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## CIMdata News

### *2024 State of Design & Make - a CIMdata Highlight*

16 April 2024

*Autodesk expands on 2023 study, going longitudinal*

#### Key Takeaways

- Autodesk launched their 2024 State of Design & Make global research study in New York City on 10 April 2024.
- Nearly 5,400 industrial practitioners from around the world responded to the 2024 version, of what will now be an annual research effort.
- The formal program featured a lengthy one-on-one between Mr. Andrew Anagnost, Autodesk President & CEO and Mr. James Cameron, a major filmmaker and long-time Autodesk partner.
- Prior to the formal event, Autodesk senior executives provided a detailed update on their strategy, licensing evolution, customer success, and other company initiatives to the analysts attending.

CIMdata had the pleasure of attending the launch event for Autodesk's latest global Design & Make research in New York City on 10 April 2024.<sup>[1]</sup> The one-day event had two sessions. The main event was a formal launch on the Observation Deck of the Freedom Tower. Just before that session, the analysts in attendance were briefed by Autodesk senior executives.

At Autodesk University 2023, Autodesk discussed their 2023 Design & Make Study, a partnership with Ipsos, a global research firm, to survey and interview 2,565 industry leaders and other experts in their target industries: Architecture, Engineering, Construction & Owners (AECO), Design & Manufacturing (D&M); and Media & Entertainment (M&E). The phrase "Design & Make" is core to Autodesk's positioning and the research focused on key topics like resilience, talent, and sustainability, mainly as a result of the months-long qualitative research that helped define the surveys and interview questions used with the respondents. CIMdata applauds such research efforts by companies like Autodesk, which is valuable in a space that often lacks broad-based, well-constructed, global research.

Clearly the company saw great value in the 2023 study because the 2024 version expanded to include 5,399 global respondents. The company announced that this study will now be conducted annually, a huge benefit to Autodesk and the market. Companies can use these studies to roughly benchmark themselves in their industry and geography based on the detailed study results. Those interested in learning more can access their results at <https://www.autodesk.com/design-make/research>.

The formal launch event started with a lengthy Q&A session between Mr. Anagnost and Mr. Cameron. Mr. Cameron's films have grossed over \$8 billion worldwide. Mr. Cameron is known for pushing the boundaries of filmmaking technology, often creating his own software and

hardware to fulfill his vision for his films. The director related that he extended MotionBuilder, an Alias product, to better support his needs. Autodesk's 2006 purchase of Alias helped lead to the long-term partnership with Autodesk. Their tools were essential to his blockbuster hit Avatar. The second part of the event, titled "Building an AI-Powered Workforce," was led by Axios, an American news website known for their digital native-friendly content (e.g., 300-word stories, short videos). It consisted of short interviews with notable industry figures like Mr. Josh Silverman, CEO of Etsy, and Dr. Tarika Barrett, the CEO of Girls Who Code.

Prior the formal launch, Autodesk executives held an analyst session to provide updates on Autodesk's Platform Vision & Strategy by Ms. Raji Arasu, Autodesk CTO, their Industry Portfolio Strategy by Mr. Vikram Dutt, Vice President of Industry & Portfolio Strategy, Autodesk's Customer Success program by Ms. Elisabeth Zomes, Chief Customer Officer, and Autodesk's Business Transformation Model by Mr. Carl White, Vice President of Global Business Transformation. These sessions were very informative and a nice compliment to higher-level information typically provided on the main stage at Autodesk University. Autodesk is one of three leading product lifecycle management (PLM) solution providers that are pursuing a platform strategy and their business model and ecosystem approach is different and potentially more open than their competitors and more valuable for partners. While Autodesk Fusion, their D&M industry cloud, is more advanced than Autodesk Forma for AECO and Autodesk Flow for M&E, the company is making rapid progress in building out their capabilities and ecosystems for all three.

After the session, Autodesk stated their intention to ramp up their efforts with analysts, a very welcome evolution and an important one given Autodesk's position in offering capabilities to enhance the Design & Make efforts of their global customers in vital industries like AECO and D&M, and culturally important ones like M&E.

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

## *CIMdata Mourns the Loss of Dr. Ken Versprille, Well-Known CAD Authority*

19 April 2024

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, is saddened to announce that Kenneth J. Versprille, Ph.D., passed away on 18 April 2024 after a short illness. Ken was a respected colleague and a pioneer in the global mechanical computer-aided design (MCAD) market.

Ken received a Bachelor of Science in Mathematics from the University of New Hampshire and earned his Master of Science and Ph.D. in Computer Science from Syracuse University. He is best known for his groundbreaking work on Non-Uniform Rational B-Splines (NURBS), mathematical representations of 3D geometry that can accurately describe any shape from a simple 2D line, circle, arc, or curve to very complex 3D free-form surfaces or solids. Today, NURBS is an international standard in CAD and computer graphics. In 2005, he received a Lifetime Achievement Award from The CAD Society.

Ken applied his expertise in mathematics and computer science at Computervision Corporation, an early leader in the application of digital technology to product design and development. Over his 15-year tenure, he became the equivalent of Chief Technology Officer (CTO) and was Vice President of R&D for core applications. Ken was a lead architect of Computer Vision's CADDs 4 product and was responsible for the initial design of Computervision's 3D graphics system. As General Manager of CV-Doors, he led the group that introduced and managed the first geometric kernel business in the CAD industry.

Subsequently, he worked as a Senior Industry Analyst at D.H. Brown Associates and Collaborative Product Development Associates (CPDA), where his thought leadership inspired others to advance the industry and its technology. CIMdata's acquisition of CPDA in 2011 integrated Dr. Versprille and his colleagues into the CIMdata team, where he was an Executive Consultant and led the Collaborative Innovation & Social Product Development consulting practice.

Despite his enormous achievements, which contributed to CAD technology and industry direction, Ken was humble and quick to recognize others for their accomplishments. He would not tolerate arrogance and always respected disciplined thinking and thoughtful opinions. Ken was compassionate, open, and patient with those seeking his help. Yet, he would never impose his opinions on others. Rather, he would help them find their own truth.

Peter Bilello, President & CEO of CIMdata, issued the following statement today: "CIMdata is saddened by the passing of Dr. Ken Versprille, a leading thinker in the realm of CAD technology. Ken was a colleague and friend to many whose industry insights, innovative thinking, and wisdom will be sorely missed."

Ken is survived by his wife, Kathleen, his children, Kathryn and David, and several grandchildren. CIMdata and his many friends and colleagues extend heartfelt condolences to his family at this time of great sorrow. His legacy as a trailblazer and mentor in the field of CAD will be remembered with deep respect and admiration.

If you would like to share your condolences or any memories of Ken with the family, please send them to CIMdata at [c.peck@CIMdata.com](mailto:c.peck@CIMdata.com), and we will pass them along.

For some recent memories of Ken, please view our video remembrance at <https://youtu.be/gFeEAw1J0-w>.



*Kenneth J. Versprille, Ph.D.  
(1947-2024)*

*Photo: Paris, November 2023*

## *CIMdata's Chairman, John MacKrell, to make a Keynote Presentation at the 2024 COExperience*

16 April 2024

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces that its Chairman, John MacKrell, will deliver the keynote presentation at the 2024 COExperience. The conference will take place from May 13-16 in Dallas, Texas, at the Sheraton Dallas.

In today's digital world, processes, systems, and smart connected products generate huge amounts of data that become part of an organization's digital web, but to become usable, search and find capabilities must be made available. Fortunately, leading solution providers are going beyond basic data indexing approaches that require all the data to be in one system. They are incorporating and leveraging an ever-expanding array of artificial intelligence (AI) algorithms to search and find data no matter where it resides. The presentation, *Extracting Insight from the Digital Thread: AI-Related Trends & Enablers*, will discuss the emergence of search and find and AI enablement.

In addition to his keynote presentation, John will lead a Master Class on Digital Transformation, which will take place on May 13, starting at 1:00 PM. The Digital Transformation Master Class is delivered in one 3.5-hour session and includes one individual assessment. The class will focus on:

- What is Digital Transformation?
- Where & How PLM Fits into a Digital Transformation Initiative
- The Key Enabling Elements of Digital Transformation
- The State of Digital Transformation

Completing the course and the associated assessment leads to a Basic Certificate of Digital Transformation Leadership and 0.3 CEUs.

COExperience attendees can sign up for the class at <https://2024-coe-experience.events.coe.org/events/sessions/view/2024-COE-EXPERIENCE-CIMDATA-DIGITAL-TRANSFORMATION-MASTER-CLASS>

## *Connecting Services to Engineering - a CIMdata Commentary*

18 April 2024

*Leveraging a Digital Thread between Digital and Physical*

Key Takeaways

- Asset and service data can provide a wealth of valuable insights to help improve design, reliability, uptime, customer experience, and quality—yet it is often unavailable or not readily accessible.

- Greater product complexity, such as smart products, is driving renewed interest in gaining better access to service information to unlock new business models, such as those based on output.
- Manufacturers should extend digital thread initiatives to field service operations to unlock this data to make it more easily accessible and actionable as part of a digital strategy.
- PTC's Service Lifecycle Management (SLM) solutions can help companies implement comprehensive asset management and service driven by a closed-loop digital thread.

## Introduction

The lack of accurate data availability across business domains continues to be one of the major challenges facing companies today. It hampers the ability to make informed decisions, collaborate effectively, and results in a broad range of inefficiencies. This is further amplified as product complexity increases as more disciplines and teams become involved, each using different applications and data creating a web of digital product data as opposed to a path of data across the product lifecycle. [\[1\]](#)

### Digital Thread

A Digital Thread is a communications framework that connects data flows, which can be used to produce an integrated and holistic view of an asset's status and performance from physical and virtual systems (i.e., its digital twin) throughout its lifecycle across traditionally siloed functional perspectives.

The demand for higher asset availability (uptime) at lower service cost has driven significant advancements in service and asset management. Many advances have been made to address challenges in this area, in large part due to emerging technologies such as the internet of things (IoT), augmented reality (AR), as well as advanced artificial intelligence (AI) and machine learning-based (ML) analytics. Investments in innovative technologies have heralded a new era of data collection, resulting in the availability of far more product-related

design and operational intelligence than ever before.

Today, the problem isn't whether the data exists, but rather how to quickly gain access to the right data to understand and act upon it despite the wealth of data that is being continuously collected. Unfortunately, much of the asset and service data currently being generated in design and engineering, collected in the field, or via service interactions, is grossly underutilized across the organization. Service stakeholders often don't have access to all the design and engineering data necessary to maintain assets, impacting parts stocking levels, workforce efficiency, and overall first-time fix rates. Similarly, much of the service data collected via service interactions is not shared with product design or engineering teams—missing opportunities for product innovation. Typically, this data is siloed—disconnected from development and production and not being shared across the enterprise in ways where the right people can access and use the information in a timely and meaningful way.

What is required is a better way to access, aggregate, and make sense of this wealth of service and asset data. CIMdata believes organizations need to bridge the gap connecting the physical world of in-service assets and the digital world, with a digital thread integrating engineering, production, and service operation processes in a continuously updated, closed-loop system.

### The Disconnect Between Service and Engineering

A transfer of product definition and configuration data has long existed as part of the product design and manufacturing process. Requirements flow into engineering where the product is designed. At a minimum the output includes a manufacturing Bill of Material (mBOM) and a service Bill of Material (sBOM) to ensure the product can be built and maintained to specifications. Many complex products (e.g., planes, ships, heavy machinery, etc.) are expected to have a useful life spanning many years with a service and maintenance plan to maximize that life. This information provides the basis for building and maintaining a digital history of the product's lifecycle.

As assets are put into service, a new set of data records are compiled based on the data that is collected to service and maintain the asset. Traditionally, an sBOM and its data may not be readily available beyond the field. If it could be consistently created and shared, then this data could provide enormous value in terms of providing design, production, reliability, and quality insights to be used in future product versions.

There are several challenges that often prevent this data from being shared. One of the most common is that data related to assets are often stored in disconnected, siloed systems. The data can also be fragmented or out-of-date, which leads to incomplete or inaccurate insights, resulting in missed opportunities. If not remedied, over time the configuration definition data coming from an asset will diverge from the engineering definition that was part of the asset's original design. The lack of timely access to service data makes it challenging to monitor and detect such deviations, take corrective actions, and improve the quality, reliability, and performance of the asset over its useful life.

### Creating the Engineering to Service Digital Thread

Every organization utilizing complex machinery or equipment stands to benefit from having a digital thread connecting each physical asset to a virtual digital representation of the as-running asset in the field—its in-service digital twin. Creating a data feedback loop or "closed-loop" between physical and digital across a communications framework is key to a complete digital thread. As each product is designed, the output should include not only an engineering Bill of Material (eBOM)—but an mBOM and sBOM to support future service requirements, including the work instructions on how to service and maintain the asset once it is deployed.

Each of these BOMs need to include a history of what materials were used and which processes were performed to design, build, and maintain each product. Digitally linking this intelligence creates the digital thread enabling engineering and service information to be shared between functions in a format that can be easily acted upon. With access to this data, service planners can plan for resource needs in people hours or part availability to support the predicted maintenance requirements of assets in the field. Execution-focused service stakeholders such

as service technicians can benefit by having greater insights as to what product performance and service specifications were incorporated into the product to help them diagnose service situations and apply the appropriate parts or work instructions. This maximizes their efficiency and scale, extremely vital in this time of dwindling service resources.

More importantly, customers and end users gain higher value from their purchase—be it in the form of better asset utilization, lower total cost of ownership, or fewer resources required to maintain. Taking it a step further, one could argue that this is the best way to establish a customer-centric relationship that delivers a consistent, recurring, positive customer experience and relationship.

Creating an asset-centric strategy is an excellent approach to addressing this issue. This entails creating an asset system of record used within a comprehensive asset work execution and management process. This type of approach should include the eBOM, mBOM, and sBOM information linked to the asset hierarchy and system of record, which can then be used to:

- Enable a customer-centric product lifecycle with more effective predictive and remote support coordination
- Inform service and maintenance activities, based on model-based content, capable of being directly integrated with engineering and design applications
- Optimize resource needs for service events that can be orchestrated across internal and external service channels
- Provide data-driven insights across the product lifecycle to improve asset quality and performance while supporting new business models, such as outcome-based services

An asset-centric strategy enabled by a closed-loop digital thread can enhance service intelligence by supporting predictive maintenance using AI/ML technologies to help identify trends in service demand, resource planning, and acquiring after-sales service parts from an organization's supply chain. Such a solution could leverage actual resolution results to enhance future solve rates and result in simplifying warranty claims between the users and suppliers. One of the key capabilities is to enable complete traceability of product changes, service activities, and user profiles to ensure accurate collection of field asset data. This approach would provide role-based usage detail and consumption to deliver insights that enable upselling and cross-selling opportunities based on customer usage and profitability.

#### Value of a Digital Thread Between Service and Engineering

Access to data from the field enables engineering to improve designs, creating more reliable, serviceable, and sustainable products. Without knowledge of a product's in-service performance and any operational issues, it is impossible to make appropriate design enhancements that result in better quality and improved in-service reliability. Better service visibility and coordination not only improves the product, but also improves the customer experience—a differentiator that is increasingly required as competition for customers becomes more intense. Regulatory and environmental trends for sustainability are also increasing, driving the need for a more circular and sustainable design and service operations

through life, that is impacting the need to design for sustainability, which includes operational and service factors. Market forces are also contributing to the potential for new value. The younger, digitally native workforce expects knowledge sharing to be intuitive and highly accessible. This is increasingly important as new engineers have a greater impact on future smart, connected products. These smart, connected products result in an increase in product complexity, which is driving organizations to gain better access to service data enabling them to unlock new output-based business models such as Product-as-a-Service. This can't be accomplished without complete visibility of how products perform in the field. CIMdata believes to accomplish this companies must take an asset-centric approach powered by a closed-loop digital thread.

Establishing a digital thread between engineering and service has a direct impact on top-line revenue with increased product innovation, better market differentiation, more product personalization, and higher customer satisfaction. Feedback from the field using a digital thread provides insights that reveal how products are used (or not used) and where new opportunities exist to create innovative and competitive new product introductions and upgrades to existing products. Organizations that have service intelligence data will gain quality insights, identify and understand feature omissions, and better understand other issues enabling them to gain market differentiation resulting in a more competitive offering.

By better understanding customers, their behavior, and the asset usage patterns that are revealed across a closed-loop digital thread, a company can tailor solutions providing personalized products—a growing trend that can lead to increased revenue. Customer satisfaction is dependent upon the buyer achieving more value from products whose performance exceeds expectations. All aspects of a product value chain must work seamlessly to deliver this exceptional experience. This requires a strategy that is predicated on high quality engineering and production combined with a closed-loop digital thread that connects the physical asset with the digital enterprise to deliver reliable, user-friendly products to satisfied customers that become brand ambassadors and customers for life.

In addition to increasing top-line revenues, an effective closed-loop digital thread increases the efficiency, with which product data is used across the extended value chain, which improves bottom-line profit. Effective digital threads help optimize the product design and manufacturing processes while reducing material waste and inventory levels, which translates into lower production costs and higher profit margins. Service insights applied to engineering-driven process improvement, automation, and supply chain management can enhance an organization's operational efficiency, leading to cost savings and improved profitability. Access to field service data can greatly improve the accuracy of engineering analysis and testing to reduce the likelihood of quality defects, future product recalls, and the ability to avoid potential legal liabilities, which could impact the bottom-line. Lessons learned from service intelligence leads to better engineered products with longer lifecycles, reducing the need for redesigns or updates, leading to more consistent revenue streams and cost savings.

PTC's SLM Strategy and Solution

Service Lifecycle Management (SLM) by PTC enables service leaders to optimize the performance of physical assets across their lifecycles to maximize customer value while supporting critical outcomes for the business. SLM is the foundation that allows service leaders to:

- Scale their business resources with greater efficiency, including people, parts, and information
- Increase customer value by delivering the highest level of responsiveness and asset uptime
- Provide near real-time visibility into field asset performance
- Deliver profitability with better visibility into cost and revenue streams
- Unlock new service business models

CIMdata believes it is critical to intimately know assets down to their digital DNA—including an asset's unique configuration, operational, and service histories. This rich data set serves as the backbone of the digital thread. PTC's SLM solution portfolio, including Arbortext Service Information, PTC Warranty, Service Knowledge and Diagnostics, ServiceMax Field Service Management, Servigistics Parts Optimization, and ThingWorx Smart Connected Products deliver an accurate record of the as-maintained asset. This asset-centric approach provides the critical data to enable a service organization to be more commercially viable, to perform predictive service operations, to better optimize resources, parts, and inventory across channels, and to make better, data-driven decisions for improved profitability and customer outcomes.

CIMdata believes taking an asset-centric approach serves as a connecting point between the digital world of PLM and design and the physical world of SLM and field assets. This provides a platform to create a true closed-loop, model-based digital thread that helps enable successful digital and business transformation.

PTC's digital, model-based content from solutions such as Creo and Windchill deliver rich information and content that help enable service organizations to optimize their service actions while maximizing asset performance. This content comes in the form of dynamic service instructions and manuals, recommended parts lists, the service bill of material, and more.

In reverse, the record of the actual performance of the physical asset can also be consumed by upstream teams such as engineering, design, quality, and reliability, to improve and accelerate product development, reliability, quality, and serviceability to support better outcomes for the business.

## Conclusion

Asset and service data can provide a wealth of valuable insights to help improve design, reliability, customer experience, and quality insights. The challenge is that it is often unavailable or not readily accessible. Greater product complexity, such as smart, connected products, are driving the need to gain better access to this intelligence to unlock new business output-based business models. CIMdata is impressed with the Service Max offering and the extensive

complementary SLM offerings PTC provides. CIMdata strongly believes in the value of connecting physical assets with their digital representations in a closed-loop using a digital thread. Manufacturers should extend digital thread initiatives to field service operations to unlock this data to make it more easily accessible and actionable as part of their digital strategy. This intelligence can benefit both engineering and design teams as well as identify how best to service and maintain the final, as-built product, to establish long-lasting customer-centric relationships with end users. CIMdata recommends any company looking to connect their physical assets in the field with their digital twins consider PTC's ServiceMax and SLM suite of solutions in any technology evaluation.

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[1] Research for this paper was partially supported by PTC.

### *Digital Thread on the Cloud: Aras ACE 2024 - a CIMdata Commentary*

17 April 2024

#### Key Takeaways

- Presentations on the digital thread by customers and partners highlighted the strength of Aras Innovator's architecture and applications, which have been enabling digital thread creation for over 20 years. Additionally, updates from past ACE presenters revealed the growth of Aras Innovator's digital thread deployments and the additional value they provide.
- SAIC, a platinum Aras partner, presented their ReadyOne SaaS platform that uses Aras Innovator as its backbone. ReadyOne enables rapid deployment and one-stop shopping for complete end-to-end top-to-bottom PLM environments that adhere to the DoD's strategic Digital Engineering initiative.
- For many, migrating on-premises solutions to SaaS requires de-customization. Aras customers, however, can lift and shift their implementations to SaaS without rework and are able to continue to deploy highly configured and upgradeable solutions while taking advantage of cloud capabilities, including DevOps and telemetry.
- Supplier management is a critical process in most companies, and Aras has released several new supplier solutions to allow collaborative exchange and management of product data with suppliers simply and securely.

Aras held the ACE 2024 conference March 4-7, 2024, in Fort Worth, Texas. CIMdata attended the conference and as usual, it provided a plethora of information for attendees. Monday was their partner and training day, during which Aras held private meetings with partners and provided users and partners with training on new capabilities and XPLM connectivity. Additionally, a few other independent organizations, including CIMdata, provided focused education and training for conference attendees. [1]

Day 2 of the conference opened with keynotes. Mr. Roque Martin, Chief Executive Officer and Board member, reviewed recent business achievements that included:

- 61% subscriber growth over the last 2 years
- 1.7 million users of Aras Innovator
- 77% YoY growth in SaaS

CIMdata sees these results as strong, especially considering the turbulent times we live in and the competitive market Aras targets. Mr. Martin reviewed recent customer successes, including Nissan’s use of Aras Innovator to support traceability during the development of their in-vehicle software variants and Red Bull’s use of Aras Innovator SaaS for recipe development and compliance from ideation to production. Aras is best known for its discrete manufacturing support, and while CIMdata is aware of several process manufacturers using Aras, it is impressive to see what Red Bull is deploying.

Mr. Martin also talked about the “Build with Aras” program that supports OEM partners including Ansys, Aveva, and SSI. This program provides support for companies that want to integrate their applications with PLM (e.g., Canvas GFX, Razorleaf, and Modular Management).

Mr. Rob McAveney, Chief Technical Officer, came on stage to talk about where Aras is going. Key points covered included Requirements as a Service, Digital Twin Syndication, and AI Infused Engineering. CIMdata was extremely interested to hear Mr. McAveney’s take on AI and its relationship to Industry 5.0. His view is that AI within the PLM context will begin with suggestions and responses provided by chatbots based on the engineer’s prompts, then progress to system suggestions based on AI monitoring of the user’s actions, and then finally grow to AI-led system interactions based on user prompts. Figure 1 shows a mockup of this progression.

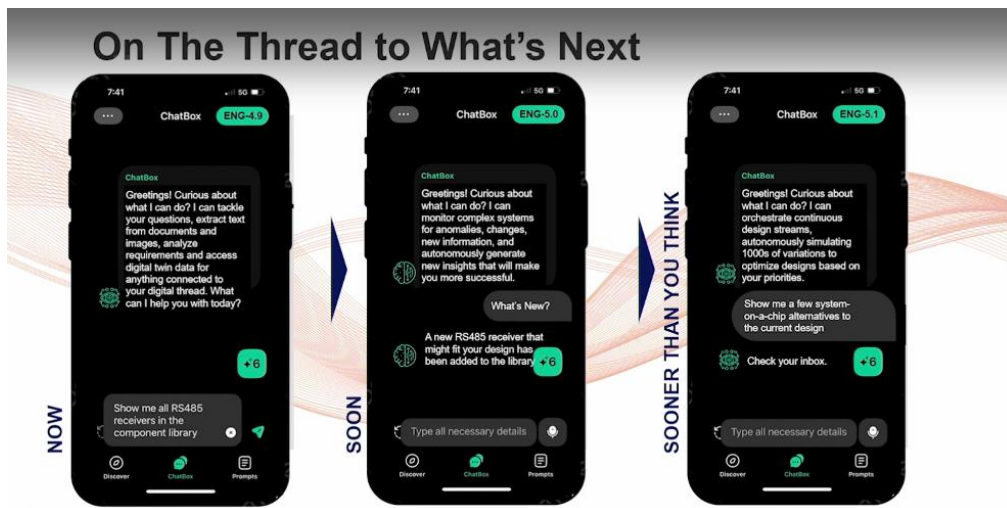


Figure 1—Mockup of AI in PLM Progression

Returning ACE customer presenters gave updates on their progress, including presentations from Ocado Technology and Microsoft. Ocado builds a robotic system to gather client grocery orders and prepare them for distribution. They explained how agile product development enabled by Aras Innovator has allowed them to expand their business model to sell their robotics solutions to now target non-grocery markets. Microsoft has presented regularly since

adopting Aras in 2015. They discussed how they have evolved over the years and showed how they have upgraded Aras over the years (see Figure 2). One of the differentiators Aras often talks about is their ease of upgradeability, and data from Microsoft supports this claim. Microsoft is currently working to leverage Aras configurator application services and incorporate Co-Pilot, Microsoft’s AI service into Aras Innovator. Perhaps this is connected to Mr. McAveney’s comments on AI (see below). As a side note, during the conference, Aras held several partner quick demo sessions, and it was very interesting to see many AI-based application prototypes integrated with Aras Innovator, such as an AI-based tool to generate AML scripting.



