

Contents

| | |
|--|-----------|
| <i>CIMdata News</i> | 4 |
| CIMdata Releases eBook on Sustainability | 4 |
| From Digital Trauma to Digital Nirvana – a CIMdata Commentary | 4 |
| PTC Acquires Intland Software – a CIMdata Highlight..... | 7 |
| The 2022 Siemens Digital Industries Software Media & Analyst Conference: Transforming the Future of Industry – a CIMdata Commentary | 8 |
| <i>Acquisitions</i> | 13 |
| Glengo Teknoloji joins forces with Lectra Turkey..... | 13 |
| Synopsis to Acquire WhiteHat Security from NTT..... | 14 |
| Wipro to acquire Rizing to create an SAP consulting powerhouse | 14 |
| <i>Company News</i> | 15 |
| 3D Systems Announces CFO Transition and Reiterates 2022 Guidance | 15 |
| Ansys Supports High-Speed Digital Engineering Through New Graduate Program | 16 |
| Founding member, Connection, rejoins the GITA ranks..... | 17 |
| Honeywell Joins City Possible Network Pioneered By Mastercard To Create Citizen-Focused Experiences That Drive Sustainable Innovation For Cities | 18 |
| Intelliwave Technologies Helps Customers Harness the Power of Materials Management and IoT Tracking at the Oracle Industry Lab | 19 |
| LT Ultra-Precision Technology and ModuleWorks partner on ultra-precision machining | 20 |
| ModuleWorks Appoints New Business Heads | 20 |
| Procure Appoints Joy Durling as Chief Data Officer | 21 |
| Sage refreshes brand to reflect the changing needs of its customers | 22 |
| TCS Inaugurates Pace Port Pittsburgh, a Co-Innovation and Advanced Research Center at Carnegie Mellon University | 23 |
| VIRTUAL PROTOTYPING TO ACCELERATE THE INDUSTRY'S "ZERO WASTE" TRAJECTORY | 25 |
| <i>Event News</i> | 26 |
| ALLPLAN presents complete solution portfolio at digitalBAU 2022 | 26 |
| Configit to Host Configuration Lifecycle Management (CLM) Virtual Summit..... | 27 |
| Industry IoT Consortium and Digital Twin Consortium Present at IoT Solutions World Congress | 27 |
| OpenText Showcases Latest Content Cloud Innovations at AIIM 2022 | 28 |
| Velo3D Announces European 2022 Seeing is Believing AM Tour | 29 |
| <i>Financial News</i> | 30 |
| Bechtel - Q1 EBT very significantly above expectations | 30 |
| Cadence Reports First Quarter 2022 Financial Results | 30 |
| Dassault Systèmes: Raising 2022 EPS Objectives on Good First Quarter Performance..... | 31 |
| IFS delivers exceptional first quarter performance with ACV bookings up 78% and recurring revenue up 45% | 32 |
| Aspen Technology Announces Financial Results for the Third Quarter of Fiscal 2022 | 33 |
| FARO Announces First Quarter Financial Results..... | 34 |
| Informatica Reports First Quarter 2022 Financial Results | 36 |
| Nemetschek Group: Strong start to 2022 with high double-digit revenue growth and increased profitability..... | 38 |
| PTC ANNOUNCES SECOND FISCAL QUARTER 2022 RESULTS..... | 41 |
| Honeywell Delivers Strong First Quarter Results, Adjusted EPS Exceeds High End Of Guidance Range; | |

CIMdata PLM Industry Summary

| | |
|--|-----------|
| Raises Full-Year Adjusted EPS Range By 10 Cents And Midpoint Of Sales Guidance..... | 44 |
| Atos - Q1 2022..... | 46 |
| Capgemini delivers record growth of 17.7% in Q1 2022 | 50 |
| Addnode Group - Interim report 1 January — 31 March 2022 | 52 |
| Hexagon Interim Report 1 January - 31 March 2022 | 53 |
| Wipro - Results for the Quarter and Year ended March 31, 2022 under IFRS..... | 53 |
| WIPRO LIMITED TO ANNOUNCE RESULTS FOR THE FOURTH QUARTER AND YEAR ENDED MARCH 31, 2022 ON APRIL 29, 2022..... | 56 |
| Velo3D to Announce First-Quarter 2022 Results on May 10, 2022 | 57 |
| Implementation Investments..... | 57 |
| Advancing Its Digital Factory Program, Faurecia Optimizes Automated Guided Vehicle Logistics with Dassault Systèmes' 3DEXPERIENCE Platform | 57 |
| Allbirds Selects Centric PLM™ to Track CO2e Emissions Alongside Margins | 58 |
| Companies Across North America Turning to SAP for Cloud Transformation | 59 |
| Defending America's Cup champions select Siemens Xcelerator to fast-track yacht development | 60 |
| Frontier Co-op Manages Business Process Risk with Infor Governance Risk and Compliance..... | 61 |
| Infosys Collaborates with Nu Skin to Drive Social Commerce-led Transformation in the Beauty and Wellness Sector | 62 |
| Jernia Making a Home in the ERP Cloud with Infor and Columbus..... | 63 |
| KLM Royal Dutch Airlines Adopts Matterport Digital Twins to Transform Ground Operations and Engage Passengers..... | 64 |
| Korea Customs Service selects HPE Ezmeral to advance smuggler crackdown and inform policy decisions | 65 |
| Lands' End Chooses Centric Solution Suite as the Foundation for Future Growth | 66 |
| Manhattan Beachwear Selects CGS's BlueCherry as its Cloud-based Solution for End-to-End Global Supply Chain Management..... | 67 |
| Next Level Apparel® Takes its Demand and Inventory Planning to the Next Level with the Logility® Digital Supply Chain Platform | 67 |
| Simulations Plus Successfully Delivers FDA-Funded Project | 68 |
| Southwest Airlines goes live with IFS maintenance management for entire Boeing 737 fleet..... | 69 |
| Spanish Logistics Company MRW Speeds Deliveries with DXC Technology and Nutanix..... | 70 |
| University of Tennessee System Upgrades Finance and HR Tech with Oracle Fusion Cloud Applications .. | 70 |
| Zenni Optical Prescribes NetSuite for Enhanced Business Visibility | 71 |
| Product News..... | 72 |
| Accenture Announces Accenture Song | 72 |
| Altair Simulation 2022 Released | 73 |
| COMSOL Completes the Working Environment for Modeling and Simulation Projects with the Model Manager Server..... | 75 |
| Digital partnership between AUSSCHREIBEN.DE and CADENAS combines product information, tender texts and BIM CAD data on one platform..... | 76 |
| Durasein and BIMsmith Partner to Provide New BIM Resources to Architecture and Design Community .. | 77 |
| EnSuite-Cloud ReVue enhances SmartPicking tools for CAD Assemblies | 78 |
| eSUB Construction Software Announces the Launch of eSUB Cloud 2.0 | 79 |
| HCL Technologies Launches All Access Media Marketplace Platform to Streamline Content Creation and Deliver Seamless User Experience | 79 |
| How EagleView's New Solar Solution Will Revolutionize Your Workflow | 80 |
| IDS GeoRadar launches Ai.DA, the AI based software monitoring tool for an intelligent support to radar data interpretation | 82 |
| Launched: Infosys Cobalt Financial Services Cloud, an Industry Cloud Platform to help Firms Unleash the Power of Cloud-Driven Transformation..... | 82 |

CIMdata PLM Industry Summary

| | |
|--|----|
| nanoCAD 22 launched..... | 83 |
| SAP Business Journeys Provide Prescriptive Services Packages to Deliver Targeted Outcomes..... | 84 |

CIMdata News

CIMdata Releases eBook on Sustainability

27 April 2022

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the release of an eBook, “The Sustainability Imperative,” focused on sustainability in industrial companies.

Sustainability has gone from one of many topics in corporate social responsibility (CSR) programs to a global imperative. Combustion and release of other greenhouse gases have raised global CO2 levels and recent commitments to reduce them will fall short of the mark. Gyres of plastics clog shipping lanes around the world, slowly degrading into microplastics that are ever-present in our water and, increasingly, air. Much of this pollution results from product creation, logistics, use, and disposal. Thus, PLM is essential to a systemic response. Leading software and service providers are defining the metrics, measurement approaches, and enabling technology needed by their industrial clients to help mitigate sustainability issues. To better understand how industrial firms address sustainability, CIMdata partnered with PTC to conduct a survey of industrial firms to determine their plans and actions on this critical topic.

“As a leading provider of digital transformation solutions in the manufacturing sector, PTC is becoming increasingly aware of our role and responsibilities to support sustainability strategies,” stated Mark Lobo, Vice President for PLM Product Management at PTC. “This is not only due to PTC’s responsibility for nature and society but also because PTC’s position, products, and strategy are an enormous lever to turn the industry and economy toward addressing sustainability. It’s about replacing resource consumption with information. These strategies must support our customers’ goals and ambitions together with our own internal initiatives to position PTC as a leader in sustainability.”

Stan Przybylinski, CIMdata Vice President continued, “Most of our industrial respondents saw their firm as either a leader in sustainability in their industry (44%) or on par with their industrial peers (51%). Their motivations were pretty consistent across the respondents, with 35% saying they were responding to regulatory requirements and 32% saying they were responding to customer requirements or demands from the financial community. CIMdata sees sustainability as transformational; while 88% of respondents have ongoing digital transformation efforts, only 16% said that sustainability was driving their digital transformation efforts. 65% said their sustainability efforts were driven out of the C-suite, a good sign for the future impacts within industry.”

The CIMdata eBook on sustainability is available at: www.CIMdata.com.

From Digital Trauma to Digital Nirvana – a CIMdata Commentary

28 April 2022

Key takeaways:

- Enterprise IT solution implementations, including PLM, have a history of failure and lack of delivering promised value, often inflicting trauma on organizations, leadership, and users.
- While every solution promises nirvana—the solution or product will solve all the problems and bring fame and fortune to those involved—few deliver anything close.
- Data transparency, business process adaptability, modern solutions, and upgradeable, easy

CIMdata PLM Industry Summary

customizations are building blocks that help companies successfully alleviate digital trauma and achieve digital nirvana.

- Aras Enterprise SaaS is a product innovation platform that contains the necessary building blocks to help companies achieve digital nirvana.

Introduction

Definitions

Nirvana: noun, An ideal condition of reset, harmony, stability, or joy.²

Digital Nirvana: noun, An IT solution that enables businesses to make fast, accurate, data-driven decisions. The solution can be easily changed and updated as the internal and external company drivers evolve. These solutions typically display a high degree of transparency or unobtrusiveness.

Much has been written over the years about the difficulties companies have with IT solution implementation, especially enterprise projects that seek to transform the company or major parts of it. PLM and digital transformation initiatives are also susceptible to these issues. This digital traumatization has several causes, some internal to companies, some external.[\[1\]](#)

The external traumatizers include rapidly evolving, converging, and emerging technologies, as well as pressures from customers, competitors, and regulators. The internal traumatizers are more frustrating as companies theoretically have control over them unlike the external traumatizers. Internal traumatizers fall under the common people, process, and technology categories. At CIMdata we talk to many solutions providers and industrial companies, and we are always amazed at the companies with many obvious issues that don't see themselves as traumatized; they see the problems as business as usual. Perhaps its organizational Stockholm Syndrome.[\[3\]](#)

Achieving Digital Nirvana

The reality is digital traumatization is solvable and digital nirvana can be approached if not fully reached. The way to solve the issues causing digital trauma is to develop a holistic plan that identifies business issues then details the vision, strategy, scope, roadmap, implementation plan, and appropriate organizational adjustments required to address those issues.

To achieve digital nirvana and get to fast accurate data-driven decisions, several critical elements are required:

| Element | Description |
|--------------------------|---|
| Modern Technology | Modern technology must provide critical capabilities needed to optimally operate a business, as we've described in other publications. [4] The current state-of-the-art product innovation platforms run natively on the cloud often with SaaS licensing and delivery. By leveraging services provided by hyperscalers such as AWS and Microsoft Azure applications become highly scalable, resilient, and performant at a reasonable cost. |
| Adaptability | Ability to configure or customize a solution to align with business processes make the solution easy for people to |

CIMdata PLM Industry Summary

| | |
|--------------------------|---|
| | understand, use, and evolve as the company requires. |
| Upgradeability | The solution implementation’s ability to easily be updated to use a newer version of a solution including all of its configurations and customizations. |
| Data Transparency | Data transparency, a subset of openness, is the characteristic of data being used with integrity, lawfully, fairly, and traceably, for valid purposes. Individuals and businesses should know what data is being collected, from whom, who can access it, how it's being used, and how they can interact with it. [5] |

Once a project plan is defined, it must be executed effectively. Today, some form of the Agile methodology is the most common approach to project execution. Using an agile approach enables the implementation team to adapt as change happens. As Mike Tyson said, “everyone has a plan until they get punched in the mouth.” Implementations will “get punched in the mouth” often. New requirements arise, technology doesn’t work as planned, people will change their minds, and many other obstructions and barriers will be encountered. The project team implementing the solution will need to adapt, and they need the proper tools, processes, and leadership support to be successful.

Aras Enterprise SaaS

Over the past few years Aras has been hard at work transforming their product innovation platform, Aras Innovator, into a state-of-the-art cloud-based SaaS-delivered solution. Aras Innovator was known for its flexibility, scalability, and upgradeability, and received high rankings in a platform evaluation CIMdata performed several years ago.[\[6\]](#) CIMdata found the Aras solution to have excellent digital thread support enabled by its pervasive low-code capabilities. It comes with adaptable out-of-the-box (OOTB) applications. The extensive configurability enabled by the solution’s native low-code capability ensures that the OOTB applications and solutions built from scratch can be adapted to meet customer requirements yet are upgradable independent of how much configuration has been performed. In recent years, Aras has extended their platform to include Model-Based System Engineering (MBSE) support, visualization, MRO, and much more.

CIMdata defines a Generation 2 cloud solution as one that has the configurability of an on-premises solution supporting the full breadth and depth of PLM requirements, and the ability to leverage cloud resources and capabilities such as elasticity natively. Aras Enterprise SaaS is an example of a Generation 2 cloud solution.

