief Ecosystem Officer at Nexar. “With the Nexar BOM Tool, users have instant access to inventory, pricing data, and alternative parts, giving them the information they need in an organized way that helps them to source their bills of material more quickly and reliably.”

Users simply upload their BOM into the OnlineComponents.com tool. With the tool’s advanced machine learning, no special formatting of the data is needed. The BOM Tool engine responds immediately with a list of relevant parts that can be sorted by price, availability, lifecycle, and lead time. Additionally, the BOM tool provides related, and description searches to help find alternate parts, two features that have become increasingly valuable during supply chain shortages. Once the desired components and quantities are selected, the “Add All to Cart” feature makes it simple to purchase the entire BOM. Ultimately, the BOM Tool empowers users to make smart decisions based on the data provided. Users can also set batch sizes for bulk ordering, or export BOM Tool results for editing and collaboration.

“We are excited to be partnering with Nexar to enhance our customer’s experience. Within just a few seconds customers can receive price, availability, and production information on hundreds of part

numbers,” stated Amir Nizam, president of OnlineComponents.com.

The BOM Tool can be used by Nexar partners to provide a seamless workflow that makes finding, organizing, and purchasing components easier than ever, enabling their salespeople to quote faster and more accurately, turning requests into quotes in a matter of minutes instead of days.

Plex Systems Achieves International Information Security Standards ISO 27001 Certification

8 December 2021

Plex Systems, a Rockwell Automation Company and the leader in cloud-delivered smart manufacturing solutions, announced that the company has passed the ISO/IEC 27001:2013 certification audit for its Smart Manufacturing Platform. The audit was completed following a rigorous independent assessment.

ISO/IEC 27001 is the leading international standard on information security published by the International Organization for Standardization (ISO), the world's largest developer of voluntary international standards. This achievement reiterates Plex's long-standing commitment to maintaining the best security practices for its employees and customers, and further solidifies the company as the leading provider of secure smart manufacturing solutions. By undergoing this rigorous process, Plex demonstrates its commitment to mitigating risks, safeguarding data and continuing to improve its security practices.

"Having passed the certification audit serves as external validation that our controls, protocols and processes are aligned with the international standards of security," stated Catherine Pitt, GVP, Chief Security Officer at Plex. "This recognition is a testament to Plex's dedication to continuous security improvements and assures our customers that they can entrust their data with a world-class organization."

With the cost of data breaches rising, many clients now require additional security validation before deciding to work with an organization. The ISO 27001 certification provides customers with an additional industry source confirming that Plex will continue meeting increased security requirements, giving them confidence that the organization is maintaining best-in-class security standards.

"Plex's commitment to ensuring the integrity of our data and our customer's data has been paramount in our overall security strategy," said Tareq Falah, Vice President, IT/IS at Creative Foam. "Achieving this ISO certification reinforces our trust in Plex to protect our data and ultimately exceed the expectations of our customers to protect their data as well."

Rockwell Automation and Cytiva collaborate to accelerate automation platforms in the biopharmaceutical industry

3 December 2021

Rockwell Automation, the world's largest company dedicated to industrial automation and digital transformation, announced that it has begun collaborating with Cytiva, a global life sciences leader, to accelerate the industry's digital transformation. This new collaboration deepens Cytiva's 2019 pledge to invest in China and also strengthens the relationship between Rockwell and Cytiva that has been in place since 2019. Cytiva joined the Rockwell Automation PartnerNetwork Program as an OEM Partner to help drive a best-in-class distributed control system offering.

Rockwell Automation and Cytiva will bring their combined expertise in biomanufacturing and automation to create an efficient, flexible, and scalable platform. As part of the collaboration, the

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companies are building an Automation and Digital Transformation Center, located in Shanghai, to co-host demonstrations, trainings, and more.

Ian Shih, regional vice president, Greater China, Rockwell Automation, says: “Scalable and sustainable development is of the utmost importance to our companies and to the industry as a whole. Our combined solutions offer the flexibility to scale up for vaccine production or scale down to produce smaller batches of personalized medicines.”

Lihua Yu, General Manager, Greater China, Cytiva says: “As the industry moves toward more automated manufacturing solutions, together we can bring digital-oriented R&D and streamlined production to life not only in China, but throughout the world. Our joint work will accelerate the development and delivery of transformative medicines, reduce costs, and ultimately deliver more medicines to patients in need.”

Rockwell Automation and Cytiva will promote Cytiva’s Figurate automation platform in China, as well as globally. The suite of offerings by Rockwell will power Cytiva’s range of solutions from idea to injection. The collaboration enables stronger integration, data collection, and analysis. This results in a standardized manufacturing platform capable of core data management.

In addition, the two companies have established multiple centers, including the Testa Center in Uppsala, Sweden, to assist customers in their drug development process. They are exploring how to apply the Industrial Internet of Things (IIOT), Augmented Reality (AR) and other advanced technologies for connectivity across the manufacturing process. With innovative solutions for factory field management in progress, Rockwell Automation and Cytiva are establishing a promising future for digital solutions for biopharmaceutical companies, helping enhance training and efficiency for operators, improving speed of batch review, streamlining equipment management, and intensifying efficiency.

Siemens collaborates with PDF Solutions to boost IC yield and speed time to market

8 December 2021

Siemens Digital Industries Software has announced a new collaboration with PDF Solutions, Inc., a global provider of differentiated data and analytics solutions to the semiconductor and electronics industries, to develop a comprehensive solution that transforms integrated circuit (IC) test and yield analysis data from Siemens’ Tessent™ software into actionable intelligence. For mutual customers, this intelligence can dramatically boost manufacturing yields and accelerate time to market for new products.

Siemens’ Tessent™ software for IC test and diagnosis has a long track record of helping many of the world’s most successful IC design firms enhance yield and improve quality by generating root cause defect data based on automated design analysis and end-of-line test data. However, yield challenges extend beyond IC design into manufacturing and other IC lifecycle phases, each of which produce their own categories and classes of yield data.

The new enhancements of Siemens’ and PDF Solutions’ products are planned to work together to deliver a comprehensive solution that aggregates and analyzes design-based, yield relevant data from Siemens’ Tessent software, together with a broad array of other yield data sources, to rapidly analyze and identify yield correlations that are otherwise undetectable quickly, and in some cases automatically.

“Our customers face multi-dimensional yield challenges throughout all phases of the silicon lifecycle,” said Joe Sawicki, executive vice president for the IC-EDA segment of Siemens Digital Industries Software. “Enhancing our design-based, diagnosis-driven yield analysis tools to work with PDF’s Exensio analytics platform promises exciting new opportunities for our customers to uncover yield-

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limiting correlations across SoC, logic, and embedded memory.”

The foundation of this new collaboration is the combination of Siemens’ Tessent™ YieldInsight™ and Tessent SiliconInsight software with Exensio® Manufacturing Analytics from PDF Solutions. This collaboration brings the power of Tessent yield tools to the product engineer’s desktop, helping to break down silos and overcome barriers to cross domain yield learning. The collaboration also leverages PDF Solutions’ differentiated Fire™ data and layout pattern analysis with Tessent to create a closed loop environment from end-of-line (EOL) test back to fab wafer processing for better monitoring of systematic yield loss, further improving the NPI process.

“To achieve faster yield learning and new product introductions, our customers have been asking for tighter integration between different platforms across the semiconductor product lifecycle, including EDA, manufacturing analytics, and test operations,” said John Kibarian, president, CEO, and co-founder of PDF Solutions. “At PDF Solutions, we believe that collaboration with industry leaders is essential for the continued success of the semiconductor ecosystem, and the benefit of enhancing Siemens’ Tessent products to work with our Exensio analytics platform clearly supports this vision. We look forward to continuing our collaboration with Siemens to help our mutual customers accelerate their yield learning and improve their NPI process.”

The solution is available now through an Early Access Program. A webinar showcasing the collaborative benefits of Tessent and Exensio will be presented January 19, 2022.

Sustainability in Fashion, Retail & Home: Centric Software® PLM and Higg Join Forces to Enable Digital Transformation

8 December 2021

Centric Software, the Product Lifecycle Management (PLM) market leader, is proud to announce its partnership with Higg, the sustainability insights platform. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source and sell products such as apparel, footwear, sporting goods, furniture, home décor, cosmetics, food & beverage and luxury to achieve strategic and operational digital transformation goals.

Centric PLM™, the leading PLM solution for the apparel industry, is now integrated with Higg to provide product designers environmental impact data on material choices.

Designers and product developers will be able to send materials from Centric PLM to Higg with the click of a button and receive impact scores for each material choice, such as its carbon footprint and water utilization, using the most robust and trusted sustainability dataset available. A product score is automatically generated once the Bill of Materials (BOM) is complete. Higg also offers information on product end of use options and impacts. Brands, retailers and manufacturers of all sizes can access Higg data through Centric PLM, regardless of where they are on their sustainability journey.

“Increased transparency and visibility enable teams to make decisions taking environmental impact into consideration while also ensuring target product margins are met, using reliable data that is accessible on a single platform,” says Ron Watson, VP of Product at Centric Software. “When also coupled with other technologies such as 3D material libraries, avatars and prototypes as well as optimized processes such as efficient supplier collaboration, not only can a product’s environmental impact be lessened but so can overall cost of goods sold. Being sustainable doesn’t mean killing growth or profitability.”

”Through Centric’s integration with Higg, designers gain access to material-level environmental impacts, which enables them to make critical decisions to develop more sustainable products,” says Higg CEO Jason Kibbey. “Conscious consumers are demanding both high-quality and environmentally-

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responsible products, and with Higg data, businesses can deliver on these expectations.”