Figure 2—Microsoft Aras Innovator Upgrades Over the Years

Mr. David Ewing Jr, Director, Digital Engineering Innovation Factory, and Ms. Cresta Bateman, Sr Manager, Digital Engineering, both from the Engineering Innovation Factory at SAIC, an integrator supporting defense, space, civilian, and intelligence markets, gave an overview of SAIC’s ReadyOne™ solution. ReadyOne is a SaaS digital engineering ecosystems solution that enables rapid configuration of heterogeneous software landscapes and digital threads to support U.S. Department of Defense (DoD) contracts. By using Aras Innovator as the backbone for a wide and deep ecosystem of engineering applications (see Figure 3) ReadyOne provides a one-stop shopping and dynamically configured program-specific environment, built in a few hours, to support specific government contracts. Custom data models aligned to DoD standards are assembled and managed using a DevOps process enabling speed and ensuring quality, repeatability, and sustainability. Not only is SAIC delivering Aras as a product, they are using Aras to manage the DevOps process while operating in the AWS GovCloud. CIMdata is looking forward to hearing more about this approach as it appears well organized and designed to scale.

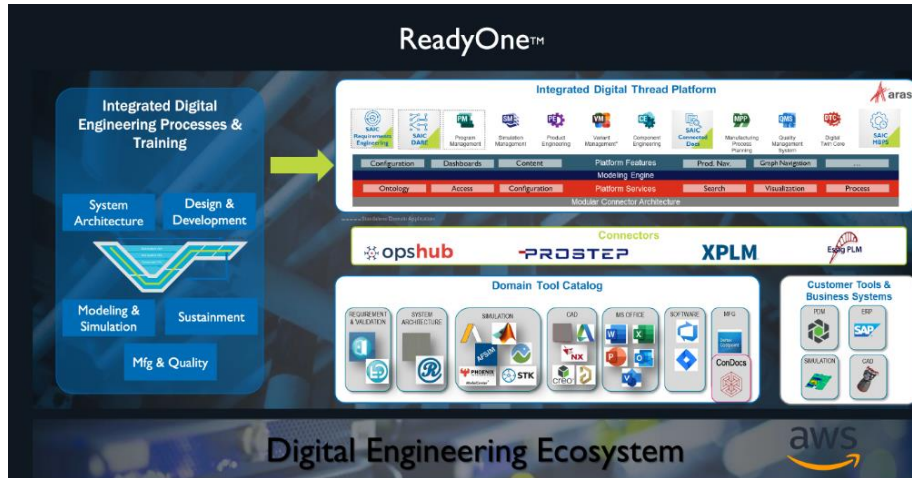


Figure 3—ReadyOne’s Digital Engineering Ecosystem

Mr. John Sperling, Senior Vice President of Product Management, delivered his annual overview of Aras’ development efforts for the past year. He reminded the attendees that Aras has included variability web services as part of the platform for several years enabling customers to build their own applications. Product Variation is an out-of-the-box application to support variability including data visualization. In the continuing quest to make data more usable, Aras added a User-Oriented Analytics capability. It enables users and analysts to configure custom dashboards and reports using standard widgets. Supplier Management consists of two solutions, the core Aras Innovator platform and the Aras Portal. The platform enables supplier collaboration, information sharing, monitoring, discussion forums, surveys, and scorecards. The portal enables secure supplier access with mobile and desktop solutions.

Additionally, Mr. Sperling introduced Configurable Web Services; a capability that enables low code/no code development and deployment of custom web services to extend digital threads. Aras DevOps is used to ensure that proper configuration and quality procedures are used to develop and deploy custom web services. CIMdata views anything that makes digital threads easier and faster to assemble and deliver as an advantage. Aras continues to expand and improve their capabilities in low code/no code development for both on premises and SaaS solutions. Unlike most of their competitors, their low code/no code capabilities are incorporated at the core of their Aras Innovator architecture, and their continued commitment to enhance and expand these capabilities further demonstrate their commitment to enable their customers to configure or customize their solutions to meet their needs today and tomorrow.

Mr. Rasool Norman, Enterprise Solution Lead and Product Owner, from Svante, a leading carbon capture and removal solution from Burnaby BC, Canada, delivered an overview of Svante’s migration from on-premises to Aras Enterprise SaaS, and the deployment of Aras’ manufacturing process planning (MPP) capability. CIMdata was most interested in hearing about the migration to Aras SaaS, to confirm claims Aras makes about migrating. Svante’s implementation confirmed Aras’ claims. While the project was complex, it was only complex in the areas that affect all IT projects; ensuring proper resources were available at the right time,

proper testing was executed, and organizational change management. The move of the Aras solution was uneventful. While there are remaining minor issues, they are related to ensuring the cloud infrastructure is properly configured and performing up to its promised specifications. These issues are generic to any major infrastructure upgrade or SaaS migration. CIMdata sees this as an important data point for companies that want to migrate to the cloud, but do not want to be first. Hat's off to Svante for being an early migrator.

## Conclusion

As usual, ACE 2024 delivered great content from Aras, some of its partners, and select Aras customers. This commentary only covers a fraction of what was presented. Beyond the formal presentations, the break and evening event discussions were icing on the cake in that deep conversations provided great information and provoked new ideas.

Hearing about the successful migration to Aras Innovator SaaS was a big deal as it will be a major trend for the next few years as existing Aras customers see the value in moving to the Cloud, especially if the costs, effort, and benefits are clearly justifiable. Growth of Aras Enterprise SaaS is outpacing typical on-premises sales and we expect that this trend will accelerate. The Aras solution continues to expand with the new variant product solution, configurable dashboards, and supplier management. These are important capabilities for customers looking to expand their use of Aras Innovator. CIMdata is looking forward to next year's event to see how Aras performs and especially how they begin to roll out AI within their product line.

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[1] Research for this paper was partially provided by Aras.

## *Key Sponsors for PLM Road Map & PDT North America Announced*

19 April 2024

CIMdata, Inc. and Eurostep AB announce the sponsors for the upcoming PLM Road Map & PDT North America 2024 event. The participating sponsors are the Aerospace & Defense PLM Action Group, Altium, Aras, Collaboration Synergies Inc., Configit, Dassault Systemès, DXP Services, ESI, Modular Management, PTC, Razorleaf, SBE Vision, and Sinequa. The event will take place at The Marriott Tysons Corner on 8 and 9 May.

"We are excited to have these key solution providers choose to sponsor our PLM Road Map and PDT conference," stated Cheryl Peck, CIMdata's Director of Marketing. "We look forward to creating an environment where open collaboration and knowledge transfer can occur between all members of the PLM ecosystem."

As part of the PLM Road Map/PDT experience, sponsors participate in an online PLM Collaboration Café™, where they showcase their solutions. For more information on the PLM Collaboration Café, visit <https://www.cimdata.com/en/education/plm-conferences/2024-plm-road-map-pdt-north-america/sponsors>.

PLM Road Map & PDT North America 2024 is a highly relevant event for PLM industry leaders and PLM professionals. It offers independent education and a collaborative networking environment where ideas, trends, experiences, and relationships critical to the industry germinate and take root. The theme for this year's event is Value Drivers for Digitalization of the Product Lifecycle Insights for the PLM Professional—Why the investment, what are the returns, and how are they achieved?

For more details on the schedule and how to register for the event, please visit <https://www.cimdata.com/en/events/register/777-plm-road-map-pdt-north-america-2024>.

## PLM Road Map & PDT NA 2024 Sponsors



## Acquisitions

### *Accenture Federal Services to Acquire Cognosante*

15 April 2024

Accenture Federal Services has entered into an agreement to acquire Cognosante, a mission-driven provider of digital transformation and cloud modernization solutions for federal health, defense, intelligence, and civilian agencies.

Founded in 2008 by Michele Kang, Cognosante has grown rapidly to become a trusted provider of innovative technology solutions with its federal government clients, including healthcare programs supporting veterans, active-duty military, patients, beneficiaries, providers, and payors. The company has an exemplary delivery track record powered by technology expertise, cloud modernization and migration capabilities, and exceptional program management. Cognosante is recognized for providing great user experiences, making healthcare more accessible and equitable, and maximizing the value of federal government investments.

“We are continually innovating and investing to help federal agencies stay ahead of the ever-changing needs of their mission and customers,” said Accenture Federal Services CEO John Goodman. “Accenture Federal Services is excited to welcome the Cognosante team. We are truly impressed with their people, capabilities, and impact. Together, we will deliver on the promise of technology for the nation’s priorities.”

Cognosante’s team of more than 1,500 people will join Accenture Federal Services’ more than 14,000 people to reimagine how work gets done, solve critical challenges, and create meaningful change.

“The Cognosante team is thrilled to embark on this next chapter of our remarkable journey,” said Kang. “I am grateful for the extraordinary group of past and present employees and clients who made Cognosante what it is today. As we explored ways to continue to scale and grow, we could not have found a better home than Accenture Federal Services. The company shares our commitment to its clients and people and has industry-leading capabilities, talent, speed, and scale. We look forward to continuing to help our clients modernize, enable the future mission, and enhance the lives of millions of people.”

The completion of the acquisition is subject to regulatory review and other customary closing conditions. Terms of the transaction were not disclosed.

Accenture Federal Services is a wholly owned subsidiary of Accenture.

## *Altair Acquires Cambridge Semantics, Powering Next-Generation Enterprise Data Fabrics and Generative AI*

18 April 2024

Altair a global leader in computational intelligence, acquired Cambridge Semantics, a modern data fabric provider and creator of one of the industry’s leading analytical graph databases. Cambridge Semantics’ graph-powered data fabric technology accelerates the creation of comprehensive enterprise knowledge graphs, integrating the complex web of structured and unstructured enterprise data together into a single, simplified view.

Bringing together Cambridge Semantics’ transformational knowledge graph technology with Altair’s leading tools for data analytics and data science offers organizations a solid foundation for building advanced analytics ecosystems that inject artificial intelligence (AI) into day-to-day business operations.

“Knowledge graphs are key pieces of data fabrics. They put the right data in the right hands at the right time. We believe Cambridge Semantics brings the fastest and most scalable

knowledge graphs to organizations who have significant data volumes and deep questions,” said James R. Scapa, founder and chief executive officer, Altair. “Additionally, knowledge graphs are critical for successful generative AI applications as they provide the business context necessary to ground generative AI models, eliminate hallucinations, and dramatically improve response quality.”

Cambridge Semantics’ technologies will be integrated into the Altair® RapidMiner® platform, adding knowledge graph, data governance, data virtualization, and data discovery technology to the platform’s existing data preparation, ETL, data science, business intelligence, MLOps, workload management, and orchestration tools.

“Joining Altair is a natural transition for Cambridge Semantics as we seek to accelerate the pace of our technology adoption,” said Charles Pieper, chairman and chief executive officer, Cambridge Semantics. “Cambridge Semantics has historically been successful with Fortune 500 government, defense, life science and manufacturing organizations. Bringing Cambridge Semantics to Altair’s broad customer base through the Altair Units business model – and integrating it into Altair RapidMiner – is an exciting prospect for us and for our customers.”

Cambridge Semantics was founded in 2007 by an innovation and engineering team from IBM’s Advanced Technology Group with a shared belief that semantic graph data models were a transformational technology destined to help organizations exploit their data in unprecedented ways: fueling analytics, revealing new insights, and enabling strategically important, competitive differentiation. Its technical team was fundamental to the development of data warehouses IBM Netezza and Amazon Redshift and represents one of the largest single collections of knowledge graph experts in the world.

“This acquisition adds deep data warehousing expertise to our already strong analytics and data science team, creating an enhanced core group of engineers that understand the entire data lifecycle – from data creation to real impact,” said Srikanth Mahalingam, chief technology officer, Altair. “We are all excited about where this combined team and technology will take us.”

### *Eleco enhances its digital transformation capability*

16 April 2024

Eleco plc, the specialist software provider for the built environment, announces its acquisition of custom software integration and development provider, Vertical Digital.

Romania-based Vertical Digital group has a proven track record of providing agile and innovative research and software development, technical consulting and upskilling solutions to European and multinational end-customers including Lufthansa Technik, PwC, VW Financial Services, Deloitte and Zoopla.

The acquisition will enhance Eleco’s capability to service and scale its customers by connecting systems and with technical consulting which will support their digital transformation journeys. Vertical Digital will also provide elastic augmentation of Eleco’s internal research and

development capacity which will further improve product time to value. Overall, this will strengthen Eleco Group's product breadth and focus on customer centricity.

Eleco plc is an AIM-listed (AIM:ELCO) specialist international provider of software and related services to the built environment through its operating brands ElecoSoft, BestOutcome and Veeuze.

The Group's software solutions are trusted by international customers and used throughout the building lifecycle from early planning and design stages to construction, interior fit out, asset management and facilities management. With the acquisition, Eleco adds Romania to its global centres of excellence in the UK, the US, Sweden, Germany, the Netherlands, and Australia.

Commenting on the news, Jonathan Hunter, Chief Executive Officer of Eleco, says,

*"We are pleased to welcome Vertical Digital to the Group, which will accelerate our ability to support our customers in solving the challenges they face in delivering their digital transformation strategies. Eleco is now better enabled to provide a broader range of solutions and engage with more of its customers and partners on their strategic technological direction.*

*I am impressed with the calibre of customers that Vertical Digital have acquired and the experience and talent of our new colleagues and pleased that the two founders of Vertical Digital are committed to supporting the growth ambitions of the Group. Dan Pop will be responsible for expansion in Eastern Europe as Regional Managing Director, Eastern Europe and Alex Gheboianu will ensure the Group continues to innovate and retain world-class technical talent as Chief Technology Officer."*

Dan Pop, Co-founder and CEO of Vertical Digital, says:

*"Alex Gheboianu and I, the founders of Vertical Digital, have always thought big and although the business has quickly grown in recent years, our ambition is to scale much quicker. In Eleco, we've discovered a partner that fully embodies our vision and growth mindset: putting customers first to solve their challenges. We are excited to be embarking on this new chapter and are committed to making meaningful contributions to the ongoing success as part of the Eleco Group."*

## Company News

### *20 years of CADENAS in Essen, Germany: A success story with a bright future*

15 April 2024

On April 15, 2004 a new CADENAS location was founded in Essen. Markus Poppinghuys started as Key Account Manager to close the last regional gap between the headquarters in Augsburg and the branches in Schorndorf and Wolfsburg. The Essen office is now celebrating its 20th anniversary.

#### **Moving into new business premises**

The foundation stone for the Essen office was laid in 2004. A year later, the company moved

into new offices in the Essen Technology and Development Center (ETEC). With Jochen Hohm as project manager, the new team was quickly expanded.

### **Customer events are quickly becoming very popular**

With the active support of Alen Blechinger, Managing Director of CADENAS Solutions GmbH in Wolfsburg, various events for customers and interested parties on the topics of strategic parts management and electronic CAD product catalogs were established at the Essen location in the following years. In addition to the annual CADENAS event, the Industry Forum at the headquarters in Augsburg, these local events were very popular and always well attended.

### **A pioneer in the field of digitalization**

As a software developer, CADENAS is a driving force for new technologies. This is why the company has been an early adopter of online tools and web meetings - whether for internal meetings between locations or during and after the coronavirus pandemic through webinars for component manufacturers or the machine and plant construction industry.

### **20 years CADENAS in Essen: Time to say thank you**

Markus Poppinghuys, Branch Manager of CADENAS Solutions GmbH in Essen, is proud: "In retrospect, 20 years is a very long time, and I would like to take this opportunity to thank everyone in the CADENAS team who has contributed to the success of the Essen branch, especially Alen Blechinger, Managing Director of CADENAS Solutions GmbH in Wolfsburg, and Jürgen Heimbach, Managing Director of CADENAS GmbH at the headquarters in Augsburg.

Also the colleagues in Croatia, who take care of the customers in Essen, do an excellent job every day. "It is impossible to name them all," says Poppinghuys, "so we would like to thank Ladislav Antić, Managing Director of CADENAS Services d.o.o., and the team leaders Tomislav Petricevic, Stjepan Jukicic and Marijan Andrijanic in Slavonski Brod for the great cooperation in our customer projects".

Of course, satisfied customers also contribute to the success story, as Poppinghuys points out: "We would like to thank all our catalog and parts management customers who have placed their trust in us over the years and with whom we can look back on many successful years together."

### **Review and Outlook**

With the move within Essen from ETEC to Schürmanntrasse to modern and larger offices at the beginning of 2023, the course has been set for the further expansion and development of the Essen branch.

Currently, Jennifer Zurich, Jochen Hohm, Marcel Spielkamp, Zerine Kevric and Markus Poppinghuys form the local CADENAS team in Essen and are happy to support CADENAS customers every day.

The team is looking forward to continuing its way within the CADENAS Group and to continue the good cooperation with all customers and partners.

## *Aegis Software and JUKI Extend Reseller Relationship, Marking Over 23 Years of Collaboration*

11 April 2024

Aegis Software, a global provider of Manufacturing Execution System (MES) software, announces that JUKI Automation, a world-leading provider of automated assembly products and systems and subsidiary of JUKI Corporation, has renewed their reseller relationship with Aegis Software. JUKI Automation Systems reaffirms its commitment to excellence by offering Aegis' latest state-of-the-art FactoryLogix Digital Manufacturing Engineering solution seamlessly integrated into its unmatched line-level management and optimization software for SMT (Surface Mount Technology) production. This powerful fusion empowers manufacturers to effortlessly convert any BOM, CAD, and Gerber file, igniting unparalleled efficiency in data preparation and catalyzing a streamlined design-to-production journey across the entirety of their operations.

Greg Lefebvre, National Sales Director of JUKI Automation stated, "Our JaNets software solution software package provides managers, supervisors, and engineers with the tools required to run the most efficient production possible. Through our enduring partnership and integration with Aegis' FactoryLogix solution, our customers unlock unparalleled capabilities in data preparation and documentation within the industry. As part of JUKI's steadfast commitment to industrial transformation initiatives, JaNets customers can expand their operational horizons by extending the FactoryLogix footprint with Aegis' comprehensive suite of Manufacturing Operations software solution areas, enabling seamless digitalization across their entire factory."

"We are thrilled to continue our partnership with JUKI Automation, a longstanding reseller of our CircuitCAM and CircuitCAM Express solutions. Their decision to now offer the FactoryLogix Digital Manufacturing Engineering (DME) solution demonstrates their dedication to providing their customers with the most advanced solutions available," said Jason Spera, CEO of Aegis Software. "In today's fast-evolving landscape, customer demands are reshaping the industry's norms, compelling manufacturers to innovate rapidly and deliver seamlessly connected products. This integrated offering enables manufacturers to pivot swiftly, slashing time-to-market and unlocking unprecedented productivity levels. This ongoing collaboration underscores our dedication to delivering cutting-edge solutions through our esteemed partner, JUKI Automation."

## *Cadline, an ARKANCE Company, to sell CloudNC's CAM Assist AI software to UK CAD CAM programmers*

12 April 2024

CloudNC - a manufacturing technology company backed by Autodesk and Lockheed Martin - today announces that Cadline, an Autodesk Platinum Partner supplying innovative design and data management technologies, is to sell CAM Assist, the world's first AI solution for CNC machine programming, to its customers in the UK.

Cadline, part of the global ARKANCE group, works with thousands of UK machinists and CAD CAM programmers, supplying them with manufacturing technology and services. Its new reseller partnership with CloudNC will immediately make CAM Assist available to those users, allowing even more machinists and programmers in the UK to benefit from its efficiency gains.

Theo Saville, founder of CloudNC, said: "CAM Assist is evolving incredibly rapidly, and so are our relationships with the world's leading suppliers of manufacturing technology. Cadline and ARKANCE are leading names in this field, and their support will mean more UK CAM programmers will benefit from CAM Assist's unique capability, now including strategy creation for 3+2 axis components, saving them hundreds of hours of programming and estimating time a year."

Justin Barnes, Head of Digital Advanced Manufacturing at Cadline, said: "CAM Assist is the most exciting manufacturing technology solution to come to the market for quite some time - maybe ever - as it essentially changes how machinists can deploy their resources and boosts their efficiency in a way that wasn't previously thought possible. I'm delighted to be able to make it available for our educated, engaged customer base, as it's exactly the kind of solution they will benefit from."

CAM Assist uses advanced computer science techniques and AI to generate intuitive machining strategies in minutes or seconds, depending on complexity, which could take CNC machine programmers hours or even days to manually create.

As a result, the amount of time it takes to program a CNC machine to make a component - a bottleneck in many factories - is greatly reduced, compared to the previous manual programming process, as is the time spent to estimate how much a new component will cost to program.

That gain enables manufacturers using CAM Assist to raise productivity and shorten lead times, while also estimating for more work, more quickly - saving an average workshop over 300 hours of programming and estimating time a year.

### *CGS and FirstShift AI Partner to Deliver AI-powered Planning Solutions and Advanced Insights to Fashion and Retail Industries*

15 April 2024

CGS, a global provider of software and business applications, enterprise learning, and outsourcing services, announced a strategic partnership with FirstShift AI, a leader in AI-powered demand and supply chain planning solutions. The partnership will empower companies with advanced AI-powered planning, analytics and intelligence, enabling them to gain deeper insights and make faster, more informed business-critical decisions.

"Our partnership with FirstShift AI represents a significant step forward in our commitment to providing leading-edge solutions that provide measurable impact to our customers," said Paul Magel, president of CGS software and business applications division. "By leveraging FirstShift AI's advanced AI capabilities, we're able to offer the market a solution that

not only meets its current needs for forecasting, inventory management and replenishment, but also anticipates future challenges, enabling businesses to stay ahead of the competition."

The collaboration between CGS and FirstShift AI combines the power of CGS's BlueCherry suite and extensive expertise in delivering comprehensive supply chain solutions with FirstShift AI's state-of-the-art AI-powered planning platform. The result is a powerful planning and insights solution suite that provides businesses with actionable insights to drive growth and efficiency.

"We believe strongly that AI will transform how demand and supply planning are performed in all industry verticals. We are thrilled to partner with a global leader such as CGS to bring our AI-powered planning and insights solution to a broader audience," said Hari Menon, CEO for FirstShift AI. "CGS's BlueCherry is considered the leading solution in fashion and apparel and together, we can provide even greater value – enabling customers to accelerate their decisions and overall supply chain success. We look forward to an exciting and successful partnership with CGS."

### *CIMdata: CONTACT Elements as the ideal foundation for the digital thread*

18 April 2024

The international management consultancy recommends CONTACT Elements as the cornerstone for a digital thread spanning the entire product lifecycle, as demonstrated by the plant manufacturer Marel with its "Digital Product Highway."

Data silos cause delays, increased costs, and dissatisfied customers. Information is isolated in different departments, making analysis inefficient, collaboration challenging, and innovation potential limited. Against the backdrop of growing data volumes due to increasingly complex and smart products, companies require a digital thread that enables smooth management and analysis of information. The experts at CIMdata see the modular platform CONTACT Elements as an ideal basis for this purpose.

CIMdata emphasizes that CONTACT Software's products and the underlying low-code platform connect data and processes end-to-end. Information is available across the company — from development and production to smart service and recycling. CONTACT Elements is modular and can be flexibly adapted to individual needs and scaled gradually — on-premises and in the cloud.

Companies increase their productivity and operate more collaboratively with a digital thread, as all stakeholders in the value chain have access to a single source of truth. Although often perceived as linear, the digital thread works more like a network, including various departments, suppliers, and customers, spanning from concept to end of life. Previous decisions can thus be traced back transparently. A common application is linking a physical asset with its digital twin.

CIMdata highlights Marel as an example of a successful implementation of the digital thread with CONTACT Elements. The full-line supplier of innovative food processing solutions benefits from a smooth interaction between systems, processes, and players along its value-creation networks. "Marel were able to use CONTACT Elements to enable a "Digital Product Highway"

ensuring that everyone is looking at the correct information, in easy-to-understand formats with data consistency in a cohesive integrated approach from concept through the end of the product lifecycle," say the CIMdata experts. The detailed commentary by the consulting and market research company can be found [here](#).

The software provider showcases the entire solution portfolio of the open low-code platform CONTACT Elements at the Hannover Messe as well. Visitors can experience the capabilities for PLM, IoT, and MES at the main booth H24 in hall 17, as well as at the OWL community booth D27 in hall 07 and the Fujitsu booth H62 in hall 14.

### *Embracing New Markets: Nemetschek Group Expands Global Presence with New Office in India*

16 April 2024

The Nemetschek Group, one of the leading software providers for the AEC/O and media industries, announced the opening of a new office in Mumbai, India. The Mumbai office will drive business in India for the overall Nemetschek AEC/O products and solutions from the different brands. The initial focus will be on selected products and bundles from Allplan, Bluebeam, Graphisoft, RISA, Solibri and Vectorworks as well as the Digital Twin solution dTwin. Nemetschek India in Mumbai started operation as of April 1<sup>st</sup>, 2024, and is managed by Nirmalya Chatterjee as Country Vice President. Mumbai is the second location for Nemetschek in India after Hyderabad, where the company operates a shared services, development and research center.

"India holds an immense market growth potential for us. We look forward to expanding our innovative solution offering into this dynamic market, driving growth, and delivering value to our customers" says Yves Padrines, CEO of the Nemetschek Group. "Our aim is to work more closely with our customers throughout the entire building lifecycle by providing local support and helping them shape the world in all dimensions."

The dedicated local Go-to-Market office and team will give Nemetschek the opportunity to build up closer relationships with customers and partners in the Indian market. The offering will be tailor-made to the demands of the Indian market, focusing on bundles for different stages of the building lifecycle process. They will cover different segments from small organizations to large enterprises and will help customers to find their preferred solution for the size and maturity of their business.

#### Building a strong team with diverse expertise

Nirmalya Chatterjee has a broad experience in launching brands and products in the Indian market. He previously worked for Trimble establishing Tekla India. Under his leadership, the Mumbai office will be staffed with sales, marketing, support and education experts. A prime focus will be adapting the product packaging to the Indian market and providing local customer support. Nemetschek India will continue to engage with the channel partners of the individual product brands and offer them to upgrade in the value chain ecosystem.