In addition to supporting the basic Generation 2 requirements, Aras Enterprise SaaS supports two advanced requirements OOTB. First, the solution is 100% compatible with the on-premises version. A highly configured on-premises installation can be copied to the cloud and run.

This enables developers to work in local environments and push their updates to the cloud confident there won’t be any surprises caused by infrastructure variations. Aras Enterprise SaaS also supports hybrid implementations with capabilities split between on-premises and the cloud. The second advanced capability to impress CIMdata is the inclusion of a DevOps environment with the SaaS product.

In most companies PLM solutions are always configured and often customized due to the complex requirements that must be supported to realize products. Managing complex PLM configurations and customizations requires configuration control just like products produced by users of PLM. DevOps is the state-of-the-art way to manage cloud solution configurations, that are often created by custom implementations. A DevOps environment requires a whole series of solutions to define, code, test, and

CIMdata PLM Industry Summary

deploy software. Aras Enterprise SaaS includes this toolchain OOTB, ensuring that customers properly manage the configuration of their PLM solution.

Conclusion

The organizational trauma caused by poor IT solutions is well recognized and understood. It makes it difficult for companies to compete, maximize their return on investment, and ensure customer satisfaction. What companies want is to get their jobs done at digital speed without having to think about the idiosyncrasies of software and its deployment. They want data transparency, and software that easily adapts to their changing requirements without development or upgrade pain. This is digital nirvana.

Aras Enterprise SaaS is a product innovation platform built on a Generation 2 cloud architecture. It delivers all the capabilities Aras is known for with the added benefits of the cloud. Companies evaluating moving their PLM solutions to the cloud should evaluate Aras' Enterprise SaaS solution, it meets Generation 2 requirements while maintaining 100% compatibility with their on-premises solution. Aras's commitment to compatibility preserves investments made by existing customers and should give new customers and prospects confidence that Aras is a great choice for a PLM SaaS partner.

[1] Research for this commentary was partially supported by Aras

[2] <https://www.wordnik.com/words/nirvana>

[3] https://en.wikipedia.org/wiki/Stockholm_syndrome

[4] <https://www.cimdata.com/en/resources/complimentary-reports-research/position-papers/item/3817-the-next-step-in-plm-s-evolution-its-platformization-position-paper>

[5] <https://www.cimdata.com/en/resources/complimentary-reports-research/white-papers>

[6] <https://www.cimdata.com/en/news/item/8806-cimdata-publishes-ebook-product-innovation-platform-assessment>

PTC Acquires Inland Software – a CIMdata Highlight

22 April 2022

Expanding their ALM capabilities to the cloud

- Acquiring Inland Software provides PTC with a cloud-based application lifecycle management (ALM) solution and additional software development expertise to extend their current on-premises PLM solution portfolio.

On Wednesday, 20 April 2022, PTC announced that it has signed a definitive agreement to acquire Inland Software, a leading provider of cloud based ALM solutions. Inland develops and markets the Codebeamer™ application lifecycle management (ALM) family of software products, including a cloud-ready, fully integrated offering used extensively in software safety-critical and regulated industries.

Inland Software, headquartered in Stuttgart, Germany, serves a wide array of global enterprise ALM customers operating across the automotive, life sciences, consumer electronics, and aerospace and defense industries. PTC stated that they plan to offer Codebeamer standalone and in conjunction with both its Windchill and Arena PLM offerings, and to continue to enhance and support its existing MKS-based ALM solution.

ALM is a critical component of an enterprise's overall product lifecycle management (PLM) environment. As industrial companies of all sizes adopt the technologies and processes necessary to

CIMdata PLM Industry Summary

make and support smart, connected products with more and more embedded software, ALM and its integration with an organization's overall PLM environment are no longer optional. Historically, as products have become smarter, the embedded software has been developed using dedicated tools, and then became part of the bill of material (BOM) by attaching a .zip or .tar archive to the mechanically oriented BOM. Just as PLM evolved from authoring tools and data and process management, tools for software development evolved to support authoring, configuration management, change management, workflow, and other similar capabilities under the application lifecycle management umbrella.

This acquisition makes excellent business sense for PTC. In 2011, PTC acquired MKS, which offered an on-premises ALM solution that was touted as focusing on embedded software. CIMdata believes that adding Intland Software will expand their product innovation platform capabilities by providing SaaS, cloud-delivered source code management that can also support the needs of open-source development.

The 2022 Siemens Digital Industries Software Media & Analyst Conference: Transforming the Future of Industry – a CIMdata Commentary

29 April 2022

Key takeaways:

- Siemens AG is committed to leveraging its combined hardware and software assets to become a technology company—a significant evolution for itself and its operating units, as well as the industries and customers it supports.
- Siemens Digital Industries Software (Siemens) is pursuing an aggressive cloud and SaaS strategy and is moving to provide all its solutions via SaaS.
- Siemens is focused on increasing their clients' business and operational flexibility through the use of Mendix and composable applications.
- Siemens explained their Executable Digital Twin (xDT), a smart, connected virtual representation of a physical asset, that optimizes and updates itself to effect changes in the physical product or system.

CIMdata recently attended Siemens Digital Industries Software's (Siemens) Media and Analyst Conference (MAC) in Detroit, Michigan April 6 and 7, 2022. Held live for the first time since 2019, this event allowed CIMdata to meet face-to-face with many Siemens' leadership and staff—a very welcome change! While shorter than previous MACs, Siemens still provided attendees with significant interaction with its team, as well as a good look into Siemens' strategy, products, and results.[\[1\]](#)

Keynotes

Mr. Cedrik Neike, CEO of Siemens Digital Industries and Member of the Managing Board of Siemens AG, opened the conference by describing how Siemens AG is transforming itself to become a technology company—more than just a software or hardware provider. They want to help companies “Dream it, Make it, Change it” by bringing together Information Technology (IT), Engineering Technology (ET), and Operational Technology (OT), and being first in business areas (e.g., automation, PLC, industrial communications, and others) that support this strategy. Of course, OT in this context includes both the manufacturing insights via Industrial Internet of Things (IIoT) and the customer usage scenarios captured during product use.

Mr. Neike stated that Siemens has a transformation strategy built on:

- Go to market

CIMdata PLM Industry Summary

- Technology—hardware, electronics, software, automation, etc.
- Ecosystems—i.e., Mendix, MindSphere, Supplyframe, etc.
- Business model transformation—creating an open business model

Furthermore, he noted that to become a technology company, Siemens AG invests in technology, e.g., \$2.5B in internal research and development, particularly in cloud, industrial 5G, automated manufacturing, artificial intelligence, and the Industrial Edge. He also noted that the most successful technology companies provide both hardware and software, and the investments are leading Siemens to become a full-stack company supporting manufacturing industries.

According to Mr. Neike, to be successful, companies must address the issues of speed, price, and carbon footprint, and Siemens is transforming how it can help its customers meet these challenges by enabling them to combine the real and digital worlds. CIMdata strongly agrees and views the digital thread and digital twin strategies being pursued by Siemens as a critical part of business transformation.

Mr. Tony Hemmelgarn, Siemens Digital Industries Software CEO, followed Mr. Neike and described the theme of this year's MAC—"Transforming the Future of Industry" and how the entire Siemens organization would be enabling that transformation. He also noted that customers are dealing with new things not thought of 10 years ago and creating new business models (e.g., automotive companies are becoming mobility companies and aircraft companies are becoming air transport providers). To become a technology company, he said that Siemens is combining the best of Siemens Digital Industries' automation and software assets to enable their customers to create easy-to-use, open, and integrated business environments.

Mr. Hemmelgarn stated that Siemens Xcelerator portfolio of technology and solutions is designed (and is being implemented) to bring together the capabilities a company needs to develop, produce, operate, and service innovative products and systems. He cited customer Lockheed Martin who expect to cut their cycle time for new aircraft design from 10 years to 3.5 years, as an example. Mendix and Data Hub are key elements in enabling customers to create personalized applications and integrate third-party solutions and data repositories. He stated that Siemens' transformation is continuing its long-stated strategy to close the loop between the top floor and the shop floor—the primary reason Siemens AG acquired UGS in 2007.

Additionally, Mr. Hemmelgarn also spent time reviewing the recent acquisition of Supplyframe and how it is helping Siemens' customers reduce time to market by integrating design, manufacturing, and procurement. The Supplyframe Design-to-Source Intelligence (DSI) network is claimed to have monthly engagement with over 10 million design engineers and sourcing professionals, impacting over 2.5 million annual design cycles, giving Siemens unique insights into supply, demand, and pricing across industries.

Mr. Hemmelgarn also provided an update on their partnership with SAP announced in 2020. Many thought that it would be difficult to get the sales forces together, but they have made some progress. Their respective offerings are in each other's price books, with Siemens offering the SAP Asset Intelligence Network and their first integration with SAP S/4HANA. Working together, they have developed two new accounts. Mr. Hemmelgarn also claimed that their new SAP-Teamcenter integration makes it easier for their key partners like Accenture to support their customers. This is extremely important because partners like Accenture are often in the boardrooms and can position Siemens in ways that Siemens could not do before.

Finally, Mr. Hemmelgarn described how Siemens is working with process industry customers to help them improve flexibility by enabling small batch production and sustainability by helping them get

CIMdata PLM Industry Summary

closer to their customers.

Ms. Brenda Discher, SVP, Business Strategy & Marketing at Siemens Digital Industries Software and Strategic Marketing & Communications at Siemens Digital Industries, closed the keynote sessions talking about “transforming the future of work” and how Siemens is committed to drive sustainable, resilient, cultural transformation. She stated that Siemens’ goal is to provide choice to its customers by offering interoperability between cloud and on-premises software instances. She stated that the SaaS business had grown 40% over the last year. She also noted that they had gained over 10,000 net new subscribers in one quarter. To make this possible, Siemens made significant investments in digital infrastructure, a digital store, providing a “digital journey” for customers and prospects, both outbound and inbound marketing capabilities, and leveraging social media to digitally nurture prospective customers. Ms. Discher added that 97% of their portfolio is cloud-enabled now and in the five months since Xcelerator as a Service (XaaS) became available, over 1,000 customers have moved to one of its SaaS solutions, and approximately 80% of those are small to medium businesses (SMBs). Finally, she stated that they expect greater than 10% growth in ARR at the end of their SaaS transition period in 2025.

Sessions

The afternoon session was kicked off by Mr. Tosh Tambe, VP Business Transformation and SaaS Strategy, on the topic of XaaS and the Xcelerator cloud architecture that powers its transition to a SaaS model and cloud-native offerings. Mr. Tambe focused on the transformative aspect of XaaS, noting how Siemens is building a community around the portfolio. He discussed how XaaS enables digital transformation initiatives, especially those focused on business model changes. He also stated that XaaS gives companies expanded choices in both potential business models and how the transformation is supported. XaaS offers cloud SaaS and a hybrid SaaS approach that integrates with applications still on-premises. The focus is to move to a consumption-based model where customers pay for the capabilities they use, providing flexibility, adaptability, and resilience. This approach required a major investment from Siemens—they chose to invest and rearchitect much of their existing portfolio to support cloud-delivered SaaS, rather than just acquire replacement solutions. Siemens has a long history of protecting their customer’s investments. The choice to transform existing solutions shows Siemens understands the value customers place on investments in product data and the processes to manage it.

Mr. Tambe introduced Mr. Bill Lewis, Director of Marketing, who reviewed Teamcenter X changes and some of the recent deployment successes. New industry-specific configurations offered with Teamcenter X include PLM for Machine Builders and PLM for Medical Devices. He then referred to Valeo as a major industrial company developing electric drives for EV powertrains, noting that they have 300 users on Teamcenter X. CIMdata is pleased to see major manufacturers making the transition to Teamcenter X and expects to hear of more making that transition soon.

Mr. Dave Mitchell, VP MindSphere Product, discussed the composable enterprise enabled by XaaS. By leveraging Mendix, it’s possible to assemble data from multiple platforms within their Xcelerator portfolio of solutions to enable better decision-making. He then talked in-depth about how MindSphere, Siemens cloud native IoT platform, leverages lessons learned from Mendix to grow their customer base. By providing a free version they’ve dramatically expanded their pipeline and number of customers, including customers that subscribed without actually engaging with Siemens sales.

The morning of the second day began with a session on Digital Twin led by Mr. Ian McGann, Director of Innovation Office. Mr. McGann presented Siemens’ definition of a comprehensive digital twin and how Siemens transforms and helps its customers unlock the power of a digital twin model across the entire enterprise to drive business value. He then described the evolution of the digital twin to an

CIMdata PLM Industry Summary

“executable digital twin (xDT).” An xDT is a smart, connected virtual representation of a physical asset, including its behaviors, that senses what is happening to it, applies a simulation or algorithm, and optimizes and updates itself. Mr. McGann described using xDTs as a way to enable bringing the real world into product design optimization and transform the value of digital twins across the lifecycle. In September 2021, CIMdata wrote a highlight titled “Siemens: Making the Digital Twin Executable—Predictively Aligning Its Real-World Counterpart.”^[2] Just seven months later, Siemens has a growing group of customers using xDT to change the way they do concept engineering—harvesting performance insights early in product development. This closes the loop by making the digital twin more accurate and complete. Additionally, digital twins are more comprehensive when they can be used to see a system’s behavior and even interact with it.

A major topic that Siemens discussed at the event was refactoring its broad solution portfolio into Packaged Business Capabilities (PBCs). This goes well beyond their work on microservices and containerization used to deploy their offerings on the cloud. PBCs are architected to allow Siemens, their partners, and (eventually) their customers to compose new solutions selecting what Siemens has to offer to support new use cases. This will blur the lines between their traditional brands and offerings. According to Mr. Tambe, PBCs will support the “last mile” of personalization.