“Like all of our innovations, Centric PLM’s integration with Higg was developed hand-in-hand with our customers,” says Saurabh Deshpande, Director, Product Management at Centric Software. “We pay close attention to the needs and challenges of our customers, and sustainability is a core issue for many of them right now. We have developed a close relationship with Higg, working together to provide brands, retailers and manufacturers with accurate sustainability data.”

Many Centric customers are already using PLM to drive and monitor sustainability initiatives, and are looking forward to the increased efficiency and accuracy the integration will bring.

“Centric PLM is a very important part of our digital transformation journey. Its interconnection with Higg will help Epic to analyze and understand the environmental impact of our products and help us make lower-impact, more sustainable product offerings to our customers,” says Ranjan Mahtani, Executive Chairman of Epic Group.,

“The importance of having standardized systems for data collection across the industry is crucial if we want to make the right decisions and have the right impact,” says Kathleen Buckingham, Director, Sustainability at tentree & veritree. “Without having standardized approaches, methodologies will not be comparable. With an agreed standardized system, companies can set benchmarks and be able to learn from their peers from a standardized methodology. Since Higg delivers the industry standard for apparel, it can be trusted to reflect the latest science and specific needs. It will benefit from the input of a network of users and grow to suit the needs of the industry as the needs evolve. Having access to Higg built into Centric PLM will streamline the data collection and analysis process and reduce confusion regarding alternative systems.”

“It is important for us to be able to offer our customers full transparency regarding our products, where they are produced and what materials they contain. Centric Software’s solution makes it possible to continuously save all data at product level, so that we can then easily retrieve all data related to materials, which facilitates our sustainability reporting,” says Åsa Andersson, Sustainability Manager at Peak Performance.

“We are proud to partner with Higg, who lead the way in guiding consumer goods businesses through the maze of sustainable sourcing,” says Chris Groves, President and CEO of Centric Software. “Centric PLM’s integration with Higg will empower our customers to make better choices that benefit their environmental impact, brand reputation and bottom line.”

Tacton and KETIV Partner to Offer Top Design Automation and CPQ Software, Improve the Customer Buying Experience

8 December 2021

Tacton, a global leader in Configure, Price, and Quote (CPQ) solutions for manufacturers, announced their new partnership with KETIV, a full-service solutions provider for design and manufacturing companies pursuing digital transformation. KETIV will sell and implement Tacton’s best-of-breed Design Automation and CPQ software in North America, and offer support services for customers to ensure seamless IT integration. The partnership empowers more manufacturers and industrial companies to properly configure, price, and quote highly customized products, reduce quoting errors, save time and close deals faster.

With the rise of Industry 4.0 and the Internet of Things (IOT), digital transformation has changed not only how design and manufacturing companies operate, but how they understand and engage with customers. Manufacturers are investing into digital, customer-centric strategies like never before, and

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need the right software to create a better customer experience, optimize the sales cycle and, ultimately, increase revenue.

“In this digital era, Design Automation and CPQ solutions are essential to powering the exceptional experiences manufacturers must provide to their customers to stay ahead of the curve,” said Stephen Fauth, SVP of Sales for North America at Tacton. Viveka Tengö, VP Global Channel and Alliances adds, “By partnering with KETIV, Tacton will ensure these solutions get into the hands of even more customers, helping them to optimize the B2B buyer journey and boost their bottom line.”

“Tacton’s first-class CPQ software is the ideal complement to our mission to help design and manufacturing businesses achieve end-to-end digital transformation through software, training and full-service manufacturing business solutions,” said Anthony Rodriguez, Co-owner and Vice President at KETIV. “Together, we will increase the adoption of digital solutions and reimagine the future of manufacturing.”

TANGO ANNOUNCES GROWTH INVESTMENT FROM BERKSHIRE PARTNERS

6 December 2021

Tango, a leading provider of cloud-based store lifecycle management and integrated workplace management software, announced it has secured an equity investment from Berkshire Partners. The funding will help extend Tango’s leadership position in the market and accelerate both U.S. and international growth. Tango’s Founder, President, and Chief Executive Officer

Pranav Tyagi, the Tango management team, and Frontier Growth will all continue to hold stakes in the company. Additional terms of the transaction were not disclosed.

Combining leading-edge technology, adaptability, constant innovation, and simplicity, Tango’s real estate and facilities solutions are built for today’s evolving realities. With market-leading capabilities across predictive analytics, transactions, projects, lease, space, reservations, and maintenance—delivered in a true-multi-tenant cloud architecture with a single code base—Tango is poised for continued growth in today’s dynamic property tech marketplace. The company has partnered with more than 1,000 leading brands, and its cloud-based SaaS and mobile solution is used across 140 countries by companies ranging from those with a few dozen locations to large global brands with more than 40,000 locations.

“Today is a milestone moment in the evolution of Tango,” said Mr. Tyagi. “In addition to their experience in investing across the technology and software ecosystems, the Berkshire team has helped companies accelerate growth strategies to the benefit of all stakeholders. This capital will play a pivotal role in unlocking the next chapter of our growth story as we seek to take Tango to the next level. We’re honored to welcome Berkshire as an investor and look forward to benefiting from the insights of their investment and portfolio support professionals.”

“In a post-COVID world, active management of real estate and facilities is more important than ever, and companies require solutions to help them stay in sync with a dynamic environment,” said Jon Nuger, Principal at Berkshire Partners. “Given Tango’s market position and the unique solutions it provides to an array of blue-chip customers around the world, we view Tango to be a disruptive innovator that has significant potential to drive further value. We are excited to partner with Pranav and the entire Tango team to support the company’s continued commitment to product innovation and sustained growth in its dynamically evolving market.”

“We invested in Tango because of its unparalleled understanding of the market, innovative approach to developing and delivering industry-leading solutions and services, incredible roster of clients, and strong

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team of industry experts,” said Andrew Lindner, Co-Founder and Partner at Frontier Growth. “We have tremendous confidence in Tango’s team and products, and we look forward to continuing our partnership and supporting its next stage of growth.”

Shea & Company, LLC served as exclusive financial advisor and Reed Smith LLP served as legal advisor to Tango on the transaction. Ropes & Gray LLP served as legal advisor to Berkshire Partners.

Wipro and Celonis Launch Supply Chain Command Center Solution

6 December 2021

Wipro Limited, a leading global information technology, consulting and business process services company, and Celonis, the global leader in execution management, announced the launch of the Supply Chain Command Center to help organizations drive supply-chain transformation.

The solution enables companies to automatically identify and fix process bottlenecks and inefficiencies, gain powerful business insights, open new growth opportunities, manage risks and maintain business continuity even in disruptive times. It improves the supply-chain efficiency by working across the four stages - planning, sourcing, developing and delivering.

The Supply Chain Command Center combines a range of business-critical capabilities, from process KPI benchmarks to process optimization in transformation programs. Enterprises can leverage ready-to-use models for process maturity level assessment, custom code analysis, and automation opportunities. The solution is offered as-a-service without any upfront investments.

Harish Dwarkanthalli, President - Applications & Data, iDEAS, Wipro Limited, said: “Supply chain management has long been a priority for global businesses, but the need to transform the supply chain has dramatically increased due to the pandemic. Our joint solution enables businesses to reimagine and retransform the supply chain process, using data and process intelligence across large transformation projects. We are pleased to partner with Celonis to bring this innovative solution to companies around the globe.”

Amit Puri, Global Vice President & Head – BPO & Managed Services, Celonis, adds: “Since announcing our global partnership earlier this year, Wipro and Celonis are jointly driving next-gen digital transformation impact for global customers. Supply Chain Command Center solution is our new joint offering that is helping enterprises optimize their supply chain management transformation initiatives. The powerful combination of Celonis Execution Management System (EMS) with Wipro’s domain expertise and advanced augmented intelligence capabilities of Wipro Holmes, enables us to unlock faster value for our customers across every industry segment and accelerate supply chain transformation through data-driven business execution.”

Financial News

Oracle Announces Fiscal 2022 Second Quarter Financial Results

9 December 2021

Oracle Corporation announced fiscal 2022 Q2 results. Total quarterly revenues were up 6% year-over-year to \$10.4 billion. Cloud services and license support revenues were up 6% to \$7.6 billion. Cloud license and on-premise license revenues were up 13% to \$1.2 billion.

Oracle’s Q2 GAAP results were adversely impacted by the payment of a judgment related to a ten year old dispute surrounding former CEO Mark Hurd’s employment. That payment resulted in a Q2 GAAP

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operating loss of \$824 million and a loss per share of \$0.46. Q2 Non-GAAP operating income was up 6% to \$4.9 billion and earnings per share was up 14% to \$1.21.

Short-term deferred revenues were \$7.9 billion. Operating cash flow was \$10.3 billion during the trailing twelve months.

“Oracle’s Q2 Non-GAAP earnings per share was up 14% to \$1.21—beating guidance by \$0.10,” said Oracle CEO, Safra Catz. “Constant currency revenue beat guidance by \$200 million. These strong results are being driven by the 22% growth of our infrastructure and applications cloud businesses which are approaching \$11 billion in annualized revenue. We now have 8,500 Fusion ERP customers with revenue growing 35%, 28,400 NetSuite ERP customers with revenue growing 29%, and our Gen2 infrastructure businesses are growing even faster—and accelerating.”

“Oracle’s Autonomous Database and new MySQL Database with HeatWave are the world’s two highest-performance databases,” said Oracle Chairman and CTO, Larry Ellison. “Because of their extreme high-performance, both products present huge growth opportunities for our cloud infrastructure business. Oracle database on-premise customers are choosing our Autonomous Database as they move to the public cloud and our unique Cloud@Customer service. Amazon Aurora customers are discovering that moving to MySQL with HeatWave can increase their performance by more than ten-times—with a corresponding reduction in cost. These two databases will sustain Oracle’s database market and technology leadership for years to come.”