Nirmalya Chatterjee, Country VP Nemetschek India adds: “I am delighted to be participating in this exciting new chapter for the Nemetschek Group. India is one of the largest construction markets in the world, showing a significant growth. We are very much looking forward to optimizing our offerings and embarking on this transformative journey. We believe the AEC segment of the Indian subcontinent needs a better alternative as well as affordable BIM technology solutions which address the whole building life cycle under one umbrella.”

### *Hexagon and Dragos unveil technical partnership to strengthen industrial cybersecurity*

16 April 2024

Hexagon’s Asset Lifecycle Intelligence division announced a strategic partnership with **Dragos**, a global leader in cybersecurity for operational technology (OT). Together, the companies aim to revolutionize OT cybersecurity at industrial facilities.

The rapid evolution of technology underscores the urgent need for robust cybersecurity measures in industrial settings. In response, Hexagon and Dragos have joined forces to effectively address this demand.

The technical partnership focuses on integrating the complementary OT cybersecurity capabilities of the Dragos Platform and Hexagon’s **PAS Cyber Integrity**® to provide customers with enhanced inventory data, comprehensive configuration management and superior intrusion detection and threat management to protect businesses operating in multiple critical infrastructure sectors. The collaboration is expected to harness the respective strengths, industry insights and innovative spirit of both Dragos and Hexagon.

“This relationship represents a significant step in forging the future of OT cybersecurity,” said **Nick Cappi**, vice president of OT Cybersecurity at Hexagon. “Through the integration of technologies, industrial facilities that use Hexagon and Dragos will be in a better position to achieve their security goals. We are excited to work together and collectively solve bigger security challenges for customers.”

The companies will integrate their specialized expertise and capabilities to tackle the unique challenges encountered by owner operators. Together, they aspire to enhance safety, efficiency and productivity, with a goal of revolutionizing how the cybersecurity industry protects industrial infrastructure and valuable assets.

“Hexagon is known for providing forward leaning technology that also prioritizes safety and security, and the partnership with Dragos brings additional value to industrial and critical infrastructure organizations using our technologies,” said Matt Cowell, Global VP of Business Development at Dragos. “The integration between Dragos and Hexagon will leverage our complementary capabilities and respective strengths to provide an integrated approach to managing security across the different layers of the operational environment.”

## *Infosys Topaz and Intel Collaborate to Accelerate Enterprise Growth and Efficiency with Generative AI*

10 April 2024

Infosys, a global leader in next-generation digital services and consulting, and Intel, a global leader in computing innovation, announced that they have expanded their strategic collaboration to assist global enterprises in accelerating their AI journeys. The advanced artificial intelligence (AI) solutions offered as a part of this collaboration will aim to help businesses become cost effective and performance driven while being responsible by design.

Infosys Topaz – an AI-first set of services, solutions and platforms that help enterprises accelerate business value using generative AI technologies, will adopt Intel-based solutions, including Intel® Xeon® processors, Intel® Gaudi® accelerators, Intel® Core™ Ultra Processors, software, and future generation products, to enable customers to integrate Gen AI into their businesses and adhere to the emerging guardrails of AI.

Additionally, Infosys will leverage the Intel AI training assets to skill up its employees on Intel product portfolio to provide generative AI expertise to its wide network of global customers across industries.

**Balakrishna D.R. (Bali), Executive Vice President, Global Services Head, AI and Industry Verticals, Infosys**, said, “Infosys has embraced an AI-first strategy to deliver advanced AI services to clients seeking to unlock significant business value across their operations. The Infosys Topaz offerings and solutions seamlessly complement Intel’s core stack and its 'AI Everywhere' strategy. By combining our strengths, we are helping enterprises on their journey to become AI-first and accelerate business value with our industry leading AI solutions.”

**Christoph Schell, Executive Vice President and Chief Commercial Officer, Intel Corporation**, said, “Customers and developers are looking for competitive TCO and time-to-value AI solutions to scale and win. Our approach in bringing AI everywhere is by supporting an open AI software ecosystem and accelerating the adoption of Intel Xeon and Gaudi accelerators for Gen AI use cases. We believe our collaboration with Infosys and local ISVs is a huge opportunity for us to develop software and tools which can help drive Intel-based technology adoption and reduce the overall TCO for our customers.”

## *LTIMindtree Collaborates with Vodafone to Deliver Connected, Smart IoT and Industry X.0 Solutions*

18 April 2024

LTIMindtree, a global technology consulting and digital solutions company, has collaborated with Vodafone, a global leader in managed Internet of Things (IoT), with over 175 million connections worldwide, supporting a wide range of business-critical applications. Through this partnership, LTIMindtree will offer connected and smart IoT solutions, powered by its Insight NXT platform (iNXT) and Vodafone’s IoT Managed Connectivity, that will enable Industry X.0 and digital transformation across multiple vertical sectors.

LTIMindtree's iNXT Business Unit brings Technical and Functional components, and together with Vodafone's IoT Managed Connectivity solutions it will deliver to solve complex business challenges. By drawing on a best-in-class ecosystem of partners, LTIMindtree will empower clients to maximize their efforts across revenue acceleration through newer business models, cost efficiency and sustainability, leveraging Smart IoT and Industry X.0. LTIMindtree, enabled by Vodafone will provide solutions that deliver advance capabilities in AI, machine learning, predictive maintenance, digital twin, supply chain visibility, sustainability, energy management, worker safety, sensorization of assets, augmented reality, and virtual reality training.

Gemma Barsby, UK Head of IoT, Vodafone, said, "Our partnership with LTIMindtree means Vodafone can support the real-time delivery of IoT managed services to their clients and empower them in driving cost efficiencies and greater productivity. As a global IoT provider we look forward to collaborating with LTIMindtree to mutually grow our market share in the Industrial 4.0 and Digital Transformation domain."

Through this partnership, LTIMindtree will design highly scalable, end-to-end solutions by leveraging the power of IoT, Metaverse, Artificial Intelligence and Machine Learning and deliver secure, connected ecosystems and outcomes over Vodafone's "Managed IoT Connectivity" Network.

Monish Mishra, Chief Business Officer- iNXT, LTIMindtree, said, "In today's highly distributed yet interdependent economy, continuous innovation and access to connected ecosystems to deliver immersive experiences, is vital for growth and differentiation. We are excited to collaborate with Vodafone and enhance our proposition on Industry X.0 and Industrial Digital transformation. We remain committed to working with customers across industries within UK & Europe and getting them to the future, faster."

## *Materialise and Renishaw Announce Partnership to Increase Efficiency of Metal 3D Printing*

15 April 2024

Materialise, a global leader in 3D printing software and services, and Renishaw, a global engineering technologies company, have announced a partnership to increase efficiency and productivity for manufacturers using Renishaw's additive manufacturing (AM) systems. Through the partnership, Renishaw system users will benefit from Materialise's next-generation build processor software tailored to the RenAM 500 series of metal AM systems. They will also have access to Magics, Materialise's leading data and build preparation software. This will enable users of Renishaw's AM systems to build a seamless workflow from design to 3D-printed part, control and customize their 3D printing process, reduce production time, and increase the efficiency of their AM operations.

Manufacturing companies are increasingly adopting additive manufacturing to produce metal parts on an industrial scale. A significant technology for industrial 3D printing is laser powder bed fusion (LPBF), which offers users the ability to adapt print parameters for increased productivity. However, LPBF can be challenging for inexperienced users, so additional training may be required to get the most from the technology. Software allows manufacturers to unlock

the full potential of the technology by optimizing the 3D printing process and streamlining the workflow.

“Working with Materialise enables us to support Renishaw users deploying 3D printing in a host of different manufacturing applications,” said Matt Parkes, AM Strategic Development Manager at Renishaw. “Their next-generation build processors, in combination with their software portfolio, complement our recent technology updates. We’re pleased to be collaborating on the tools needed to support the industry as metal 3D printing becomes an essential piece of the manufacturing puzzle.”

Build processors link 3D printers with data preparation software, streamlining the additive manufacturing process from design to print. Materialise’s next-generation build processor complements Renishaw’s recently launched TEMPUS™ technology. This new scanning algorithm for Renishaw’s RenAM 500 series of AM machines allows the laser to fire while the recoater moves, saving up to nine seconds per build layer without reducing part quality. With this advancement, part build time can be cut by up to 50 percent. Materialise’s next-generation build processor software handles data consistently and speeds up data processing of complex geometries and high volumes of parts. Additionally, the new build processor for Renishaw AM systems enables dedicated print parameters at the part level for increased productivity and optimized quality, making it a viable solution for the volume production of different or identical parts.

“This partnership enables a unique approach to efficient metal 3D printing. The combination of Renishaw’s TEMPUS technology and the ability of Materialise’s build processor to process data at high speeds can significantly reduce production time,” said Karel Brans, Senior Director of Partnerships at Materialise. “Partnering with 3D printer manufacturers maximizes efficiency by optimizing build preparation and streamlining build jobs. This enables manufacturing at all volumes and levels of customization, allowing users to scale production.”

The build processor for Renishaw AM systems allows users to seamlessly connect to Materialise Magics. This is a technology-neutral data and build preparation software that offers compatibility with nearly all import file formats and connectivity to all major 3D printing technologies. It provides users with advanced workflow control and automation, including the recently launched e-Stage for Metal+. This software optimizes data and build preparation for LPBF systems using physics-based modeling to automate support structure generation.

Manufacturing companies can also rely on the Materialise Build Processor Software Development Kit to create their own intellectual property. The open software system allows them to build their own next-generation build processor tailored to their metal 3D printing application. Customized build processors can help to further enhance cost efficiency, production speed, and part quality, which makes it possible to manufacture intricate parts and mass-produce identical or personalized products with consistent quality, reduced scrap rates, and abbreviated lead times.

## *Nancy Krystal Joins Velo3D as Vice President, General Counsel*

11 April 2024

Velo3D, Inc., a leading additive manufacturing technology company for mission-critical metal parts, announced the appointment of Nancy Krystal as Vice President, General Counsel to oversee all legal matters for the company. With over 16 dynamic years of experience in corporate law, Nancy brings a wealth of experience in navigating complex legal landscapes and spearheading pivotal deals to her new role at Velo3D.

“Nancy’s extensive legal expertise and track record of success with established, mature companies make her an invaluable addition to our leadership team as Velo3D enters its next phase of growth as a company,” said Brad Kreger, Velo3D CEO. “With Nancy on board, I am confident that we will strengthen our legal foundation and ensure that our operations are aligned with the highest standards of integrity and compliance.”

In her role, Nancy will report to the CEO and be responsible for all legal matters at Velo3D including but not limited to managing the board of directors processes and procedures, supporting SEC and public company compliance, handling contracts, and overseeing the company’s intellectual property. The appointment follows several major strategic initiatives executed by Velo3D as it matures as an organization and transitions to its next phase of growth.

“Velo3D’s innovative technology make it uniquely poised to succeed in the additive manufacturing space and I am thrilled to join the company as it enters this exciting phase of growth,” said Nancy. “I look forward to working closely with Brad, the Velo3D executive team, and the board of directors as we execute against our plan to achieve our strategic objectives. I am confident in our executive team and their vision for the company position us well for what’s to come.”

Prior to joining Velo3D, Nancy served as General Counsel of Jelly Belly Candy Company, where she helped orchestrate the historic sale of the company to Ferrara Candy Co., which was finalized in late 2023. In that role she oversaw and managed all legal functions, using her legal acumen and leadership to ensure corporate compliance, mitigate risks, and improve profitability. She also held integral roles at Big Heart Pet Brands and AXA Advisors, playing key roles in multi-billion-dollar transactions and compliance program development.

Nancy received a Juris Doctor degree from Pepperdine University School of Law and a Bachelor of Arts in Psychology from University of California, San Diego. She serves as a board member of California Grocers Association, California Manufacturers & Technology Association, and Evisort.

## *Siemens and Microsoft to converge Digital Twin Definition Language with W3C Thing Description Standard*

15 April 2024

In a collaborative move with the W3C Consortium, Siemens and Microsoft have announced their commitment to converge the Digital Twin Definition Language (DTDL) with the Thing Description standard from international standards organization, W3C.

By unifying both languages, customers are offered consistent modeling experiences, mitigating fragmentation in an evolving IoT landscape. With customers typically deploying a mix of vendors in their infrastructure leading to lock-in and high integration efforts, this convergence will allow for simpler system integration and interoperability.

As virtual replicas of physical objects, processes, or systems that mirror their real-world counterparts in a digital environment, digital twins enable organizations to monitor, predict, and improve the performance of their assets, enhancing efficiency and reducing costs. Standardizing Digital Twin languages is therefore crucial for interoperability, ensuring seamless communication and integration between different digital twin systems and platforms.

With Siemens already facilitating the emerging W3C Thing Description standard for future products in building management, power distribution and smart grids, extending this interoperability strategy to Microsoft Azure will bring about substantial benefits to customers.

"We see the convergence of two very similar Digital Twin languages like the DTDL and the W3C Thing Description as an essential move that will enable customers to describe the physical world in a way that is agnostic to specific IoT platforms," said Thomas Kiessling, Chief Technology Officer at Siemens Smart Infrastructure. "This strategic alliance underscores our commitment to fostering collaboration and embracing openness."

Microsoft's Digital Twin Definition Language enables modeling of the physical world with Azure services, while the W3C Thing Description standard provides an interoperable representation of device interfaces and their incorporation of standard industry ontologies. Both languages have revealed many conceptual similarities during the initial stages of convergence.

"Ever since we invented the Digital Twin Definition Language and open-sourced its specification and reference implementations, we planned to standardize it through a consortium like the W3C. Therefore, merging DTDL with W3C Thing Description, in close partnership with Siemens, is the natural next step in our journey to democratize digital twins in the industry," said Erich Barnstedt, Chief Architect Standards, Consortia and Industrial IoT, Azure Edge and Platform team, Microsoft Corporation.

## *Siemens opens its largest global research hub north of Munich*

17 April 2024

Siemens has opened the first building complex of the Siemens Technology Center (STC) at Garching Research Campus, north of Munich, Germany. In addition to Siemens, other institutions next to the Technical University of Munich (TUM), such as the Max Planck Institute

and SAP, are located there, with around 28,000 people working at this hub. As a result, the Garching Research Campus is one of the largest centers for science, research and teaching in all of Europe.

“No one can solve the current challenges alone. We must accelerate collaboration with our customers and partners in the early stages of development. The Siemens Technology Center, located on the same campus with TUM, international research institutions and companies, benefits from an excellent environment and will strengthen Germany’s global role in cutting-edge research,” said Peter Körte, Chief Technology and Chief Strategy Officer of Siemens AG.

As one of the world’s most innovative companies, Siemens regularly holds top positions in patent rankings, including the number one spot for industrial AI in Europe, and has already been recognized for its innovation culture by numerous organizations such as Fortune, Fast Company and Indeed.

### **The research center stands for openness and for working in a research and innovation ecosystem**

“The collaboration between Siemens and TUM as part of the Industry on Campus strategy shows how a leading industrial partnership can bridge the gap between academic excellence and industrial innovation to work together on the challenges of our time and develop powerful disruptive solutions,” said Thomas F. Hofmann, President of the Technical University of Munich.

Through the joint activities with TUM, such as hackathons, lectures and the Makerspace, the STC will be much more open. Siemens experts conduct joint research with universities, research institutes, academic start-ups, tech incubators, and customers throughout the world in a total of 16 Siemens Research and Innovation Ecosystems. In these ecosystems, including the STC in Garching, Siemens is showing how the challenges of our time can be met by joining forces and speeding up the pace of innovation.

“Two international champions made in Bavaria are joining forces – success is therefore inevitable. At the Siemens Technology Center in Garching, talented people from science and industry are researching and working together under one roof to create fertile ground for innovation and technological strength. TUM as a world-class university and the global company Siemens ensure the best opportunities for the future through knowledge transfer and talent development. In Bavaria, for Bavaria – and far beyond,” stated Markus Blume, Bavaria’s State Minister for Science and the Arts.

Siemens will bundle all its corporate research activities in Germany at the STC. In the first phase, around 450 Siemens people will work on future technologies in collaboration with 150 scientists from the Technical University of Munich. The plan is to open the second building complex in 2027 with more than 630 Siemens Technology researchers and IP specialists. The STC will then be the largest of the total of about twelve central Siemens research hubs worldwide with an investment of more than €100 million in total. The newly opened building was designed and built by Siemens Real Estate and will be certified “GOLD” according to the internationally recognized sustainability standard LEED (Leadership in Energy and Environmental Design). As a result, the building will make an important contribution to Siemens’ goal of becoming climate neutral in its operations by 2030.

### Main areas of research

Data analytics and artificial intelligence (AI) will be used at the STC, specifically to facilitate programming, detect production breakdowns at an early stage and enable natural language communication between humans and machines. With around 3,700 AI patents, Siemens plays a leading role in the field of artificial intelligence.

Spending on research and development (R&D) rose by around €600 million to approximately €6.2 billion in fiscal 2023. These investments are focused on strengthening the company's leading position in its core technologies, such as Simulation & Digital Twin, Data Analytics & Artificial Intelligence, Connectivity & Edge, Future of Automation or Cybersecurity & Trust, which then all come together on the open digital business platform Siemens Xcelerator. These technologies help develop, manufacture and operate industrial products more efficiently and sustainably. In all these areas, Siemens collaborates with strong partners, such as the Technical University of Munich, SAP, BMW, the Fraunhofer Institutes and business start-ups.

### *TCS Announces New Delivery Center in Londrina, Brazil*

15 April 2024

Tata Consultancy Services (TCS), a global leader in IT services, consulting, and business solutions, announced a new delivery center in Londrina, Paraná, Brazil. This new center will create more than 1,600 new job opportunities over the next five years, contribute to the local economy and strengthen TCS' presence in the region.

Present in Londrina since 2018, TCS employs around 1,700 people in the city. The new centralized campus will bring the city workforce under one roof, creating a vibrant hub for collaboration and innovation in Londrina. The delivery center will specialize in key areas such as Business Transformation, Artificial Intelligence, and Cognitive Business Operations, offering a comprehensive suite of IT services to clients in Brazil and around the world.

During his recent visit to the Tata Experience Center in Mumbai, **Carlos Massa Ratinho Junior, Governor of the State of Paraná, Brazil**, said, *"This announcement by TCS is so important to us, because it involves a strategic area for the development of our state. I have come to India to learn more about the capabilities that the country has built in many areas, especially in digital technologies, where India is a global leader, and leveraging experiences from here we can deepen digitization of various services and products for the Brazilian economy."*

**Bruno Rocha, Country Head, TCS Brazil**, said, *"The new delivery center in Londrina is a testament to our ongoing commitment to Brazil and our confidence in local talent. We are looking to double the number of associates in key areas such as Cybersecurity, Cloud, CBO, ITIS, AI, and automation, reflecting our dedication to innovation and excellence in technology services."*

TCS has been operating in Brazil for over two decades, with operations in Londrina, São Paulo and Rio de Janeiro. Serving over 140 clients in the region across industries such as banking, insurance, mining, retail, and telecommunications, TCS has earned recognition as a Top Employer in Brazil for 10 consecutive years and received the diversity seal from the state of São Paulo in 2022.

## *Transporeon and MODE Global Announce Collaboration for Autonomous Capacity Management*

11 April 2024

MODE Global, a multi-billion, multi-brand 3PL platform and one of the world's leading logistics companies, is announcing a collaboration with Transporeon, a Trimble Company. The collaboration aims to leverage automation to tender both spot and dedicated freight using **Autonomous Procurement** offered by Transporeon. As a leading Transportation Management Platform, it will be white-labeled and customized for MODE as MODE Global Marketplace.

Given ongoing market challenges and rate volatility, consistent and reliable procurement has been a challenging area for shippers, carriers and intermediaries globally. Many transportation industry stakeholders, like MODE, recognize the potential of machine learning and data analytics to help navigate market conditions more dynamically. Transporeon's AI and behavioral science-driven Autonomous Procurement solution for spot sourcing optimizes the entire freight procurement process. It transforms formerly manual procedures characterized by multiple touchpoints into a streamlined, automated process.

As part of this collaboration, Autonomous Procurement by Transporeon will be available in the MODE Global Marketplace. This will give organizations unfettered efficiencies specific to their tendering strategies while also creating a space for their carrier partners to instantly book shipments in a marketplace that is catered and customized to carrier needs. Carriers will have access to thousands of daily shipments all with real, immediately bookable rates attached to them.

"Initiating a collaboration with Transporeon has been an important aspect of our digital transformation," said Gene Welsh, chief transportation officer for MODE Global. "Digital freight brokerage is a key component in allowing us to offer a total cost of ownership model, which is the first step in managing our shippers' business from purchase order to cash. We're excited about our journey to create an integrated, 4PL offering for our shippers, carriers and agents."

The shared goal is to create a better environment for carriers within a digital platform.

"The technology is fully integrated with our transportation management system," says Welsh. "We are now even more effective in managing our network of carriers and shippers, giving our clients tremendous flexibility and insight into their logistics spend."

For its part, Transporeon will ingest the pipeline of MODE data and use it to better track markets and train algorithmic pricing models. This collaboration will significantly expand Transporeon's existing carrier network of over 150,000 carriers and logistics service providers, while improving prediction accuracy and performance for all regional customers.

"MODE Global demonstrates a seriousness about their digitization ambitions, in scope and depth," says Jonah McIntire, chief platform officer at Transporeon. "MODE's scale makes them especially suited to reap the benefits of our technology and we are excited to continue to work with leaders in this sector."

## *Transporeon Joins the Virtual Watch Tower Network, an International Supply Chain and Logistics Initiative*

15 April 2024

Transporeon, a Trimble Company, has joined the **Virtual Watch Tower Network (VWTnet)**. A digital platform delivering collective intelligence from multiple industry players, VWTnet improves collaboration and visibility in global supply chains and modernises disruption management.

Backed by the expertise of research institutions such as **RISE, VTT, A\*STAR IHPC** and more, VWTnet benefits all transportation stakeholders. By combining public and private data with advanced analytics, it aims to give shippers, carriers and terminal operators a clearer picture of their cargo's journey across ocean and road. VWTnet aims to enhance disruption management, improving ETA accuracy and minimising carbon emissions.

VWTnet is currently under development with a pilot scheduled for Singapore Maritime Week (15-19 April, 2024). At the event, Transporeon and other partners will preview a future solution, based on a minimum viable product (MVP), that provides frictionless visibility between multiple supply chain actors and watch towers.

### **Transporeon's Role in VWTnet**

VWTnet's architecture prioritises network efficiency over individual nodes. This streamlined approach makes public data and services available through APIs and enables strong data privacy, as users can set up precise controls on data sharing.

Transporeon's visibility and data exchange solution will underpin the VWTnet tech stack. Uniting data from multiple sources (private, public and solution providers/intermediaries), Transporeon will be the VWTnet go-between to help enable data interaction, data consumption, messaging systems and customised watch towers.

Bernhard Schmaldienst, director of visibility products at Transporeon, said: "Transporeon is convinced that cross-industry data governance and collaboration — powered by digital tools — are the future of transportation management. For this reason, we're very proud that our tracking and visibility engines have been chosen to support the VWTnet tech stack. We're excited to work with our partners to accelerate progress and create more adaptable, scalable and reliable global supply chains."

Wolfgang Lehmacher, RISE advisor and member of the Virtual Watch Tower Network coordinating team, added: "Modern supply chains are more volatile and complex than ever. This requires new initiatives like the Virtual Watch Tower Network. We're pleased to have found a partner like Transporeon who can help us deliver on our vision of creating a network-based and distributed solution for managing supply chain disruptions. We also look forward to potential collaborations with Transporeon's parent company, Trimble."

Mikael Lind, adjunct professor of maritime informatics at Chalmers and RISE, said: "Since launching VWTnet, our mission has been to attract as many top-tier tech providers as possible to join the project. I'm delighted that Transporeon has come on board."

Anders Rystedt, logistic manager, Americas at Alleima, said: “We’re delighted that Transporeon is joining VWTnet. As a global shipper of metals, we’re acutely aware of the need to improve communication with our customers, other supply chain stakeholders and even within our intra-group. VWTnet will be essential to achieving this, and we’re excited to work with all partners — including Transporeon — to become more collaborative, efficient and sustainable.”

## Event News

### *AVEVA previews industrial AI assistant in collaboration with Microsoft at Hannover Messe*

17 April 2024

AVEVA, a global leader in industrial software, driving digital transformation and sustainability, reinforces collaboration with Microsoft with a preview of its industrial AI assistant, which will be available to view live on the show floor at Hannover Messe next week.

The industrial AI assistant, running on Microsoft Azure OpenAI Service, is a virtual subject matter expert driving the Industry 5.0 revolution. It represents a paradigm shift in how industrial organizations answer complex questions in mission-critical environments. The time between curiosity and insight is seconds. AVEVA’s AI assistant acts as a virtual expert, simplifying the vast task of extracting insights from scattered data sets to answer complex, multi-stage questions. Industrial teams can take advantage of large language models (LLM) and generative AI through an intuitive interface that leverages AVEVA’s 50+ years of expertise in industrial software and analytics. Security and trust are built in from the ground up. Analytic quality is enhanced by strict engineering prompts and cross-critique methodologies to ensure that the AI assistant’s answers are robust and transparent, referencing sources and citations. To protect data security and ownership, proprietary data is not blended with the LLM or any other third-party sources.

Rob McGreevy, CPO, AVEVA, said: *“When designing AI for industrial settings, we are conscious of the huge responsibility that industries bear to deliver safe, secure, and sustainable processes and results. That is why, as we infuse AI capabilities across our portfolio, we always enrich it with domain-specific expertise that recognizes the requirements and rigors associated with industrial settings. Our industrial AI assistant draws on integrated data combined with the highest levels of security and expertise so that customers can confidently interrogate their information in real time. All of this is available and scalable with Microsoft through our CONNECT intelligence platform.”*

Together, AVEVA and Microsoft are accelerating the delivery of industrial intelligence, empowering customers to utilize the power of innovation. With Microsoft's solutions and AVEVA's deep industry expertise and software, businesses can capitalize on the power of technology to become more agile, resilient and environmentally sustainable. AVEVA is actively co-innovating with Microsoft. It is among the first industrial independent software vendors to commit to interoperability with Microsoft Fabric and CONNECT (formerly AVEVA Connect).