After Mr. McGann’s and Mr. Tambe’s sessions, Siemens delivered breakout sessions focused on:

- IC Lifecycle
- Supply Chain Logistics
- Additive Manufacturing
- Supplyframe

Siemens acquisition of Supplyframe brings some exciting capabilities into the Siemens portfolio. Mr. Richard Barnett, CMO Supplyframe and Mr. Andrew Mosely, Senior Technical Marketing, Development Engineer Siemens, presented the breakout session. The company began in 2003 with a focus on creating a better experience around the quoting process for electronics supply. As their membership grew, they evolved the solution to provide Design-to-Source Intelligence. The breadth of support Supplyframe provides is impressive. It provides access to over 600 million parts and components and supports \$120 billion in annual direct materials spend. The speakers claimed that Supplyframe could reduce cycle times and help their customers take out 2 to 3% of their direct costs. Such “digital exhaust” helps provide customers insights into the health of the electronics market. For example, they can see that even “popcorn parts,” simple components usually readily available, are now in short supply.

Over the last several years, Siemens has emphasized how their various offerings are helping their customers build vast global ecosystems. Hundreds of thousands develop on Mendix, delivering applications servings tens of millions of users. MindSphere offers a different type of ecosystem around IIoT applications. Siemens is creating a network/marketplace to support additive manufacturing as well. With Supplyframe they are adding a broadly used platform for electronics development and supply. These approaches fit with the Industry 4.0 vision, which makes sense given that Siemens was one of the original drivers of that vision. It will be interesting to see how Siemens will leverage the proven Supplyframe platform for other aspects of the product lifecycle.

Mr. Ravi Subramanian, Senior Vice-President & GM at Siemens, reviewed the digital transformation taking place within the semiconductor industry and how Siemens EDA (formerly Mentor) is driving that change. He noted key trends within the industry, including:

CIMdata PLM Industry Summary

- Software defined semiconductor-based systems.
- A shift in spending where non-traditional companies such as Google, Apple, and Facebook are vertically integrating IC design and thus are spending large sums of money on custom design tools.
- The growth of Systems on a Chip (SOC) that is exceeding Moore's law growth rates thanks in part to ongoing innovation and investment in the kinds of electronic design automation (EDA) tools that Siemens EDA develops and sells.
- AI and ML are transforming and fueling business value creation.

To support these trends, Mr. Subramanian described how Siemens EDA is providing optimization across the whole silicon lifecycle from architecture design through manufacturing, into chip design, PCB design, packaging, and beyond. By providing these integrated capabilities, he stated that Siemens has been able to raise the level of abstraction, help customers reduce complexity and shorten design cycles even as they develop increasingly sophisticated and higher performing processors year after year. This is enabling ever more complex products leading to software-driven semiconductor design—driving new product lifecycle management concepts into this industry.

During the Additive Manufacturing session, Mr. Aaron Frankel, Vice-President of the Additive Manufacturing Software Program and Ms. Alyssa Berger, Senior Manager of Business Development, described Siemens' activities to encourage and increase industrial adoption of additive manufacturing. The Siemens strategy for additive comprises three elements:

- Identifying target market segments which could benefit from the use of additive manufacturing.
- Helping small-to-midsize companies to scale additive production using SaaS-based tools.
- Helping large enterprises target use case exploration.

During this discussion, Mr. Frankel and Ms. Berger identified barriers to adoption of additive including design knowledge (i.e., topology), quality control, and post-printing process management (e.g., cleaning, machining, and heat treatment). Real-world application using Siemens tools for additive manufacturing came from human centric prosthetics producer Unlimited Tomorrow. Each human's interface to a prosthesis is unique—making it an ideal application for additive manufacturing.

During the MAC's closing session, Ms. Suzanne Kopcha, Vice President Strategy, and Mr. Dale Tutt, Vice President Industry Strategy, described how Siemens is going to market by digital threads to bring their portfolio to their customers in industry-specific manners. They described four such threads from across a range of industry types:

- Intelligent Manufacturing
- Enterprise Recipe Management
- Autonomous Vehicle Development
- Advanced Machine Engineering

For each thread, they also illustrated an example of how a customer is using XaaS to meet their business challenges and goals.

Lastly, Ms. Discher closed the event reiterating that Siemens is transforming to be a technology company and is working to bring IT and OT together to help its customers dream, deliver, and support their next innovative product. She noted that every customer is facing incredible transformation and Siemens wants to be there with them, providing great tools and support that enable the right business models. She noted that during the course of this event, Siemens had provided nearly 30 examples of

CIMdata PLM Industry Summary

customers that are transforming with XaaS and how it is the easiest, most open way of accessing the entire Siemens portfolio.

Conclusion

CIMdata was impressed with Siemens AG's commitment to transforming itself into a technology company and believes that, if successful, it will have a significant, positive impact on its customers and industry at large. Siemens Digital Industries has the breadth and depth to continue expanding and delivering on its vision of a closed-loop between the top floor and the shop floor, and now seems to be integrating all the assets they have to achieve that vision. They have a vision for a comprehensive, executable digital twin which includes expanding operational use, which will foster learning and adapting.

Siemens continues to move rapidly to deliver its broad solution portfolio fully via SaaS, as well as continuing to support on-premises uses. Their hybrid approach enables customers to move to the cloud, when, how far, and how fast, as best fits each company's strategy. Siemens' commitment to supporting open ecosystems (implemented with cloud-based and open tools such as Mendix and MindSphere) gives their customers the freedom to implement what they prefer and not require a Siemens "lock-in."

[1] Travel and other expenses for this commentary were provided by Siemens Digital Industries Software.

[2] <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/16725-siemens-making-the-digital-twin-executable-predictively-aligning-its-real-world-counterpart-highlight>

Acquisitions

Glengo Teknoloji joins forces with Lectra Turkey

25 April 2022

Lectra is pleased to announce Glengo Teknoloji ("Glengo"), the exclusive distributor of Gerber solutions in Turkey, will join forces with Lectra Turkey. Bringing Lectra Turkey and Glengo together provides an opportunity for both organizations to expand their footprint in Turkey, Central Asia and the Middle East, and better serve their customers. Lectra Turkey will become Glengo Lectra Teknoloji and distribute the entirety of the Lectra Group's product portfolio. This union is the logical next step after Lectra's acquisition of Gerber Technology ("Gerber") in June 2021.

Glengo was established in 1986. The Istanbul-based company has been providing sales, installation, training and after-sales services for Gerber solutions since its founding. Apart from the head office in Istanbul, Glengo has offices in Adana, Ankara, Bursa, Denizli, Izmir, Kayseri, Malatya, Ordu, Urfa, Sivas and Tokat Erbaa, with over 120 staff members. Glengo primarily serves the Turkish and Central Asian markets. It also sells Gerber solutions to Turkish companies in Bulgaria, Moldavia, Romania and the Balkans.

"We are proud to have more customers benefiting from our 36 years of experience in providing top-tier solutions, technical assistance and support. Being part of Lectra's organization gives us access to Lectra's state-of-the-art offers, based on Industry 4.0 technology, which will enable us to help our customers to accelerate the digital transformation of their operations," states Mehmet Aykut Vural, founder of Glengo and now Chairman and CEO of Glengo Lectra Teknoloji.

CIMdata PLM Industry Summary

Turkey ranks as the sixth-largest apparel supplier in the world. In addition to the flourishing local industry, many international brands are considering moving their manufacturing ecosystem to Turkey. As supply disruptions continue to hit the fashion industry, shipping costs are becoming the biggest cost driver. Therefore, 71% of fashion and apparel companies are planning to increase their nearshoring share by 2025, according to experts. Turkey is one of the top three most promising locations for nearshoring, especially for European countries.

“Joining forces with Glengo will allow Lectra to reinforce its position in a country where our business is growing, and benefit from the Glengo teams’ excellent knowledge of the regional market and their technological expertise.” says Jérôme Viala, Executive Vice President of Lectra.

The transaction consists in the acquisition by Lectra Turkey of the business assets of Glengo for approximately 4 million euros and 25% of shares in Glengo Lectra Teknoloji.

Synopsys to Acquire WhiteHat Security from NTT

27 April 2022

Synopsys, Inc. announced that it has signed a definitive agreement to acquire WhiteHat Security, a leading provider of application security Software-as-a-Service (SaaS). The addition of WhiteHat Security will provide Synopsys with significant SaaS capabilities and market-segment-leading dynamic application security testing (DAST) technology to strengthen what is considered one of the industry's broadest application security testing portfolio. Synopsys and WhiteHat Security, which was acquired by NTT Security Corporation in 2019, share a vision for delivering SaaS-based security testing solutions and building security into the software development lifecycle.

Under the terms of the transaction, Synopsys will pay approximately \$330 million in cash. The transaction is subject to regulatory review and customary closing conditions and is expected to close in Synopsys' fiscal Q3 2022. Based on its preliminary review, Synopsys currently expects the acquisition to be roughly neutral to FY2022 non-GAAP earnings per share.

"WhiteHat Security helped pioneer SaaS delivery of application security testing and brings powerful technology and expertise into our application security portfolio," said Jason Schmitt, general manager of the Synopsys Software Integrity Group. "WhiteHat Security's DAST capabilities complement our strengths in static analysis, interactive analysis and software composition analysis, while their expertise in SaaS will accelerate our security testing SaaS capabilities. We are excited about the value this will create for our customers and welcome the WhiteHat Security team as they join us in our mission to build trust in the software that businesses depend on."

"We're thrilled to join forces with Synopsys in the next phase of our journey," said Craig Hinkley, chief executive officer of WhiteHat Security. "The combination of our respective strengths and our shared vision for the future of application security presents exciting opportunities for our customers and the broader market. We look forward to continuing to serve the loyal customers that have trusted WhiteHat Security for nearly 20 years and expanding our footprint as part of the larger Synopsys portfolio."

Wipro to acquire Rizing to create an SAP consulting powerhouse

26 April 2022

Wipro Limited, a leading global information technology, consulting, and business process services company, announced that it has signed a definitive agreement to acquire Rizing Intermediate Holdings, Inc. (“Rizing”), a global SAP consulting firm, significantly expanding its breadth of capabilities in helping businesses transform into intelligent enterprises.

CIMdata PLM Industry Summary

Rizing is the latest in a series of acquisitions by Wipro, underscoring the company's ambitious growth agenda. Rizing's high-touch approach, along with its industry expertise and SAP consulting capabilities in enterprise asset management, consumer industries, and human experience management, will be instrumental in advancing Wipro's position as a sought-after advisor for clients' most complex SAP transformations.

"We are thrilled to welcome the Rizing team to the Wipro family," said **Thierry Delaporte, Chief Executive Officer & Managing Director, Wipro Limited**. "Rizing's complementary consulting capabilities and strong client relationships will significantly boost our existing offering, creating one of the most differentiated SAP services in the marketplace. Together, we will be able to expand our presence in high-growth industry sectors."

Rajan Kohli, President of Wipro's iDEAS (Integrated Digital, Engineering and Application Services) business, added, "Our clients' digital transformation needs are rapidly evolving, and they are turning to us to help them become Intelligent enterprises. Rizing's domain expertise, combined with our cloud and digital solutions, will allow us to help clients unlock new value and build agile businesses for a new era of digitalization."

As one of the leading strategic partners in the world for SAP, Rizing will become a critical extension of Wipro's SAP Cloud practice and Wipro FullStride Cloud Services. The combined offering will help clients surface unique business opportunities and new competitive advantages through SAP cloud implementations. It will also help Wipro expand its leadership in oil & gas, utilities, manufacturing, and consumer industries.

"This is the next phase of growth for Rizing. With Wipro's backing, we will be able to enhance the value we deliver to our current clients and bring our differentiated offering to a broader universe of businesses," said **Mike Maiolo, Chief Executive Officer, Rizing**. "Combining the two firms will allow us to scale our services and expand our footprint in the market. We are thrilled to join a company that shares our values and vision, enabling us to grow in new strategic areas."

Upon completion of the acquisition, Rizing will operate as Rizing, a Wipro company, under the leadership of Maiolo.

Rizing is headquartered in Stamford, CT, and has more than 1300 employees in 16 countries across North America, Europe, Asia, and Australia. Rizing was previously owned by private equity firm One Equity Partners.

Guggenheim Securities, LLC acted as exclusive financial advisor to Rizing for this transaction.

The acquisition is subject to regulatory approvals and is expected to close before the end of the quarter ending **June 30, 2022**.

Company News

3D Systems Announces CFO Transition and Reiterates 2022 Guidance

25 April 2022

3D Systems announced that Jagtar Narula is stepping down as the company's Chief Financial Officer, effective May 20, 2022, to accept a new career opportunity. Wayne Pensky, former chief financial officer of Hexcel Corporation (NYSE:HXL), has been appointed interim CFO, effective May 21. The company has initiated an executive search to identify a permanent finance leader.

"I want to thank Jagtar for his dedication and leadership as we have executed on a transformational plan

CIMdata PLM Industry Summary

to refocus our business portfolio on additive manufacturing, driving improved growth and operating performance, while significantly strengthening our balance sheet. We have made tremendous progress on all facets of our business plan and I appreciate the important contributions Jagtar has made during his tenure with the company. I wish him continued success in the next chapter of his career. I am also delighted that Wayne will assume the role of interim chief financial officer. Wayne is a veteran finance leader who is uniquely positioned to serve in an interim capacity, having played a significant role in the earliest stages of our transformation process at 3D Systems in 2020. I believe that Wayne will ensure we do not miss a step as we move through this transition period.”

Mr. Pensky retired in 2017 after 24 years with Hexcel, a multinational manufacturer of advanced composite materials used in aerospace and industrial applications. He served as CFO for his last 10 years with Hexcel, during which time Hexcel’s revenue doubled to more than \$2 billion and its net income grew nearly four-fold. Prior to that, he held a variety of financial leadership roles including head of finance, corporate controller and chief accounting officer. Pensky began his career with Arthur Andersen & Co, where he served 14 years. He earned a Master of Business Administration from the University of California at Berkeley.

Reiterates Full Year 2022 Guidance

In its fourth quarter 2021 earnings release, the company provided annual guidance for revenue, non-GAAP gross margins, and non-GAAP operating expenses for the full year 2022. The company confirms that it expects full-year 2022 revenue to be within a range of \$570 million and \$630 million. The company expects full-year 2022 non-GAAP gross margins to be between 40% to 44% and non-GAAP operating expenses to be between \$225 million and \$250 million. The company’s 2022 guidance assumes no significant increase in macroeconomic and geopolitical factors that would negatively impact its business.