The board of directors increased the authorization for share repurchases by \$10 billion. The board of directors also declared a quarterly cash dividend of \$0.32 per share of outstanding common stock. This dividend will be paid to stockholders of record as of the close of business on January 7, 2022, with a payment date of January 19, 2022.

Earnings Conference Call and Webcast

Oracle will hold a conference call and webcast today to discuss these results at 4:00 p.m. Central. A live and replay webcast will be available on the Oracle Investor Relations website.

Implementation Investments

Advanced Multi-Axis CNC Machine Tools Provide Indian Shoe Last Manufacturer with Unique Competitive Advantage

6 December 2021

Rupmaya Shoe Last Industries, India’s largest shoe last manufacturer, recently completed a major CNC machine tool upgrade programme which has enabled the company to increase production capacity to 1,500 pairs of quality shoe lasts per day.

The CNC machine tools are all based on NUM’s Flexium CNC platform, and are produced by the specialist Italian company, Newlast.

Founded in 2002, Rupmaya Shoe Last Industries Pvt. Ltd has grown to become one of the largest manufacturers of adults’ and children’s shoe lasts in India. The company’s headquarters are located in Agra, and it also operates production facilities in Kanpur and Ambur, as well as a product development centre in Noida. Rupmaya’s customers nowadays include many of the world’s leading shoe manufacturers.

Although it started out as a traditional craftsmen-based manufacturer, Rupmaya decided to transition to CNC machines at an early stage in the company’s development. An initial investment in CNC

technology from the Far East proved unsatisfactory on quality and support grounds, so in 2017 the company procured a state-of-the-art shoe last milling machine from Newlast for evaluation purposes.

Rupmaya was so impressed by the performance of the Newlast machine, and by the ease of control provided by the machine's CNC system, that it took the strategic decision to differentiate itself from competitors by migrating all of its production facilities over to Newlast machines. The entire upgrade programme, which represented a major investment by the company, took three years to implement and was finally completed in 2020.

According to Mayank Agarwal, Director of Rupmaya, "We were the first company in India to use Newlast machines with their patented 'SDF' shoe last clamping technology. From the outset, the improvements in product accuracy and quality were apparent to our customers and quickly gave us a competitive edge. The control flexibility provided by NUM's Flexium CNC systems makes the machines extremely easy to set up and use – our operators only need a few days of training. We are currently running three production lines simultaneously, giving us the capacity to craft over 1,150 pairs of lasts, as well as more than 350 pairs of samples, every day."

Rumpaya's production facilities make extensive use of Newlast's latest generation SDF HS machines, which can finish three pairs of plastic or wooden lasts automatically during a single working cycle. As Rajesh Nath, Managing Director of NUM India, points out, "These machines, which are based entirely on NUM's open architecture Flexium CNC platform, have 9 interpolated axes and are capable of producing about 45 pairs of highly accurate, fully finished shoe lasts per hour."

AkzoNobel selects Atos OneCloud to manage public and private cloud

9 December 2021

Atos has been selected by AkzoNobel, a Dutch multinational company which creates paints and performance coatings for both industry and consumers worldwide, for the management of its private and public cloud environments, as part of AkzoNobel's strategy for migration to the public cloud. With this strategy, AkzoNobel aims at reducing the complexity of processes and increasing its flexibility. Atos will be in charge of renewing the existing private cloud environment, which was already managed by Atos, and expand it to the public cloud.

Atos' services will enable cost reductions, through further automation, within both the private and public cloud, while supporting the upscaling of AkzoNobel's global development teams, by providing base components for a faster, standardized, and safer software development.

Atos Digital Hybrid Cloud

For the management of AkzoNobel's private cloud environment, Atos is deploying its Atos Digital Hybrid Cloud platform. It is also responsible for the migration of specific workflows from the private to public cloud. Atos ensures standardized global deployment and management of both cloud environments as part of its Digital Cloud Services.

*"We are very pleased that AkzoNobel has chosen Atos to manage both its public and private cloud environment. This project fully benefits from our unique Atos OneCloud services, which we introduced at the end of last year. With Atos OneCloud, we aim to help our customers proactively accelerate their migration to the cloud through a single window", says **Peter 't Jong, Head of Atos in the Netherlands.** "We believe that the cloud is the new standard for digitization and as part of this mission we are going to help AkzoNobel harness the full potential of the cloud."*

"We continue our partnership with Atos as we had a great experience with their classic hosting services,

and they offered the best approach for our move to a secure cloud environment. We are therefore pleased that Atos will support us in the migration to a public and private cloud, which allows us to operate much more efficiently and achieve significant cost reductions," says Aloys Kregting, CIO, AkzoNobel.

DXC Technology Enables Copa Airlines' Transformation by Modernizing and Migrating Passenger Service System with Cloud Right™ Approach

8 December 2021

DXC Technology announced a multiyear renewal with Copa Airlines, a leading Latin American airline carrier, to modernize the mainframe-based Passenger Service System (PSS) and migrate it entirely to the public cloud, without business disruption. DXC, in collaboration with its strategic partner Microsoft, and Copa, will lead the transformative initiative.

This new agreement will accelerate Copa's digital transformation by providing a flexible, scalable and open airline core IT platform. The modern platform will fully support integration of third-party applications in Copa's IT ecosystem, and will enable the airline to improve customer and staff experience.

DXC will apply its Cloud Right™ approach to help Copa rapidly maximize the benefits and value of cloud modernization. With Cloud Right, DXC helps customers maximize the value from cloud and IT modernization, optimizing and managing existing investments and ensuring the best use of on-premises, private and public cloud environments to achieve business objectives.

"We are delighted to be awarded another large-scale cloud transformation," said Jim Brady, president, Americas, DXC Technology. "Our expertise at developing a specific IP toolkit will allow us to help Copa transform at a very high rate of speed and with precision accuracy, making the automated conversion rate of migration nearly 99.5 percent."

With extensive experience in the travel industry and a deep understanding of Copa's entire IT estate, DXC is transforming all passenger service applications running on the existing mainframe and on-premise environment to the public cloud. DXC selected Microsoft Azure for its strength and experience in mainframe migrations.

"We have already integrated our services and data layers to the DXC PSS platform, and used it to also integrate our own digital experience as well as third-party components that power our flexible shopping, merchandising and New Distribution Capability (NDC)," said Julio Toro Silva, chief information officer at Copa Airlines. "Now, moving the PSS to the Microsoft Azure cloud will result in a huge increase in integration scalability at a reduced cost. It will also provide us with the flexibility of cloud development tools and practices to enable the modularization and continuous modernization of the PSS components."

"There have been other mainframe applications migration projects over the years, but Microsoft and DXC are innovating on taking a high-performance airline application and moving it directly to the public cloud in a wholesale fashion, said Daniel Verswyvel, General Manager Microsoft Central America. "This expertise will benefit the airline industry as well as several others."

Epic Group Implements Centric PLM™ to Shorten Development Times and Meet Customer Demands

6 December 2021

Epic Group, a leading apparel and fashion company, has selected Centric Software's Product Lifecycle Management (PLM) solution. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source and sell products such as apparel, footwear, sporting goods, furniture, home décor, cosmetics, food & beverage and luxury to achieve strategic and operational digital transformation goals.

Epic Group is a key player in the apparel industry. Starting as a major textiles trading house, then as a leader in sourcing quality fabrics, and since 2005, a state-of-the-art manufacturing company with facilities in Bangladesh, Vietnam and Ethiopia. The company is dedicated to seeking out the highest standards in everything they do, from world-class apparel manufacturing and design services to innovative machinery that enables them to reach ambitious sustainability targets.

A combination of speed, efficiency, technology, design and innovation is essential for the group to meet ever-changing market trends and consumer demands.

Ranjan Mahtani, Executive Chairman at Epic Group explains how there was a lack of efficiency within some areas of the business, "Today, product development activities are mostly done through email exchanges and excel sheets. Tech packs are received under multiple different formats. We see work duplication and weak traceability in the current model."

To support the integration of product related data, processes and business systems, Epic Group selected Centric PLM based on its cloud-based model, strong customer references and experience with OEM models.

"Centric PLM provides a single source of truth for product information and connects the various teams who work on the product, be it designers, technicians, sample room associates, sourcing and merchandising staff. Centric PLM's built-in 3D connect toolbar seamlessly integrates with our current 3D capabilities too," comments Mahtani.

"The digital fabric library and proper storage of data will allow us to re-use product information, thus saving a lot of time. We will increase productivity, become more agile and gain a faster turnaround for products. It will help us to create more accurate performance indicators, leading to a virtuous cycle of improvement."

"We are delighted to be an important part of Epic Group's digital transformation journey," says Chris Groves, President and CEO of Centric Software. "We are excited to work closely with such an ambitious and innovative organization, empowering them to meet the demands of their customers."

Financial Times and Infosys Announce Strategic Digital Collaboration to Enhance Immersive Journalism

7 December 2021

Infosys, a global leader in next-generation digital services and consulting, has announced a strategic collaboration with the Financial Times (FT), one of the world's leading business news organizations. As the Digital Innovation Partner for the FT, Infosys will leverage digital innovation to support the latest creative and engaging data-led storytelling experiences for FT's readers, which include some of the world's most influential decision makers.

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This new digital innovation collaboration brings together the FT's unparalleled expertise and insight with Infosys' domain and technology capabilities to help deliver creative and immersive journalism through digital channels. The FT, already a leader in using technology to enhance user experience, is prioritizing engaging digital techniques to bring readers closer to the stories that matter most to them. Among the banner projects the two companies will work on together in 2022 is a climate change-related simulation. This will take inspiration from an earlier newsroom innovation that was a strong hit with readers: the Uber Game. Here readers were put in the driving seat, immersed directly into the business model of Uber.