Sharing more of the detail of the product capabilities, Jim Chappell, Head of AI & Advanced Analytics said: *“AVEVA has combined LLM, generative AI (GenAI), and our own patent-pending AI technology to analyze customer data, find issues, and help solve problems. By leveraging the customer’s industrial data and a LLM with the power of AVEVA’s AI capabilities, the user can ask our industrial AI assistant natural language questions with minimal setup required. The user can also ask objective-driven questions which means more complex, multi-step requests can be completed in one single action.”*

Matt Kerner, CVP, Microsoft said *“Bringing together the AI and cloud capabilities of Microsoft Azure with AVEVA’s expertise in industrial AI has the power to transform how industries can operate at scale. With the intuitive AI assistant interface, it’s easier for operators and executives to benefit from insights, interrogate results and optimize performance.”*

### **AVEVA and Microsoft at Hannover Messe:**

From 22-26 April, AVEVA and Microsoft will demonstrate how today’s industries are working with technologies to unify data and insights across their digital ecosystem, enabling deeper sustainability and efficiency.

On Microsoft’s booth, in Hall 17, Stand G06, AVEVA will use a wind turbine example to demonstrate how AVEVA’s industrial AI assistant supports an operator through the entire workflow, from investigating abnormal performance, to identifying the cause and preparing the required maintenance actions. This demonstration, which includes a 3D intelligent digital twin, will showcase AVEVA’s advanced capabilities in facilitating enhanced collaboration and operational efficiency.

### *CONTACT Software presents new solutions for sustainable production processes*

12 April 2024

In its presentations at Hannover Messe, CONTACT Software demonstrates how companies utilize the digital twin, Artificial Intelligence, and simulations to make their manufacturing processes more energy-efficient.

Energy efficiency is a crucial lever for the manufacturing industry to address high electricity costs, stringent environmental regulations, and the growing sustainability awareness among customers. On Hannover Messe’s conference stages, CONTACT Software shows how companies can reduce energy consumption in production sustainably and combine climate protection with competitiveness.

Dr. Nicole Göckel starts things off with her presentation **AI-based Prognosis for the Energy Demand: Optimization Approaches in the Shopfloor** on the Energy 4.0 Conference Stage (April 23, 2:40 pm, hall 12, booth D35). In her talk, she illuminates how energy consumption in manufacturing can be reduced through AI-based forecasts in CONTACT Elements for IoT.

CONTACT's IoT platform uses the digital twin of a machine to capture its energy consumption. If the software detects deviations between the pre-calculated target and actual values, it notifies production managers via a dashboard. This allows them to quickly initiate appropriate countermeasures.

Using the practical example of a grinding machine, the presentation illustrates how electricity costs are reduced by efficient shutdowns that take into account planned production orders and ramp-up times. Additionally, production orders can be planned based on their consumption forecasts to avoid expensive peak loads.

In their presentation **PredictECO – Development of a Virtual Production Twin for Sustainability Assessment** on the Tech Transfer Conference Stage (April 24, 9:35 am, hall 2, booth B02), Maximilian Weidemann from CONTACT Research and Dr. Oliver Lohse from Siemens introduce a joint project in the aerospace industry. At its core is a green digital twin that stores environmental information and serves as a virtual representation of production. The project aims to establish sustainability as a key factor in product development in order to use resources more efficiently and meet national and EU-wide climate protection goals.

Using manufacturing simulations and intelligent analyses, the sustainability of production processes can already be assessed in the design phase. The results of PredictECO are being validated in the energy-intensive manufacturing of fiber composite. The prototype solution enables the evaluation of sustainability KPIs, which can be used to optimize manufacturing and make sustainable decisions.

The presentations will be streamed live. CONTACT presents the entire solution portfolio for PLM, IoT, and MES of its open low-code platform CONTACT Elements at its [main booth](#) H24 in hall 17. Here, visitors can also discover use cases for the Asset Administration Shell (AAS) together with Mitsubishi Electric, as well as with msg at the IDTA stand (hall 9, booth F27). CONTACT will also be present at the OWL joint booth D27 in hall 07 and the Fujitsu booth H62 in hall 14.

### *Cyncly brings industry-leading bathroom planning software to IFH Intherm Nürnberg 2024*

15 April 2024

Cyncly, the leading global provider of software and content solutions that help make amazing spaces for living, will bring its bathroom planning solutions to [IFH Nürnberg](#) at the Nuremberg Exhibition Centre on April 23-26, 2024. Cyncly's software helps professionals create beautiful bathrooms, deliver a great customer experience, and run their businesses profitably.

“For years, we’ve been building innovative solutions that help bathroom professionals build stronger customer relationships, close deals more quickly, and protect their margins,” said Christian Pfeifer, Managing Director, EMEA and APAC SMB Sales. “This year is especially exciting because it’s the first time we’re joining IFH Nürnberg under the Cyncly brand. We’re looking forward to listening to customers, understanding their goals, and showing them how Cyncly can help them deliver on their service promise every time.”

At the show, Cyncly will feature Innoplus, the most comprehensive bathroom design and bathroom planning software on the market. Innoplus enables designers to turn their customers’ ideas into photo-realistic 3D images that gain their commitment to buy in your first meeting. This professional tool helps service providers manage the complete bathroom

renovation process, from initial plans to installation, with accurate data catalogues, outstanding renders and seamless workflows.

Cyncly will also feature SimpliPlan software, which was previously marketed under the name M3B. SimpliPlan goes beyond a rename of M3B, with a new user interface and new functions that make it quick and easy to bring customers' dream bathrooms to life in 3D, even without training. Among other improvements, users can access a significantly faster and easier-to-use rendering function, as well as the new Cyncly-Scan function, which allows users with mobile devices to create a room measurement based on Lidar technology in just a few seconds and process it further with SimpliPlan. As part of the market launch of SimpliPlan, users can look forward to attractive special offers for expansion modules or upgrading to the full version for a limited period.

Cyncly will also be presenting new features of Innoplus, the leading bathroom planning software in the three-stage sales channel. In addition to demonstrating a brand new renderer, which elevates the standard for display quality and speed, Cyncly will feature the implementation of Open Master Data and Open Project Data industry standards, as well as other innovations that make everyday work easier in the long term. Further, to accelerate the bathroom planning process, the Cyncly-Scan function is available in the Room Survey app, which allows users to create a room survey in seconds using Lidar on their mobile devices.

Cyncly's solutions offer bathroom professionals a complete sales solution. All of Cyncly's bathroom design and planning software is backed by an accurate, comprehensive content catalog featuring more than 600 brands. With streamlined design processes, the ability to quickly update plans based on customer feedback, and beautiful renders, Cyncly software helps bathroom professionals convert more sales, more quickly.

Visitors to IFH Nürnberg can find Cyncly at stand 7.225 in Hall 7.

### ***DXC Technology Summit Spain: A Forum for Innovation and Collaboration***

11 April 2024

DXC Technology, a leading Fortune 500 global technology services provider, has hosted the DXC Technology Summit Spain, bringing together leaders in technology, customers and key sponsors at the event focused on unparalleled innovation and collaboration.

The Summit, held at the Santiago Bernabeu Stadium, brought together a select group of technology experts and executives from global and Spanish companies, who engaged in interactive sessions, panel discussions, and product demonstrations designed to explore the latest trends and solutions in disruptive technology.

A unique platform for the exchange of ideas and experiences among DXC's clients, the event facilitated the sharing of success stories, challenges, and best practices in implementing innovative technological solutions.

Topics included new software development models based on DXC's Platform Engineering to harness the benefits of Cloud technology and AI strategy supported by AI-as-a-service. The event also covered the transformation of Mainframe solutions to eliminate technological debt

through a case study presentation with Iberdrola, and the advantages offered by DXC's modern SOC (Security Operations Centre).

The agenda concluded with a roundtable led by Juan Parra, Europe Market Leader of DXC Technology and Alfonso García, Managing Director of DXC Technology Spain, as moderators. It featured renowned experts including Marc Armengol, Chief Operating Officer & General Director of Banco Sabadell, Elena Liria Fernández, Chief Executive Officer of the Agency for the Digital Administration of the Community of Madrid, José Antonio Santana, CIO of Carrefour, and Francisco Calzado, CIO, Corporate Center Banco Santander.

The event was capped off with an award presentation to the Las Rozas City Council and Las Rozas FC for their steadfast support in promoting values and inclusion through sports, particularly their inclusive football team. José de la Uz, Mayor of Las Rozas, and Ángel Campos, President of Las Rozas CF, accepted the awards.

"Our DXC Summit is a flagship event that reflects our continued commitment to excellence, innovation, and collaboration," said Alfonso Garcia, Managing Director of DXC Technology Spain. "We are delighted to have had the opportunity to bring together some of the best talents and minds in technology to explore new ideas, inspire each other, and forge strategic partnerships that drive business success in the digital age."

A number of DXC's partners attended and sponsored the event, demonstrating the power of collaboration in driving forward innovative solutions through synergized expertise. Sponsors of the event included: AWS, Microsoft, GitHub, HPE, RedHat, HP Inc, ServiceNow, Trend Micro, Tenable, DELL and IBM.

### *Industrial AI and sustainability at scale: Siemens redefines industrial innovation at Hannover Messe*

18 April 2024

The industrial sector is in need of digital transformation toward greater sustainability and resilience. Value creation and actions for the planet must be brought into balance. Companies need to do more with fewer resources. At Hannover Messe, Siemens will show how proven, cutting-edge technology and strong partnerships enable industries to become both more sustainable and more competitive. Visitors at Booth D53 in Hall 9 will experience showcases featuring core technologies for digital and sustainable transformation in the automotive, food, chemicals and semiconductors industries.

"Together with our partners, we will be showcasing how innovations like AI, digital twins and software defined automation can help customers to address multiple challenges. From increasing competitiveness, reducing costs, overcoming labor shortages or increasing sustainability, Siemens has the technologies that industries need right now," said Roland Busch, President and CEO of Siemens AG.

#### **Siemens press conference and live stage program**

At Hannover Messe, Siemens will be demonstrating how customers can benefit from the Siemens Xcelerator digital business platform. The focus will be on applications such as AI-

enabled machine vision and Siemens Industrial Copilot with Microsoft and Schaeffler. The Siemens Xcelerator ecosystem is constantly evolving: the number of partners and sellers nearly doubled in the last year alone.

At a **press conference on Monday, April 22, 2024, from 5:30 p.m. to 6:30 p.m. CEST**, Siemens will present the latest trends and developments. Journalists can also join the press conference via livestream by registering at: <https://siemenspkhannover24.events.dc.siemens.com/>

Further activities at the tradeshow will be accompanied by a live stage program featuring members of the Siemens AG Managing Board along with experts, partners and customers.

Roland Busch, President and CEO of Siemens AG, and Rev Lebedian, Vice President of Omniverse and Simulation Technology at NVIDIA, will discuss the AI-powered industrial metaverse. They will explore the potential of immersive experiences for customers in all industries and showcase how Siemens' physics-based digital twins powered by NVIDIA Omniverse and AI are driving productivity.

The session **"Supercharging transformation: how AI-powered digital twins enable the industrial metaverse"** will take place at the **Siemens booth on Monday, April 22, at 12 noon CEST**. Participating journalists will be able to ask questions afterwards. The talk and Q&A will also be livestreamed: <https://www.linkedin.com/events/siemens-nvidia-howai-digitaltwi7182007244371165186/theater/>

### **Chancellor Scholz to experience new era of human-machine interaction with Siemens Industrial Copilot**

German Chancellor Olaf Scholz plans to visit the tradeshow's biggest booth to experience the transformative power of generative AI firsthand. Klaus Rosenfeld, CEO of the Schaeffler Group, will also be present during the Chancellor's visit because Siemens and Schaeffler are now working together even more closely on digital transformation and generative AI. To this end, both companies will sign a memorandum of understanding to expand their joint work on Siemens Industrial Copilot.

In a world premiere at the SPS tradeshow last fall, Siemens and Schaeffler unveiled an integrated generative AI-powered assistant in a production machine: Siemens Industrial Copilot helps automation engineers speed up the generation of code for programmable logic controllers (PLCs). PLCs are the devices that control most machines throughout the world's factories. Engineering teams can significantly reduce time, effort and the probability of errors by generating code through natural language inputs.

"Our AI solutions, such as the Siemens Industrial Copilot, show our commitment to combining the real and the digital worlds," said Cedrik Neike, member of the Managing Board of Siemens AG and CEO of Siemens Digital Industries. "Last year, we presented our vision of putting AI at your fingertips and highlighted the huge opportunities these capabilities will bring. Now, we're turning this vision into reality by taking AI from concept to scale. And this new reality goes beyond engineering and operations. It's a game-changing transformation that is also tackling challenges like labor shortage and climate change."

## Decarbonizing industrial operations and buildings

As part of the Siemens Xcelerator portfolio, Siemens is presenting Electrification X for the first time. Built on highly scalable cloud services, Electrification X is designed to manage, optimize and automate the challenged electrification infrastructure of commercial, industrial and utility customers. The aim is to improve efficiency and performance while reducing costs and CO2 emissions.

“The digitalization of buildings, electrification infrastructure and power grids is key for creating a smarter, more efficient and decarbonized industrial sector,” said Matthias Rebellius, member of the Managing Board of Siemens AG and CEO of Smart Infrastructure. “At the industrial tradeshow in Hannover, we’re showcasing our latest products driving sustainable transformation, such as the highly innovative Sentron electronic circuit protection device and SF6-free switchgear. We’re also announcing new partners in our ecosystem. Beyond that, we’re proudly introducing Electrification X, which is a highly scalable, internet-of-things software-as-a-service offering to transform electrification infrastructure.”

Furthermore, Siemens is presenting new apps as part of the Building X digital building platform. They include the Sustainability Manager app, which can be used to achieve greater transparency in the operation of manufacturing and office spaces. In addition, the Comfort AI app enables optimized energy consumption through AI-based control of the entire heating, ventilation and air conditioning system within a building.

Siemens is also adding products for infrastructure and industrial applications to its Siemens EcoTech portfolio. Siemens EcoTech gives customers a comprehensive insight into product performance across selected environmental criteria and is setting a new standard for transparency in the industrial sector. The label represents the next milestone in the company’s long-standing commitment to minimizing the environmental footprint of its own operations and products and to supporting the digital and sustainability transformation of its customers.

Please find here further information about the Siemens booth:

[Hannover Messe 2024 - Siemens Global HM24](#)

## *RedTeam Announces “RedTeam on the Road” Event Series to Empower Construction Professionals*

18 April 2024

RedTeam Software, a leading provider of cloud-based construction management software, announced its 2024 [RedTeam on the Road event](#) series. Taking place in Orlando, Nashville and Dallas, this 3-city event will offer construction professionals the opportunity to gain valuable industry insights, participate in hands-on trainings and network with peers and industry leaders.

“We’re thrilled to introduce RedTeam on the Road this year,” says Jim Atkinson, CEO at RedTeam. “This event series is a great way for construction professionals to learn about some of the latest trends and best practices in the industry, and to get hands-on experience with our construction management software solutions. We’re looking forward to seeing everyone in Orlando, Nashville, and Dallas!”

Celebrating the future of construction will be at the forefront of this event. With inspirational and educational content, attendees will be able to advance their skills and build on their knowledge to continue to transform the construction industry.

RedTeam on the Road will feature sessions led by leaders in construction, RedTeam clients and RedTeam product experts, covering a range of topics such as:

- The latest construction trends
- Technology change management best practices
- Workflow and feature tips
- Insight into RedTeam’s product roadmap.

Attendees will join Hugh Seaton, CEO at The Link, for a no-nonsense opening session about AI and the promises and limits of this game-changing set of technologies in construction.

Attendees will also have the opportunity to participate in hands-on training workshops, where they can learn how to use RedTeam’s solutions to streamline their processes, improve collaboration and boost project success.

In addition to educational sessions and workshops, attendees can connect with other construction professionals, industry leaders and RedTeam’s leadership team and product experts during lunch and afternoon receptions. This will be an excellent opportunity to expand professional networks, exchange ideas and build relationships with peers who share a passion for the construction industry.

RedTeam on the Road will be held in the following cities:

- Orlando, Florida: May 9, 2024
- Nashville, Tennessee: May 13, 2024
- Dallas, Texas: May 30, 2024

To register for the RedTeam on the Road event in the city closest to you, please visit the following links:

- [Register for RedTeam on the Road in Orlando](#)
- [Register for RedTeam on the Road in Nashville](#)
- [Register for RedTeam on the Road in Dallas](#)

*Return to COExperience for Award-winning Virtual Twin Presenter*

15 April 2024

**TECHNIA is excited to announce its participation in the upcoming COExperience 2024, the premier Dassault Systèmes user-focused conference.**

**This influential event is set to take place at the Sheraton Dallas, Texas, from May 13–16, 2024. COExperience 2024 is a hub for hundreds of users and industry partners to engage in educational, skill-building, and networking opportunities.**

Claytex, a TECHNIA Company, was recently honored with the Best Presentation Award for Nate Horn's presentation, "[Virtual Twins in Motorsport: Deploying DYMOLA Models in the Field](#)," at COExperience 2023.

The award-winning presentation showcased Claytex's strength in helping customers create high-fidelity digital twins for motorsports customers, emphasizing the importance of time management in the motorsport industry.

This year, TECHNIA is proud to exhibit and share expertise in virtual twin maintenance and management, drawing on experiences from the collaboration with McMurtry Automotive. This partnership shows how the combination of industry-leading simulation with cutting-edge automotive engineering accelerates innovation and performance.

*"We're delighted to return to COExperience and share our insights on the pivotal role virtual twin technology plays in delivering smarter products faster. Our collaboration with McMurtry and the integration of Claytex's advanced simulation capabilities are prime examples of how we are driving progression in automotive."*

**Magnus Falkman, CEO | TECHNIA**

COExperience attendees will have the opportunity to engage with Dassault Systèmes and TECHNIA product experts, participate in keynote presentations, and join in with specialized track content for systems and simulation engineers.

*"We are thankful for the invitation to connect with our customers and partners at COExperience 2024, and to be able to demonstrate once again how TECHNIA's expertise in virtual twin technology is assisting McMurtry in their pursuit of innovation."*

**Mike Dempsey, MD | Claytex, a TECHNIA Company**

Join us at the Dallas Sheraton Hotel for an event which promises to be equally informative and inspirational.

Don't miss your chance to see firsthand how these innovation solutions are shaping the future of product lifecycle management and simulation.

Mark your calendars for May 13–16, 2024.

For more information on TECHNIA's participation in COExperience 2024, visit <https://www.technia.com/events...>

To register for the event, visit <https://2024-coe-experience.ev...>

*Rockwell Automation and its PartnerNetwork™ Ecosystem Present Artificial Intelligence, Autonomous Operations, 5G and Cybersecurity in Driving Digital Transformation at Hannover Messe 2024*

18 April 2024

Rockwell Automation, Inc., the world's largest company dedicated to industrial automation and digital transformation, will showcase its innovative, industry-leading technology and services with its partners, including Microsoft and Cisco, at the [Hannover Messe 2024 trade fair](#), April 22-26, in Hannover, Germany.

Rockwell will collaborate with its PartnerNetwork™ ecosystem and demonstrate solutions that address a variety of challenges for industrial companies, including modernizing operations, achieving sustainability goals and accelerating digital transformation.

“Our partnerships embody a shared vision of building and delivering the best solutions to drive digital transformation in industry and enable intelligent factories,” said Malte Dieckelmann, vice president, enterprise software sales, Europe, Middle East and Africa, Rockwell Automation. “We do this by simplifying how manufacturers design, operate and maintain their operations and empower their people in a secure, connected enterprise.”

In collaboration with Cisco, Ericsson, Microsoft, ODVA, the OPC Foundation and NVIDIA, Rockwell will present technology and services that help solve complex challenges with solutions for the entire value chain of a digital transformation journey.

Artificial intelligence (AI), autonomous operations, 5G and cybersecurity are among key technologies that help manufacturers accelerate their digital transformation. According to Rockwell’s recently published 9th annual “State of Smart Manufacturing Report,” industrial companies around the world cite artificial intelligence as their top priority for new investment over the next 12 months.

At the Microsoft booth, visitors will see the latest technology integrations between the two companies, including how AI is transforming manufacturing through a customer-inspired digital twin of a quality inspection process using artificial intelligence, highlighted by a real-world simulation of product sorting and autonomous material handling.

Following a recently announced collaboration with NVIDIA, Rockwell will share how it is integrating NVIDIA Omniverse Cloud

application programming interfaces (APIs) into Emulate3D by Rockwell Automation, bringing users data interoperability, live collaboration and physically based visualization for designing, building and operating industrial-scale digital twins of production systems.

At the Cisco booth, Rockwell will present how the two companies enable a secure connected industrial environment leveraging Rockwell’s Converged Plantwide Ethernet™ reference architecture (CPwE) with its co-developed industrial ethernet switching, as well as cybersecurity solutions such as Cisco® Cyber Vision, which enables network segmentation, asset discovery and security monitoring.

Rockwell will highlight its collaboration with Ericsson by demonstrating Plex Asset Performance Management (APM) – enabled by industrial private 5G connectivity – driving real-time decision-making and managing new assets such as autonomous mobile robots (AMRs). Private 5G allows manufacturers to be more agile, flexible and sustainable while adding more devices and intelligence to their networks.

Rockwell is also partnering with ODVA, a standards development organization, to demonstrate the benefits of EtherNet/IP, CIP Security™ and 5G. Reliable wireless industrial automation appliances using EtherNet/IP and CIP Safety in private 5G networks will be shown. Also on display will be recent wireless device additions to Rockwell’s EtherNet/IP product portfolio.

Finally, Rockwell will be at the booth of OPC Foundation, an industry group that maintains standards for the secure and reliable information exchange in industrial applications. Rockwell offers scalable OPC UA solutions for machine builders and end users through Embedded Edge Compute Modules and the FactoryTalk® Optix™ software platform, supporting heterogeneous software applications and control environments.

## Financial News

### ABB -Q1 2024 results

18 April 2024

Positive book-to-bill, record-high margin and strong cash flow

Ad hoc Announcement pursuant to Art. 53 Listing Rules of SIX Swiss Exchange

- Orders \$8,974 million, -5%; comparable<sup>1</sup> -4%
- Revenues \$7,870 million, 0%; comparable<sup>1</sup> +2%
- Income from operations \$1,217 million; margin 15.5%
- Operational EBITA<sup>1</sup> \$1,417 million; margin<sup>1</sup> 17.9%
- Basic EPS \$0.49; -12%<sup>2</sup>
- Cash flow from operating activities \$726 million; +157%

#### KEY FIGURES

(\$ millions, unless otherwise indicated)	CHANGE			
	Q1 2024	Q1 2023	US\$	Comparable <sup>1</sup>
Orders	8,974	9,450	-5%	-4%
Revenues	7,870	7,859	0%	2%
Gross Profit	2,935	2,716	8%	
as % of revenues	37.3%	34.6%	+2.7 pts	
Income from operations	1,217	1,198	2%	
Operational EBITA <sup>1</sup>	1,417	1,277	11%	11% <sup>3</sup>

as % of operational revenues <sup>1</sup>	17.9%	16.3%	+1.6 pts
Income from continuing operations, net of tax	914	1,065	-14%
Net income attributable to ABB	905	1,036	-13%
Basic earnings per share (\$)	0.49	0.56	-12% <sup>2</sup>
Cash flow from operating activities	726	282	157%
Free cash flow <sup>1</sup>	551	162	240%

1 For a reconciliation of non-GAAP measures, see “supplemental reconciliations and definitions” in the attached Q1 2024 Financial Information.

2 EPS growth rates are computed using unrounded amounts.

3 Constant currency (not adjusted for portfolio changes).

Against high comparables, our Q1 performance shows the year has started off well with stronger than expected order momentum, record-high margin and strong cash delivery. This makes us confident to nudge up our margin expectation for 2024.

## Björn Rosengren, CEO

### CEO summary

My key take-aways from the first quarter of 2024 are the better than expected order intake of \$9 billion, positive book-to-bill of 1.14 and record-high Operational EBITA margin as well as the free cash flow of \$551 million representing a strong delivery for a first quarter. We published our sustainability report, where a highlight was the proof point of one of our core customer value propositions - reduced greenhouse gas (GHG) emissions. From products sold in 2023, and through their lifecycle, we enabled our customers to avoid 74 megatons of GHG emissions. At the current total of 139 megatons, we are on a good path towards our ambition of helping customers avoid 600 megatons of CO<sub>2</sub>e emissions throughout the lifetime of products sold from 2022 to 2030.

As expected, orders declined from last year’s record-high comparable, however the drop was limited at 5% (4% comparable). To summarize the quarter, we see a continued high level of customer activity in the project and systems areas, and I am encouraged by the positive order development in Electrification’s short-cycle businesses. So, while ABB’s total orders declined in the first quarter, I feel even more confident about 2024 than I did coming into the year.

It was impressive to see new record-high order intake in both Electrification and Motion business areas. Process Automation orders declined from the all-time-high comparable, but remained fairly consistent with strong recent quarterly levels. At the start of this year, we called

the fourth quarter the trough for Robotics & Discrete Automation order level. This realized, and as expected order intake increased sequentially. However, it declined sharply year-on-year on the back of customers normalizing order patterns after a pre-buy period.