Ansys Supports High-Speed Digital Engineering Through New Graduate Program

28 April 2022

In line with its mission to support engineers at every stage of their careers, Ansys will help facilitate simulation integration at CU Boulder through the university’s new Professional Master’s Program in High-Speed Digital Engineering (PMP-HSDE). The program will provide aspiring engineers with hands-on experience by incorporating Ansys’ industry-leading electronics simulation into its curriculum of high-speed digital engineering topics from signal and power integrity to electromagnetic compatibility.

The ten-course master’s program will integrate the Ansys Electronics Desktop Student software product, which students can easily download to access Ansys HFSS, Ansys Maxwell, Ansys Q3D Extractor, and Ansys Icepak. Ansys’ student products are a key component of the Ansys Academic Program, which supplies universities with affordable software for use in the classroom and in research, while providing students with free resources for self-learning.

“We are excited to partner with Ansys to develop new signal and power integrity example projects that illustrate the best design, simulation and analysis practices we teach in our courses,” said Eric Bogatin, a professor in the ECEE department at CU Boulder. “The recent introduction of the free student version of the Electronics Desktop means we will be able to influence a larger group of students who will be the future signal integrity engineers in our electronics industry.”

As a subset of the PMP-HSDE program, CU Boulder will offer certificate programs tailored to specific design skills and tools. The master’s and related certificate programs will be offered through the

CIMdata PLM Industry Summary

Department of Electrical, Computer and Energy Engineering (ECEE).

“The purpose of our new Master of Science PMP degree in high-speed digital engineering is to educate our students to be productive members of a signal integrity design team immediately after graduating,” said Professor Melinda J. Piket-May, director of the PMP-HSDE. “Educating our students to use critical thinking skills to solve high-speed digital engineering problems incorporating the Ansys tool suite, which is used extensively in industry, will enhance a student’s value to any employer.”

The Ansys Electronics Desktop Student simulation package provides students with the opportunity to gain firsthand experience in high- and low-frequency electromagnetics, electromechanical and electrothermal analyses, and more, while cultivating a greater talent pool of well-trained, career-ready electronics engineers for potential employers.

“It’s not often that a top-level university and simulation company team up to ensure that an academic program meets industry needs and educational standards, while incorporating expert-level use of simulation,” said Prith Banerjee, chief technology officer at Ansys and executive sponsor of the Ansys Academic Program. “With CU Boulder as a leader in radio frequency, electromagnetic and signal integrity research and Ansys as a global leader in simulation, this makes a great match. Together we are empowering students with the confidence and know-how to tackle real-world engineering challenges after graduation and succeed as career engineers.”

Currently, engineering students across more than 3,300 universities in 90 countries are developing industry-ready simulation skill sets with Ansys’ products. CU Boulder will introduce the on-campus program in spring 2023 with the potential to expand access through an online option after a successful launch.

Founding member, Connection, rejoins the GITA ranks

22 April 2022

The Global IT Alliance (GITA) has expanded its footprint in the USA with the IT solutions provider, Connection. Headquartered in Merrimack, New Hampshire, Connection supports SMB, large enterprise and public sector customers with a portfolio of products and services spanning business resiliency, cloud, cybersecurity, data centre, network and workplace transformation, as well as digital signage and managed services. With sites in eight US states and a reach into all 50, Connection is no stranger to the Global IT Alliance. PC Connection, as it was known then, co-founded the GITA in 2013 along with Bechtle, but eventually left the group in 2016 to focus on developing its own sustainable market position, and is now rejoining the worldwide network of IT service providers.

“Connection is excited to enter into the GITA partnership network. We feel the addition of GITA and our existing GlobalServe network will give our clients the most robust comprehensive solution for their global IT needs. In today’s complex global marketplace the strong execution and experience that the GITA networks brings is unparalleled. There is no replacement for experience and GITA partners bring a wealth of experience and knowledge,” says Jamal Khan, Connection’s Chief Growth & Innovation Officer.

Emery Geosits, Executive Director, GITA, explains, “From a personal point of view, and for GITA as a whole, Connection enriches the network in more ways than one. Firstly, with GlobalServe being part of the Connection family of companies, we expect some exciting collaborations and secondly, Connection has given us access to many globally-active US companies. I’m looking forward to working with this fantastic team of experts, who will make a critical contribution to GITA’s continued development.”

CIMdata PLM Industry Summary

“We are delighted to welcome back Connection—one of GITA’s founding members. As one of the leading IT service providers in the United States, Connection will bring considerable added value to the network. This agreement gives GITA new access to internationally active US companies, whilst enabling us to offer our European customers in particular even better service in one of the world’s most important economies. Connection’s membership is a pivotal moment for the future of our network,” says James Napp, Managing Director of Bechtle direct UK and Bechtle’s ambassador to the Global IT Alliance.

In 2021 Connection was named to the Fortune 1000 list and has twice been named by Forbes as one of America’s Most Trustworthy Companies. With Agilant and Connection, GITA is now represented by two partners in the USA in order to better serve its customers. GITA also counts Compucentro (Mexico) and Microware (Brazil and other countries), as well as Compugen (Canada) and Innova Solutions (Caribbean and Ecuador) among its network of partners in the Americas—the latter two of which only joined in December 2021. The other members are Bechtle (Europe), Data#3 (Australia), Dynacons (India), as well as HKBN JOS (Hong Kong, China, Macau, Malaysia, Singapore and other parts of Asia).

Honeywell Joins City Possible Network Pioneered By Mastercard To Create Citizen-Focused Experiences That Drive Sustainable Innovation For Cities

20 April 2022

Honeywell announced it is joining City Possible, the ecosystem pioneered by Mastercard that brings cities, companies and communities together to identify common challenges and develop solutions that advance inclusive and sustainable urban development. Honeywell’s participation will allow City Possible communities to more easily work with Honeywell City Suite, an artificial intelligence-enabled platform, to promote sustainable urban development, enhance citizen mobility, and create safer, more resilient communities.

The announcement builds on Mastercard and Honeywell's work with Egypt's New Administrative Capital, where the Honeywell City Suite and Mastercard's electronic payment solutions will make the New Administrative Capital the first integrated smart city and first cashless city in Egypt. Honeywell City Suite aggregates information from different verticals across the New Administrative Capital including utilities, traffic, environment, parking, emergency services, safety, and security into a single, unified digital platform and Mastercard facilitates electronic payments.

“Cities around the world are evaluating how to enhance the resident experience by improving access to city services,” said Miguel Gamiño, executive vice president, Enterprise Partnerships and Head of Global Cities and City Possible at Mastercard. “By engaging with companies like Honeywell, we can expand the range of solutions we provide to the City Possible network and ensure a safe and inclusive digital economy.”

City Possible facilitates a framework where members can draw on the collective expertise and resources of all stakeholders involved to replicate innovative solutions that address urban challenges. The network has grown from 16 founding members in 2018 to more than 330 companies, city members and candidate cities globally, including AT&T and Citi Bank and cities like London, Los Angeles, and Buenos Aires.

“The potential for cities today is unprecedented given access to technology that can dramatically change the way citizens experience and interact with the cities in which they live,” said Matthew Britt, general manager, Smart Cities & Communities, Honeywell Building Technologies. “With hundreds of communities already connected to the City Possible network, we look forward to working with

CIMdata PLM Industry Summary

Mastercard to create solutions to help make it easier for citizens to interact with city services they use from parking to paying utility bills with seamless transactions.”

Together, the offerings can help its cities meet environmental, social and governance (ESG) goals by improving accountability and real-time tracking and reporting of cashless payments for city services.

Honeywell City Suite Software integrates data from critical city infrastructure systems such as traffic, streetlights, environment, emergency services, public safety and security, and utilities into a single, unified view. The Honeywell City Suite is deployed in 75 cities worldwide, helping to improve more than 100 million lives.

Intelliwave Technologies Helps Customers Harness the Power of Materials Management and IoT Tracking at the Oracle Industry Lab

26 April 2022

Oracle and Intelliwave Technologies are joining forces to help Engineering and Construction customers create new opportunities and solve tough challenges at the **Oracle Industry Lab**. The facility provides hands-on, simulated industry settings for customers to experiment, learn and bring transformative technologies to life. Intelliwave is a member of Oracle PartnerNetwork (OPN).

Intelliwave Technologies’ **SiteSense®** products are global and award-winning Web and Mobile-based software solutions for identification and tracking of construction materials, equipment, and tools on all sizes of industrial, infrastructure, and buildings projects. At the lab, visitors will be able to see how SiteSense can help project teams to effectively manage supply chain constraints, materials deliveries and real-time location, along with streamlining vendor payments.

“The grand opening of the Oracle Industry Lab in Chicago is a major step forward for the industry as a whole. It will enable realistic scenarios for customers to experience how new technologies can vastly improve the way construction is done,” stated Dale Beard, CEO of Intelliwave. “Intelliwave’s participation with the Oracle Industry Lab further extends our commitment to the Oracle community, and enables customers to easily visualize the benefits of SiteSense in a lab environment. We look forward to participating in the Oracle Industry Lab grand opening where SiteSense will demonstrate how construction projects can save costs and reduce project delays, when operating within the ecosystem of Oracle’s Construction and Engineering offerings alongside other Oracle partners.”

The 30,000-square-foot Oracle Industry Lab brings customers, technology partners, and the entire Oracle portfolio of solutions and decades of deep industry expertise together to incubate and demonstrate new solutions across industries. Supported by Verizon 5G Ultra Wideband, the Oracle Industry Lab will first focus on use cases in utilities, construction and engineering, communications, and manufacturing.

“Many industries are at a crossroads as they look to navigate increasing regulatory, environmental, and customer-driven demands,” said Burcin Kaplanoglu, vice president, Oracle Industry Labs. “We built the Chicago lab to bring together leading innovators like Intelliwave Technologies so we can jointly help customers shape bold ideas into powerful solutions that improve productivity, operational intelligence, and sustainability.”

LT Ultra-Precision Technology and ModuleWorks partner on ultra-precision machining

22 April 2022

CAD/CAM software specialists ModuleWorks and LT Ultra, specialists for ultra-precision technology, have collaborated on a software solution for ultra-precision milling and turning. Built upon the ModuleWorks 6-axis optics kernel, the new software enhances LT Ultra's machining platforms with automated workflows for manufacturing diverse parts with nanometer precision.

The ModuleWorks optics kernel has been developed to meet the growing demand for machining increasingly complex free-form geometries with a precision in the nm range. Integrated into the LT CAM product line, it enables LT Ultra to offer flexible solutions for a diverse range of ultra-precision machining applications with automatic toolpath calculation from point clouds, CAD models and analytical functions as well as corrections based on real measurement data. The calculated toolpaths are automatically available for full 3D machining simulation and output via a high-performance CNC posting framework that uses multi-threading for fast generation of large NC programs (up to 50k points per second).

"The ModuleWorks optics kernel allows the full potential of machines to be exploited. The exceptional calculation precision in the nm range and flexible adaptation to our series and custom machines are outstanding. For our customers as well as our own contract manufacturing, we have developed a solution in close cooperation with ModuleWorks that prepares us for the future of ultra-precision machining," says Dr. Kurt Haskic, Head of Research at LT Ultra.

"Working in close cooperation is the best way to get the most out of our combined technologies and it's great to see how our optics kernel helps our customers to build innovative, state-of-the-art solutions at the forefront of ultra-precision machining" says Lothar Glasmacher, Head of Business Additive and Process Technology at ModuleWorks.

ModuleWorks Appoints New Business Heads

22 April 2022

ModuleWorks announces the creation of three new senior positions as well as the successor to Heiko Weber, former Head of Digital Manufacturing.

Continued growth has led to the creation of new positions which will enable ModuleWorks to deliver more highly integrated business and technology solutions to its customers.

Digital Manufacturing

Constant advances in the ModuleWorks 3-axis and 5-axis toolpath generation and simulation software continue to add value to CAM applications. Furthermore, the latest innovations for adaptive roughing, deburring and 3+2 machining are expected to generate even more value in future years. The ModuleWorks Digital Manufacturing business area concentrates on further developing this core technology which is used throughout the CAM and PLM enterprise industries.

The new Head of Technology – Digital Manufacturing is Sebastian Wallraff, who succeeds Heiko Weber. Mr. Wallraff has in-depth knowledge in applied manufacturing and toolpath technology, having worked for ModuleWorks for more than 15 years.

Julia Meyer-Hendricks joined ModuleWorks in 2013 and has a rich background in Sales and Account Management. She will partner Mr. Wallraff as Head of Business Development – Digital Manufacturing.

Digital Factory

CIMdata PLM Industry Summary

This business area is dedicated to CNC manufacturers and machine tool builders. Recent years have seen significant expansion in the range of software available on CNC controllers, including simulation, toolpath creation and even full collision avoidance systems. This trend is expected to continue as the processing power of CNCs increases and the expectations of users grow. Machine tool builders are also looking to provide complete solutions to end users, including appropriate software to drive the machines. ModuleWorks Digital Factory addresses these needs with an effective combination of component technology and bespoke development.

Mark Foti, Head of Technology – Digital Factory, will team up with Fabian Tarara, the new Head of Business Development – Digital Factory. Mr. Tarara has been with ModuleWorks for 9 years and has a strong sales and business background in building long-term working relationships and delivering successful solutions to companies in this market segment.

CAM Automation & Digital Dentistry

This business area focusses on automating and optimizing CAM workflows with customized, plug and play self-driving CAM solutions. The application areas of this technology can range from traditional engineering areas to specific verticals which value from automated manufacturing.

Over the last 15 years, digital dentistry has grown into an established and important market utilizing CAD/CAM technology. Providing a combination of powerful technology and fully customized solutions tailored to the individual requirements of each partner, ModuleWorks has become one of the major players in this market.

The Head of Business – CAM Automation & Digital Dentistry is Soroosh Eghbali. He is now partnered with Ben Weber as the new Head of Strategic Partnerships – CAM Automation & Digital Dentistry. Mr. Weber joined ModuleWorks 7 years ago and has supported customers on a variety of successful projects thanks to his valuable experience as a Key Account Manager and Sales professional.