The FT and Infosys teams will also develop a 'crossword app', digitizing one of the most loved and traditional puzzle features of the FT for its global following. The publication's crosswords have a loyal following that stretches back decades, and through this partnership it will now be available to a much wider global audience in an engaging digital format for the first time.

James Lamont, Director of Strategic Partnerships said: "Our readers expect the best from the FT and we are experimenting with exciting digital ways to bring stories and features to a wider audience. With Infosys' help, we can use technology better and faster to deliver Editorial features in more enterprising and eye-catching ways. The expertise Infosys provides to these newsroom projects will help foster a spirit of innovation and reader service that supports our mission to delight and inform the FT's audience."

Ashiss Kumar Dash, EVP and Segment Head - Services, Utilities, Resources, Energy at Infosys, emphasized: "Enhancing in-depth journalism from the FT with the power of digital technology from Infosys offers an exciting opportunity for the global news audience and has the potential to set a new standard for news delivery. We are delighted to become the digital innovation partner of an organization consistently recognized as the world's most iconic, credible and influential news brand and look forward to providing exciting new technology solutions."

Finn Flare Launches Centric PLM™ with Astonishing Go-live Results

8 December 2021

Popular Russian clothing company Finn Flare recently went live with Centric PLM and have enjoyed significant gains in both time savings during product development, and reduced sourcing costs. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source and sell products such as apparel, footwear, sporting goods, furniture, home décor, cosmetics, food & beverage and luxury to achieve strategic and operational digital transformation goals.

Finn Flare was started in 1960 in the small Finnish town of Salo, and over the next 10 years exported clothing to Scandinavia, Germany, the Netherlands, Austria, Switzerland and the USA. After entering the Russian market, the company opened concept stores specially adapted to the tastes and preferences of Russian buyers. Finn Flare specializes in middlewear, outerwear, casual and accessories collections, and today operates more than 110 stores in Russia, Kazakhstan, and Belarus, as well as appearing in popular European stores like Zalando, and selling direct to consumers via their online store.

Before undertaking their transformative digital journey with Centric PLM, the company recognized a need to shorten the development and production time of their collections. This meant finding effective production areas in different countries, as well as system-wide management of costing issues based on a comprehensive analysis of materials, work and delivery costs. When Covid-19 hit, they also faced business restrictions and logistics problems in different countries, especially an increase in delivery time of goods due to the pandemic.

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“Due to different processes and the specific work of our brand, data from different departments are often isolated, not presented completely or rendered stagnant, which can hinder the efficient management of the product lifecycle,” says Valentina Khilmanovich, Head of Design and Development at Finn Flare. “Centric PLM can easily integrate data from the entire lifetime of a product seamlessly. We can also conduct a comprehensive analysis of the product at all stages of the lifecycle, from the beginning of production to sales and financial results of the collection.”

Centric PLM stood out against other PLM solutions during Finn Flare’s selection process thanks to added value for productivity, cost management, accelerated time to market, data sharing with ERP systems and product development. The ability to set and control key dates and milestones for production schedules was essential, as well as management and analysis of consumption of materials, prices, orders, sales and margins from each style, collection, and overall season.

Khilmanovich continues, “Our main strategy was to shorten the production cycle as much as possible. We’ve already seen a 25% reduction in development time for each collection and we were able to achieve a 10% reduction in production costs thanks to updating the costing process with suppliers, which provided new sourcing possibilities. Now we’re working on the timing of production cutbacks.”

“In terms of a business strategy, Centric PLM lets us enter updates, develop, support and retire products throughout their lifecycles, depending on decisions we make along the way. Centric is highly flexible for meeting the needs of our clients.”

“We started to develop our e-commerce strategy many years ago,” explains Khilmanovich, “building our own online store and cooperating with companies in Russian and European markets such as Wildberries, Otto and Zalando. Now, with more consumers shopping from home, our goal is to improve the connection between their interests and our brand loyalty. Centric PLM will help us develop assortments for these new sales channels more easily to improve overall performance.”

Chris Groves, President and CEO of Centric Software, commented, “As we expand into the Russian market, it’s deeply satisfying to see a company like Finn Flare achieving their growth strategy goals and accelerating by streamlining their supply chain using Centric PLM. We are delighted to be a part of the company’s ongoing digital evolution and to be a part of all their future success.”

GUC Optimizes Quality of Results and Accelerates Time to Tapeout Using the Cadence Digital Full Flow

7 December 2021

Cadence Design Systems, Inc. announced Global Unichip Corporation (GUC) used the Cadence® digital full flow to accelerate the time to tapeout of its ASIC designs for mobile, automotive, AI and hyperscale computing applications. By leveraging the Cadence Innovus™ Implementation System’s mixed-placer automation technology, GUC successfully reduced floorplan design time from weeks to days and achieved more than 10% reduced wirelength and 5% better switching power.

GUC has been using the Cadence digital full flow for many years to tape out the most challenging ASIC designs down to the latest 5nm and 3nm process nodes. As a leading global ASIC provider, delivering the best power, performance and area (PPA) results within ever more demanding schedules is critical for success.

As ASIC designs grow in size and complexity, the number of macros in a floorplan also increases rapidly, making GUC’s traditional manual and iterative floorplanning process a lengthy part of the implementation schedule. Using the Innovus mixed-placer technology, the GUC team can handle the placement of both standard cells and macros concurrently, automating the floorplanning process to

achieve greater efficiency and faster PPA analysis.

“As our ASIC customer designs move to the latest process nodes and grow in size and complexity, GUC is always making strategic investments in the latest technologies that ensure we can meet and exceed customer requirements for optimal PPA,” said Louis Lin, senior vice president at GUC. “Cadence’s Innovus mixed-placer technology enabled us to make a significant productivity breakthrough, so that we could complete customer designs more efficiently and accelerate tapeout. The Innovus mixed-placer technology is now a key part of our GUC production implementation flow, providing many tapeout successes, and we use it for the majority of our designs.”

The Cadence digital full flow provides customers with a fast path to design closure and better predictability. It supports the company’s Intelligent System Design™ strategy, enabling SoC design excellence.

Legal Aid Western Australia Modernizes Work with OpenText

7 December 2021

OpenText™ announced Legal Aid Western Australia (WA) selected OpenText™ Extended ECM platform to improve client service delivery through better information management and enhanced collaboration.

Legal Aid WA is the largest provider of legal aid services in Western Australia and promotes access to legal services and information for all its citizens. With roughly 400 lawyers and support staff in ten locations managing sensitive content across different systems, the government agency needed a solution to provide secure, efficient access to information, boost collaboration, and integrate with their existing business applications.

“OpenText Extended ECM facilitates Legal Aid WA’s digital transformation program. Each staff member has access to the information they need to provide the best experience for our clients,” said Lee Baker, Director of Business Services, Legal Aid WA. “Extended ECM allows us to better access, use, and control our information, with compliance built in. Having information readily available when and where it is needed will improve the delivery of our services.”

OpenText Extended ECM Platform integrates content services with lead business applications to improve information flows and processes and extend governance across the organization. With an intuitive user interface and connected workspaces, it enables secure, cross-functional collaboration on tasks like needs assessments and planning.

“With the OpenText platform, Legal Aid WA is enabling their lawyers and staff to better meet the needs and requirements of their clients,” said Muhi Majzoub, Chief Product Officer at OpenText. “Effective management, governance and control of information through content services technology improves productivity, reduces risk, and modernizes their client service delivery.”

Baker added, “User feedback has been enthusiastic. We knew our staff would jump on board if we put a system in place that was easy to use and provided immediate benefits to them.”

Legal Aid WA worked with OpenText Gold partner, Hayes Information Systems, to build a roadmap, migrate 15 million documents and support the end-to-end content management solution.

OFFICE Stays One Step Ahead with Infor

2 December 2021

Infor, the industry cloud company, announced that OFFICE, a leading-edge fashion footwear specialist and part of Truworths International, has chosen Infor CloudSuite Fashion to align multiple business processes within a unified ERP system. Delivered via multi-tenant cloud on Amazon Web Services (AWS), the solution will be deployed by Infor partner Fortude, and will help OFFICE simplify complex processes across merchandising, warehousing, allocations, planning and inventory management for greater business efficiency.

As part of its wider digital transformation strategy, OFFICE recognised the need to future-proof its merchandise management system and was looking for a solution that would simplify its complex business processes. OFFICE's omnichannel model was placing considerable strain on existing IT resources and the business wanted to eradicate inefficiencies while securing real-time business insight to boost decision-making capabilities.

"Our IT infrastructure wasn't keeping pace with the business' rate of growth," comments Jon Richens, OFFICE's managing director. "Infor CloudSuite Fashion will provide the streamlined functionality that the business needs, resulting in real efficiency savings across the organisation. We will be able to deliver timely, accurate and insightful business information to the right people, at the right time, enabling faster, more pro-active decision-making.

"We're a dynamic business and need systems to match," Richens continues. "The solutions from Infor provide simplicity of architecture but with the depth and breadth of industry-specific functionality we need, all at an attractive price point and with the added resilience and agility of the cloud. The level of commitment from both the Infor and Fortude teams has been second-to-none, and we've established a truly collaborative working partnership, which I'm confident will stand us in good stead once we start implementation in 2022."

"Our roots in fashion and skill in leveraging enterprise technology solutions were key to our selection for the project. Our knowledge and expertise ensure customers select the most effective solutions in meeting their specific needs — no matter how complex." comments James Abdool, Fortude SVP for UK & Europe. "By working in partnership with Infor, we made sure we understood the challenges OFFICE was facing, and how Infor's solutions could meet these challenges head on, by setting the right infrastructure in place to underpin best-practice processes right across the business."