Revenues remained stable (up 2% comparable), with comparable growth supported in equal parts by price and volumes. I was pleased to see the positive gross margin improvement of 270 basis points to 37.3%, supported by a positive development in all business areas. A more efficient execution of slightly higher volumes and price contributed to the 160 basis points increase in Operational EBITA margin to the new record-high of 17.9%. In my view this is a good sign that there is still upside potential in ABB and we can make mid-term improvements within the new higher margin target range announced in November.

The strong cash flow start to the year positions us for what we anticipate to be another good annual free cash flow delivery of at least similar to last year's level. Using the cash to expand know-how and footprint through acquisitions is an important path to creating long-term shareholder value. It was nice to see the announced acquisition of SEAM, which would add energy asset management and advisory services to clients across industrial and commercial building markets to the Electrification Service division. We have a good target pipeline, including some deals which are slightly more sizeable than most of the recent announcements. The share buyback program is a tool we use to distribute residual excess cash, and we announced another annual program of up to \$1 billion which launched on April 1. The size of the program is consistent with last year's, although the time frame for execution is shorter as it runs until the end of January 2025, to align with the announcement of Q4 2024 results and 2024 dividend proposal.

During the quarter we announced my decision to retire as CEO from ABB. I remain fully committed until the end of July when Morten Wierod takes the reins, and thereafter I will support the transition in an advisory role until the end of the year. I am happy to see Morten take this step and I am confident that the ABB Way operating model will be even further engrained in our ways of working under his already proven leadership. While we regret to see him go, I want to congratulate Tarak Mehta on his new opportunity outside of ABB. Tarak has made an outstanding contribution to the success of our company and I wish him all the best for this next step on his journey. The process to find new leaders to the business areas Electrification and Motion is ongoing and Morten looks to have a full team in place when he takes office in August.

## Outlook

In the **second quarter of 2024**, we anticipate a mid-single-digit comparable revenue growth year-on-year and the Operational EBITA margin to be slightly higher than in the first quarter 2024.

**In full-year 2024**, we expect a positive book-to-bill, comparable revenue growth to be about 5% and the Operational EBITA margin to be about 18%.

## *AMETEK Announces First Quarter 2024 Earnings Call and Webcasted Investor Conference Call Information*

15 April 2024

AMETEK, Inc. will issue its first quarter 2024 earnings release before the market opens on Thursday, May 2, 2024.

AMETEK will webcast its first quarter 2024 investor conference call on Thursday, May 2, 2024, beginning at 8:30 AM ET. The live audio webcast can be accessed by clicking on the Events & Presentations link in the "Investors" section of [www.ametek.com](http://www.ametek.com). A replay of the call will also be archived on the website and will be available until the next quarterly earnings call.

## *Configit Strengthens Momentum with Fourth Consecutive Year of Double-Digit ARR Growth*

11 April 2024

Configit, the global leader in Configuration Lifecycle Management (CLM), announced strong momentum heading into 2024. Backed by Polaris Equity, **Configit continues to solidify its leadership position for discrete manufacturers**, with new product innovations, partnerships and a strengthened leadership bench.

**Financial highlights** for the past year include:

- An average compound **annual growth** of almost 30% over the last four years in Annual Recurring Revenue (ARR)
- **New subscription/SaaS business model** implemented have secured a substantial part of next year's revenues. Together with Configit's normal level of consulting business more than 90% of the 2024 revenues can be considered secured at the start of the year
- Expect to be Earnings Before Interest, Taxes, Depreciation, and Amortization (**EBITDA**) cash positive in **2024** as projected

**Bolstered leadership bench with key appointments:**

- Hired **Damantha Boteju** as **Chief Product and Technology Officer**, to drive the company's product development strategy.
- Brought on **Max Mirbaz** as **Vice-President of Global Partner Business**, with a focus on developing and enhancing global partnerships, driving strategic growth initiatives and strengthening the company's market presence. Max previously played a pivotal role in the successful North American partnership between KETIV Technologies and Tacton.

In 2023, Configit **expanded** its flagship product, **Configit Ace®**, with a **cloud offering** to empower manufacturers and service providers to regain control with a scalable, reliable enterprise-grade platform that provides a shared source of truth on product configuration information. The solution is now **available through the Microsoft Azure Marketplace**, an online store providing applications and services for use on Azure. This availability enables customers

to leverage the Microsoft validated SaaS solution on the Azure cloud platform for streamlined deployment and management.

Other product highlights:

- Achieved **Unity Verified Solution status**, with a codeveloped connector between Configit Ace and Unity Forma to provide manufacturers with best-in-class configuration and 3D visualization technology.
- Released **Configit Ace® BOM Solve API** to help manufacturers rapidly generate a Bill of Materials (BOM) for a configurable product by leveraging product models.

**Allan Bach Pedersen, Partner, Polaris Private Equity**, said: “Complexity is the enemy of efficiency, and Configit is on the right track to provide a solution to complex product configurations. Configit’s achievements underscore the strength of its leadership, commitment to excellence and the significant value it provides to its customers. We look forward to the company’s continued success in the market.”

**Johan Salenstedt, CEO, Configit**, said: “Configit’s commitment to innovation, coupled with our dedicated team, positions us as a reliable business partner. Our strategic focus on delivering exceptional value to our customers has been instrumental in achieving our goals.”

### *Invitation to presentation of Addnode Group’s Interim Report January – March 2024*

12 April 2024

Addnode Group is pleased to invite investors, analysts, and media to a presentation where President and CEO Johan Andersson and CFO Kristina Elfström Mackintosh will present the interim report January – March 2024. After the presentation, there will be an opportunity to ask questions.

**Date:** Thursday April 25, 2024

**Time:** 09:30 AM CEST

**Link to audiocast:** <https://ir.financialhearings.com/addnode-group-q1-report-2024>

**Link to participate via teleconference with the ability to ask questions**

**verbally:** <https://conference.financialhearings.com/teleconference/?id=50048731>

*After registration you will be provided with phone numbers and a conference ID to access the conference.*

The presentation will be held in English.

The interim report will be published at 07:30 AM CEST the same day.

The full report, presentation, and links to the audiocast and teleconference will be available on [www.addnodegroup.com](https://www.addnodegroup.com).

## *Procore Announces Timing of First Quarter Fiscal Year 2024 Earnings Call*

15 April 2024

**Procore Technologies, Inc.**, the leading global provider of construction management software, announced that it will report its first quarter fiscal year 2024 financial results after the U.S. financial markets close on Wednesday, May 1, 2024.

In conjunction with this announcement, Procore will host a conference call on Wednesday, May 1, 2024 at 2:00 p.m. Pacific Time to discuss Procore’s financial results and financial guidance. To access this call, dial +1 833 470 1428 (domestic) or +1 404 975 4839 (international). The conference ID number is 705247. A live webcast of this conference call will be available on the Investor Relations page of Procore’s website, <http://investors.procore.com>, and a replay will be archived on the website as well.

## *PROS Holdings, Inc. Announces Date of First Quarter 2024 Financial Results Release, Conference Call, and Webcast*

11 April 2024

PROS®, a leading provider of AI-powered SaaS pricing, CPQ, revenue management, and digital offer marketing solutions, will release its financial results for the first quarter 2024 ended March 31, 2024, after the U.S. financial markets close on Tuesday, May 7, 2024.

PROS Holdings, Inc. will host a conference call on Tuesday, May 7, 2024, at 4:45 PM ET to discuss the company’s financial results and business outlook. To access this call, dial 1-877-300-8521 (toll-free) or 1-412-317-6026.

The live and archived webcasts of this call can be accessed under the “Investor Relations” section of the Company’s website at [www.pros.com](http://www.pros.com). A telephone replay will be available until Tuesday, May 14, 2024, at 11:59 PM ET at 1-844-512-2921 (toll-free) or 1-412-317-6671 using the pass code 10188161.

## *Record Deal Wins and Robust Margins Mark Strong Finish to TCS’ FY24*

12 April 2024

Tata Consultancy Services reported its consolidated financial results according to Ind AS and IFRS, for the quarter and full year ending March 31, 2024.

FY 2023-24: Annual Highlights	Q4 FY 2024: Quarterly Highlights
<ul style="list-style-type: none"> <li>• Client metrics:</li> <li>• <b>62</b> clients in the <b>\$100 Mn+</b> band (+2 YoY)</li> <li>• <b>139</b> in the <b>\$50 Mn+</b> band (+6 YoY)</li> <li>• Employee Metrics:</li> <li>• Employee Headcount: <b>601,546</b></li> </ul>	<ul style="list-style-type: none"> <li>• Revenue at <b>\$7.36 Bn</b>, <b>+2.3%</b> YoY (CC: <b>2.2%</b>)</li> <li>• Growth led by India (<b>+37.9%</b>), UK (<b>+6.2%</b>), and Manufacturing (<b>+9.7%</b>)</li> </ul>

<ul style="list-style-type: none"> <li>• Diversity: <b>152</b> nationalities; <b>35.6%</b> women</li> <li>• IT Services Attrition (LTM): <b>12.5%</b></li> <li>• Talent Development:</li> <li>• <b>5 million</b> competencies acquired</li> <li>• Number of Contextual Masters at <b>73,000</b></li> <li>• Free Cash Flow: <b>\$5.3 Bn</b></li> <li>• Shareholder payout of <b>\$5.6 Bn</b> in the form of dividends and buyback</li> </ul>	<ul style="list-style-type: none"> <li>• Operating Margin: <b>26.0%</b>; YoY expansion of <b>150 bps</b></li> <li>• Net Margin: <b>20.3%</b>; YoY expansion of <b>100 bps</b></li> <li>• Net Income: <b>\$1.5 Bn</b>, <b>+8.0%</b> YoY</li> <li>• Strong Cash conversion: Operating Cash Flow <b>100.4%</b> of Net Income</li> <li>• Final Dividend per share (proposed): <b>₹28</b></li> </ul>
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**K Krithivasan, Chief Executive Officer and Managing Director**, said: *“We are very pleased to close Q4 and FY24 on a strong note with the highest ever order book and a 26% operating margin, validating the robustness of our business model and execution excellence. In an environment of global macro uncertainty, we are staying close to our customers and helping them execute on their core priorities with TCS’ portfolio of offerings, innovation capabilities and thought leadership.”*

**N Ganapathy Subramaniam, Chief Operating Officer and Executive Director**, said: *“Our Q4 performance is robust, with broad based deal wins across industries and geographies. Our products and platforms business sparkled with the mega deal win at Aviva and emerging markets had another stellar growth quarter demonstrating the power of TCS’ diversified portfolio.”*

**Samir Seksaria, Chief Financial Officer**, said: *“In FY 2024, our disciplined approach to operations have helped us expand our industry-leading margins. In a challenging environment, we persisted with our long-term investments in workforce reskilling, research and innovation. We will continue to drive efficiencies and competitiveness to capture opportunities for growth with profitability.”*

**Milind Lakkad, Chief HR Officer**, said: *“We are pleased to announce the annual increments for our workforce, as we have done consistently every year, with top performers receiving double digit hikes. The reduced attrition at 12.5%, enthusiastic response to our campus hiring, increased customer visits and employees returning to the office have resulted in great vibrancy in our delivery centres and elevated morale of our associates.”*

Q4 and Full Year Segment Highlights

Growth by Domain

Industries	Q4 FY23 (%)	Q4 FY24 (%)	Y-o-Y CC Growth (%)	FY 2023 (%)	FY 2024 (%)	Y-o-Y CC Growth (%)
BFSI	32.9	31.3	(3.2)	33.3	32.0	(1.0)
Consumer Business	16.0	15.7	(0.3)	16.0	15.8	1.8
Life Sciences & Healthcare	10.9	10.9	1.7	10.8	10.9	4.8
Manufacturing	8.1	8.8	9.7	8.2	8.6	7.3
Technology & Services	8.9	8.2	(5.6)	9.0	8.5	(2.3)
Communication & Media	7.1	6.6	(5.5)	7.2	6.8	(2.6)
Energy, Resources and Utilities	5.4	5.6	7.3	5.2	5.6	12.6
Regional Markets & Others	10.7	12.9	26.0	10.3	11.8	19.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>2.2</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>

Growth by Markets

Geography	Q4 FY23 (%)	Q4 FY24 (%)	Y-o-Y CC Growth (%)	FY 2023 (%)	FY 2024 (%)	Y-o-Y CC Growth (%)
Americas						
North America	52.4	50.0	(2.3)	53.4	51.1	(0.2)
Latin America	1.8	2.0	9.8	1.8	2.0	12.4
Europe						
UK	15.7	16.8	6.2	15.0	16.5	10.1
Continental Europe	15.1	14.6	(2.0)	14.9	14.9	0.7
Asia Pacific	8.0	7.8	5.2	8.0	7.8	4.5

India	5.0	6.7	37.9	5.0	5.6	20.2
MEA	2.0	2.1	10.7	1.9	2.1	14.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>2.2</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>

**Services:** In a challenging macro environment, clients are prioritizing initiatives that reduce cost, increase business agility, improve security posture and resilience.

Win themes across key deals involved Cloud Migration and Modernization, GenAI, Enterprise application services, Identity & Access Management, Connected Devices, Digital Workplace Services, Network Services and Vendor Consolidation.

AI.Cloud, Enterprise Solutions, IOT&DE and Cyber Security led the growth this quarter.

**Analyst rankings:** 80% leadership positions across all key service areas (Application Transformation, Consulting, AI & Analytics, Cloud, IoT & Digital Engineering, F&A, Procurement, Assurance, Enterprise Application Services, Security, Infrastructure).

- **AI.Cloud:** During this quarter, we saw significant demand for Cloud, data platforms and Gen AI across industry segments. Clients are seeking to harness these technologies to reimagine customer experience, simplify their technology estate and transform their operating model. Clients continued to scale their experimentation with Gen AI and went live with an increasing number of use cases. We are progressing well on our mission to organically reskill our workforce on AI and Gen AI. TCS is a launch partner for the newly announced AWS Generative AI Competency. Our Responsible AI Framework for Azure has been launched in Azure Marketplace.
- **Cyber Security:** We saw continued growth momentum this quarter with good traction in Identity and Access Management (IAM), Governance Risk Compliance and Network Security and Platforms. We are expanding footprint across all client segments, with clients seeking an integrated services approach to enterprise security. We launched and saw good traction with our AI and Gen AI Security offerings. We continue to expand our domain focused offerings across industry segments.
- **Enterprise Solutions:** During this quarter, we saw strong demand from clients for Enterprise Application Services. Clients continue to make significant investments in their digital core through an ERP led Transformation approach. There is also significant interest in enhancing user and customer experience through Low Code No Code applications. Our portfolio of offerings in SAP S/4HANA, Salesforce, ServiceNow, Oracle Cloud and JDE platforms saw significant traction. Our investments in building a domain-based catalogue of GenAI use cases, Sustainability offerings on major ERP platforms and assets under the umbrella of Crystallus™ saw good momentum this quarter.
- **IoT & Digital Engineering:** Strong growth was led by multiple transformation programs and demand for next generation solutions across connected plants, connected services and intelligent product engineering. Key services leading the growth were Factory of the

Future, Electric Vehicles and Software Defined vehicles, Digital thread, Digital Twins and Medical Devices Engineering. IoT enabled connected devices and shop floor manufacturing are seeing greater adoption at scale, along with early pilots and adoption of Gen AI. Among industry groups, TSS, CBG, Manufacturing and LSHCERU saw greater traction.

- **Cognitive Business Operations:** IT Infrastructure Services led the growth this quarter with strong deal wins powered by Cognix™. Key themes were reimagining digital workplace services, transforming enterprise network infrastructure, and vendor consolidation. Clients also partnered with TCS for Business Process Services including first time outsourcing, agile and resilient supply chain operations, and transforming employee experience amongst others.
- **TCS Interactive:** During this quarter clients partnered with TCS Interactive across a wide range of engagements including, relaunch of digital presence using design language, transform online channel experience, run E-Commerce command center, audit retail media network maturity, marketing agency and for Product engineering services. We also saw good traction with our unique Apple Vision Pro based immersive airline experience solution, TwinX (AI) enabled smart marketing concierge solution and immersive commerce solutions.

#### Key Highlights

- Signed a strategic partnership with **Ramboll**, a global architecture, engineering, and consultancy company headquartered in Denmark, to manage Ramboll's cloud and data centers, application development and maintenance, Cyber Security and Digital Workplace. This will set a digital foundation for Ramboll's business growth, help to reduce its climate footprint, and increase scalability.
- Announced a 15-year expansion of partnership with **Aviva**, the UK's leading Insurance, Wealth and Retirement provider, to transform its UK Life business and enhance customer experience leveraging the TCS BaNCS™ platform. The end-to-end policy administration and servicing will expand to cover over 5.5 million policies, to be managed by Diligenta, TCS' FCA regulated subsidiary in the UK, on behalf of Aviva.
- Enabled **Euroclear Finland**, the National Central Securities Depository (CSD) of Finland in the integration of its core platform with the European Central Bank's TARGET2-Securities (T2S) platform. This has ensured easier cross-border settlements and will attract more investment into the country.
- Selected by **Central Bank**, a leading Midwest regional bank, for TCS BaNCS™ to modernize its core technology infrastructure, drive innovation, and strengthen customer relationships. Central Bank's strategic partnership with TCS aims to create frictionless and flexible customer onboarding processes, enabling continued growth for the bank.
- Signed an agreement with **Nuuday**, Denmark's leading digital connectivity and communications provider, to drive a complex cloud transformation. As part of this

multi-million-dollar deal, TCS will migrate Nuuday's IT infrastructure to the TCS hybrid cloud, paving the way for future transformations.

- Announced a strategic partnership with **Enento Group**, a prominent provider of digital business and consumer information services in the Nordic region. As part of this multi-year collaboration, TCS will transform Enento's IT applications, cloud, digital workplace, and IT security for resilient business operations. TCS' cloud and DevOps solutions will help accelerate Enento's business agility and provide a best-in-class digital customer experience.
- Selected by **Toyota Motor North America** as its strategic partner to consolidate their supplier landscape, transform their IT infrastructure, Site Services, Corporate and Plant customer experience. This partnership aims at bringing standardization, delivering synergies at scale and reduce technical debt by leveraging Gen AI and automation to deliver an omnichannel experience.
- **Ontario Teachers' Pension Plan (OTPP)** has renewed its longstanding strategic relationship with TCS for IT managed services / transformation initiatives, solidifying the relationship between the two organizations. The decision to renew the partnership underscores the successful collaboration between OTPP and TCS, characterized by service transformation, reliability, and a shared commitment to excellence. With a focus on providing domain expertise, accelerating cloud migration, and driving automation initiatives, TCS is poised to continue supporting OTPP's strategic objectives and ensuring future success.
- Extended partnership with **AkzoNobel**, a Dutch multinational paints and coatings company to leverage its contextual knowledge and technical expertise to maintain the stable application portfolio and drive simplification of business operations, leverage Gen AI and hyper automation to elevate user experience across value chains. TCS will also help AkzoNobel in building business capabilities, improve time to market by engaging multiple digital transformation initiatives at scale.
- A leading **UK based financial group** has partnered with TCS to implement network security solution to give its users the fastest, most secure access to private applications while enabling zero trust connectivity for workloads. This solution minimizes security risks and mitigates lateral threat movement through advanced segmentation and AI-powered, context-aware policies.
- Expanded strategic partnership with **easyJet**, a leading European airline, to transform its IT operations landscape. TCS will establish an entirely new platform-based futuristic operating model, leverage cutting-edge technologies, deploy TCS solutions TCS Cognix™, ignio™ AIOps to modernize the infrastructure and migrate the DC to the cloud to provide best-in-class services. This will improve operational agility, enhance competitiveness, drive sustainable growth and enable easyJet to provide the best possible travel experience to its customers.

- Selected by **Australia's largest e-health company**, providing software products, solutions and platforms, to develop a robust software product offering to manage the operations of next-gen health sector as well as transformation of acquired business processes. TCS will build future ready platform for multiple lines of businesses, including marquee customers backed by the local government.
- TCS has been selected as a strategic partner by the **French entity of a Global Insurer** to provide agility to the business by operating model transformation in Application development and maintenance. As part of the multi-year contract, TCS will bring its best-in-class agile delivery models which will help the Insurer's IT in strengthening the delivery to provide continuous value to business.
- Brought our global network of Pace Ports to London, which is set to become a dynamic center for cutting-edge technology, research, and development in the region. Leveraging TCS's extensive expertise in technology-based business transformation, the hub will serve as a catalyst for the adoption of innovation-led solutions.
- Partnered with **Macquarie University** to launch the **TCS GoZero Hub**, a research and innovation center to guide Australian organizations in their journeys towards net zero carbon emissions. Aligning with the central themes of COP28, this hub will focus on five core themes – energy transition, carbon management, nature positive future, circular economy and sustainable waste management, and climate adaptation and resilience – and how to limit and prepare for future climate change.

#### Customer Speak

“Connecting to T2S is critical to the growth and prosperity of the Finnish market. Our clients will benefit from more efficient processes and access to greater investment avenues, making Finland an attractive place for issuers and investors. As a direct holding market with end investor accounts, this program was amongst the largest of its kind in terms of the number of book-entry accounts and holdings moved to the platform. With our core platform based on TCS BaNCS™ for Market Infrastructure, we are glad to have partnered with TCS in our business and IT transformation journey, creating one of the most modern and efficient CSD systems in Europe.

**Hanna Vainio, Chief Executive Officer, Euroclear Finland**

“Extending this strategic partnership will improve how we serve our customers, further simplify our operations and support our growth ambitions. It will allow us to rationalize our systems and improve efficiency, bringing significant benefits for our customers and the business.”

**Doug Brown, CEO Insurance, Wealth & Retirement, Aviva**

“When the decision was made to modernize our core as part of a long-term strategy, we looked extensively for a true partner. Given our shared commitment to technology and its role in the customer experience, TCS, with its TCS BaNCS™ product suite, was a natural choice for Central Bank.”

**John Ross, President and CEO, Central Bank**

“As the leading digital Nordic knowledge company, we continue to be at the forefront in developing new data-driven solutions and services that power society with intelligence. With its track record in the Nordics, TCS has been chosen as our trusted partner for business transformation. Working with TCS is key to achieving our long-term targets.”

**Daniel Ejderberg, Chief Information Officer, Enento**

“The Pilot Pay platform is the culmination of a seamless collaboration with our pilot community and ALPA. Our relationship with TCS allowed us to address some of the core concerns related to the need for real-time visibility, accuracy, and transparency in pay. The intent was to build a future-ready, scalable solution that grows with us.”

**Jason Birnbaum, SVP & CIO, United Airlines**

“As the leading digital communications and connectivity provider in Denmark, we need a modernized and autonomous Infrastructure estate that can support the increasing demand for the latest digital products and services. We are turning to TCS based on the company’s proven industry experience and successful completion of complex cloud transformation projects in the digital communications sector. This important partnership brings us a modern, automated hybrid cloud service that will help us futureproof our business and ensuring excellent end-user satisfaction.”

**Monika Gullin, Chief Technology Officer, Nuuday**

“Our company has experienced remarkable growth, and we are determined to see this success forward. To continue our upward trajectory, we recognized the need for a trustworthy partner who can help us build a standardized, scalable IT platform that allows for innovation, and is agile enough to foster creativity. We are thrilled to have chosen TCS, a proven expert in large-scale complex digital transformations, for this global project. With TCS as our partner, we are confident in our ability to future-proof the business and continue to deliver the excellent services our customers expect.”

**Thomas Angelius, Senior Group Director, Chief Information Officer, Ramboll**

“easyJet chose TCS due to proven expertise in delivering large-scale digital transformations and the companies’ strong cultural alignment. This extended partnership will help easyJet build a future-ready, platform-based technology architecture that fosters a culture of innovation and improves our digital agility—toward our goal of making travel easy and becoming the most loved airline in Europe.”

**Stuart Birrell, Chief Data and Information Officer, easyJet**

#### Research and Innovation

As on **March 31, 2024**, the company has applied for **8,040** patents, including **188** applied during the quarter, and has been granted **3,919** patents including **461** granted during the quarter.

#### Human Resources

TCS’ workforce stood at **601,546** as on March 31<sup>st</sup>. The employee base is very diverse, with **35.6%** women and with **152** nationalities.

Year till date, TCSers have clocked **51 million** learning hours, and acquired **5 million** competencies. IT services’ attrition was at **12.5%** for the last twelve months.

### *Trimble Announces New Reporting Segments*

12 April 2024

Trimble announced that it will change the reporting of its segment financial results to better reflect the Company’s organizational structure and business models. Starting with first quarter 2024 results, Trimble will report revenue and operating income based on three operating segments as follows:

- Architects, Engineers, Construction and Owners ("AECO"). This segment primarily provides software solutions, which sell through a direct channel to customers in the construction industry.
- Field Systems. This segment primarily includes hardware-centric businesses, which sell through dealer partner channels.
- Transportation and Logistics ("T&L"). This segment will primarily maintain the historical businesses from the previous Transportation segment, which serves customers working in long haul trucking and freight shipper markets.

Financial segment information for the four quarters and the full year for fiscal years 2023 and 2022, as if reported under the new structure, will be available in an 8-K filed today and is posted in the Investor Relations section of the Company’s web site at: <http://investor.trimble.com>. Also available at <http://investor.trimble.com> will be pre-recorded prepared remarks and an accompanying slide presentation on the new reporting segments. The new segment financial results for 2022 and 2023 include the Company’s agriculture business, which was contributed to its joint venture with AGCO, which closed on April 1, 2024.

## *Wipro Announces Results for the Quarter and Year ended March 31, 2024*

19 April 2024

Wipro Limited, a leading technology services and consulting company, announced financial results under International Financial Reporting Standards (IFRS) for the quarter and year ended March 31, 2024.