Additive & Process Technologies

The additive market continues to grow, which is why ModuleWorks created a new business area to focus on the specific requirements of this market. Additive manufacturing places special demands on software, some of which can be met with conventional CAM technology and some of which require the development of new solutions. The ModuleWorks Additive & Process Technologies business area, which also includes robotics and ultra-precision machining, develops and delivers solutions that support this growing industry.

Lothar Glasmacher continues as Head of Additive and Process Technologies. Mr. Glasmacher joined ModuleWorks in 2014 as Project Director and has been heavily involved in developing and delivering solutions for a wide range of applications in different industries, including the medical industry, additive and hybrid manufacturing, milling and diamond-based cutting.

These new appointments of Heads of Business Development alongside the Heads of Technology will enable ModuleWorks to better address the market-specific requirements for new technologies and provide a higher level of industry-focused products and services that address the business as well as the technology requirements of its customers.

Procore Appoints Joy Durling as Chief Data Officer

27 April 2022

Procore Technologies, Inc., a leading global provider of construction management software, announced Joy Durling as its first-ever chief data officer. Joy will lead Procore's data-as-a-product strategy, as well as all information technology, data intelligence, and product and information security.

CIMdata PLM Industry Summary

She will join Procore's executive leadership team and report to founder, President and CEO, Tooley Courtemanche.

Most recently, Joy served as executive vice president and chief information officer at Vivint, where she focused on elevating the customer and employee experience with data-driven innovation. She was integral in scaling Vivint's technology platform and operations to successfully transition to a public company. Prior to that, Joy was vice president of technology at Adobe Systems Inc. During her 11 years at Adobe, she held a variety of roles building out cross-functional business and technology experiences. Most notably, she played a strategic role in Adobe's transition from a box product to a SaaS company. This required significant evolution in their technology architecture, operations and talent.

"Over the last few years, we have been investing in leveraging the massive amount of data on our platform to help our customers run better businesses. Joy will lead us in the next stage of this journey as we continue to transform into a data-first company." said Tooley Courtemanche, Procore founder, President and CEO. "Joy's passion for customers, experience leading at scale and ability to drive innovation to deliver real value is a huge asset for Procore and our customers. I couldn't be more excited to welcome her to the team."

"The construction industry is primed to seize on advances in technology. Unleashing the power of data intelligence will drive cohesion, competitive advantage and ultimately result in more value for customers. Procore is in a unique position to continue to lead the way," explained Durling. "I'm thrilled to be joining Procore's fast-paced and mission-driven team. Their commitment to building a better, safer and more sustainable world shines through everything they do."

Sage refreshes brand to reflect the changing needs of its customers

28 April 2022

Sage, the leader in accounting, financial, HR and payroll technology for small and mid-sized businesses will have a refreshed brand from today - a symbol of its evolution, and a reflection of the changing needs of small and mid-size businesses globally.

SMBs say they are toughened up and ready to face the future post COVID but the complexities of running a business in today's uncertain world are adding a new type of pressure. SMBs say they need an easier way to keep all the balls in the air and Sage research shows 49% are looking for companies like Sage to simplify business processes and give them a greater sense of control.

Cath Keers, Chief Marketing Officer, Sage said, "It's tough being in business right now. Our refreshed brand is about how we show up for customers globally - removing complexity, delivering insights and building human connections for them, for our colleagues and within society. We've been a trusted brand for SMBs since Sage was a start-up 40 years ago, but the way we support them has changed and the refresh will enable us to reflect that consistently across all our markets."

The updated brand represents Sage's new purpose - to knock down barriers so everyone can thrive. This starts with its customers and a commitment to fuel SMB confidence by focusing on simplicity and insight, with a human touch to help business flow.

As a symbol of the changes that the refreshed brand represents, Sage today announces a series of experiences focused on delivering insights and smarter decision making to fuel confidence:

- **Sage Membership:** Every Sage customer now gets automatic access to the benefits of Sage Membership, starting with Member Masterclass rolling out this May. Member Masterclass offers human insights through talks and articles from the world's leading experts and trailblazers on the

CIMdata PLM Industry Summary

challenges that are most important for businesses today—created exclusively for Sage customers and partners and available for a limited time to everyone. Based on current challenges faced by SMBs globally, Season 1 will tackle the competition for talent.

- **New digital network services:** Sage will double down on its commitment to make business simpler through a range of new services in the digital network, including giving SMBs access to essential accounting and bookkeeping tools directly via their bank app or web browser. Sage Accounting and Compliance as a Service (ACaaS) will launch in the UK in May.
- **New partnerships:** Sage will continue to invest in communities and create unique customer experiences that deliver on its purpose, delivering business simplicity and faster, more accurate decision making to its customers. As an Official Supporter of the Rugby World Cup 2023 Sage, with partner Parthéna Consultants, will provide software to France 2023. Further partnerships will be announced in the coming months.

The brand and the values that drive Sage will also come to life through its £10m investment in NewcastleGateshead Quays. The Sage will launch in 2024 - a pioneering community-focused, state of the art arena (Sage Arena), exhibition and conference centre (Sage ICC), showcasing the best of the region to a global audience. £300m+ development will provide a £70m annual boost to the local economy and create 2,000 jobs. Sage will encourage local SMBs and Sage customers to contribute to the development and operation of the site and benefit from working spaces, priority access and promotional opportunities

Steve Hare, CEO, Sage said, “The refreshed Sage brand reflects the simplicity, flow, and confidence that Sage can give to customers through greater control and better insights so they’re ready to adapt and thrive in an ever-changing world. It is based on real insights about our customers, our colleagues and partners, and society. It is a symbol of what we stand for, the successes that have brought us here, and a promise for the experiences we will deliver in the future as we build the trusted network for SMBs.”

The refresh includes a new brand architecture, visual and verbal identity, and product portfolio migration strategy. Sage customers will experience the refreshed brand online and in products starting from today with a full roll out expected to continue until the end of the year. Out of home and broadcast advertising will start from May.

TCS Inaugurates Pace Port Pittsburgh, a Co-Innovation and Advanced Research Center at Carnegie Mellon University

21 April 2022

Tata Consultancy Services (TCS) has launched TCS Pace Port™ Pittsburgh, an advanced research and co-innovation center on the Carnegie Mellon University campus. The center is designed to help U.S. companies bring innovations to life faster by using the latest advances in technology and collaborating with local startups, entrepreneurs, students, and educators.

TCS Pace Port Pittsburgh is the fourth global co-innovation hub launched by TCS. Designed for companies in a wide range of industries, it specializes in innovation in the manufacturing and utilities sectors, providing enterprises with new ways to tap the Internet of Things (IoT) and the latest advances in AI from TCS Research.

The pandemic has accelerated adoption of digital technologies and the digitalization of customer interactions. This has also strengthened the imperative for companies in every industry to innovate faster to establish competitive differentiation. As the preferred transformation partner to leading U.S.

CIMdata PLM Industry Summary

companies, including nearly half the Fortune 500, TCS built this center to cater to the needs of clients looking to speed up and scale their innovation initiatives. TCS Pace Port Pittsburgh brings together partner ecosystems, digital talent, trendspotting, sandboxes and other innovation toolsets, and can instantly source inspiration and capability from across the world. Key capabilities of the new creative hub include:

- **TCS Academic Research Lab:** A space that allows researchers and CMU experts to gain exposure to the thinking and collaborative ecosystem research environment enabled by TCS, while furthering a research agenda across cutting-edge technology areas such as AI, blockchain, advanced analytics, cybersecurity, and quantum computing.
- **TCS Innovation Showcases:** A presentation and engagement facility that helps clients visualize the phases of their digital transformation journey.
- **TCS Co-Innovation Network (COIN™) Accelerator:** A collaborative ecosystem where startups, technology partners, CMU students and faculty, and TCS experts can collaborate on innovations.
- **TCS Agile Workspace:** A fully equipped, agile working environment to run business solution concepts with devoted virtual environments engineered to simulate real-world conditions.
- **TCS Rapid Lab:** An incubation lab that aims to accelerate innovation, solve business problems, move faster from concept to design and experience, and accelerate innovation acceptance.
- **TCS Think Spaces:** A workspace tailored to apply design thinking in discovering engaging ways to build new businesses and new sources of differentiation. Design thinking workshops are customized to help clients uncover new game-changing opportunities.

“Pennsylvania’s rich history of innovation is one of the best things about the commonwealth, and our world-class research institutions and universities are some of its greatest assets,” said **Governor Tom Wolf**. *“Bringing these two things together promises to keep Pennsylvania on the forefront of the manufacturing industry. I am proud TCS selected CMU for their newest co-innovation hub and look forward to seeing what they create together.”*

TCS is committed to deepening partnerships with leading global academic and research institutions such as CMU to solve critical business challenges. The launch of TCS Pace Port Pittsburgh coincides with the dedication of TCS Hall at CMU, a research and academic space that is home to the new Pace Port. Made possible by TCS’ philanthropic gift of \$35 million, the LEED Gold certified, 90,000 square-foot building also houses the Carnegie Mellon Master of Science in Computational Finance program, facilities for the School of Computer Science's Institute for Software Research, and its Center for Business Engagement.

“Collaboration between universities and industry is key to addressing the pressing global challenges that face our society,” said **CMU President Farnam Jahanian**. *“We are grateful to TCS for its exceptional philanthropy that has made possible this dynamic new facility. TCS Hall serves as a training ground for CMU students as well as a nexus of collaboration for partners across the innovation ecosystem. This is the latest chapter of our ongoing partnership to drive innovation and entrepreneurship at the leading edge of technology, science, and society.”*

CMU’s James H. Garrett Jr., Provost and Chief Academic Officer, and Anne Molloy, Vice Chair, Board of Trustees, were among the distinguished speakers and guests who joined N Chandrasekaran, Tata Sons Chairman of the Board, TCS’ Rajesh Gopinathan, Chief Executive Officer and Managing Director, and Krishnan Ramanujam, President, Enterprise Growth Group, at the ribbon-cutting ceremonies to

inaugurate TCS Pace Port Pittsburgh and TCS Hall.

*"U.S. competitiveness hinges on the ability of private enterprises and entrepreneurial leaders to set the global pace of innovation," said **Suresh Muthuswami, Chairman, TCS North America**. "TCS' partnership with Carnegie Mellon University is a testament to how academia and industry can support this mandate."*

*"To drive sustainable growth, U.S. companies are forming collaborative ecosystems spanning multiple technology disciplines and industries -- like the ones TCS, CMU, startups and other partners will foster right here at TCS Pace Port Pittsburgh," said **Ananth Krishnan, Chief Technology Officer, TCS**. "This co-innovation hub brings to life our belief that innovation has a context but no boundaries. Together, we are answering the call to innovate with speed."*

VIRTUAL PROTOTYPING TO ACCELERATE THE INDUSTRY'S "ZERO WASTE" TRAJECTORY

22 April 2022

The International Earth Day, celebrated on April 22, questions our collective dependency on exhaustible resources, as well as the growing scarcity of raw materials. This reliance is observed through the over productive dynamics of certain sectors and the unprecedented accumulation of waste. This year, the International Earth Day is held in a particularly volatile health and geopolitical context that reveals the extreme dependence of many sectors on raw materials that have become essential.

These challenges remind us of the need to accelerate the development of an industry that is less dependent on physical constraints and therefore has a smaller environmental footprint.

THE INDUSTRY OF THE FUTURE WILL BE MORE DIGITAL AND THEREFORE MORE VIRTUOUS

ESI Group, a pioneer in virtual prototyping, has been helping companies reduce their dependency on physical testing for product evaluation, design, and testing for over half a century.

ESI Group's cutting-edge technology, such as its "Virtual Prototyping Solution (VPS)" and its predictive physics modeling, enable significant savings in raw materials and an unprecedented reduction in waste. These key factors allow industry to move forward in the "zero waste" trajectory of their industrial processes. ESI Group's solutions enable them to work on the optimization of products before their manufacture, by perfecting production systems or by proving the manufacturability and consistency of processes. Similarly, by limiting the use of raw materials, digital technology can drastically reduce manufacturers' dependence on importing rare and expensive materials.

ESI Group thus supports its partners in developing more virtuous and less energy-consuming industries, whether in the automotive (Renault, Volkswagen, Seat), aeronautics (SAFRAN) or energy (EDF and Veolia) sectors.

A COMMITTED REVOLUTION

ESI Group's methodologies, cutting-edge simulation solutions, and expertise, developed since 1973, are already helping industrial players develop economic models that are more respectful of our resources and the environment.

For example:

- Renault relied on ESI Group's expertise in physics of materials and virtual prototyping to virtualize the concept stage of its Clio 5 until the crash-test certification. The use of computer-

CIMdata PLM Industry Summary

aided engineering allowed Renault to immediately succeed all physical tests the first time, with no additional testing required.

- ESI Group also contributed to the 100% digital and virtual development of Volkswagen's Nivus in Brazil. The use of virtual prototyping enabled a twofold reduction in the initial development schedule, which was shortened to ten months, and in prototype production costs by 65%.
- Gestamp relied on ESI Group's technology that significantly reduces the carbon footprint of vehicles by lightening their weight using the Proper Generalized Decomposition Method (PGD). The Spanish company was able to reduce the weight of its vehicle thanks to the technology designed by ESI Group.

"In the past, virtual prototyping was an option. Today, it has become strategic and essential to produce in a cleaner way by reducing the ecological footprint. It has become more profitable by reducing delays and raw material costs, and more autonomous by reducing dependence on raw material imports. More than ever, thanks to advances in predictive physics, manufacturers are entering the era of positive impact production. ESI Group is at their side to support them."

Event News

ALLPLAN presents complete solution portfolio at digitalBAU 2022

28 April 2022

ALLPLAN, provider of BIM solutions for the AEC industry, will present a complete overview of its software portfolio for architecture and engineering firms and construction companies at digitalBAU 2022 in Hall 1, Booth 313 in Cologne. Visitors will be able to find out, at the booth, how Allplan AEC 2022 enables a continuous workflow from the first design to successful implementation on the construction site. Special highlights include tools for terrain models and road planning, modeling, visualization, and steel construction, as well as functions for implementation on the construction site.