"The flexibility and agility of cloud technology is the perfect fit for growing businesses that are fully embracing an omnichannel model," comments Anwen Robinson, Infor GM and SVP for UK & Ireland. "Infor CloudSuite Fashion offers industry-specific functionality to enable brands to respond quickly and effectively to shifting consumer demands. As OFFICE has recognised, it's the ideal solution for fashion businesses that are keen to refine and streamline their key business processes. What results is comprehensive organisational visibility and insight, coupled with a rapid return on investment and a solid platform for sustainable business growth."

Özyeğin University pioneers the use of OpticStudio for channel modeling in optical wireless communication

7 December 2021

Özyeğin University is a private, non-profit university in Istanbul founded in 2007. Along with ten other institutions and industrial companies, Özyeğin is a partner in the EU-funded VISION ITN project, based

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in Marseille, France. VISION—an acronym for "visible light-based interoperability and networking"—aims to train a new generation of early-stage researchers in the emerging area of visible light communication (VLC) and equip them with the latest research.

The main goal of the VISION's VLC research is to develop technical and practical insights into the use of light fidelity (Li-Fi), a VLC technology that offers an alternative to Wi-Fi by running wireless communications based on light-emitting diodes (LED) transmission. Channel modeling for a VLC system—especially in outdoor applications—must account for a wide variety of possible obstructions in order to provide meaningful input into a system design.

To account for these obstructions and deliver a viable design, the Özyeğin team used built-in Li-Fi channel activity modeling support and methodology in OpticStudio. This Zemax feature, based on powerful non-sequential ray tracing algorithms and analytics for visualizing channel impacts, equipped the team with credible support for moving forward on their Li-Fi system design with a high degree of confidence.

Using OpticStudio, the team tracked and predicted key channel modeling metrics for VLC, including channel impulse response, amplitude response, phase response, and channel path loss—all to hugely beneficial levels of simulation accuracy.

"When we compared the results from our as-built system to the OpticStudio model we used during design," said Hossien Eldeeb, a VISION ITN research engineer who helped lead the project, "we saw an outstanding match between the ray tracing approximations and the actual measurements that were produced by our vector network analyzer in Fraunhofer Heinrich Hertz Institute."

Rus Savitar Selects Canvas Envision to drive pioneering shift towards interactive 3D assembly instructions

6 December 2021

Canvas GFX, Inc, announced that Rus Savitar, a leading European manufacturer and retailer of ready-to-assemble furniture, has selected interactive product communication platform Canvas Envision to drive critical operational efficiencies and underpin the digital transformation of its end user documentation strategy.

By cutting the time it takes to create assembly instructions from up to three weeks to as little as two days, Envision will enable Rus Savitar, which has a portfolio of more than 5,000 products, to address a major operational and economic challenge: Historically, a lag between product readiness and availability of the assembly instructions has slowed time to market and delayed revenue generation.

Canvas Envision allows users to work directly with existing 3D models in a rich graphics solution, bridging the technical and creative environments, instead of having to switch between multiple, often incompatible applications.

The Envision deployment comes as Rus Savitar, 75 per cent owned by UK-headquartered investment firm Greenbridge Partners and focused on rapid international expansion, lays the ground for a pioneering shift towards interactive digital assembly manuals.

Documents created in Envision can be accessed through any browser and allow viewers to interact with 3D CAD models they contain, rotating, isolating, or hiding parts.

"Product assembly instructions had created a bottleneck that was delaying our products getting into market," said Dragos Nimu, Director of IT Operations at Rus Savitar. "With Envision it is so simple to use our existing 3D models to create exactly the right views and communicate each detail of the

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assembly. Now we can create the manuals in just a couple of days which is a huge improvement and frees up our engineers to focus on other activities.”

Canvas GFX CEO Pat Hume said: “We consistently see Envision being chosen because it delivers clear, measurable economic and operational benefits and I am delighted to welcome Rus Savitar to the Canvas Community. What particularly excites us is their vision for an evolution to interactive content, which is precisely what Envision was conceived to deliver. We are happy to support Rus Savitar in this highly innovative endeavor.”

Supertech Group Digitally Transforms with Infor to Boost UAE’s Industrial Growth

8 December 2021

Infor, the industry cloud company, has announced that Supertech Group, a diversified conglomerate based in Dubai, has digitally transformed with the help of Infor LN, enhancing its ability to meet growing demand for industrial products and discrete manufacturing across sectors. Supertech Group’s digital transformation aims to support national initiatives such as the UAE’s 'Operation 300bn' strategy to increase the industrial sector’s contribution to gross domestic product (GDP) to AED 300 billion (US \$81.7 billion) by 2031.

Supertech Group is one of the leading businesses in the Middle East and India for the supply of industrial products & services in sectors including oil & gas, petro-chemical, power generation, primary steel, alternate energy, food & beverage, automotive, and marine & shipping.

Supertech Group has transformed its sales, engineering, distribution, and after-sales support operations with Infor LN, a powerful, industry-focused, enterprise resource planning (ERP) application. The solution has enabled the company to increase visibility, reduce complexity and boost efficiency across its business, supporting its evolution into a value-added service provider that designs, builds, and installs customized solutions for customers.

Supertech Group also transformed its human capital management (HCM), with bespoke HR solutions especially built into Infor LN. These solutions enhance the way Supertech Group manages its large and rapidly growing workforce, enabling it to increase the efficiency of its HR practices, raise productivity and improve customer service.

“To help meet the region’s surging demand for industrial products and bespoke solutions, Supertech Group needed to transform its systems and processes including sales, engineering, distribution, and human resources,” said Deepak Odhrani, managing director of Supertech Group. “By deploying Infor LN and HCM as part of our digital transformation, Supertech Group has raised its efficiency and productivity, enabling us to focus on our customers’ needs.”

With Infor LN, Supertech Group is now able to capture and manage product warranty information, which is essential when its customers visit for quality audits. The solution has transformed integration between the engineer-to-order cycles, improved sales and finance processes, and increased visibility of complex supply chains. As a result, stock values are now 100% accurate.

The implementation of Infor LN, which is for 80 users across Supertech Group’s operations in the UAE, Qatar, Oman, and India, was managed by Infor partner Piersoft.

“Supertech Group demonstrates how specialist industrial services and supply companies in the Middle East can leverage digital solutions to drive innovation, raise productivity, enable growth and exceed customers’ expectations,” said Amel Gardner, vice president, Infor Middle East & Africa. “As the

region looks to boost its manufacturing capabilities, Supertech Group is well positioned to optimize its performance, supply chains, and workforce.”

Tenaga Nasional Berhad selects Capgemini and Google Cloud to accelerate innovation and agility

9 December 2021

Capgemini and Google Cloud announced that they have collaborated with Tenaga Nasional Berhad (TNB), the largest electricity utility in Malaysia, to design an enterprise-wide Application Programming Interface (API) strategy, as well as implement Google Cloud’s Apigee API Management Platform, which allows the company to enable new agile ways of working. The more open digital backbone now provides the flexibility TNB needs to connect with the outside world, generate new revenue streams, and accelerate innovation.

TNB serves a massive customer base of over 9.4 million citizens in Peninsular Malaysia, Sabah and Labuan today. To remain responsive to the needs of its stakeholders and the marketplace, TNB was keen to modernize its technological infrastructure, in order to make way for new integration technology such as microservices.

In collaboration with Capgemini and Google Cloud, TNB launched a comprehensive enterprise-wide API adoption program to build, deploy and scale APIs and introduce new agile ways of working to accelerate its digital maturity from within. This involved updating its existing API products, expanding its in-house digital capabilities, as well as exploring non-regulatory revenue streams from API monetization leveraging an API Management tool. Capgemini also facilitated a cultural mindset shift to drive API literacy across TNB for better knowledge sharing and collaboration on API development.

The more agile and flexible infrastructure has helped TNB to unlock newly consolidated data and services, opening them for broader consumption by internal and external customers, as well as enabling reusability, enhanced security, and the strengthening of governance requirements.

“To achieve our strategic aspiration of becoming the leading provider of sustainable energy solutions, both in Malaysia and internationally, TNB is constantly looking into opportunities to capitalize on the impact of technology disruptions to unlock new growth,” said Datuk Fazil bin Ibrahim, Chief Information Officer, Tenaga Nasional Berhad. *“We are glad that with Capgemini and Google Cloud’s participation in our transformation journey, we were able to lay a strong foundation for TNB to react more effectively and swiftly to market-competitive pressures, as well as to stay responsive to changing customers’ demands.”*

“API-led connectivity enables enterprises to seamlessly integrate multiple technologies together to create unique and valuable offerings for customers and the broader ecosystem. By leveraging our Google Cloud expertise, Capgemini offered a robust set of end-to-end services for API strategy to deliver on TNB’s digital vision,” said Olaf Pietschner, CEO of Capgemini in Asia-Pacific and member of the Group Executive Committee.

Jagannath Narendran, Director of Business Application Platform, Google Cloud in Asia Pacific, said, *“Together with Capgemini, we are excited about the value we can deliver to support TNB on their digital transformation journey. With Apigee, TNB can rapidly build and monetize APIs that are secure and scalable, and expand the canvas of possibilities for both TNB and its customers.”*

The Cape Group Improves Quality Assurance with Procore

7 December 2021

Procore Technologies, Inc., a leading provider of construction management software, today announced that customer Cape Group is expanding its years-long relationship with Procore. Cape Group is standardizing its processes nationwide with Procore's Quality and Safety tool, **Action Plans**, which enables the company to digitize its inspection and test plans (ITP) and improve quality assurance.

Vancouver-based Cape Group is a family-run real estate and development company founded in 1956 that prides itself on keeping the needs of the communities it works in top-of-mind. From rental units to warehouses, high-rises to master planned communities, mixed-use buildings to market housing and more, Cape Group has extensive experience with myriad types of projects.