### **Highlights of the Results**

#### **Results for the Quarter ended March 31, 2024:**

1. Gross revenue reached ₹222.1 billion (\$2.7 billion<sup>1</sup>), flat QoQ.
2. IT services segment revenue was at \$2,657.4 million, an increase of 0.1% QoQ and decrease of 6.4% YoY.
3. Non-GAAP<sup>2</sup> constant currency IT Services segment revenue decreased 0.3% QoQ, and 6.6% YoY.
4. Total bookings<sup>3</sup> was at \$3.6 billion. Large deal bookings<sup>4</sup> was at \$1.2 billion, increase of 31.1% QoQ and 9.5% YoY.
5. IT services operating margin<sup>5</sup> for the quarter was at 16.4%, up by 40 bps QoQ.
6. Net income for the quarter was at ₹28.3 billion (\$341.0 million<sup>1</sup>), an increase of 5.2% QoQ.
7. Earnings per share for the quarter was at ₹5.43 (\$0.07<sup>1</sup>), an increase of 5.2% QoQ.
8. Operating cash flows of ₹52.2 billion (\$626.1 million<sup>1</sup>), an increase of 9.0% QoQ and at 182.6% of Net Income for the quarter.
9. Voluntary attrition was at 14.2% on a trailing 12-month basis.

#### **Results for the Year ended March 31, 2024:**

1. Gross revenue reached ₹897.6 billion (\$10.8 billion<sup>1</sup>), a decrease of 0.8% YoY.
2. IT services segment revenue was at \$10,805.3 million, a decrease of 3.8% YoY.
3. Non-GAAP<sup>2</sup> constant currency IT Services segment revenue decreased 4.4% YoY.
4. Large deal bookings<sup>4</sup> was at \$4.6 billion, up by 17.4% YoY. Total bookings<sup>3</sup> was at \$14.9 billion decrease of 5.5% YoY.
5. IT services operating margin<sup>5</sup> for the year was at 16.1%, up by 50 bps YoY.
6. Net income for the year was at ₹110.5 billion (\$1,325.3 million<sup>1</sup>), a decrease of 2.7% YoY.
7. Earnings per share for the year was at ₹20.89 (\$0.25<sup>1</sup>), an increase of 0.8% YoY.
8. Operating cash flows of ₹176.2 billion (\$2,114.0 million<sup>1</sup>), an increase of 34.9% YoY and at 158.6% of Net Income for the year.

### **Outlook for the Quarter ending June 30, 2024**

We expect revenue from our IT Services business segment to be in the range of \$2,617 million to \$2,670 million\*. This translates to sequential guidance of (-)1.5% to +0.5% in constant currency terms.

\* Outlook for the Quarter ending June 30, 2024, is based on the following exchange rates: GBP/USD at 1.26, Euro/USD at 1.08, AUD/USD at 0.66, USD/INR at 83.19 and CAD/USD at 0.74

### **Performance for the Quarter and Year ended March 31, 2024**

**Srini Pallia, CEO and Managing Director, said** *“FY24 proved to be a challenging year for our industry, and the macroeconomic environment remains uncertain. However, I am optimistic about the opportunities that lie ahead. We are on the brink of a major technological shift. Artificial intelligence is transforming our clients’ needs as they seek to harness its power for competitive advantage and enhanced business value. At Wipro, we have been gearing up for this moment. We have the capabilities, leadership, and the strength of over 230,000 Wiproites around the world to help us realize our goals. Although there’s a considerable amount of work ahead of us, I am confident that together, with our collective effort, we can pave the way for the next chapter of growth.”*

**Aparna Iyer, Chief Financial Officer, said** *“We expanded our margins by 40 basis points during the quarter resulting in EPS growth of 5.2% QoQ in Q4. Despite a challenging macro-environment our IT services margin expanded by 50 basis points for the full year FY24. We generated highest operating cash flow in recent years which is at 183% of our net- income in Q4 and 159% on a full year basis.”*

### **Capital Allocation:**

The Board of Directors confirmed the interim dividend of ₹1 declared by the Board earlier at its meeting held on January 12th, 2024, shall be considered as the final dividend for the financial year 2023-24.

1. For the convenience of the readers, the amounts in Indian Rupees in this release have been translated into United States Dollars at the certified foreign exchange rate of US\$1 = ₹83.34, as published by the Federal Reserve Board of Governors on March 31, 2024. However, the realized exchange rate in our IT Services business segment for the quarter ended March 31, 2024, was US\$1= ₹83.09
2. Constant currency for a period is the product of volumes in that period times the average actual exchange rate of the corresponding comparative period.
3. Total Bookings refers to the total contract value of all orders that were booked during the period including new orders, renewals, and increases to existing contracts. Bookings do not reflect subsequent terminations or reductions related to bookings originally recorded in prior fiscal periods. Bookings are recorded using then-existing foreign currency exchange rates and are not subsequently adjusted for foreign currency exchange rate fluctuations. The revenues from these contracts accrue over the tenure of the contract. For constant currency growth rates, refer note 2.

4. Large deal bookings consist of deals greater than or equal to \$30 million in total contract value.
5. IT Services Operating Margin refers to Segment Results Total as reflected in IFRS financials.
6. Voluntary attrition is in IT Services computed on a quarterly annualised basis and excludes DOP.
7. Effective April 1, 2023, we merged our ISRE segment with our IT Services segment. The YoY growth rates for the quarter ended March 31, 2024 were computed by rebase lining Q4'23 numbers.

### **Highlights of Strategic Deal Wins**

In the fourth quarter, Wipro continued to win large and strategic deals across industries. Key highlights include:

1. A multinational healthcare and insurance organization has selected Wipro to transform its technology-enabled health services business to increase adoption of value-based care and enhance member experience. Wipro will help the client re-imagine its end-to-end member, patient, and provider journey by building a standardized, interoperable, and integrated care delivery platform. Overall, the project will improve talent allocation and care coordination by leveraging GenAI. It will also reduce costs and improve the quality of healthcare.
2. Wipro was selected by a US-based health information technology company to scale their Release of Medical Information business that covers over 2,000 hospitals and 15,000 clinics in the country. Wipro will deploy automation-enabled workflows to ensure seamless patient data handling, allowing the client to create new efficiencies and expand its business.
3. A major US-based health insurance provider for government-sponsored health programs selected Wipro as its technology and operations transformation partner. Leveraging its proprietary Medicare Advantage platform, Wipro will offer the client an AI-driven, modular member enrolment platform, which will streamline business operations. The project will lead to reduced operating expenses, improved compliance and STAR rating of its products, and enhanced member experience.
4. A leading US-based telecom wireless operator has selected Wipro as a strategic partner to provide managed services and overhaul the client's IT and digital operations. As part of this deal, Wipro will implement and operate a leading IT SaaS operating platform across the organization, drive data driven insights, enhance digital and billing operating platforms, and drive better security and quality engineering practices.
5. A large omnichannel lifestyle retailer in Brazil has awarded Wipro a multi-year deal to modernize and transform its operations to support its strong growth ambitions. In a first of its kind in the region, Wipro will migrate the client's retail landscape, including the merchandising and planning modules, to a cloud-based platform, creating a more agile, resilient, and efficient system. This will drive increased productivity, reduce costs, and support the client's sustainability goals.

6. A US-based multinational department store has selected Wipro to develop an automation framework that will help the client streamline and improve its business processes and systems. Through this engagement, Wipro will help the client identify inefficiencies and enable continuous improvement of business system features. Wipro will also conduct ongoing performance testing to ensure a seamless user experience and enhance customer satisfaction. This will lead to a 20% improvement in time to market, supporting the client's market expansion across brick-and-mortar and online stores.
7. A leading US-based technology company has selected Wipro to provide integrity and labelling services for its platforms and tools. Wipro will deploy its trained data experts to review and label large volumes of content and accelerate turnaround times to meet the client's changing business needs. Wipro teams will improve the accuracy and precision of data, thereby enhancing the client's GenAI/machine learning algorithm.
8. A US-based regional bank has selected Wipro to deliver a multi-faceted transformation across their ecosystem. This multi-year engagement will include cloud and data, cyber security, and infrastructure to deliver enhanced business value to their customers. These programs will enable the client to increase operational efficiency, achieve a better cybersecurity posture, and a faster time to market.
9. An American bank has selected Wipro to setup a near shore bi-lingual alert monitoring unit to enhance their anti-money laundering operations. Wipro has been selected for their exceptional quality, efficient and scalable delivery model, and proven track record in the financial crime compliance space.
10. A US-based bank and financial services company has selected Wipro to digitally transform their business. Wipro will support integration of new technology initiatives centered on modernizing existing business applications, processes, and data management. This multi-year technology transformation will support the client's growth strategy and accelerate their goal of becoming a full-service bank.
11. Wipro was selected by a Singapore government agency for its finance digitization and cloud transformation program. Wipro will maintain and drive product upgrades to process daily transactions seamlessly. This will enhance the user experience and provide the client with a 360-degree view of interactions. Wipro will also rationalize and consolidate the client's IT services for business-critical Corporate and Enterprise applications on a fully digital platform. This will enable greater productivity, enhance efficiency, and improve effectiveness for the client, thereby accelerating their digital transformation journey.
12. A European-based bicycle manufacturer selected Wipro to manage their entire integrated IT landscape. The Wipro team will run everything from their customer-facing digital tower to all back-end and IT applications. Wipro will also transform and run the client's core infrastructure, including complete cyber security operations and their entire data backbone. This multi-year engagement will lead to streamlined, consolidated, and synchronized IT processes, boosted cybersecurity, elevated customer experience, and reduced costs.

13. A German global automotive parts manufacturer selected Wipro to transform their IT back-end systems into a hybrid cloud-based solution. The solution will enable the client to standardize and digitize their back-end ecosystem while increasing their cybersecurity posture. The client will be more agile and resilient as a result of the project.

14. A global insurance broker has selected Wipro to unify and scale its business. Wipro will digitize and streamline the client's bid, product, and onboarding processes across multiple geographies. The project will integrate the client's customer relationship management solutions into their broader technology estate using a templated platform-based approach with Salesforce & MuleSoft. The team will also provide continuous platform evolution and business support. The project will enable a more cohesive business and technology landscape, leading to better efficiencies, an improved customer experience, and new growth opportunities.

### **IT Products**

1. IT Products segment revenue for the quarter was ₹1.2 billion (\$13.9 million<sup>1</sup>)
2. IT Products segment results for the quarter were ₹0.14 billion (\$1.72 million<sup>1</sup>)
3. IT Products segment revenue for the year was ₹4.1 billion (\$49.5 million<sup>1</sup>)
4. IT Products segment results for the year were (-₹0.37 billion) (-\$4.45 million<sup>1</sup>)

Please refer to the table on page 12 for reconciliation between IFRS IT Services Revenue and IT Services Revenue on a non-GAAP constant currency basis.

### **Quarterly Conference Call**

We will hold an earnings conference call today at 07:00 p.m. Indian Standard Time (9:30 a.m. U.S. Eastern Time) to discuss our performance for the quarter and the year. The audio from the conference call will be available online through a webcast and can be accessed at the following link-

<https://links.ccwebcast.com/?EventId=WIP190424>

An audio recording of the management discussions and the question-and-answer session will be available online and will be accessible in the Investor Relations section of our website at [www.wipro.com](http://www.wipro.com)

## **Implementation Investments**

### *Aviko Launches Centric PLM to Replace Legacy System*

19 April 2024

Aviko, Europe's largest producer of potato products, went live with Centric Software's Product Lifecycle Management (PLM) solution to support growth and manage product specifications. Centric Software® provides the most innovative enterprise solutions to plan, design, develop, source and sell food & beverage and consumer products to achieve strategic and operational digital transformation goals.

Founded in 1962, Aviko has expanded to become one of the top five worldwide producers of chilled, frozen and dried potato products. Aviko operates in more than 110 countries and produces 25% of all french fries in Europe. Aviko is backed by Dutch parent company Royal Cosun and is on a growth trajectory.

Aviko's plans include strengthening their leadership position in Europe and expanding market share all around the world. Extending their product portfolio with value-added potato products is also part of the mix and they needed a robust PLM solution to achieve those goals.

Aviko's legacy PLM was reaching its end of life and upgrading the system would have been costly and time-consuming. The PLM was heavily customized, functionality was limited and Aviko needed a solution that supports their growth and development.

"We needed a modern solution to support our growth plans, manage product specification processes and enhance customer service in multiple markets and regions," says Maaïke Renssen-Alberts, Project Manager at Aviko. "We specifically looked for a solution to automate manual work and to meet the demands of operating in 110 markets."

After an extensive vendor evaluation process, Aviko chose Centric PLM™ to improve management of technical product data throughout the lifecycle and support the product packaging development process.

Centric PLM is now used by several teams at Aviko including quality, regulatory, packaging, commercial operations, innovation and procurement.

With the new PLM system, Aviko is streamlining all product related data. This makes it easier and quicker to access, update and share information about ingredients, additives, semi-finished products, packaging materials and products across the company's departments and production plants.

Centric PLM also plays an important role in end-to-end packaging development, as the system holds all relevant labeling information for specific regions and channels to ensure quick generation of compliant labeling briefs. With PLM's single data source, cross-functional teams will have full visibility of project progress, bolstering efficiency and internal collaboration on packaging and labeling briefs, artwork proofing and managing and sourcing packaging items.

"With Centric PLM's 'single source of truth,' we can streamline notifications and changes in formulation, recipes and regulations across markets to ensure regulatory compliance and launch new product variations more quickly. We can also store supplier data, claims, certificates and contracts in one place," explains Renssen-Alberts. "Aviko has entered a new and improved era of software user experience — PLM's modern, easy-to-use and intuitive interface is making life easier for all of our teams."

"We are thrilled that Aviko has chosen Centric Software as a digital transformation partner," says Chris Groves, CEO of Centric Software. "We are delighted to be partnering with such an iconic and innovative company on their journey of growth across multiple markets."

## **CAPGEMINI SELECTED TO ENABLE DIGITAL TRANSFORMATION OF NORWEGIAN PUBLIC ROADS ADMINISTRATION**

16 April 2024

**Capgemini announced the signing of a strategic agreement with the Norwegian Public Roads Administration (NPRA) to enable its digital transformation journey and manage its transition towards a more data-driven entity. NPRA strives to provide a smart, safe and continuous road transport system for all of Norway and data is key in ensuring this. As part of this four-year agreement, Capgemini will help develop digital systems that'll ensure people have relevant and trustworthy data related to traffic and transport, improving the flow of traffic across the country, and helping NPRA meet its commitment to providing a reliable and safe service for citizens.**

Capgemini will work together with NPRA on services design, system development, test and maintenance/IT operations, boosting its digital capacity through the provision of dedicated resources and competency-based training. Through this new agreement, Capgemini will help NPRA to improve decision making and enable NPRA to collect, process, present and store road data in a secure manner, which is vital to ensure that the administration is prepared for the future of mobility.

*“As a key societal player, we have a responsibility towards the people of Norway and oversee vast resources of data and infrastructure. NPRA is also responsible for applications that provide commuters with important information such as estimated duration of travel, weather data, and pictures and video footage from webcams. The quality of information provided is crucial in ensuring safer travel for all, and Capgemini will play a key role in enabling this. Increased digitalization ensures safer and more predictable travelling on Norwegian roads and optimized costs,”* says Lars Kalfoss, director of IT at the NPRA.

*“NPRA plays a central role in maintaining and optimizing the road transportation system in Norway. While the administration already possesses a high volume of traffic and transportation data, this brings with it the need for new technologies and competencies that can be applied in the most effective areas of the organization. Our work with NPRA will make it easier to extract data and make these insights available to commuters on Norwegian roads. As a trusted business and technology partner of NPRA since 2017, we are committed to enabling an effective and safe transportation system in Norway,”* says Atle Bergfjord, Head of Public Sector at Capgemini Norway.

## **Crunch Fitness Partners with Matterport to Offer Advanced Photography Services to its Franchisees**

16 April 2024

Matterport, Inc., the leading digital twin platform for the built world, announced it has partnered with Crunch Fitness, one of the largest fitness companies in North America, to use Matterport's leading digital twin and photography services to ensure brand consistency across marketing materials for its U.S. franchise locations.

Headquartered in New York City, Crunch has over 450 gyms worldwide, serving a diverse community of more than 2.5 million members. Known for its reputation for innovation in the fitness community, Crunch invested in Matterport's state-of-the-art property marketing solutions to offer single-source brand marketing materials across its portfolio of gyms.

With this agreement, Matterport will offer Crunch clubs access to nationwide photography, digital twins, and aerial drone photography services to produce rich media content that encourages prospective gym-goers to start their fitness journey with Crunch.

In seeking to achieve brand uniformity and streamline photography work, Crunch decided to partner with Matterport due to the company's network of expert photographers, global capture technicians for its unique digital twin technology, and its overall scale. Beyond virtual tours, Matterport's digital twins are capable of providing affordable all-in-one property marketing packages that span HDR photos, 4K video, and floor plans – all of which can be generated from a single digital twin.

"We are always seeking ways to further enhance and evolve the franchise experience," said Kate Weis, Vice President of Franchise Marketing, Crunch Fitness. "Being able to partner with Matterport, the leading company in the digital photography space, and offer our franchise network such high-level visual assets will continue to move the needle for our franchisees."

"We are thrilled to help Crunch create a more consistent experience across promotional materials that encourages members from every community to participate in fitness," said Jay Remley, Chief Revenue Officer, Matterport. "With our expert photography services and the immersive power of Matterport's digital twins, Crunch Fitness is primed to extend its excellence as a leader in the fitness world across all of its marketing assets."

### *Darmann Abrasive Products Chooses Flexxbotics for Advanced Robot Machine Tending to Meet Rising Automotive Demand*

9 April 2024

Flexxbotics, delivering workcell digitalization for robot-driven manufacturing, announced that Darmann Abrasive Products (Darmann), a leading global manufacturer of fine grit abrasive products for superfinishing and precision grinding applications, has selected Flexxbotics for advanced robotic machine tending.

The Flexxbotics solution seamlessly connects Universal Robots to Darmann's CNC machines enabling robotic command and control of the workcell. Flexxbotics provides the ability for Darmann to dramatically improve production capacity while maintaining a more consistent operating cadence.

"As we introduce collaborative robotic technology, we wanted a partner that would support our full journey from design and implementation to scale production, which Flexxbotics has done exceptionally well," said Scott Kroeger, President & CEO of Darmann Abrasive Products. "We're particularly impressed with Flexxbotics compatibility with all makes and models of machines in our factory enabling us to roll out automation across our workcells quickly and efficiently."

Darmann selected Flexxbotics based on the following criteria:

- **Full design and implementation** capabilities to ensure that the solution is optimized to Darmann's exact needs within a strict timeline
- **Solution flexibility** to start with initial workcells, get success quickly and scale to additional workcells factory-wide
- **Open connectivity and interoperability** with a wide range of robots, CNC machines and IT business systems
- **Monitoring and analysis** including CNC status monitoring, real-time alerts, alarm detection and identification with data aggregation and graphical dashboards
- **Remote-in support** capabilities to quickly identify and resolve issues and prevent downtime before production output is impacted

Scott Kroeger continues, "With Flexxbotics we can achieve a 7:1 machine-to-man ratio which is hugely beneficial given labor challenges as our business grows."

Flexxbotics robotic workcell digitalization is the backbone of the smart factory delivering autonomous process control for next generation machining environments utilizing robotics. Flexxbotics breakthrough innovation, the unique FlexxCORE™ technology, seamlessly connects and coordinates robots with existing automation equipment, IT systems and people.

"We understand that most times when automation projects fail it's because the robots are disconnected and unable to communicate with the machines which creates ongoing downtime issues impacting capacity, quality and limiting efficiency gains," said Tyler Bouchard, CEO & Co-founder of Flexxbotics. "That's why the Flexxbotics solution delivers broad interoperability to enable the robots to optimize each machine's operation for maximum throughput."

### *Emotors adopts Siemens' Simcenter solutions for NVH testing of next-generation automotive e-drives*

16 April 2024

Siemens Digital Industries Software announced that Emotors, an independent e-drive manufacturer, has taken advantage of test solutions from the Siemens Xcelerator portfolio of industry software to aid in the development and constant improvement of its e-drive systems for hybrids, plug-ins and full electric vehicles (EVs).

Headquartered in Carrières-sous-Poissy, France and formed in 2018 as a joint venture between Stellantis and Nidec Leroy-Somer, Emotors is an independent e-drive manufacturer. Emotors has created a series of next-generation electric drive (e-drives) units for Stellantis brands like Peugeot, Opel, DS Automobile and Jeep.

"A key part of our knowledge is not just about good development – being able to design and prototype next-generation e-drives for our EV customers, but also manufacturing them en masse. This is where platform development, a very well-known strategy in automotive, helps us be competitive," said Cédric Plasse, CTO, Emotors. "We design many things digitally but cannot

do everything with just our digital models. To be quick-to-market and accurate, we need to calibrate our models with test measurement data. Our NVH test engineers benchmarked all the tools on the market, and it appeared quite quickly that the Siemens tools were the best.”

One of Emotors’ many challenges is meeting stringent and changing customer specifications -- especially in Noise Vibration Harshness (NVH) acoustic – when tailoring a whole new range of sounds for EVs, electric drivetrains and e-drives. These include customized interior and exterior soundscapes, enhanced “silent” driving experiences, and pedestrian warning systems (PWS) or acoustic vehicle alerting systems (AVAS).

To meet these challenges, Emotors is using a range of solutions from Siemens, including Simcenter™ Testlab™ software for test-based engineering, combining high-speed data acquisition with integrated testing, analytics and modeling tools, Simcenter™ SCADAS™ hardware which provides a broad range of test data acquisition solutions for multi-physics measurement for acoustic, vibration, and durability engineering. Emotors is also making use of a comprehensive suite of innovative sound and vibration excitation systems designed to measure driving points and structural and vibroacoustic frequency response functions.

“To meet our customers’ NVH requirements, we perform classic experimental modal analysis in Simcenter Testlab. We extract modal parameters, like frequency, modal shape, and damping. And provide this information to the simulation team to confidently predict the NVH behavior of our Emotors’ products. The Simcenter testing solution easily takes us through the main tasks, step-by-step, from the channel setup to final measurement analysis,” explains Bonaventure Ndong Gumedzoe, NVH Testing Manager, Emotors.

### **The future of NVH simulation at Emotors**

“When I speak with my NVH team, they say that Siemens’ support is very professional and there is good communication. We are trying to use Siemens tools across all domains. This is a good thing because we can capitalize on having more people on both sides – the simulation and the test sides -- talking to each other. This is a good driver to improve communication. We will capitalize on the success between Siemens and Emotors as we introduce more motors on the market in the future,” concludes Cédric Plasse, CTO, Emotors.

### *Holmen Selects Trimble's Connected Forest Management System*

16 April 2024

Trimble announced that Holmen, a leading Swedish forestry company, has selected Trimble CONNECTED FOREST® as its new, comprehensive forest management system for Holmen Skog. ForestX, Trimble's service partner in Sweden, will implement the digital transformation project.

Holmen Skog, responsible for managing and developing Holmen's extensive land holdings totaling approximately 1.3 million hectares, is set to become the first in Sweden and Scandinavia to fully adopt the Trimble CONNECTED FOREST suite. Selecting the CONNECTED FOREST suite aligns with Holmen's strategic commitment to become more data-driven in its forestry operations.

Clas Engström, head of development at Holmen Skog, commented on the strategic move: "CONNECTED FOREST gives us a platform where we can add more solutions and systems in the future. We have a lot of data. Now we have a platform that makes it possible for our company to take a data-driven approach in our work for the long term. In Trimble, we have an active counterpart who continues to develop their software. We get inspiration from Trimble for our own development."

The adoption of the CONNECTED FOREST suite represents not only an IT project, but a significant shift in Holmen Skog's approach to work. Engström said, "We are also looking at changing our own working methods. We have involved large parts of the business to find some new approaches and to work in new ways."

"Holmen Skog's strategic adoption of Trimble's CONNECTED FOREST suite represents a pivotal moment in advancing data-driven forestry operations in Sweden," said Kevin Toohill, general manager of Trimble Forestry. "In collaboration with ForestX, this initiative is pivotal to transforming sustainable forest management."

ForestX plays a crucial role in implementing the project. Engström emphasized the value of ForestX's involvement: "ForestX is close to us and knows forestry in Sweden and Scandinavia. It will be a great advantage to collaborate in Swedish during these major development steps."

### *Maria Black to Elevate Compliance with Centric PLM*

16 April 2024

Centric Software®, the Product Lifecycle Management (PLM) market leader, proudly announces its partnership with Maria Black, a contemporary fine and fashion jewelry brand based in Copenhagen.

Centric Software provides the most innovative enterprise solutions to plan, design, develop, source, buy, make, price, allocate, sell and replenish products such as fashion, outdoor, luxury, multi-category retail, grocery, food & beverage, cosmetics & personal care and consumer electronics to achieve strategic and operational digital transformation goals.

Maria Black founded her eponymous jewelry brand in 2010 and creates contemporary jewelry collections that are driven by an inclusive ethos, inviting customers to explore and embrace their individuality in fresh and creative ways. The company has grown quickly from humble beginnings, producing and retailing at some of London's most renowned markets, including Portobello Road Market and Sunday Upmarket, to a company with 30 employees, eight brick-and-mortar stores worldwide and robust e-commerce and wholesale distribution channels.

"We have a lot of new developments, and therefore a lot of information to organize in one central location," says Maria Black, Founder and Creative Director at Maria Black.

The combination of stringent compliance, for example for IMPACT gold which is 30% Fairtrade & 70% recycled gold, and sustainability regulations, an increased amount of data to consolidate and an over-reliance on spreadsheets and manual administration led the team to adopt a PLM system.

“So much information is siloed and there’s huge potential for mishaps working across countless documents and communication channels. We’d sometimes receive a file from our wholesalers with 150 values to fill out,” shares Black. “We were desperate to find one single source of truth in a PLM and a way to reduce time-consuming tasks as well as ensure proper traceability and sustainability documentation.”

The advent of new environmental legislation and the growing prominence of Digital Product Passports (DPP) led Maria Black to explore PLM as a means of enhancing their supply chain visibility and gathering accurate data surrounding their product materials, sourcing and packaging.