In addition, ALLPLAN presents process optimization in workflows for infrastructure and bridge designers as well as about the live connection with Lumion software for fast and realistic visualizations. The recently released update of Allplan AEC 2022 further sets standards in facilitating the collaboration of all project participants across disciplines. Interested professionals will be welcomed to learn more about the innovations in Allplan at seven workstations. During the three days of the trade show, experts from ALLPLAN sales and technical departments will be on hand to provide comprehensive information.

Award of the German Construction Prize 2022

The German Construction Award 2022, which ALLPLAN supports as the main sponsor, will also be presented at the trade fair in Cologne. The competition honors ideas, concepts and products that make construction more efficient, sustainable and safe. *"We are delighted to be promoting innovation in construction with the German Construction Award,"* says Dr. Detlef Schneider, CEO of ALLPLAN. *"We are particularly excited about the entries in the categories of digitalization, innovation and sustainability, as these have a special significance for us. However, we are keeping our fingers crossed for all participants."*

Presentation on Green BIM in the Smart Forum

In addition, digitalBAU will be accompanied by an extensive supporting conference program. In the future, architects, specialist consultants and building contractors will make a significant contribution to the climate neutrality of our cities. Taking into account new political framework conditions, they will

CIMdata PLM Industry Summary

design and maintain sustainable buildings. Stefan Kaufmann, Product Manager BIM Strategy and New Technologies at ALLPLAN, will talk about digital solutions for a sustainable circular economy in a presentation on "Green BIM". The talk will take place as part of the Smart Forum on Thursday, June 2 at 11:30 a.m. in Hall 1.

Configit to Host Configuration Lifecycle Management (CLM) Virtual Summit

26 April 2022

Configit, the global leader in Configuration Lifecycle Management (CLM), will host the 7th Annual Configuration Lifecycle Management (CLM) Virtual Summit on May 17 – 19, 2022.

The **CLM Virtual Summit's peer-to-peer agenda** focuses on both problem-solving and future uses of product configuration management technology to gain control of the increasing complexity in products and systems. This year's summit is aimed at B2B manufacturers and others with an interest in the configuration of complex products, including managers and above in IT, engineering and sales, as well as executives across the enterprise. **Since 2015, the CLM Virtual Summit has gathered manufacturing experts, innovators and leaders** from around the globe to share their experiences, success and insights on how to transform the end-to-end configuration management process into a competitive advantage. This year there will be use cases from global manufacturers like **Emerson, Jaguar Land Rover, Signify, CNH Industrials, Johnson Controls** and more.

What: The CLM Virtual Summit

About: Attendees will get to connect with like-minded industry experts and learn valuable insights from other manufacturers on how a cross-functional CLM approach can help companies meet their business goals. They'll also get to explore recent and emerging trends in manufacturing, including immersive 3D visualization, green configuration and digital twins, while discovering how their existing tech stack can be leveraged to help their companies mitigate risk, reduce costs and enable growth.

When: May 17, 18 and 19 from 9 – 11:30 AM ET

Where: To register for the virtual event, visit the CLM Summit's page.

Industry IoT Consortium and Digital Twin Consortium Present at IoT Solutions World Congress

26 April 2022

Industry IoT Consortium® (IIC®) and Digital Twin Consortium® (DTC) members will exhibit and speak at IoT Solutions World Congress (IOTSWC) from May 10 - 12, 2022 in Barcelona, Spain.

Leaders from the world's most prominent technology companies will share game-change technologies and solutions that are transforming industries with the more than 16,000 people from 120 countries who are expected to attend the Congress.

IOTSWC will feature 250 speakers and 250 exhibitors in 20,000 square meters of floor space. Members from IIC and DTC will participate as speakers, panelists, and exhibitors in five IOTSWC tracks, which include security, connectivity, business optimization, intelligence, and customer experience.

IIC members will provide expert commentary on a range of topics including connected vehicles, cybersecurity, distributed ledger, sustainability, data analysis, manufacturing, digital transformation, and more. DTC member experts will address such topics as building automation, energy, artificial intelligence, networks, standards, open-source, carbon reporting, real estate, and more.

"We are extremely fortunate to have the world's most innovative companies as members of our consortia," said Bill Hoffman, Chairman and CEO, Object Management Group® (OMG®), parent

organization of IIC, DTC, and other consortia. "Thought leaders from IIC and DTC will give first-hand knowledge of IoT and digital twin technologies that will help companies improve business outcomes in a range of industries."

OpenText Showcases Latest Content Cloud Innovations at AIIM 2022

27 April 2022

OpenText™, a long-standing market leader in content services for more than 17 years, will be at AIIM 2022 as a Diamond sponsor. This year, OpenText is showcasing new capabilities that enable organizations to embrace information management with the flexibility of choice – off-cloud, private cloud, public cloud, or API. The OpenText™ Content Cloud™ innovations, including OpenText™ Core Content and OpenText™ Core Case Management empower organizations to adapt and master modern work in a multi-cloud environment through improved digital collaboration, fast and secure information access, and proper governance and compliance.

“With today’s distributed workforce, organizations require flexibility and scalability to properly manage and access content from all areas of their business,” said Sandy Ono, Executive Vice President and CMO at OpenText. “From digital collaboration to governance and compliance, OpenText provides a full portfolio of information management offerings to help businesses optimize information and drive operational excellence and organizational efficiency through automation and deeper integrations that deliver better insights.”

Rethinking content for operational excellence

To realize the full value of operational excellence in modern work environments, businesses need a scalable information management strategy. This requires a centralized, enterprise information infrastructure that delivers content which supports the workflows and tasks users work with every day.

A sample of products in OpenText’s Content Cloud portfolio that help to achieve operational excellence include:

- **OpenText™ Core Content** provides a turnkey solution to process and manage the content lifecycle with rapid provisioning and self-service configuration for Business Administrators. It has an intuitive user interface with template-based business workspaces enabling teams to easily access and find content for a common task or goal.
- **OpenText Core Case Management** now provides deeper integration with OpenText Core Content enabling a unified approach to managing an organization’s content lifecycle in context of its formal and informal business processes.
- **OpenText Content Services APIs** are now available for developers who need to build custom solutions leveraging content from around the company. Businesses can use OpenText APIs to drive innovation and speed development of custom applications with electronic signature, document capture, metadata management, PII protection and other content services delivered securely from the OpenText Cloud.

By viewing content as a centrally managed enterprise asset that is independent of the applications and processes it services, organizations can begin to eliminate information silos and create a ‘single source of the truth’, so employees know they are working with the most recent, accurate and relevant information.

Get the latest on OpenText’s content cloud innovation

OpenText is sharing more about its cloud capabilities during a general session featuring Fred Sass,

CIMdata PLM Industry Summary

Senior Director, Content Services, where he'll discuss how new approaches to content services can help organizations better manage information and drive business success.

There's also a fireside chat with OpenText customer Ryan Zilm, Legal Records Management Manager at Motiva Enterprises, where he'll share insights about their governance journey in the cloud. Additional highlights will be presented during the *Automating Document and Data Capture Round Table* where participants will learn more about automation and how it helps organizations leverage capture to achieve the fastest return on investment as well as how to get the most value from ERP and ECM solutions.

Join us at AIIM 2022, April 27-29.

Velo3D Announces European 2022 Seeing is Believing AM Tour

27 April 2022

Velo3D, Inc., a leading metal additive manufacturing technology company for mission-critical parts, announced its Seeing is Believing Additive Manufacturing Tour for Europe, which will visit seven cities in 2022 across Germany, France, Italy, and the United Kingdom. The roadshow brings together innovators across key industries including space, aviation, oil & gas, and energy to share how additive manufacturing and the Velo3D end-to-end solution are transforming these businesses by helping engineers manufacture the parts they need without compromise.

“When we talk to prospective customers who have experience with additive manufacturing, the first thing they want is to see the parts for themselves to witness whether the geometries we offer can truly be achieved,” said Renette Youssef, Velo3D CMO. “In our pilot of the Seeing is Believing roadshow we made amazing connections between engineers, technology influencers, and executives in the additive manufacturing industry to learn from and inspire one another. We look forward to achieving this same community building in Europe.”

Velo3D initially launched its roadshow in 2021 across five cities. The events brought together hundreds of innovators to learn how the Velo3D end-to-end solution delivers unprecedented part quality, complex geometries, repeatability in distributed manufacturing, and high-volume production through its scale-up Sapphire XC printer.

“With 3D printing being a relatively new manufacturing technology, these community building events help innovators conceptualize how it can be used to transform their businesses, improve efficiency in key systems, and solve their biggest challenges,” said Campbell MacPherson, Schoeller-Bleckmann Oilfield (SBO) EVP of Advanced Manufacturing. “As the first company to acquire a Velo3D Sapphire printer in Europe, we're thrilled to share how the technology has helped us better serve our customers.”

The roadshow events focus on educating engineers of all types on the many benefits and capabilities of advanced additive manufacturing. The presentations highlight the process from start to finish, including pre-print, during printing, quality assurance, the underlying manufacturing process, and post processing. The 2022 show will make seven stops at European cities, including:

- Bergamo, Italy– May 25
- Lyon, France– June 10
- Augsburg, Germany– June 21
- Toulouse, France– September 15

Financial News

Bechtle - Q1 EBT very significantly above expectations

27 April 2022

In the first quarter of the year, Bechtle AG's earnings before taxes (EBT) amounted to €73 million, preliminary numbers suggest, an increase of some 19% over the previous year (€61.0 million). This very positive development is in no small part due to special effects on the debit side for the same period last year, which have been largely absent in the current year. All in all, preliminary earnings are very significantly above the analysts' consensus estimate of around €64 million derived by Bechtle AG itself. Despite the ongoing supply bottlenecks, revenue from January to March rose by some 7% to around €1,379 million (previous year: €1,291.4 million). The EBT margin grew accordingly to an expected 5.3%.

Bechtle AG will publish its statement on the 1st quarter including the finalised figures on 12 May 2022.

Cadence Reports First Quarter 2022 Financial Results

25 April 2022

Cadence Design Systems, Inc. announced results for the first quarter of 2022.

Cadence reported first quarter 2022 revenue of \$902 million, compared to revenue of \$736 million for the same period in 2021. On a GAAP basis, Cadence achieved operating margin of 35 percent and recognized net income of \$235 million, or \$0.85 per share on a diluted basis, in the first quarter of 2022, compared to operating margin of 28 percent and net income of \$187 million, or \$0.67 per share on a diluted basis, for the same period in 2021.

Using the non-GAAP measures defined below, operating margin for the first quarter of 2022 was 44 percent and net income was \$324 million, or \$1.17 per share on a diluted basis, compared to operating margin of 38 percent and net income of \$231 million, or \$0.83 per share on a diluted basis, for the same period in 2021.

“Q1 was a strong start of the year for Cadence, as we delivered outstanding results driven by broad-based strength across our diverse product portfolio,” said Anirudh Devgan, president and chief executive officer. “Our Intelligent System Design strategy aligns well with the generational secular trends that are fueling robust design activity, and our innovative solutions are accelerating growth in both our core and our new systems businesses across a rapidly expanding customer base.”

“Q1 results reflect the success we have with our customers and partners, as well as the solid execution from the Cadence team. We benefited from strong demand for our technologies,” said John Wall, senior vice president and chief financial officer. “We exceeded all key operating metrics for the quarter and are raising our full year guidance.”

CFO Commentary

Commentary on the first quarter 2022 financial results by John Wall, senior vice president and chief financial officer, is available at www.cadence.com/cadence/investor_relations.

Business Outlook

For the second quarter of 2022, the company expects total revenue in the range of \$825 million to \$845 million. Second quarter GAAP operating margin is expected to be in the range of 29 percent to 30 percent and GAAP net income per diluted share is expected to be in the range of \$0.59 to \$0.63. Using

CIMdata PLM Industry Summary

the non-GAAP measures defined below, operating margin is expected to be in the range of 39 percent to 40 percent and net income per diluted share is expected to be in the range of \$0.95 to \$0.99.

For fiscal year 2022, the company expects total revenue in the range of \$3.395 billion to \$3.435 billion. On a GAAP basis, operating margin is expected to be in the range of 28.5 percent to 30 percent and GAAP net income per diluted share for 2022 is expected to be in the range of \$2.51 to \$2.59. Using the non-GAAP measures defined below, operating margin for 2022 is expected to be in the range of 38.5 percent to 40 percent and net income per diluted share for 2022 is expected to be in the range of \$3.89 to \$3.97.

The company utilizes a long-term projected non-GAAP tax rate, which reflects currently available information, as well as other factors and assumptions. The non-GAAP tax rate could be subject to change for a variety of reasons, including the rapidly evolving global tax environment, significant changes in the company's geographic earnings mix, or other changes to the company's strategy or business operations. The company expects to use this normalized non-GAAP tax rate through fiscal 2025 but will re-evaluate this rate periodically for significant items that may materially affect its projections.

A schedule showing reconciliations of the business outlook from GAAP operating margin, GAAP net income and GAAP diluted net income per share to non-GAAP operating margin, non-GAAP net income and non-GAAP diluted net income per share, respectively, is included in this release.

Audio Webcast Scheduled

Anirudh Devgan, president and chief executive officer, and John Wall, senior vice president and chief financial officer, will host the first quarter 2022 financial results audio webcast today, April 25, 2022, at 2 p.m. (Pacific) / 5 p.m. (Eastern). Attendees are asked to register at the website at least 10 minutes prior to the scheduled webcast. An archive of the webcast will be available starting April 25, 2022 at 5 p.m. (Pacific) and ending June 17, 2022 at 5 p.m. (Pacific). Webcast access is available at www.cadence.com/cadence/investor_relations.

Dassault Systèmes: Raising 2022 EPS Objectives on Good First Quarter Performance

27 April 2022

Dassault Systèmes announced IFRS unaudited financial results for the first quarter ended March 31, 2022. The Group's Board of Directors approved these results on April 26, 2022. This press release also includes financial information on a non-IFRS basis and reconciliations with IFRS figures in the Appendix to this communication.