The company chose Procore as its construction management solution for its comprehensiveness and proven track record. Today, Cape Group uses Procore to track all its projects, including real-time budgeting and cost control. The company uses Procore Analytics to turn project data into intelligence, including tracking and analyzing how long it takes for Requests For Information to receive a response.

"Cape Group is delivering projects around 10 per cent faster by using Procore, and we're generating 10 times more revenue. We appreciate that Procore delivers continuous innovation in its platform," said Zack Ross, Chief Operating Officer, Cape Group. "Procore has evolved the way we work at Cape Group. Standardizing tasks with Action Plans is the next step. We know from experience that Procore lets us deliver more value to our customers, which helps our business grow."

Cape Group is now implementing Procore's Action Plans in an effort to standardize its processes. Action Plans helps companies show clients and regulators that a job met quality standards and each stage was approved by a relevant party. Action Plans allows Cape Group to create templates for sequential work such as quality assurance, concrete pours and safety plans. Company-assigned approvers control when a plan can advance to the next step, allowing Cape Group to manage projects the same way on every job, whether the work is being done by local teams in Vancouver, Winnipeg, Ottawa or Toronto. Everything is tracked on the Procore platform, including proof of completion such as photos.

"The Procore platform is purpose-built for construction. A long-standing partner such as Cape Group incorporating Action Plans into its project management demonstrates that contractors can grow their business with Procore," said Jas Saraw, Vice President, Canada at Procore.

Valmet and Infor Continue Their Shared Journey to the Cloud

1 December 2021

Infor, the industry cloud company, announced that Valmet, a leading global developer and supplier of technologies, automation and services for the pulp, paper and energy industries, has chosen Infor CloudSuite for industrial manufacturers as a next step in the company's ERP-enabled business transformation, which was started together with Infor in 2016.

The target of the company's ERP renewal is to help drive a global, digital transformation of operations. The next step in the journey together with Infor CloudSuite will involve a sophisticated project to move more than 10,000 users to the cloud in over 30 countries.

As part of the project, all current on-premises functionalities will be moved to Infor's multi-tenant cloud, using extensibility capabilities to meet Valmet's industry requirements while preserving the benefits of continuous upgrades. The solution will operate on Amazon Web Services (AWS), delivering global scale, performance, and security.

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Valmet operations span manufacturing, construction, software, and services. The implementation of Infor CloudSuite will not only help retain knowledge across a wide variety of activities based on unified processes throughout these operations, but also will help deliver consistent reporting and “one set of numbers” to help accelerate and improve decision-making.

"The core objective for our original ERP renewal was to achieve operational excellence, execution and control over our complex project and contract management business," said Janne Puustinen, CIO of Valmet. "We are now set to digitally transform and exploit cloud technology to realize improvements in productivity and create a platform for long-term innovation, efficiency and growth. As a trusted partner with a relationship spanning more than two decades, Infor was a natural candidate for consideration. However, it was only Infor's current, deep commitment to our success, shown in the willingness to take responsibility for taking us to the cloud, which led us to choose them for this next phase."

"Building on the progress of our on-premises applications implementation in Valmet's current ERP program, Infor will now take Valmet to the cloud," said Joerg Jung, Infor executive vice-president and international general manager. "Valmet has realized that Infor will offer the kind of commitment that sees us bringing their industry-specific requirements into Infor CloudSuite through our extensibility capabilities. We will both help protect the company's existing ERP investment and support future growth."

Product News

ActCAD 2022 Update 1209 Released, Dt.08-Dec-2021

8 December 2021

ActCAD announces the release of its new version 1209 for ActCAD 2022 Professional and ActCAD 2022 Standard products.

This version is based on most latest IntelliCAD 10.1a engine. Below is a list of major improvements in this release:

- Added new command EXTRIM
- Added new command LAYERMERGE
- Added new command TABLEIMPORT
- Import Excel files directly to Table
- New capabilities when working with tables including data links, formulas, and cell formats
- Nudge entities through keyboard shortcuts
- Improved features of Publish command
- Improved features of Sheet sets
- Added create planar surfaces in Professional version
- Added convert entities to NURBS in Professional version

The new versions are available from ActCAD download page. Existing users can use Check for updates command to get the latest version.

ARO Fluid Management reduces turnaround time for CAD models by up to 5 days with product configurator

3 December 2021

CADENAS technology enables configuration & download of 3D CAD models within a few minutes

ARO® Fluid Management has launched a new, interactive 3D CAD product configurator powered by CADENAS. The new tool on www.arozone.com and www.PARTcommunity.com offers engineers thousands of configurations for ARO's 17 primary valve lines, which they can customize as needed and then download in over 150 native CAD formats. This way, the tool reduces design time by providing immediate 3D CAD models downloads of customized ARO valves.

Quick data provision instead of two to five-day turnaround

“Previously, customers would go through an authorized ARO distributor or our customer service department, and it was a two to five-day turnaround to receive a product model,” said Ann Dine, North America fluid power product manager for ARO. “The configurator provides on-demand access to CAD models. Instead of going through multiple departments, customers can get what they need and return to their work immediately. It makes finding the right product much more efficient,” Dine added.

In addition to pneumatic valves, ARO's portfolio also includes cylinders, various pumps, filters, regulators and lubricators, as well as accessories. Engineers and designers can test the required valve directly within their CAD design using ARO's new online configurator. “This online tool enables our customers to instantly find, configure and download the exact product they need,” Dine said. “It enables them to more accurately test the product within their design, ensuring it’s right for their application. When they’re finished, they can order the exact part number, confirming they have the right part the first time.”

Atos expands the scope of its Security Operations Centers and launches “Managed Detection and Response for media”

3 December 2021

Atos announces the launch of a new Managed Detection and Response (MDR) cybersecurity service for the media and entertainment industry, addressing media and video content piracy and protecting organizations against targeted cyber threats.

As media companies play a vital role in forming a public outlook, their high-quality content makes them an ideal target for cyber threat actors and piracy, resulting in revenue loss. In this context, the Atos solution aims to prevent illegal content distribution and protect it against data breaches and exfiltration.

This offering is based on Atos' Managed Detection and Response (MDR) services, a leading-edge cybersecurity solution powered by proven artificial intelligence, big data analytics, and edge computing. It includes Viaccess-Orca's anti-piracy center, with its dynamic watermarking service, to combat the sophisticated cyber threats that target content video industry.

With “**Atos MDR for Media**”, customers benefit from:

- Expert guidance and services from a cybersecurity services leader complemented with services from a media content protection expert
- High-speed anti-piracy and threat detection, containment, and automated response
- End-to-end artificial intelligence-driven security monitoring and orchestration managed by a team of cybersecurity experts that are adept at handling media threats

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“Media and entertainment companies are highly vulnerable to cyber threats and face attacks from unique APT groups, hacktivists, for-profit cybercriminals, among other types of hackers. Our new ‘MDR for media’ offering considers the unique needs of these organizations and offers them the best protection against such attacks. It enables faster and targeted threat detection and response to protect our client’s high-value content,” says **Chris Moret, Senior Vice President, Head of Cybersecurity Services at Atos.**

Atos offers a range of solutions with assurance of data sovereignty to accommodate different regulations, whether in the European Union, the United States, Asia-Pacific or the Middle East and Africa.

Hexagon closes CNC machinery “OEE gap” by connecting shop floors to cloud-native asset management and reporting

9 December 2021

Cloud-native CNC (computer-numerical control) machine-tool asset management introduced today by Hexagon’s Manufacturing Intelligence division connects to almost any machine-tool, enabling machine shops to optimise their return on investment (ROI) using its real-time status dashboards with mobile operator alerts and enabling global manufacturers to analyse machine fleet utilisation across multiple plants.

Increasing overall equipment effectiveness (OEE) is the goal of any manufacturer, but without reliable information it can be difficult to pinpoint improvements to machine shop operations. Purchasing a £200,000 - £500,000 machine tool will increase productivity, but few manufacturers are able to realise the full potential of such expensive assets because critical information such as machine-tool availability is often recorded via paperwork or spreadsheets. This can introduce human error, and the data is not made available fast enough to be analysed and actioned.

In operator-intensive departments, this data gap presents difficulties valuating machine availability and performance over time. For unattended series machining, timely performance information becomes critical because consistent historical data makes it possible to predict problems, and plan operator interventions and maintenance. While OEE is based upon a machine tool’s availability, performance and the quality of the parts it produces, accurately measuring OEE is difficult without immediate access to comprehensive operating data.

Hexagon’s SFX Asset Management application is already trusted by global manufacturers to improve employee productivity and the utilisation of Hexagon metrology devices, and now also records CNC machine tool operating data so that teams can analyse and mitigate downtime. The application can be used by production staff across manufacturing organisations to pinpoint bottlenecks and optimise the utilisation of CNC machinery, and by management to measure the ROI of those assets and identify valuable improvements in OEE.

Built in Hexagon’s cloud-native SFX platform, the application acquires and processes Industrial Internet of Things (IIoT) data in real time to provide shop-floor operators access to machine-tool status at any time. Role-based access provides staff access to the status of the required machines, so they can check programme and utilisation information from any location using a computer, tablet, or mobile phone. Customisable system alerts make it easier for an operator to supervise multiple machines and help instil greater confidence in lights-out production. The accompanying SFX Asset mobile application provides secure mobile-optimised access to status alerts and KPIs without the complexity of a virtual private network (VPN).