“What really pushed us on the decision to implement a PLM system was compliance,” says Black. “There was an increasing need for traceability and insight into the specific materials that we use and put out into the world.”

The Maria Black team assessed several different PLM systems over the course of a few years and selected Centric PLM™, in large part due to Centric’s industry expertise and valuable technical features including the Costing and PO modules.

“Centric PLM seems quite simple to integrate,” says Black. “Our main partner based in India that does 90% of our production recently implemented Centric PLM. It seems like there is great potential and alignment with producers.”

Maria Black plans to utilize PLM to streamline product development as well as using the solution to automate data entry into their e-commerce system. And for course, it will also be used for traceability and compliance information and documentation.

“We expect teams will save a huge amount of time by cutting out manual data entry and be freed up to focus on sales and development activities,” explains Black. “We look forward to streamlining the organization, having one single source of truth and substantially reducing product development time.”

“We are delighted that Maria Black has selected Centric Software as a partner to navigate the increasingly complex compliance and traceability landscape,” says Chris Groves, CEO of Centric Software. “We look forward to seeing how Centric PLM will modernize Maria Black’s processes and support their future growth.”

### *MAS Holdings Continues Digitalization Momentum with Third Centric PLM Expansion*

18 April 2024

Centric Software® is pleased to announce the expansion of its partnership with apparel manufacturer, MAS Holdings. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source, buy, make, price, allocate, sell and replenish products such as fashion, outdoor, luxury, multi-category retail, grocery, food & beverage, cosmetics & personal care and consumer electronics to achieve strategic and operational digital transformation goals.

Founded in 1987 in Sri Lanka, MAS Holdings is a global apparel-tech company providing concept-to-delivery solutions to major apparel brands and retailers across the world. The company employs over 100,000 employees and operates in 16 countries. MAS strives to be a changemaker in the apparel industry with technology at its forefront and sustainability at the core of everything it does.

Since choosing Centric PLM™ as their technology partner in 2019 to digitally transform the product development process and streamline operations, MAS Holdings now leverages Centric PLM across five business units. This successful partnership will further extend Centric PLM to one of their key subsidiaries, MAS Intimates, which designs and manufactures for leading global lingerie brands.

Previously, MAS Intimates relied on an in-house system to manage its product development processes. However, they needed a seamless system such as Centric PLM to boost collaboration, drive efficiency and ultimately, stay competitive in the current economic climate.

Successful Centric PLM adoption by another MAS subsidiary, MAS KREEDA, serves as an indication of the impact to be expected at MAS Intimates. Lasanthi Gunawardena, Director of Technical Development and Innovation at MAS KREEDA, explains how Centric PLM has freed up her team from spending too much time on manual administrative tasks, “Now that Centric PLM has removed manual admin such as updating spreadsheets, we experience a reduction in product development processing time. The time is given back to the technical team so they can focus on more valuable aspects of their work, such as product innovation.”

In addition, Centric PLM has played a part in reducing overall lead times by improving accuracy and visibility, as well as enabling data-driven decisions. Collaboratively, MAS Holdings leverages Centric’s OEM best practices, while Centric benefits from invaluable insights provided by MAS Holdings to enhance its product development roadmap for a greater industry impact.

Jayantha Peiris, CIO at MAS Holdings, shares the company’s overall strategy influencing the expanded partnership, “Our goal is to be a changemaker in the apparel industry and to create a best-of-breed application landscape to digitally transform our company. Our partnership with Centric has played a key, vital role in achieving that objective.”

“We are excited to embark on a new stage of partnership with MAS Holdings as we welcome MAS Intimates to the Centric family,” says Chris Groves, CEO of Centric Software. “We are looking forward to working together to create a digital landscape that will empower them to bring innovative, high-quality products to their customers.”

### *SAFRAN Aircraft Engines accelerates training the next generation of CAM programmers, machine operators and engineers with Hexagon digital twin simulator*

11 April 2024

Safran Aircraft Engines (SAE) has selected new training technology now available globally from Hexagon’s Manufacturing Intelligence division which leverages the power of its digital twins to halve the time taken to help train new machinists to use valuable shop-floor equipment as part

of SAE's strategy to train the urgently needed aerospace workforce. The new highly realistic training simulator reduces the risk of damage to business-critical production machinery by training new engineers that would previously have been given access to sophisticated shop-floor equipment with limited "hands on" experience.

Training aerospace engineers to use CNC (computer numerical control) machines and similar tools is expensive, slow, and potentially dangerous. As part of SAE's revised training strategy for new engineers, by using HxGN Machine Trainer, trainees can accurately and interactively replicate 'real world' scenarios with a physical simulator, making it possible for SAE to onboard and upskill their new employees faster than ever before. HxGN Machine Trainer will play a significant part in SAE's new training programmes, including 'Adaptive Machining' by providing less theoretical and more practical experiences to enable trainees to become autonomous in half the previous time.

The shortage of pilots and maintenance technicians is recognised inside and outside aviation circles, but aerospace manufacturing is also struggling with employee retention, turnover, and workforce capacity. In the US, for example, job openings are hovering near all-time highs at 800,000 with 55% roles unfilled (1), with almost three in 10 manufacturing firms in Europe reporting production constraints in the second quarter of 2022 due to a lack of workers (2).

SAE operates a fleet of nearly four-hundred valuable business-critical CNC machines that are dedicated to the production of LEAP® Leading Edge Aviation Propulsion jet engines, which that could be damaged is used to train and onboard new engineers who are not familiar with the equipment. HxGN Machine Trainer solves the problem, as the simulator is designed to be as realistic as possible – with hardware that replicates the look and feel of a real machine. Its 43-inch screen displays accurate simulations of a large variety of machine and cutting tools, complemented by a light tower, physical CNC hand wheel that enables trainees to take control and respond to issues exactly as they would on the shop floor.

"SAE has historically worked with Hexagon on the WYSIWYC (What You See Is What You Cut) concept, using its NCSIMUL simulation software to prove out machining strategies in the virtual world before implementing, and it is this principle that lies at the heart of our decision in choosing the HxGN Machine Trainer.

"In a competitive market for skilled aerospace engineers having HxGN Machine Trainer is vital for SAE, to ensure that we can onboard new engineers as fast as possible, with no risk to our expensive shop-floor equipment. This minimises potential production downtime because of damage to technology such as CNC machines being used for training," commented Philippe Audinet, Head of CAM Software and Commercial Development and Support department, Safran Aircraft Engines.

SAE's first practical work on their 'Adaptive Machining' training modules will be undertaken by new trainees on the HxGN Machine Trainer before the end of the year at **Campus FAB** a state-of-the-art industrial training centre near Paris that showcases all aspects of the connected factory. In addition, because of its portability and ease of transportation, HxGN Machine Trainer will also be made available to various schools throughout France to show how SAE is driving innovation and inspire future aerospace engineers.

## *StarHub accelerates growth and delivers superior customer experience with Qualtrics*

17 April 2024

Qualtrics, the leader and creator of the experience management (XM) category, announced StarHub, a leading provider of telecommunications, entertainment, and digital services in Singapore, has selected Qualtrics® to increase market share and accelerate growth by helping the company to decisively identify and bring to market new and optimised products, services, and experiences aligned to the evolving and diverse digital needs and behaviours of consumers in Singapore.

The multi-year agreement is a key initiative in StarHub's strategic transformation programme (DARE+), which targets a combined \$500 million in cost savings and revenue growth by FY2026 through an expanded digital product and entertainment offering, and a superior, simplified experience across all customer engagements.

"To drive sustainable and impactful growth in business today, organisations must be able to quickly understand and take action on the greatest friction points and unmet needs in their business. It means experience management technologies are now a critical tool for every company, leader, and team, and the people-centric focus being adopted by organisations like StarHub is helping drive growth, savings, and productivity for organisations across Southeast Asia and the globe," said Mao Gen Foo, Head of Southeast Asia, Qualtrics.

"Aligned with our DARE+ initiatives, StarHub remains committed to exploring new ways to elevate our customer service experience and take it to the next level," said James Riley, Vice President of Customer Lifecycle Management, StarHub. "The real-time, multi-channel insights and capabilities Qualtrics brings us will be a key driver in understanding our customers better, allowing us to make precise and efficient decisions when it comes to our overall customer experiences."

StarHub will be able to continually evolve and scale its customer experience programme to accommodate changing consumer behaviours and product offerings, working closely with the team of XM experts at Qualtrics to optimise its investment. The programme will be implemented by Qualtrics Partner Merkle.

## *Universal Robots Expands Partnership with MathWorks by Joining Connections Program*

9 April 2024

Universal Robots, the Danish collaborative robot (cobot) company, has further strengthened its partnership with MathWorks, the leading developer of mathematical computing software, by joining the Mathworks Connections Program. The program supports organizations that develop and distribute complementary, commercially available products, training, and consulting based on MATLAB® and Simulink®. Last year, MathWorks became a UR+ partner within the Universal Robots ecosystem, consisting of more than 300+ approved developer companies creating products for the UR platform.

The two companies have already worked closely together, co-developing a support package for Robotics System Toolbox™, launched in 2023. Engineers can design, simulate, test, and deploy their MATLAB-based cobot applications onto Universal Robots cobots using MATLAB and Robotics System Toolbox from MathWorks.

"In conjunction with MathWorks joining UR+, Universal Robots' entry into the Connections Program formalizes the organizations' commitment to helping engineers develop advanced cobot applications and ensures compatibility with new MathWorks releases," said Jim Tung, MathWorks Fellow. With Universal Robots' market leadership and the ability of MATLAB and Simulink to accelerate the pace of innovation, integrators and end users will continue to solve ever-more complex automation workflows."

Jesper Kildegaard Poulsen, Senior Director of Digital Ecosystems at Universal Robots, said, "We are delighted to be a part of the Connections Program and to expand our collaboration with MathWorks. At Universal Robots, we constantly push the boundaries of what can be automated and how easily it can be done. Together with MathWorks, we look forward to continuing our common quest to simplify advanced cobot deployments for robotics engineers."

### Join MathWorks and Universal Robots at RoboCup 2024

As another testament to the two organizations' close relationship, Universal Robots partnered with MathWorks to organize the Autonomous Robot Manipulation Challenge this July in Eindhoven, Netherlands, as an affiliated event to RoboCup 2024. The ARM Challenge is an educational, scientific competition that asks young researchers and students to address problems related to autonomous robot manipulation, organized by RoboCup and MathWorks since 2021. As a co-organizer in 2024, Universal Robots will provide its UR5e robots to be used by participants for the final rounds of the competition.

## Product News

### *Bluebeam Releases New AI Product Feature in April Update*

15 April 2024

Bluebeam, a leading developer of solutions and services for architecture, engineering and construction professionals worldwide, announced updates to Revu 21, the company's flagship desktop solution.

Bluebeam's latest release (Revu 21.1.0) delivers advanced AI-powered functionality, powerful search preference features and seamless access to learning materials for increased productivity.

The major highlight of this product release is **Auto Align** for drawing overlays and comparisons. Auto Align reduces the tedious, error-prone steps of manually aligning three points on each drawing revision, so users can understand the differences between them faster. Bluebeam customers currently use the Overlay and Compare features more than five million times a year. While powerful, the process takes several clicks and up to two minutes per drawing. With the

Auto Align option and a revamped feature interface, this can be streamlined to as little as 15 seconds, helping users understand the differences up to 80 percent faster.

This latest Revu 21 release also boosts productivity by adding a new search feature in Preferences that allows users to quickly locate features and options without interrupting workflows. Plus, users can now easily access Bluebeam University using the same Bluebeam ID (BBID) login they use to access Revu and Bluebeam Cloud. Bluebeam University offers on-demand training courses ranging from beginner through expert to help users make the most out of their Bluebeam solution.

### *Cadence Announces Most Comprehensive True Hybrid Cloud Solution to Provide Seamless Data Access and Management*

17 April 2024

Building upon its leadership in hybrid cloud solutions, Cadence announced industry's most comprehensive True Hybrid Cloud solution for enterprise, enabling Cadence customers to seamlessly transition to hybrid cloud environments. This solution provides customers with the flexibility and simplicity they need to leverage a single data source and move between cloud, on-premises, or hybrid multi-cloud environments without any intervention from IT teams managing those clusters.

In 2021, Cadence announced the industry's first innovative hybrid cloud solutions, which have set the standard for hybrid cloud at the product level, such as Virtuoso ADE Cloud and Clarity 3D Solver Cloud, in EDA by seamlessly transferring only the required data to the cloud and back for peak simulation needs with the click of a button from a desktop environment. With this new announcement, Cadence extends its leadership by having the most comprehensive hybrid cloud solution for enterprise and desktop-based users alike.

"We are thrilled to collaborate with Cadence to deliver a seamless hybrid cloud experience for their customers," said Krish Vitaldevara, senior vice president, Platform Products at NetApp. "ONTAP FlexCache is designed to simplify data access and management in hybrid cloud environments, making it an ideal solution for Cadence customers who need to leverage a single data source and move between cloud, on-premises, or hybrid multi-cloud environments."

NetApp's ONTAP FlexCache is a powerful data management solution that enables customers to access data from anywhere, anytime, without explicit synchronization of incremental data changes. This capability, offered in Cadence OnCloud Managed Service solutions reduces the initial setup time from days to hours and completely remove the need for explicit synchronization of incremental data changes, resulting in faster time to market for new product development and introduction and gaining a fast-moving advantage in the industry. This capability is available for customer managed hybrid cloud environments as well.

"Our collaboration with NetApp delivers the perfect blend of simplicity and flexibility that our customers require to succeed in a hybrid cloud environment," said Tarak Ray, CIO of Cadence. "By leveraging our True Hybrid Cloud Solution, we can reduce the additional storage need by up

to 90% in many cases, making it an ideal solution for distributed product development across multiple sites."

Cadence and NetApp are committed to delivering innovative solutions that enable customers to succeed in their electronic design automation workflows. This collaboration is a testament to both companies' commitment to providing the best possible experience for their customers.

### *Cadence Collaborates with MemVerge to Increase Resiliency and Cost-Optimization of Long-Running High-Memory EDA Jobs on AWS Spot Instances*

17 April 2024

Building upon its 20+ years of leadership in providing hosted (or managed) cloud solutions for EDA workloads, Cadence has collaborated with MemVerge to enable seamless support for AWS Spot instances for long-running high-memory EDA jobs.

Cost-optimization of cloud infrastructure has become a consistent ask as more and more customers deploy EDA workflows on Cadence Cloud. Utilizing AWS Spot instances, which provide up to 90% cost savings over on-demand pricing, is one of the most effective ways to save costs on the cloud. However, not all EDA jobs can take advantage of Spot instances.

EDA jobs, specifically in the back-end design workflow, can take several days to complete and cannot take advantage of Spot instances because they can be taken away within two minutes of notification. Hence, the job running on the Spot instance must be cold restarted, resulting in a loss of engineering productivity and resource wastage of several runtime hours and compute costs.

In a move that promises significant cost savings and enhanced efficiency for design engineers, the Cadence and MemVerge collaboration solves this challenge by implementing a transparent, low-overhead incremental checkpoint/restore solution that makes these EDA jobs resilient (hot restart) to Spot pre-emptions or without needing to change the underlying EDA application.

Key customer benefits include:

- **Cost Savings:** By utilizing Spot instances, users can enjoy significant cost savings compared to traditional on-demand pricing models without compromising performance or reliability.
- **No Application Modification:** The integration between Cadence's EDA solutions and MemVerge's MMCloud technology ensures a seamless user experience, with no need to modify existing EDA applications.
- **Resiliency and Reliability:** Incremental checkpoint and restore technology provides users with the ability to achieve deterministic results, ensuring reliability and consistency even in the event of system failures or interruptions, whether on-prem or on AWS.

For complex advanced-node chip designs, the Cadence Innovus™ Implementation System can run for several days. By adopting this incremental checkpoint solution, even large memory jobs using the Innovus system can run without disruption. Based on real-world production test case

modeling, Innovus users can realize up to 57% and 48% cost savings over on-demand pricing for design top and design block jobs, respectively.

Cadence is committed to delivering innovative solutions that enable customers to run EDA workflows in the cloud effectively and cost-efficiently, thus increasing developer productivity.

## *Cadence Unveils Palladium Z3 and Protium X3 Systems to Usher in a New Era of Accelerated Verification, Software Development and Digital Twins*

17 April 2024

Cadence Design Systems, Inc. announced the new Cadence® Palladium® Z3 Emulation and Protium™ X3 FPGA Prototyping systems, a revolutionary digital twin platform that builds on the success of the industry-leading Palladium Z2 and Protium X2 systems to tackle escalating system and semiconductor design complexity, and to accelerate the development timeline for the most advanced SoCs. Palladium and Protium systems have long been trusted by market-shaping AI, automotive, hyperscale, networking and mobile chip companies to deliver the highest throughput pre-silicon hardware debug and pre-silicon software validation. Targeted at the industry's largest multi-billion-gate designs, the new Palladium Z3 and Protium X3 systems set a new standard of excellence, providing customers with more than a 2X increase in capacity and a 1.5X performance increase compared to previous-generation systems, enabling faster design bring-up and shortening overall time to market.

“As generational drivers accelerate the need for system and semiconductor innovation, our customers are facing increasing challenges to power the most advanced applications,” said Paul Cunningham, senior vice president and general manager of the System Verification Group at Cadence. “The third generation Palladium and Protium dynamic duo systems are core components of the Cadence Verification Suite and seamlessly interface with the Verisium AI-driven Verification Platform. The Cadence verification full flow offers our customers the highest verification throughput needed to deliver their hardware innovations to market faster and to support the rapid development of new technologies, such as generative AI.”

The Palladium Z3 and Protium X3 systems offer increased capacity, and scale from job sizes of 16 million gates up to 48 billion gates, so the largest SoCs can be tested as a whole rather than just partial models, ensuring proper functionality and performance. The systems are powered by the NVIDIA BlueField DPU and NVIDIA Quantum InfiniBand networking platforms and maintain congruency when transitioning between the two systems and transitioning from virtual to physical interfaces and vice versa. The Palladium Z3 system accelerates hardware verification, and through functional and interface congruency, models can be quickly brought up onto the Protium X3 system for accelerated software validation.

“The supercharged Palladium Z3 and Protium X3 are built to deliver fast pre-silicon verification and validation of the largest and most complex devices,” said Dhiraj Goswami, corporate vice president, Hardware System Verification R&D at Cadence. “Our innovative custom silicon and system architecture, combined with revolutionary modular compile and debug capabilities enabling multiple turns per day, continues to push the envelope to meet our customers’ needs,

allowing them to solve the world's toughest challenges and enable their next generation of innovations to become a reality."

"Building efficient, high-performance AI platforms requires sophisticated infrastructure and integration across a full stack of optimized systems and software," said Scot Schultz, senior director, Networking at NVIDIA. "Accelerated by NVIDIA networking, the next-generation Cadence Palladium and Protium systems push the boundaries of capacity and performance to help enable a new era of generative AI computing."

With the Palladium Z3 system's new domain-specific apps, users have access to the most complete offering for managing increasing system and semiconductor design complexity, improving system-level accuracy, and accelerating low-power verification. The domain-specific apps include the industry's first 4-State Emulation App, the Real Number Modeling App, and the Dynamic Power Analysis App.

"As SoCs become more complex, scalable validation and verification tools that enable massive software testing before tapeout are more critical than ever," said Tran Nguyen, senior director of design services, Arm. "The latest hardware verification platforms and tools from Cadence are sparking innovation in Arm IP design for AI, automotive, and data center applications, and we look forward to how this will benefit our mutual customers."

"Delivering on leadership computing products requires AMD to bring together a multitude of pre-silicon solutions and techniques to meet the scale of the verification challenge," said Alex Starr, Corporate Fellow, AMD. "Cadence Palladium Z3 and Protium X3 systems add to our capabilities between emulation and enterprise prototyping to improve design productivity and meet time-to-market goals. Our collaboration with Cadence also incorporates the AMD Versal™ Premium VP1902 adaptive SoC within the Protium X3 system as well as AMD EPYC™ processor-based host servers qualified for both the Palladium Z3 and Protium X3 systems to enable high capacity with next-level performance and scalability."

The Palladium Z3 and Protium X3 systems are part of the broader Cadence Verification Suite and support the company's Intelligent System Design™ strategy, enabling SoC design excellence. The systems have been deployed at select customers, with general availability expected in Q3 2024.

## *CCTech and Autodesk Introduce "3D Design Exchange" — A Paradigm Shift in AEC Presentations*

15 April 2024

In an exciting advancement for the AEC industry, CCTech proudly introduces the "3D Design Exchange" connector for PowerPoint. This innovative tool, a collaboration with Autodesk Platform Services (APS), is a pivotal breakthrough, now featured on the Autodesk store. With the capability to embed BIM and CAD models from over 150 engineering design file formats, it is a true game-changer.

## Universal Compatibility Meets Cutting-Edge Integration

The challenge of presenting intricate design concepts in a digestible format and shifting from bulky software for all stakeholders is no stranger to the AEC industry. The "3D Design Exchange" boasts unparalleled compatibility, supporting more than 150+ engineering design file formats from industry-leading software such as Revit, Civil3D, NavisWorks, Tekla, Rhino, Inventor, Fusion 360, Solidworks etc. This wide-ranging support ensures that no matter the software used for designing, the "3D Design Exchange" offers a robust solution for bringing these models to life within PowerPoint slides.

## Transformative Features of the "3D Design Exchange"

Our "3D Design Exchange" empowers users to:

- **Universal Model Integration:** A robust platform that can present 3D designs from over 150 file formats, making it the most versatile tool in a stakeholder's arsenal.
- **Interactive 3D Presentations:** Dynamic, real-time engagement with models allows for an immersive presentation experience, directly within PowerPoint.
- **Operational Efficiency:** The simplification of the design sharing process translates to tangible time savings and streamlined project discussions.

## Future-Proofing AEC Collaboration

CCTech's "3D Design Exchange" is not just about bridging the gap between technical and non-technical stakeholders, it's about setting a foundation for future advancements in AEC communication and project management.

We're not stopping here—our vision for the "3D Design Exchange" includes ongoing enhancements to further enrich the user experience with advanced features like animation detailed metadata views, and more.

## Embrace the Future with CCTech's "3D Design Exchange"

CCTech's collaboration with Autodesk signifies a new chapter in AEC project delivery, marked by innovation, improved communication, and enhanced decision-making. The "3D Design Exchange" connector is more than just a tool—it's a pivotal step toward smarter, more efficient project management and execution.

Experience the transformative power of the "3D Design Exchange" by visiting the Autodesk store and integrating it into your next PowerPoint presentation.

## *Customers Expand Their Horizons with OpenText Cloud Editions 24.2*

15 April 2024

OpenText™, the information company, announced Cloud Editions (CE) 24.2 at its OpenText World Europe conference April 15- 18. OpenText's innovations combine trusted information management solutions and data strategies with advanced artificial intelligence (AI) capabilities to make work smarter, safer, and simpler.

Titanium X is OpenText's strategic product roadmap to be delivered by CE 25.2. The three areas of innovation are:

- **Business Clouds:** Knowledge with security can be a competitive advantage for our customers in modern work and business fabrics. OpenText sets out to elevate everyone – from engineers to IT – with integrated and secure technology to drive meaningful simplification and efficiencies.
- **Business AI:** Data governance, compliance, and authentication are table-stakes today. OpenText is applying generative AI to power customers to get more out of their IP. With AI-assistants that run across large private data sets, the right people get the right information.
- **Business Technology:** Connected data is an imperative and prerequisite as workloads continue to shift to cloud. OpenText is focused on bringing customers enterprise-strength data platforms deployed anywhere in any way – private cloud, public cloud, or through APIs.

As AI continues to shape our world, trust and governance is essential for fostering confidence in AI technologies. With 80% of organizations already exploring or investing in generative AI, transparent and accountable AI technologies are imperative for the future of customer support and customer success. Built from OpenText's expertise in information management, the company's latest AI-enabled innovations are poised to meet this need, providing robust solutions to fuel innovation and growth.

"As organizations navigate their Cloud, Security and AI journeys, establishing trust in data integrity is paramount and at the center of what is required," said Muhi Majzoub, EVP and Chief Product Officer, OpenText. "With CE 24.2, we are delivering against our 90-day innovation cycles to bring advancements in our Business Clouds, Business AI, and Business Technology. OpenText solutions bring knowledge and empowerment, equipping our customers and partners with the tools and data insights needed to navigate these journeys effectively, regardless of the challenges they face."

### **Business Clouds**

New offerings in OpenText Business Clouds 24.2 include:

- **OpenText Experience Cloud** – OpenText Core Journey is now available to help customers better strategize, design, and execute customer communications effectively at scale for onboarding, compliance, and retention experiences.
- **OpenText Business Network Cloud** – OpenText Trading Grid is now integrated with Oracle NetSuite and Microsoft Dynamics 365 to enable mid-sized enterprises to seamlessly manage connections across vendors.
- **OpenText DevOps Cloud** – OpenText Application Lifecycle Management is now integrated with SAP cloud to enable customers to speed up testing and accelerate SAP release cycles.

- **OpenText IT Operations Cloud** – OpenText OpsBridge has new open telemetry capabilities for application observability to drive better monitoring and real time insights across IT estate.
- **OpenText Cybersecurity Cloud** – OpenText Fortify has a refreshed user experience for developers to seamlessly perform code vulnerability checks and security measures. OpenText NetIQ and OpenText Magellan is now integrated for better identity intelligence management.