Summary Highlights

(unaudited, all revenue growth rates in constant currencies)

- 1Q22 IFRS diluted EPS increased 51% to €0.20, as reported; non-IFRS diluted EPS grew 20% to €0.27, as reported
- 1Q22 total revenue and software revenue increased 8%, with licenses & other software revenue up 10% and subscription & support up 8% (non-IFRS)
- 1Q22 3DEXPERIENCE software revenue rose 21% (non-IFRS). Cloud software revenue also increased 21% (non-IFRS)
- 1Q22 cash flow from operations of €630 million (IFRS); set to achieve deleveraging well ahead of schedule
- FY2022 non-IFRS objectives: reaffirming total revenue growth of 9%-10%, in constant

CIMdata PLM Industry Summary

currencies. Raising non-IFRS diluted EPS target to 9%-11% growth to €1.04 - €1.06. Increasing non-IFRS operating margin target to 33.4%-33.7%

IFS delivers exceptional first quarter performance with ACV bookings up 78% and recurring revenue up 45%

26 April 2022

IFS, the global cloud enterprise software company, announced its financial results for the quarter ending March 31, 2022 with ACV (annual contract value) bookings up 78% year on year and recurring revenues up a significant 45% year on year.

The company continues to report growing demand for its cloud technology resulting in an increase in cloud revenues of 67% year on year despite market challenges and geopolitical disruptions. Throughout 2021 and into 2022 the company has also consistently increased its recurring revenues as a share of software revenues to 92% in Q1.

This outstanding performance enables IFS to boast a very healthy and strong business, which provides performance predictability beyond 2022. This, combined with the Hg investment in March, at a valuation of \$10bn firmly secures the company position as a leading global cloud enterprise software vendor.

IFS is uniquely positioned in the market thanks to IFS Cloud – a single, composable technology platform that enables customers to differentiate on service. With specific industry solutions and capabilities for asset management and ERP, what makes IFS really stand out is how this combines with the company's leading service management capabilities. Never before have there been such high expectations on how a company serves its customers, which makes IFS Cloud's ability to deliver amazing Moments of Service™ hugely compelling – for many customers, it is their own basis of differentiation.

In Q1 alone, this was recognized by industry analyst IDC who named IFS a Leader in both its MarketScape for Worldwide Manufacturing Service Life Cycle Management Platforms and its MarketScape for Worldwide Field Service Management Solutions for Utilities.

The investments made into IFS Cloud have been well received by customers and continue to drive demand thanks to new functionality developed into the IFS Cloud April 2022 release, as well as the availability of Customer Experience Management, which is now integrated in IFS Cloud following the acquisition of Customerville just nine months ago.

IFS CEO Darren Roos commented: “For the last four years IFS has consistently outperformed the market and Q1 is an extension of this trend with ACV bookings up 78% year on year. Our first quarter of 2022 has delivered exceptional results across the board and I am proud that these continue to be a validation of our strategy.” **Roos continued:** “These results, combined with the recent Hg investment, provide IFS with the backing of now three highly experienced investors allowing us to explore how we can further disrupt the market and offer choice.” **He concluded:** “Both through our software and our success services we are making it possible for customers to buy and consume technology in the way that creates the most value for them, so they can deliver amazing Moments of Service™ to their customers.”

IFS Chief Financial Officer, Constance Minc, commented: “Q1 is another quarter where IFS has delivered great performance. This is particularly significant because we are achieving this across all our metrics which paints the picture of a strong and healthy business focused on growth and profitability.” **Minc continued:** “Q1 shows a continued shift in the quality of the revenue mix with 70% of the total revenue base now being recurring; these strong results highlight the relevance of IFS in its

CIMdata PLM Industry Summary

market and demonstrate we have the right growth strategy.”

Financial* and Operational Highlights for Q1 FY2022:

- Q1 FY2022 software revenue was SEK 1.3bn, an increase of 25% versus Q1 2021
- Q1 FY2022 recurring revenue was SEK 1.2bn, an increase of 45% versus Q1 2021
- Q1 FY2022 cloud revenue increased 67% versus Q1 2021
- Q1 FY2022 net revenue was SEK 1.7bn, an increase of 15% versus Q1 2021

*Note: all figures based in Swedish Krona and reported in constant currency.

In line with WorkWave establishing itself as a standalone business at the end of Q2 2021, the performance reported above excludes WorkWave’s contribution to the IFS Group.

Aspen Technology Announces Financial Results for the Third Quarter of Fiscal 2022

27 April 2022

Aspen Technology, Inc. (AspenTech), a global leader in asset optimization software, announced financial results for its third-quarter of fiscal year 2022, ended March 31, 2022.

“AspenTech delivered strong third quarter results driven by a notable improvement in customer spending and continued execution by our team. We believe the growing importance of operational efficiency and sustainability across capital intensive industries will support our ability to return to consistent double-digit growth over time,” said Antonio Pietri, President and Chief Executive Officer of AspenTech.

Pietri continued, “We are also excited to be approaching the completion of our proposed transaction with Emerson with the shareholder meeting set for May 16th. We believe the innovation and expertise of OSI and Geological Simulation Software will enable the new AspenTech to deliver even greater transformative value to customers in a broader set of industries.”

Third Quarter and Fiscal Year 2022 Recent Business Highlights

- Annual spend, which the company defines as the annualized value of all term license and maintenance contracts at the end of the quarter, was \$655 million at the end of the third quarter of fiscal 2022, which increased 7.4% compared to the third quarter of fiscal 2021 and 2.4% sequentially.

Summary of Third Quarter Fiscal Year 2022 Financial Results

AspenTech’s total revenue of \$187.8 million included:

- **License revenue**, which represents the portion of a term license agreement allocated to the initial license, was \$130.0 million in the third quarter of fiscal 2022, compared to \$110.1 million in the third quarter of fiscal 2021.
- **Maintenance revenue**, which represents the portion of the term license agreement related to ongoing support and the right to future product enhancements, was \$50.0 million in the third quarter of fiscal 2022, compared to \$45.9 million in the third quarter of fiscal 2021.
- **Services and other revenue** was \$7.7 million in the third quarter of fiscal 2022, compared to \$6.7 million in the third quarter of fiscal 2021.

For the quarter ended March 31, 2022, AspenTech reported income from operations of \$80.8 million, compared to income from operations of \$68.9 million in the third quarter of fiscal 2021.

Net income was \$75.1 million for the quarter ended March 31, 2022, leading to net income per share of

CIMdata PLM Industry Summary

\$1.12, compared to net income per share of \$0.91 in the same period last fiscal year.

Non-GAAP income from operations was \$102.5 million for the third quarter of fiscal 2022, compared to non-GAAP income from operations of \$80.9 million in the same period last fiscal year. Non-GAAP net income was \$92.3 million, or \$1.38 per share, for the third quarter of fiscal 2022, compared to non-GAAP net income of \$72.0 million, or \$1.05 per share, in the same period last fiscal year. These non-GAAP results add back the impact of stock-based compensation expense, amortization of intangibles and acquisition and integration planning related fees. A reconciliation of GAAP to non-GAAP results is presented in the financial tables included in this press release.

AspenTech had cash and cash equivalents of \$285.2 million and total borrowings, net of debt issuance costs, of \$279.4 million at March 31, 2022.

During the third quarter, the company generated \$81.1 million in cash flow from operations and \$89.2 million in free cash flow. Free cash flow is calculated as net cash provided by operating activities adjusted for the net impact of: purchases of property, equipment and leasehold improvements; payments for capitalized computer software development costs, and other nonrecurring items, such as acquisition and integration planning related payments.

Business Outlook

Based on information as of today, April 27, 2022, AspenTech is issuing the following guidance for fiscal year 2022:

- Annual spend growth of 7-8% year-over-year
- Free cash flow of at least \$285 million
- Total bookings of \$814 to \$840 million
- Total revenue of \$737 to \$754 million
- GAAP total expense of \$410 to \$415 million
- Non-GAAP total expense of \$333 to \$338 million
- GAAP operating income of \$327 to \$339 million
- Non-GAAP operating income of \$404 to \$416 million
- GAAP net income of \$299 to \$310 million
- Non-GAAP net income of \$360 to \$371 million
- GAAP net income per share of \$4.43 to \$4.59
- Non-GAAP net income per share of \$5.33 to \$5.50

The above guidance does not give effect to the proposed transaction with Emerson, which, if completed, is expected to close during the fourth quarter of fiscal 2022, ending June 30, 2022. These statements are forward-looking and actual results may differ materially. Refer to the Forward-Looking Statements safe harbor below for information on the factors that could cause AspenTech's actual results to differ materially from these forward-looking statements.

FARO Announces First Quarter Financial Results

27 April 2022

FARO® Technologies, Inc., a global leader in 4D digital reality solutions, announced its financial results for the first quarter ended March 31, 2022.

CIMdata PLM Industry Summary

"First quarter revenue came in below expectations as the Chinese government's mandated COVID lockdown in Shanghai prevented shipments from our lone Chinese logistics center at the end of March. Additionally, ongoing supply chain shortages and softer than expected demand in the AEC market further impacted our Q1 revenue," stated Michael Burger, President and Chief Executive Officer. "With the launch of our new Focus Premium Laser Scanner in April and the Quantum Max FaroArm in the second half of 2021, we have refreshed three quarters of FARO's hardware revenue which positions us very well competitively."

Mr. Burger continued, "Our focus remains on providing the market increasing levels of analytics, insights and value from 3D models captured by FARO's hardware products and accessed through FARO Sphere, our recently announced cloud-based environment. While the ongoing uncertainties in the market create risks to near-term results, the long-term opportunity for FARO remains as exciting as ever. Our high accuracy expertise and focus on enabling customers to efficiently and easily manage their assets virtually, positions us well to capitalize on the massive potential of the digital reality market."

First Quarter 2022 Financial Summary

- Total sales of \$76.7 million, in line with the prior year period
- Software sales, of \$10.3M or 13% of revenue remained in line with the prior year period
- Recurring revenue of \$16.5M or 21.5% of sales was up 6.5% compared to the prior year period
- Gross margin of 53.5%, compared to 52.9% in the prior year period
- Non-GAAP gross margin of 53.8%, compared to 53.0% in the prior year period
- Operating expenses of \$48.2 million, compared to \$46.8 million in the prior year period
- Non-GAAP operating expenses of \$44.2 million, compared to \$42.8 million in the prior year period
- Net loss of \$9.7 million, or (\$0.53) per share compared to \$3.2 million, or (\$0.18) per share in the prior year period
- Non-GAAP net loss of \$2.5 million, or (\$0.14) per share compared to \$0.6 million, or (\$0.03) per share in the prior year period
- Adjusted EBITDA of (\$0.7) million, or (0.9%) of total sales compared to \$0.4 million, or 0.5% of total sales in the prior year period
- Cash and short-term investments of \$107.2 million, compared to \$122.0 million as of December 31, 2021

* A reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures is provided in the financial schedules portion at the end of this press release. An additional explanation of these measures is included below under the heading "Non-GAAP Financial Measures".

Outlook for the Second Quarter 2022

For the second quarter ending June 30, 2022, FARO currently expects:

- Revenue in the range of \$77 to \$85 million
- Non-GAAP (loss) earnings per share in the range of (\$0.17) to \$0.04

Conference Call

The Company will host a conference call to discuss these results on Wednesday, April 27, 2022 at 5:00 p.m. ET. Interested parties can access the conference call by dialing (866) 518-6930 (U.S.) or +1 (203)

CIMdata PLM Industry Summary

518-9797 (International) and using the passcode FARO. A live webcast will be available in the Investor Relations section of FARO's website at: <https://www.faro.com/en/About-Us/Investor-Relations/Financial-Events-and-Presentations>

A replay webcast will be available in the Investor Relations section of the company's web site approximately two hours after the conclusion of the call and will remain available for approximately 30 calendar days.

Informatica Reports First Quarter 2022 Financial Results

27 April 2022

Informatica, an enterprise cloud data management leader, announced financial results for its first quarter 2022, ended March 31, 2022.

"We delivered ARR and non-GAAP Operating Income above the high end of our guidance range and achieved another quarter of operating profitability and positive cash flow while continuing to invest in long-term, durable growth. Demand for our cloud-native IDMC platform and continued momentum from enterprise customers and strategic partners drove cloud ARR growth of 43%," said Amit Walia, Chief Executive Officer at Informatica. "These results highlight the continued customer adoption of our cloud data management solutions, and the execution of our multi-pronged strategy is delivering results. We are off to a great start for the year, and we see total ARR growth in 2022 accelerating."

First Quarter 2022 Financial Highlights:

- GAAP Total Revenues increased 9% year-over-year to \$362.3 million.
- GAAP Subscription Revenues increased 26% year-over-year to \$197.7 million.
- Total ARR increased 17% year-over-year to \$1.4 billion.
- GAAP Operating Income of \$6.2 million and Non-GAAP Operating Income of \$83.4 million.
- GAAP Operating Cash Flow increased 8% year-over-year to \$70.2 million.
- Unlevered Free Cash Flow (after-tax) of \$87.5 million.

A reconciliation of GAAP to non-GAAP financial measures has been provided in the tables included in this press release. An explanation of these measures is also included below under the heading "Non-GAAP Financial Measures."

First Quarter 2022 Business Highlights:

- Achieved a subscription net retention rate of 113% at the end of March 31, 2022.
- Processed 32.2 trillion cloud transactions per month for the quarter ended March 31, 2022, as compared to 19.6 trillion cloud transactions per month in the same quarter last year, an increase of 64% year-over-year.
- Reported 164 customers that spend more than \$1 million in subscription ARR at the end of March 31, 2022, an increase of 50% year-over-year.
- Reported 1,732 customers that spend more than \$100,000 in subscription ARR at the end of March 31, 2022, an increase of 22% year-over-year.

Product Innovation:

- Expanded partnership with Snowflake that will result in deeper, product integrations for data governance, acceleration and scaling of joint marketing and demand-generation activities, and expanded field sales collaboration.

CIMdata PLM Industry Summary

- Launched the Informatica Intelligent Data Management Cloud (IDMC) for Retail -- a cloud-neutral, end-to-end data management solution for the retail industry to drive innovation and business value in a multi-cloud, hybrid environment.
- Launched the Informatica Intelligent Multi-domain Master Data Management (MDM) for enterprises to connect, understand and manage the relationship between multiple domains such as location, customer, product or supplier as well as assets including IoT devices or sensors.
- Expanded global system integrator partnership with Wipro Limited to accelerate cloud modernization for global customers.