CIMdata PLM Industry Summary

“Machine tools only make you money when they’re running, so reporting on the root cause and duration of downtime is critical to reacting quickly and making changes when needed,” said Greg Holdsworth, Senior Product Manager for Digital Operations, Hexagon’s Manufacturing Intelligence division. “Looking at historical usage data to see – for example – if a cycle ran in the time predicted, or if a machine tool had to wait three hours for a setup is just as important as responding to crashes. All of these factors contribute to the overall effectiveness of a machine tool and, when you’ve made a significant financial investment, it’s important to take full advantage of the technology at your fingertips.”

When a machine tool is down for any reason – such as maintenance, a collision, or waiting for materials or a setup – a tag can be generated by SFX Asset Management to categorise the cause of the downtime. Once the machine tool is up and running, the system automatically removes the tag and records the new activity. Charts generated by the application display machine tool availability to simplify job scheduling and highlight usage over time, clearly identifying opportunities to improve gaps in productivity.

Any manufacturer can implement SFX Asset Management within hours by connecting a local server to the CNC controllers they use, which can be from any leading vendor. This includes Fanuc, Haas, Heidenhain, Mazak, Siemens and all those that support the popular MTConnect (ANSI/MTC1.4-2018) technical standards for CNC data exchange. Using a commercial off-the-shelf internet-equipped personal computer, the SFX Asset Management server software efficiently connects multiple machines to Hexagon’s highly-scalable cloud-native platform. Any global user from any location can then be immediately provided secure role-based access to the required assets and sites.

Lectra And Gerber Boost Fashion Ecosystem Productivity With Patternmaking Solution Interoperability

7 December 2021

Lectra and Gerber announce that their patternmaking users will now be able to easily exchange CAD digital assets between their Modaris and AccuMark software to unleash productivity in the fashion ecosystem.

CAD systems abound in the modern fashion industry. Due to the diversity of user needs and required functions, designers, pattern makers, developers and manufacturing teams often work with different systems and platforms. Therefore, compatibility is essential. However, interoperability among various CAD systems has been a major challenge for the industry.

Thanks to the synergies created by the integration of Lectra and Gerber, Modaris and AccuMark customers now have access to modules that make the pattern conversion process quick and accurate. For Modaris users, Pattern Converter is a web application that enables companies to convert files in the AccuMark format into the Modaris format with a simple drag and drop. AccuMark users will be able to use Data Conversion Utility or Pattern Design, both of which are fully embedded in the AccuMark software, to convert Modaris patterns to the AccuMark format. Not only do these intuitive, easy-to-use applications eliminate the time-consuming, error-prone manual conversion process but they also enable companies to reduce costs linked to data conversion, open up the scope of collaboration and boost productivity by streamlining communication between teams and departments.

“Interoperability and data reliability represent a major challenge in the fashion industry. We understand that Lectra and Gerber customers have been using a mix of programs in their ecosystem for decades. Providing them with the flexibility they need to work in faster fashion cycles is our top priority. We are

working on even more ways to ease the operations of our customers, no matter what tools and processes they use” says Céline Choussy, chief product officer.

LTI Launches Fosfor, the Data-to-Decisions Product Suite for Monetizing Data

8 December 2021

Larsen & Toubro Infotech, a global technology consulting and digital solutions company, launched Fosfor, the Data-to-Decisions Product Suite. Fosfor helps businesses monetize data at speed and scale by providing best-in-class capabilities. The Fosfor suite of products has extensive set of go-to-market and technology partnerships with leading cloud companies and has been recognized by leading industry analysts.

The Fosfor suite consists of five products:

- Spectra – a comprehensive DataOps product enabling the fastest way to harness data;
- Optic – an autonomous data fabric product to facilitate discovery-to-consumption data journeys;
- Refract – a data science and MLOps product automating operations across entire lifecycle;
- Aspect – a no-code, unstructured data processing product; and
- Lumin – an augmented analytics product that provides a search-like interface for all types of insights.

Sanjay Jalona, CEO & Managing Director, LTI, said: “We are in the age of Data Commerce, where data is not just a business enabler or differentiator, but also ‘the business’ for every enterprise. As an integrated suite of products across the data-to-decisions lifecycle, Fosfor is uniquely positioned in the market for AI-driven data products. We are confident that Fosfor will be a quantum leap in unlocking value for our clients.”

Siddharth Bohra, Chief Business Officer, Cloud & Data Products, LTI, said: “We firmly believe organizations need to fundamentally repivot what data can do for them, and Fosfor will play a significant role in achieving that goal for our clients. It signifies LTI’s intensified focus into the multi-billion dollar, fast growing Data and AI products market. Fosfor is based on our proven technology stack and some of the largest enterprises in the world are already benefiting from the cutting-edge products that are part of the suite.”

The Fosfor suite represents the evolution of LTI’s Mosaic and Leni products. These products have each seen great success in the market and are now brought together into the Fosfor suite. Several marquee clients leverage Fosfor suite of products for their mission-critical data and AI needs.

Materialise embeds native CAD workflows into Magics by integrating Siemens’ Parasolid Technology

7 December 2021

Materialise, a global leader in 3D printing solutions, has licensed Siemens’ Parasolid® software for integration with Magics, the company’s industry-leading software for data and build preparation.

With Parasolid technology, Materialise will add native CAD workflows within Magics 26, providing an additional toolset on top of mesh functionality. This powerful combination of trusted solutions will allow users to continue iterating CAD designs in Magics to prepare for additive manufacturing processes, improving productivity and providing cleaner, more accurate and fit-for-purpose data.

“For years, the 3D printing industry has discussed whether CAD or mesh is the preferred workflow for

file preparation,” said Stefaan Motte, Vice President Software for Materialise. “We believe both offer unique benefits and a seamless integration of both formats will provide users with the optimal workflow.”

Magics 26 will enable users to seamlessly transition from design optimization in CAD to mesh-based file preparation. This will enable users to easily review and edit parts with designers and engineers who are familiar with CAD systems before transitioning to mesh for platform and build preparation.

Developed by Siemens Digital Industries Software, Parasolid is the world’s premier 3D geometric modeling kernel. Parasolid is at the core of the Siemens’ Xcelerator portfolio’s open and flexible ecosystem and has been adopted by more than 200 software vendors giving end-users 100 percent 3D model compatibility across 350+ Parasolid-based software applications.

Convergent Modeling™ technology, a core part of the Parasolid solution, enables mesh data to be mixed with traditional CAD geometry in a unified environment, removing the need for time-consuming and error-prone data translation and enabling intelligent operations to be carried out. Magics users will benefit from the best of both worlds – CAD for part editing using best-in-class technology and mesh-based operations for platform preparation using tried-and-true solutions.

Magics 26 will be released in spring 2022, powering the additive manufacturing champions with a cohesive and fully integrated workflow for 3D printing.

ModuleWorks Releases 2021.12 Digital Manufacturing Software

6 December 2021

ModuleWorks announces the release of its 2021.12 CAD/CAM software components for digital manufacturing. This is the third ModuleWorks release of 2021 and contains new and enhanced features across the entire product range, including new multi-axis hole making cycles with independent feed rate control, a new morph pattern for laser aided manufacturing and a collision-free solution for robotics post processing.

New hole making cycles for multi-axis machining

The new ModuleWorks hole making strategies provide flexible feed rate control for drilling, reaming and thread tapping with fast programming via a graphical user interface.

When drilling holes, operators can select a different feed rate for the break-through distance to reduce the amount of burr. This can also be used on non-flat holes to ensure a high-quality finish and longer tool life.

Reaming increases the precision of holes. With the new ModuleWorks hole making options, operators can select different approach and retract feed rates to ensure optimal machining conditions for reaming cycles.

The feed rates can also be independently adjusted for thread tapping. Selecting the right feed rate for retract motions reduces non-productive time and speeds up machining.

New hole making cycles for multi-axis machining

The new ModuleWorks hole making strategies provide flexible feed rate control for drilling, reaming and thread tapping with fast programming via a graphical user interface.

The morph pattern can now be applied to laser aided manufacturing to create a morph toolpath between two leading curves or two guide meshes. The toolpath gradually interpolates between the two input objects and spreads evenly over the machining surface. This is especially useful when machining steep

areas during mold making.

The morph pattern can now be applied to laser aided manufacturing to create a morph toolpath between two leading curves or two guide meshes. The toolpath gradually interpolates between the two input objects and spreads evenly over the machining surface. This is especially useful when machining steep areas during mold making.

Collision-free robotics post processing

This new feature uses the ModuleWorks collision checking algorithm to compute a collision-free solution for robotics post processing. When calculating the inverse kinematics for robots, the ModuleWorks MultiXPost processor detects collision pairs in the robot's kinematics and takes them into account when generating the posted toolpath.

Nexar and SnapEDA Announce Partnership to Increase CAD Model Library Collections in PCB Design Workflows

2 December 2021

Nexar, a business unit of Altium LLC announced that SnapEDA has joined Nexar's growing ecosystem of electronics innovators. As a Nexar partner, SnapEDA will make available their library of computer-aided design (CAD) models to enhance printed circuit board (PCB) design and innovation. The Nexar ecosystem streamlines PCB design workflows to bring tools like CAD models into a single, unified experience.

SnapEDA's platform helps engineers download ready-to-use CAD symbols, footprints, and 3D models. "SnapEDA is tailored to the needs of professional engineers to find the CAD design resources they need to bring new products to life quickly," explains Natasha Baker, founder and CEO of SnapEDA. "We are partnering with Nexar as we share a common vision to improve our industry's PCB design and part selection workflows."

"Adding SnapEDA electronics design libraries means PCB designers won't have to change their current workflows to access content that's meaningful to getting their jobs done," said Ted Pawela, Chief Ecosystem of Altium and Head of Nexar. "Octopart, part of the Nexar ecosystem, will be the first to launch this integration. Octopart users will have the ability to search and access 10 million electronic component models that are compatible with nearly all major PCB design tools."