## **Business AI**

New offerings in OpenText Aviator include:

- OpenText™ Content Aviator is an intelligent assistant that simplifies information retrieval with conversational search, content summaries, and translation features. Now integrated with OpenText Core Content, Extended ECM, and Documentum, it automates content and workspace analysis, boosting workflow efficiency and knowledge reuse without having to move the data.
- OpenText™ IT Operations Aviator, a private generative AI virtual assistant, is now integrated into OpenText™ SMAX. Formerly exclusive to ITSM users, this advanced service management solution now extends support to service desk agents. With an AI agent capable of summarizing incoming tickets and offering solutions, agents can resolve issues more efficiently to heighten user satisfaction, improve productivity, and mitigate staffing challenges.
- OpenText™ Operations Bridge with Aviator adds a private intelligent assistant, powered by generative AI, that empowers every troubleshooter with a simple guided search interface to find the relevant information and resolution steps quickly. By combining Aviator AI capabilities with Operations Bridge automation, organizations can deliver uninterrupted service and improve performance with less resources.
- OpenText™ DevOps Aviator now empowers developers and testers with a simple, embedded conversational search with an Ask-me-anything AI assistant. As end-to-end software quality assurance becomes mission critical for large banks, auto manufacturers, biotech firms, and more, customers can now much more easily gain insights and pursue functional and performance testing faster with OpenText ValueEdge.
- OpenText™ Experience Aviator is now available on OpenText Exstream and TeamSite, integrating generative AI to enhance web and customer communication experiences. This update empowers customer experience leaders to maximize customer lifetime value and auto-generate relevant personalized customer material at scale.
- OpenText™ Axcelerate™ with Aviator is a new comprehensive Axcelerate eDiscovery solution designed to streamline legal investigations and inform case strategy effectively. The latest introduces generative AI capabilities, empowering legal departments and law firms to identify and summarize crucial documents and concepts swiftly and accurately.

This enhancement aims to expedite investigations and review processes, ensuring timely and informed decision-making.

### **Business Technology**

New offerings in OpenText™ Aviator Platforms 24.2 include:

- OpenText™ Aviator Core Analytics Database is a new SaaS enterprise-level data lake house that merges the power of OpenText Vertica's advanced database with the flexibility of a multi-tenant platform. The new offering provides users with self-service insights, fostering better decision-making capabilities while lowering total cost of ownership and carbon footprint.
- OpenText™ Aviator Search now offers revolutionary capabilities in information extraction and enrichment across file formats, bolstered by advanced security features like generative AI and large language models. With CE 24.2, users can now access enhanced conversational functions, enabling seamless information retrieval. This update also empowers users to pinpoint answer origins and validate them across data sources, delivering heightened accuracy and efficiency.
- OpenText™ Aviator IoT introduces traceability, authentication, and an out-of-the-box data lake for IoT event data that enables users to track and manage all types of high value assets for their business. OpenText Aviator IoT offers end to end visibility designed to elevate data consistency and transparency while enhancing operations in supply chain and asset management.
- OpenText™ Aviator Thrust Studio introduces a real-time digital assistant designed to support developers throughout the application-building process. Now, developers can use an early access version of OpenText Aviator Thrust Studio within VS Code to assist in generating code that utilizes our Thrust APIs. This intelligent assistant streamlines development tasks, enhancing productivity and efficiency.

### **Availability**

As a part of the quarterly OpenText Cloud Editions releases, customers benefit from new AI capabilities every 90-days.

## ***DELTEK LAUNCHES AI-POWERED BUSINESS COMPANION, DELTEK DELA™, TO REVOLUTIONIZE PROJECT-BASED BUSINESSES***

15 April 2024

Deltek, the leading global provider of software and solutions for project-based businesses, has unveiled Dela™, its AI-powered, intelligent business companion. Dela is a suite of AI-powered technologies built into Deltek's portfolio of solutions. Individually, each AI capability has its own role and function, which brings together all of Deltek's existing and future AI capabilities under one umbrella.

Within certain Deltek solutions today and with future releases coming, customers can begin to leverage Dela in multiple ways to generate smart content, predict project performance, find information more efficiently, and automate simple tasks.

### **Generating Smart Content**

Dela organizes vast amounts of data and distills it into concise, actionable insights with GenAI-powered Smart Summaries™ that equip decision-makers with crucial information and enable informed choices.

GovWin IQ and Vantagepoint are two of the Deltek solutions already utilizing Dela's smart content capabilities. GovWin IQ Smart Summaries™ – unveiled in late 2023 – leverages GenAI to make data collection and synopsis effortless by delivering clear, concise executive briefings for federal Agency Profiles, federal Contract Awards and state, local, and education (SLED) Government Profiles with the click of a button.

### **Predicting Success**

By introducing predictive elements into everyday processes, Dela will help anticipate resource needs, automate processes, streamline project staffing and hiring, and recommend strategies to reduce future risks based on historical project and performance data.

Coming soon in Deltek ERPs, Dela will make labor forecasting smarter – helping project managers and resource managers predict availability based on current assignments, suggest replacements if needed and also provide potential actions.

### **Intelligent Exploration**

Dela engages users through natural language interactions to retrieve and explore information, perform tasks and get product assistance without having to navigate Deltek solutions. Dela is an AI-powered digital companion that comes to work every day with each user.

Costpoint, one of Deltek's ERP solutions, already features GenAI capabilities. In its latest release, Deltek evolved *Hey Deltek* to the Dela digital assistant, designed to make government contractors even more productive and efficient. Powered by GenAI, the Dela digital assistant allows end-users to: ask questions about contracts or projects; initiate emails or phone calls regarding overdue tasks; use voice recognition and natural language processing capabilities to provide answers based on the relevant data available in Costpoint; and make more informed and quicker decisions. The Dela digital assistant will be making its way into more Deltek products, starting with Vantagepoint this summer.

“Dela represents our commitment to continuously innovate on how projects get done for the thousands of global project-based businesses that rely on Deltek solutions,” said Warren Linscott, Chief Product Officer at Deltek. “We are in a new era of AI-enabled software, and project-based businesses need a trusted partner that can help them responsibly transform with new technology. We're excited to add value for our customers through the use of traditional AI and GenAI within our products. Dela's capabilities will revolutionize the way our customers operate their businesses and execute their projects. We're excited about what we have already delivered and plan on accelerating AI-driven capabilities into our products in 2024 and beyond.”

## ENGYS® RELEASES HELYX® VERSION 4.2.0

17 April 2024

ENGYS is pleased to announce the release of **HELYX version 4.2.0**, the latest advancement in our commitment to providing cutting-edge open-source simulation tools. **HELYX 4.2.0** empowers engineers worldwide to tackle complex fluid dynamics challenges with confidence.

### What's New in HELYX 4.2.0:

HELYX 4.2.0 introduces several new capabilities and improvements, including:

- **Advanced Automation:** enhanced Python Journaling system and Macro Library for seamless automation of simulation tasks.
- **New Geometry tab:** to load, manage and manipulate CAD files and surface data in the GUI prior to meshing.
- **Improved Mesh Generation:** new Multi-Mesh interface for generating complex meshes by combining multiple grids into single-region or multi-region domains.
- **Extended Unified Solver Framework:** new solver models and extended physics to enable modular multi-physics simulations for complex engineering problems.
- **New Boundary Conditions:** for more accurate and realistic simulations, enhancing simulation fidelity.
- **Enhanced Visualization:** new Turbo post-processing tools for detailed turbo machinery design and analysis, including a dedicated interface to CFturbo.

### Accessing HELYX 4.2.0:

Existing users of HELYX can access version 4.2.0 by logging in to the ENGYS Customer Portal and navigating to the Downloads section. Installation files are available for Linux and Windows operating systems.

## ModuleWorks 2024.04 Release Now Available

16 April 2024

ModuleWorks announces the 2024.04 release of its software components for digital manufacturing. This latest release of the ModuleWorks SDK contains a range of new and enhanced features for efficient toolpath generation, ranging from improvements in 2-axis machining to multi-axis surface finishing and more.

### Rotary Machining Roughing

#### Leads for Roughing

In open regions, toolpaths often start directly at the stock with a plunge movement, which can damage the tool or reduce tool life.

To address this, ModuleWorks 2024.04 now supports lead-in and lead-out options for rotary machining roughing toolpaths. These additional motions ensure a smooth entry and exit of the tool into and out of the material. This is especially useful for open pockets, as well as rest machining operations. It generates smoother transitions and ensures optimum start points on open contours. Tool wear and the risk of tool damage are also reduced.

### **Geodesic Machining**

#### **Improved Corner Smoothing**

In sharp corners, machining is typically slow as the tool has to decelerate significantly. This leads to longer machining times and poor surface quality.

The ModuleWorks 2024.04 release introduces a corner smoothing option for geodesic machining toolpaths. This option improves the surface quality and reduces machining time as the tool no longer needs to decelerate and accelerate abruptly.

### **Deburring**

#### **Corner Arc Support for Chamfer Tools**

In previous releases, cutting motions in the inner and outer corners were interrupted. A new enhancement in ModuleWorks 2024.04 now produces uninterrupted cutting motions.

The algorithm creates a continuous toolpath around the inner and outer corners when using a chamfer mill. With this improvement, intermediate links are no longer generated for 5-axis deburring operations. This reduces the linking motions and hence the overall cycle time for chamfering.

### **Existing Toolpath**

#### **Custom Rotate/Transform/Mirror Sequence**

Previous limitations in tombstone machining meant that only one operation could be rotated with a fixed order of rotation before any transformation was allowed, and the mirroring operation was separate.

In ModuleWorks 2024.04, the Rotate/Transform/Mirror functionality has been enhanced and now includes a user-defined sequence option. Users can specify the order in which the operations are performed and set up a complex sequence of Rotate/Transform/Mirror steps via a tree structure. The machining direction for mirror operations can also be controlled in the tree. This makes it possible to machine multiple identical parts positioned in the machining area.

### **3-Axis**

#### **3D Contact Point Boundary for Finishing**

Current containment options limit the toolpath to the tooltip which can sometimes leave unmachined areas.

The new implementation of the 3D contact point boundary accurately limits the finishing toolpath to the 3D containment on the part. Users no longer need to recreate the containment or manually add offsets, which reduces the programming time. It also ensures that the surface is completely machined.

### Hole Making

### External Thread Milling

Machining external threads on hard materials is challenging.

The new external thread milling feature allows thread milling on external orientations. The feature is especially useful for machining threads on difficult-to-cut materials. Another advantage is that a single tool can be used for machining multiple thread diameters.

ModuleWorks 2024.04 is available for download from the ModuleWorks website.

## *nanoCAD 24 Multilingual Launch: Empowering Users Worldwide*

17 April 2024

Nanosoft AS is excited to unveil nanoCAD 24, the platform's inaugural multilingual edition, designed to empower global users. This breakthrough release, enriched with extensive multilingual support, including English, German, Spanish, French, and Korean, signifies Nanosoft's dedication to enhancing global design collaboration. Featuring a suite of advanced tools and functionalities, nanoCAD 24 promises to revolutionize design processes, catering to the diverse needs of professionals in architecture, engineering, and construction.

Frode Rødland, CEO of Nanosoft AS, emphasizes, "*The launch of nanoCAD 24 aligns with our mission to democratize design technology, making sophisticated CAD solutions universally accessible and fostering a vibrant community of designers and engineers.*"

With comprehensive multilingual support, users around the globe can now experience nanoCAD in English, German, Spanish, French, and Korean, enjoying more intuitive and efficient design work than ever before.

The release of nanoCAD 24 showcases an unparalleled leap forward in CAD technology, embracing global diversity and innovation. The development team, fueled by insightful feedback from our valued users and beta testers, has introduced new features and improvements that redefine the boundaries of CAD software capabilities.

### What's New in nanoCAD 24 platform:

- **Layer Manager:** A newly designed toolbar that simplifies layer management.
- **Layer Translator:** A tool to manage, remove, and merge layers.
- **Plot Dialog Update:** Improvements in the plotting experience, including a new "Preview" button.
- **Text Editing Enhancements:** New shortcuts and a function for copying text format.
- **Centroid Snap:** A feature for finding the center of mass of closed objects.

- **Coverings Library Update:** New textures in the sections of Wood, Roofing, Landscape Design.
- **Inquiry Toolbar Update:** A new Area tool for finding area and perimeter.
- **CAD Standards Toolbar:** Includes commands like Standard Settings, Configure, Check, and Layer Translator.
- **ETRANSMIT Command Update:** Improved functionality for sharing drawings.
- **Point Cloud Project Manager:** new toolbar allows you to manage the project created during the import of point clouds.

#### What's New in Topoplan Module:

- New Command for **Projecting Objects on a Surface**
- **Setting Attributes** when Importing Geopoints
- **Copying Column Data**
- Updated Appearance of Dialogs for Working with Geopoints
- **Underlay Type Storage**
- **Conversion Precision Adjustment**

#### What's new in 3D Solid Modeling Module:

- Corrected **Direct Modeling**
- Improved **Parametric Modeling**
- Corrected **Sheet Solids**

#### What's new in Construction Module:

- Import **large IFC files** (1 Gb+)
- **Quick Selection** of frozen and hidden layers
- Setting the **object coordinate system by UCS**
- The bug has been fixed due to which zeros in the fractional part were cut off in room and area markers regardless of the **Number of decimal places setting**.
- The bug in the **Stamp Creation Wizard** has been fixed. Due to this the thickness and color of the stamp lines could not be determined by the design settings.

#### What's new in Mechanica Module:

- **New Types of 3D Thread**
- **Flange Properties**
- Now the parameters of a sheet solid are displayed in the **Parameters Manager**.

Nanosoft AS invites the global design community to explore the full capabilities of nanoCAD 24 and leverage these innovative features to bring their creative visions to life with unparalleled ease and efficiency.

### *New Cutting Parameters AI solution automatically generates appropriate physics-based precision machining feeds and speeds, transforming CNC machining*

16 April 2024

CloudNC, the manufacturing technology company, announces the release of Cutting Parameters AI, a new solution that automatically generates appropriate physics-based feeds and speeds for virtually any CNC machining scenario, in moments.

Defining new feeds and speeds for CNC machining operations is an arduous and time-consuming task, involving considerable manual experimentation. As a result, many CAM programmers are forced to rely on a 'one-size fits all' approach towards machining components, instead of tailoring specific settings for every toolpath - resulting in lower productivity, inefficient cycle times, and sub-optimal surface finishes.

Cutting Parameters AI resolves that problem by employing models that allow users to easily set physics-based feeds and speeds for every unique toolpath in moments, within their existing CAM software packages and workflows. With Cutting Parameters AI, the largest constraints to removing material faster in any unique cut are always visible to the machinist, enabling them to take immediate action to increase productivity.

In addition, Cutting Parameters AI can provide safe starting feeds and speeds for materials and with tools that the user has never worked with, dramatically increasing right-first-time operations.

As a result, CloudNC expects users of Cutting Parameters AI - provided as a new module of its existing CAM Assist solution, which generates machining strategies for 3-axis and 3+2 axis components - to immediately benefit from instant cutting parameters tailored to any scenario, resulting in productivity optimisations of at least 20% in their machining operations.

Theo Saville, co-founder and CEO of CloudNC, said: "Cutting Parameters AI is the first solution to automatically provide sensible feeds and speeds that can be applied in virtually any machining scenario, by a user of any ability level. It's a step change in accelerating one of the most time consuming, tricky aspects of machining and will substantially reduce the time that CAM users spend setting up, while also substantially increasing what it's possible for them to achieve with a CNC machine."

When making new components with a CNC machine, there are so many factors to consider when selecting feeds and speeds that determining the best option is very time consuming for an experienced CAM engineer, and bewildering for someone new to the industry.

Cutting parameters that are too aggressive cost money through broken or worn out tools and scrapped parts. Equally, sticking to a conservative, safe range of cutting speeds leaves time and money on the table with slow toolpaths.

Furthermore, what are good cutting parameters for one toolpath may be less suitable for other toolpaths - but programming different parameters for every operation is too intricate and difficult for all but the largest batch sizes. Additionally, introducing new types of tooling (or materials) comes with the overhead of creating presets and populating the data into CAM software.

Cutting Parameters AI resolves those problems by applying AI. When using the software, the physics model immediately recommends appropriate feeds and speeds by combining both its embedded domain knowledge and an understanding of the cutting context.

It identifies and models factors that ultimately limit the machining process, including cutting dynamics, workpiece and tool material, tool holder geometry, and surface finish models. It then combines machine learning models and a detailed three-dimensional model of the physics of the cutting process to provide a recommendation to the user.

The user interface also allows the applicable constraints to be configured in a flexible and intuitive way, allowing the user to rapidly reach a recommendation tailored to their specific usage and specifications.

### *Release Announcement of CADdoctor for Autodesk Moldflow EX10.0*

19 April 2024

Elysium has released CADdoctor for Autodesk Moldflow EX10.0.

Key Enhancement

Added Support for the Latest CAD Versions

Import Options	Versions added in EX10.0	Supported Versions
NX	2306 Series	UG10 – NX 2306 Series (until 2306.7000)
Parasolid	V36.1	V7 – V36.1
ACIS	R34	R6 – R34

### *Siemens launches Electrification X, strengthening the Siemens Xcelerator portfolio across buildings, electrification, and grids*

18 April 2024

Siemens Smart Infrastructure has launched Electrification X, a highly scalable Internet-of-Things (IoT) SaaS offering to transform electrification infrastructure.

Electrification X is the latest SaaS and IoT portfolio of Siemens Xcelerator, developed by Siemens Smart Infrastructure. Building X, the scalable and digital building platform, was the

inaugural offering introduced in 2022 as part of Siemens Xcelerator. Following that, Gridscale X, Siemens' advanced grid management software, was announced in February 2024.

Electrification X now completes the trio, further expanding Siemens' commitment to innovative technology in the electrification sector.

Built on highly scalable cloud services, Electrification X is designed to manage, optimize, and automate the challenged electrification infrastructure of commercial, industrial and utility customers, improving efficiency and performance while reducing costs and CO2 emissions.

“Our vision is to make our world more sustainable by driving the electrification of everything,” said Matthias Rebellius, Managing Board Member of Siemens AG and CEO of Smart Infrastructure. “Digitalization sits at the heart of enabling that vision and with the addition of Electrification X to the Siemens Xcelerator portfolio, we are making it easier than ever before for companies to digitally transform their electrification infrastructure, faster and at scale.”

As a part of Siemens Xcelerator, an open digital business platform to accelerate digital transformation and value creation, Electrification X software is developed with the core design principles of interoperability, flexibility, openness, availability as a service, and with the highest level of cybersecurity.

At launch, the Electrification X offering comprises Load Management, Network Fault Management, Asset Management, Sustainability Energy Management, and OT Companion. Combining the real world with the digital worlds, these applications will help renewable generators, transmission system operators (TSOs), distribution system operators (DSOs), industries and infrastructure customers to improve productivity, reliability, asset utilization, energy efficiency, and sustainable innovation.

Electrification X offerings from Siemens will be showcased for the very first time at its booth in Hall 9 at Hannover Messe from 22 – 26 April.

### *Stratasys Unveils Direct-to-Garment Solution, Paving the Way for Personalized, Sustainable Fashion*

17 April 2024

In a bold move that redefines the future of personalized fashion and sustainability, Stratasys Ltd. announced the launch of its Direct-to-Garment (D2G) solution for the J850 TechStyle™ printer, the newest offering in the Stratasys 3DFashion™ direct-to-textile printing technology. The first example of its application is an Urban Tattoo denim collection which will be revealed at the Texprocess exhibition in Frankfurt, Germany on April 23.

The D2G solution is ideal for customization and personalization by enabling the application of full color multi-material 3D print directly on fully assembled garments of various fabric types including denim, cotton, polyester, and linen. It allows fashion brands to facilitate personalized and bespoke designs for customers, including the ability to tailor 3D prints according to individual preferences, sizes, and styles.

“Many brands are limited in how much they can mass produce denim clothing, while maintaining a level of personalization that has meaning to the wearer,” said Zehavit Reisin,

Senior Vice President Commercial Solutions, Stratasys. “We are giving brands the opportunity to do something remarkable, to bring more character to their clothing line, while pushing a more sustainable business practice that appeals to multiple audiences across the consumer spectrum.”

Available in two sizes, the D2G tray kits facilitate the personalization of garments ranging from jeans to jackets, enabling designers and manufacturers to adopt more sustainable practices by reducing material waste. The seamless workflow delivers ease of calibration and compatibility with various garment sizes, streamlining the production process and fostering the creation of unique, personalized apparel.

Demonstrating this innovation, the Urban Tattoo collection showcases the potential and the ease of direct-to-garment 3D printing. Working with noted designers Karim Rashid, Travis Fitch, Zlatko Yanakiev at Meshroom along with Foraeva Studio, this distinctive collection shows the transformation of ordinary garments into extraordinary pieces of wearable art, imbuing them with personal identity and meaning.

Like body tattoos, Urban Tattoos promote a deeper emotional connection, encouraging the upcycling of existing garments and contributing to a more sustainable fashion ecosystem. This aligns with Stratasys’ strategy for Mindful Manufacturing™. Stratasys has been able to create a new collection that will appeal to multiple brands that reach across diverse socio-economic backgrounds.

“With Urban Tattoos, we're not just decorating a garment, we're giving it more life and spirit,” said Naomi Kaempfer, Stratasys Creative Director. “By adding layers of stories and symbolism that resonate with the individuality of the wearer, these tattoos help consumers promote their identity, and celebrate their individuality. It is a testament to the transformative power of additive manufacturing technology in fashion.”

### *With Versalis Automotive Digital Marking, Lectra Offers Automotive Seat And Interior Manufacturers A Digital Marking Solution For Leather Defects*

15 April 2024

Lectra facilitates the transformation of players in the fashion, automotive and furniture industries by providing technological solutions that accelerate their transition to Industry 4.0. The group has now launched Versalis Automotive Digital Marking, a digital marking station for leather defects coupled with an automatic hide repositioning software. Through the use of data, this offer improves marking accuracy and facilitates decision making, resulting in lower production costs and material savings.

Highly competitive and still impacted by the Covid-19 pandemic, the automotive industry faces many challenges: high fluctuation in demand, transition to electric vehicles, reduction of carbon footprint, digitalization of production and shortage of skilled labor. Against this backdrop, all automotive suppliers, including leather seat manufacturers, who will equip more than one in five vehicles worldwide in 2024, must strive to constantly improve their production costs in order to reconcile competitiveness and sustainability.

“At Lectra, we firmly believe in the importance of innovation to maintain our customers’ competitive edge. Our digital marking solution is unique from the competition thanks to the automation of hide repositioning at the cutting stage. By working closely with key industry players, we strive to actively listen to their needs and challenges, in order to shape a solution that precisely meets their expectations,” explained Maximilien Abadie, chief strategy officer and chief product officer at Lectra.

While hides for cutting are traditionally marked with chalk, the new Versalis Automotive Digital Marking station now makes digital marking possible and optimizes its use on Versalis Automotive cutting equipment. Thanks to the integrated and connected proprietary software, it is possible to automatically recognize previously digitized hides and associate all the data required for the cutting stage. The combination of the two solutions ensures intelligent marking, and enables hides to be repositioned to optimize the quantity and minimize wasted space between parts at the cutting stage.

While meeting the most stringent requirements of OEMs (Original Equipment Manufacturers), Versalis Automotive Digital Marking achieves material savings of up to 1.5 percent of the leather surface to be cut — a significant gain in an industry as competitive as the automotive sector. Thanks to continuous process improvement, manufacturers of vehicle seats and interiors can better control their costs and inventories, while reducing their carbon footprint.

### *ZWCAD MFG 2025 Beta Has Released and Ready for Testing*

18 April 2024

ZWSOFT, a reliable all-in-one CAx solutions provider, announced the release of ZWCAD MFG 2025 Beta, the latest version of its advanced 2D CAD solution for the manufacturing sector. Packed with enhancements in compatibility, accessibility, part library, drawing functionality and specialized toolset, this version is guaranteed to help designers and engineers create standardized designs faster and easier.

ZWCAD MFG is an advanced CAD solution for manufacturing professionals to improve design standardization and efficiency. Built on the powerful ZWCAD platform, it enables users to create standardized, high-quality designs easier and faster by offering an extensive library of standard parts, intelligent drawing tools and other productivity-enhancing features. Moreover, it can be seamlessly integrated into PLM systems to achieve efficient management throughout the product lifecycle.

In this article, we will unveil key new features and enhancements in ZWCAD MFG 2025:

#### **Enhanced Compatibility:**

- **AutoCAD® Mechanical Compatibility:** Reuse legacy data with the ability to freely edit entities in AutoCAD® Mechanical like frames, balloons, BOMs, part references and mechanical symbols.

#### **Expanded Part Library:**

- **Support More Part Standards:** The built-in part library adds JIS, KS and PN standards with standard parts including features, fasteners, shaft parts, springs and steel shapes.

### Enhanced Drawing Functionality:

- **2D Hide:** It can quickly hide background graphics behind the outer contours of parts, saving time spent on manual trimming.
- **Part Reference:** By tagging parts as part references, it can automatically generate BOMs and keep data synced among BOMs, balloons and part references.
- **Scale Area:** It can divide model space into regions with different length scales and text scales, so you can plot appropriate engineering drawings conveniently.

### Enhanced Specialized Toolset:

- **Enhanced Moment of Inertia Calculation:** It supports complex calculation for closed shapes with holes, closed shapes with spline contours, discrete shapes, and shapes with centerlines.
- **Sprocket/Pulley Design Tool:** Quickly draw sprockets/pulleys, calculate the length of chain/belt links, adjust sprockets/pulleys and chain/belt links, and draw chain/belt links.

### Enhanced Accessibility:

- **Support More Languages:** Polish and Turkish versions are added to enhance accessibility, so you can use the software in your preferred language.

### Get Started Today

ZWCAD MFG 2025 Beta is now available for testing. Download it now and enjoy a 30-day free trial.

### Upgrade to ZWCAD 2025 and unlock the Advanced Part Library for Free

From April 18 to June 6, when you purchase or upgrade to ZWCAD MFG 2024, you can enjoy a free upgrade to ZWCAD MFG 2025 upon its official release, along with a bundled 1-year license of the Advanced Part Library.