Remeha masters BIM challenges by providing 3D BIM CAD models of heating systems

9 December 2021

Simplified project planning thanks to intelligent Remeha CAD product data powered by CADENAS

It is indispensable in today's construction industry to have detailed and comprehensive digital building planning/ plans including information for all trades. For this to work, all manufacturers in the construction industry are required to actively participate in this development. Remeha, a specialist for innovative heating systems, offers high-quality products as well as comprehensive service. This includes providing extensive BIM and CAD data for free download. Remeha chose the software manufacturer CADENAS, one of the leading providers of electronic product data, as their partner for implementing their digital catalog.

Digital Remeha product data as well as tender text for architects & planners

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Remeha has been offering a comprehensive BIM and CAD download portal based on the eCATALOGsolutions technology by CADENAS since the beginning of 2021. The download portal can be found on the German Remeha website under the "Technical Support" tab or at www.partcommunity.com. The individual products are arranged according to subject areas such as gas condensing wall/standing/heating center, hybrid systems, air/water heat pumps or cogeneration. The appropriate data can be found quickly and processed directly in the CAD system. Almost all products are available in various native and neutral CAD formats. In addition, the preview displays 2D and 3D view as well as a dimensioning view, along with sectional and exploded views. The option of creating a shopping cart makes it possible to request corresponding tender texts directly from Remeha. Planners can also follow the link to the German database for tender texts www.Ausschreiben.de directly from the product.

Mastering BIM challenges with CADENAS

"Remeha has been working very intensively on the topic of Building Information Modeling over the last 18 months. Digital planning is picking up mightily and will have a significant impact on our future actions. We at Remeha are already facing up to this challenge today and want to be a reliable partner for all interested parties, also in terms of BIM," says Frank Draber, Head of Plant Engineering at Remeha. "With CADENAS, we have found an innovative partner for the provision of our product data, with whose technology we will always be up to date."

Siemens' mPower solution achieves certification for advanced analog IC foundry process technologies

3 December 2021

Siemens Digital Industries Software today announced that its new mPower™ solution for power integrity analysis of analog, digital and mixed-signal integrated circuit (IC) designs is now certified for Tower Semiconductor's SBC13 and SBC18 process technologies.

Siemens' mPower software is the industry's first and only IC power integrity verification solution to provide virtually unlimited scalability for analog, digital, and mixed signal ICs, enabling comprehensive power, electromigration (EM) and voltage drop (IR) analysis for even the largest IC designs.

"Siemens is proud that Tower Semiconductor, an industry leader in analog technologies, has now certified mPower for its SBC13 and SBC18 process offerings," said Joseph Davis, senior director of mPower product management. "This joint work by Tower Semiconductor and Siemens can help mutual customers conduct EM/IR analysis more accurately and quickly, resulting in faster time to market and higher quality end-devices."

Using mPower technology, IC designers can more quickly and thoroughly verify that their mixed-signal and analog IC designs meet power-related design goals -- capabilities that can help IC customers dramatically boost quality, enhance reliability and speed time to market.

Siemens' new mPower solution gains certification for TSMC's N7 and N5 technologies

10 December 2021

The significant power and performance advancements of TSMC's N7 and N5 processes make them ideal for next-generation mobile, artificial intelligence, high-performance computing, and network connectivity designs, as well as other high-performance digital and mixed-signal applications.

"It is exciting to see a new entrant into this critical EDA field of power integrity," said Suk Lee, vice

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president of the Design Infrastructure Management Division at TSMC. “This joint effort combining Siemens’ new mPower solution and TSMC’s N7 and N5 processes will enable customers to take full advantage of the power and performance improvements of TSMC’s advanced technologies to accelerate innovation for their differentiated products.”

Siemens’ mPower integrated circuit (IC) power integrity verification solution supports analog, digital, and mixed signal designs, while enabling comprehensive power, electromigration (EM) and voltage drop (IR) analysis.

“Siemens is pleased that TSMC, an industry leader in process technologies, has now certified mPower for its N7 and N5 processes,” said Michael Buehler-Garcia, vice president of Product Management for Calibre Design Solutions at Siemens Digital Industries Software. “Siemens’ collaboration with TSMC on these certifications will help our mutual customers conduct power integrity analysis tasks more quickly and accurately, enabling faster tape-outs with enhanced reliability and quality of results.”

Update on ROHM Solution Simulator: New Thermal Analysis Function

7 December 2021

ROHM has recently added a new thermal analysis function to ROHM Solution Simulator that allows designers of electronic circuits and systems in the automotive and industrial markets to collectively verify power devices and driver ICs thermal issues on different solution circuits.

ROHM Solution Simulator, which runs on ROHM’s website, makes it possible to carry out a variety of simulations for free – from component selection to individual device and even system-level verification. This enables easy and accurate verification of ROHM products such as SiC devices in power semiconductors, driver/power supply ICs, and passive components (i.e. shunt resistors) in solution circuits under close to actual application conditions.

ROHM released its ROHM Solution Simulator in 2020 – in line with the company’s overall focus: developing and supporting application circuits that maximize the characteristics of driver ICs and power devices designed to supply high power in the automotive and industrial equipment markets. In this context, the ROHM Solution Simulator enables full circuit verification of power semiconductor and analog ICs. The tool is free of charge, and the software has been well received for its applicability and high accuracy.

The newly added thermal analysis function can be implemented in solution circuits for devices and applications where heat is likely to become an issue in electronic circuit design. Examples are PTC heaters (heaters specifically designed for electric vehicles without internal combustion engines) equipped with IGBTs and shunt resistors as well as DC/DC converter ICs and LED drivers in order to meet the increasing demand to simulate temperature during circuit operation. This is the only simulator in the industry that enables web-based electrically and thermally coupled analysis of not only of the semiconductor chip (junction) temperature during operation, but also pin temperatures as well as thermal interference of board components on solutions circuits that include both power semiconductors and ICs along with passive components. As a result, thermal analysis that used to take as much as a day can now be performed in about ten minutes (100x faster than conventional methods). This allows users to quickly and easily check the temperature of various parts of the device before prototyping (instead of after as is currently the case), reducing the need for rework. At the same time, the amount of development resources required for applications where heat is an issue decrease.

ROHM Solution Simulator can be used free of charge by simply registering on ROHM’s website. In addition to the simulator, the dedicated web page provides access to videos and documents required for

use.

Going forward, ROHM will continue to implement thermal analysis functions in solution circuits compatible with ROHM Solution Simulator, focusing on the latest SiC devices, to further reduce the number of resources required for application development and prevent issues.

New Thermal Analysis Function Overview

Electronic circuit boards' several parameters (i.e. number of layers, area) affect the heat dissipation performance. The thermal analysis function in ROHM Solution Simulator is achieved by using a thermo-fluid analysis tool to create a 3D model of the parameters related to heat dissipation calculated from the actual circuit board, then reducing the model to 1D so that it can be thermally analyzed by the electric circuit simulator and performing coupled analysis of electricity and heat. In addition to the semiconductor chip (junction) temperature that fluctuates during operation, thermal analysis of pin temperatures as well as thermal interference between board components and module chips that previously took about a day can be performed in less than 10 minutes (100× faster than conventional methods).

As a first step, ROHM has incorporated the thermal analysis function in solution circuits for a PTC heater (a heater specially designed for electric vehicles without internal combustion engines) equipped with IGBTs and shunt resistors as well as a DC/DC converter IC (BD9G500EFJ-LA) and LED driver ICs (BD18337EFV-M and BD18347EFV-M). For applications and devices where heat is a major issue during electronic circuit design, the temperature of various parts of the device can be quickly checked in the simulation before actual prototyping, contributing to reduced application development resources.

Key Features of ROHM Solution Simulator

One of the only free web simulators in the industry that enables full circuit verification of power semiconductors, ICs, and passives, ROHM Solution Simulator provides the following features that significantly reduce application development time for designers of electronic circuits and systems.

1. Allows for batch verification of power semiconductors and ICs using a solution circuit close to the actual application environment

ROHM Solution Simulator makes it possible to easily and accurately verify power semiconductors such as SiC devices and IGBTs along with driver/power supply ICs and passive components (i.e. shunt resistors) in solution circuits under close to actual application conditions. This allows users to perform simulation of characteristics that cannot be seen with the device alone, including peripheral circuits.

2. Simulation data can be transferred to the user's own development environment

ROHM Solution Simulator was developed based on the PartQuest™ simulation platform from Siemens EDA, a leader in electronic design automation software with an extensive track record in the automotive and industrial equipment industries. Existing PartQuest™ users and those with newly registered PartQuest™ accounts can incorporate simulation data executed in ROHM Solution Simulator into their own PartQuest™ environment (workspace) to perform verification of system circuits under conditions close to actual use (including customizations).

What's new OpenBOM December 2nd, 2021

3 December 2021

Oleg Shilovitsky announced the OpenBOM December Update on December 3, 2021. In this release we see updates to Change Management, the Change Order Dashboard, Change Requests, OpenBOM Drive. We also see integration improvements with Dassault Systèmes Solidworks, Autodesk Eagle, Autodesk

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Revit, and Oracle Netsuite. Finally there are new Advanced Purchasing Features added. To learn more visit the OpenBOM blog post. <https://www.openbom.com/blog/whats-new-openbom-december-2nd-2021>

What's new in Opcenter Research Development and Laboratory 9.1

7 December 2021

Alessandro Ceresto of Siemens has a new blog post detailing the update release of Opcenter Research, Development, and Laboratory. Opcenter RD&L is released on the platform formerly known as Simatic IT® Research and Development Suite. To learn more about this release please read the full blog post. <https://blogs.sw.siemens.com/opcenter/whats-new-in-opcenter-research-development-and-laboratory-9-1/>