Industry Recognition:

- Named to Fast Company's Annual List of the World's 50 Most Innovative Companies for 2022. Informatica ranked #2 in the competitive enterprise category.
- Named a 2022 Gartner Peer Insights Customers' Choice for Data Integration Tools, making Informatica the only vendor to receive this accolade four consecutive times.
- Recognized as an Overall Leader in KuppingerCole Leadership Compass Data Catalogs and Metadata Management Report.
- Recognized as a Champion in the Bloor Stream Processing Market Update.

Second Quarter and Full-Year 2022 Financial Outlook

The Company provides the financial guidance below based on current market conditions and expectations and subject to various important cautionary factors described below. Based on information available as of April 27, 2022, guidance for the second quarter of 2022 and full-year 2022 is as follows:

Second Quarter 2022 Ending June 30, 2022:

- Total Revenues in the range of \$358 million to \$368 million, representing approximately 6% year-over-year growth at the midpoint of the range.
- Subscription ARR in the range of \$875 million to \$885 million, representing approximately 28% year-over-year growth at the midpoint of the range.
- Cloud ARR in the range of \$365 million to \$371 million, representing approximately 40% year-over-year growth at the midpoint of the range.
- Non-GAAP Operating Income in the range of \$44 million to \$51 million.

Full-Year 2022 Ending December 31, 2022:

- Total Revenues in the range of \$1,585 million to \$1,605 million, representing approximately 10% year-over-year growth at the midpoint of the range.
- Raising Total ARR to a range of \$1,520 million to \$1,550 million, representing approximately 13% year-over-year growth at the midpoint of the range. This is an increase from the prior range of \$1,510 million to \$1,540 million and approximately 12% year-over-year growth at the midpoint of the range.
- Subscription ARR in the range of \$990 million to \$1,010 million, representing approximately 25% year-over-year growth at the midpoint of the range.
- Cloud ARR in the range of \$438 million to \$448 million, representing approximately 40% year-over-year growth at the midpoint of the range.
- Non-GAAP Operating Income in the range of \$325 million to \$345 million.

CIMdata PLM Industry Summary

- Unlevered Free Cash Flow (after-tax) in the range of \$323 million to \$343 million.

In addition to the above guidance, the Company is also providing second quarter and full-year 2022 weighted-average number of basic and diluted share estimates for modeling purposes. For the second quarter 2022, we expect basic weighted-average shares outstanding to be approximately 280 million shares and diluted weighted-average shares outstanding to be approximately 283 million shares. For the full-year 2022, we expect basic weighted-average shares outstanding to be approximately 281 million shares and diluted weighted-average shares outstanding to be approximately 288 million shares.

Reconciliation of non-GAAP operating income and unlevered free cash flow after-tax guidance to the most directly comparable GAAP measures is not available without unreasonable effort, as certain items cannot be reasonably predicted because of their high variability, complexity, and low visibility. In particular, the measures and effects of our stock-based compensation expense specific to our equity compensation awards and employer payroll tax-related items on employee stock transactions are directly impacted by the timing of employee stock transactions and unpredictable fluctuations in our stock price, which we expect to have a significant impact on our future GAAP financial results.

Webcast and Conference Call

A conference call to discuss Informatica's first quarter 2022 financial results and financial outlook for the second quarter and full-year 2022 is scheduled for 1:30 p.m. Pacific Time today. To participate, please dial 1-844-200-6205 from the U.S. or 1-646-904-5544 from international locations. The conference passcode is 505719. A live webcast of the conference call will be available on the Investor Relations section of Informatica's website at investors.informatica.com where presentation materials will also be posted prior to the conference call. A replay will be available online approximately two hours following the live call for a period of 30 days.

Nemetschek Group: Strong start to 2022 with high double-digit revenue growth and increased profitability

28 April 2022

The Nemetschek Group, a leading global software provider for the construction and media industries, reported a very successful start to the financial year 2022. The first quarter showed a significant double-digit percentage growth in revenue combined with an over-proportional increase in operating profit (EBITDA). This sales success along with the strong operating performance are based in particular on the steady expansion of the group's recurring revenue base, driven by subscription and SaaS models, innovative software solutions, ongoing internationalization efforts as well as the continued increase in internal efficiency.

"We are on a mission to digitalize the entire lifecycle of buildings in the construction industry, from the design to the manage phase. Simultaneously, we want to play an important role in the media industry. Our very strong first quarter results prove once again that there is a huge global appetite for our solutions", says Yves Padrines, CEO of the Nemetschek Group. "In addition, with our great start to the year, we have also laid a very good foundation for the remainder of 2022, which will be influenced by the subscription transition of our brand Bluebeam in the second half of the year" according to Padrines.

Key Group Figures for Q1 2022

- Group revenues increased in Q1 by 21.3% (adjusted for currency effects: 17.5%) to EUR 192.2 million.
- The growth was again driven by the revenues of subscription and SaaS models. With an increase

CIMdata PLM Industry Summary

of 59.8% (currency-adjusted: 54.4%) they reached a new record high of EUR 45.2 million in the first quarter and were thus once again the main driver of the Group's continued positive recurring revenues development. Consequently, the share of recurring revenues, which includes service contracts as well as subscription/SaaS models, further increased to 62.8% of group revenues.

- Consolidated operating earnings before interest, taxes, depreciation and amortization (EBITDA) grew over-proportionally compared to revenues by 40.9% to EUR 69.8 million. As a result, the EBITDA margin expanded by 5.0 percentage points to 36.3%.
- Net income (Group shares) increased by 44.7% to EUR 42.6 million. Accordingly, earnings per share grew to EUR 0.37.

Overview segment performances and highlights Q1 2022

- The Design segment recorded a revenue growth in Q1 2022 of 10.4% (currency-adjusted: 7.9%) to EUR 93.3 million which was in line with expectations. Higher growth is expected again in the coming quarters. The strong increase in subscription revenues (+61%) confirms the success of the segment's hybrid strategy to offer both, subscription, and licenses to its customers. The EBITDA increased by 11.8% to EUR 31.7 million, corresponding to an EBITDA margin of 34.0%.
- The Build segment repeatedly achieved a strong growth: Revenues grew by 30.3% (currency-adjusted: 23.9%) to EUR 64.7 million. The primary contributor to this increase was Bluebeam which recorded the highest number of new users in the company's history in March. At the same time, Bluebeam continued its preparation for a successful start of its transition to subscription-/cloud offerings in the second half of 2022. The EBITDA increased over-proportionally by 42.8% to EUR 29.8 million which resulted in a margin of 46.0% (previous year: 41.9%).
- The Media segment was again able to achieve a significant increase in revenues with 73.6% (currency-adjusted: 67.5%) to EUR 25.5 million. With the acquisition and subsequent integration of the US company Pixologic at the beginning of the year, Maxon once again expanded its customer base and further enriched its flagship product Maxon ONE. In addition, the acquisition enabled Maxon to better address the huge and fast-growing 3D-Animation and Metaverse markets. The segment EBITDA more than doubled to EUR 12.1 million (Q1 2021: EUR 5.0 million), resulting in a record margin of 47.2% (previous year: 33.7%).
- The Manage segment recorded a stable development with a slight growth of 1.0% (currency-adjusted: 1.0%) and a revenue of EUR 11 million. As in the previous year, the segment was negatively impacted by the continued cautious investment activities of the important customer group of facility managers due to the global Covid-19 pandemic. The EBITDA margin was 6.6%.

Outlook for financial year 2022 confirmed

Following the very successful start to the year, the Executive Board is reaffirming its current targets for the financial year 2022. The Executive Board therefore continues to expect a revenue growth at constant exchange rates in the range of 12% to 14% for the Group in 2022. The EBITDA margin is targeted to be between 32% and 33%.

The outlook is based on the assumption that there will be no significant deterioration in the global macroeconomic as well as industry-specific conditions in 2022, in particular in the light of the recent growing global economic risk due to the war in Ukraine.

Overview of quarterly key figures (Q1-22)

CIMdata PLM Industry Summary

| In EUR million | Q1 2022 | Q1 2021 | Δ in % | Δ in % FX-adj |
|--|------------|------------|--------|-------------------|
| Revenues | 192.2 | 158.4 | +21.3% | +17.5% |
| - thereof software licenses | 63.8 | 55.0 | +15.9% | +11.9% |
| - thereof recurring revenues | 120.7 | 96.1 | +25.6% | +21.6% |
| - Subscription (part of recurring revenues) | 45.2 | 28.3 | +59.8% | +54.4% |
| EBITDA | 69.8 | 49.6 | +40.9% | +33.7% |
| Margin | 36.3% | 31.3% | | |
| EBIT | 56.3 | 38.8 | +45.2% | +37.2% |
| Margin | 29.3% | 24.5% | | |
| Net income (Group shares) | 42.6 | 29.4 | +44.7% | |
| Earnings per share in EUR | 0.37 | 0.25 | +44.7% | |
| Net income (Group shares) before amortization of purchase price allocation (PPA) | 48.3 | 33.3 | +45.1% | |
| Earnings per share before PPA in EUR | 0.42 | 0.29 | +45.1% | |
| Overview of quarterly key figures per segment* (Q1-22) | | | | |
| In EUR million | Q1 2022 | Q1 2021 | Δ in % | Δ in % FX-adj. |
| Design | | | | |
| Revenues | 93.3 | 84.5 | +10.4% | +7.9% |
| EBITDA | 31.7 | 28.4 | +11.8% | +7.2% |
| EBITDA margin | 34.0% | 33.6% | | |
| Build | | | | |
| Revenues | 64.7 | 49.7 | +30.3% | +23.9% |

CIMdata PLM Industry Summary

| | | | | |
|---------------|-------|-------|---------|---------|
| EBITDA | 29.8 | 20.8 | +42.8% | +34.6% |
| EBITDA margin | 46.0% | 41.9% | | |
| Media | | | | |
| Revenues | 25.5 | 14.7 | +73.6% | +67.5% |
| EBITDA | 12.1 | 5.0 | +143.4% | +139.7% |
| EBITDA margin | 47.2% | 33.7% | | |
| Manage | | | | |
| Revenues | 11.0 | 10.9 | +1.0% | +1.0% |
| EBITDA | 0.7 | 0.8 | -11.9% | +0.9% |
| EBITDA margin | 6.6% | 7.6% | | |

*As a result of the strategic reorganization of brands between the Design and Build segments, prior year figures were adjusted for comparable reasons.

PTC ANNOUNCES SECOND FISCAL QUARTER 2022 RESULTS

27 April 2022

PTC reported financial results for its second fiscal quarter ended March 31, 2022.

"In the second quarter we continued to see our key operating and financial metrics showing strong performance. We delivered organic constant currency ARR growth of 13% year over year to end Q2 at \$1.56 billion. In Q2, our cash from operations was \$142 million, up 17% year over year, and our adjusted free cash flow was \$158 million, up 22% year over year. The strength in Q2 was broad-based across all segments and geographic regions, driven by demand for digital transformation and SaaS," said James Heppelmann, President and CEO, PTC.

"Our differentiated product portfolio and growing SaaS capabilities position PTC to drive superior value for customers. Our market position coupled with our subscription model, which took us years of hard work to put in place, is highly resilient and positions us to continue to deliver strong double-digit ARR growth. Based on our strong performance in the first half of the year and the momentum we have created, we are raising our fiscal 2022 guidance for ARR and free cash flow," concluded Heppelmann.

Second Quarter 2022 Highlights ¹

Key operating and financial highlights are set forth below. For additional details, please refer to the Q2'22 earnings presentation and financial data tables that have been posted to the Investor Relations section of our website at investor.ptc.com. Revenue and, as a result, operating margin and earnings per share are impacted by revenue recognition under ASC 606.

- **ARR** was \$1,532 million at the end of Q2'22, up 11% compared to Q2'21. On a constant

CIMdata PLM Industry Summary

currency basis, ARR was \$1,564 million, up 13% compared to Q2'21, and above guidance of \$1,540 million to \$1,550 million. ARR at the end of Q2'22 includes a \$4 million reduction associated with discontinuing our business operations in Russia.

- **Cash flow** from operations was \$142 million, free cash flow was \$140 million, and adjusted free cash flow was \$158 million in Q2'22, compared to Q2'21 cash flow from operations of \$122 million, free cash flow of \$116 million, and adjusted free cash flow of \$130 million.
- **Revenue** was \$505 million in Q2'22 compared to \$462 million in Q2'21, representing growth of 9%. On a constant currency basis, year-over-year revenue growth in Q2'22 was 13%.
- **Operating margin** was 32% in Q2'22, compared to 22% in Q2'21. Non-GAAP operating margin in Q2'22 was 42%, compared to 37% in Q2'21. GAAP and non-GAAP operating margin expanded year over year due to higher revenue and operational discipline.
- **Earnings per share** was \$0.76 in Q2'22, compared to \$0.92 in Q2'21. Non-GAAP earnings per share in Q2'22 was \$1.39, compared to \$1.08 in Q2'21. GAAP EPS in Q2'22 was negatively impacted by a non-cash charge within other expense due to a decline in value of a publicly traded equity investment, which was sold in Q2'22.
- **Total cash and cash equivalents** as of the end of Q2'22 was \$307 million. Gross debt was \$1.28 billion as of the end of Q2'22. During Q2'22, we repaid \$175 million on our revolving credit facility and we had proceeds of \$43 million from the sale of the aforementioned equity investment.
- **Stock repurchases** were \$5 million in Q2'22, reflecting the settlement of repurchases that were initiated in Q1'22

¹ We include operating and non-GAAP financial measures in our operational highlights. The detailed definitions of these items and reconciliations of non-GAAP financial measures to comparable GAAP measures are included below and in the reconciliation tables at the end of this press release.

Fiscal 2022 and Q3'22 Guidance

"PTC delivered strong second quarter results that exceeded our expectations," said Kristian Talvitie, EVP and CFO, PTC. "Based on our Q2 performance and our forecast for the remainder of the year, we are raising our guidance for fiscal 2022 ARR, Free Cash Flow, and Revenue. Despite significant foreign exchange headwinds and the impact of exiting our business in Russia, our strong execution and operational discipline have helped us to deliver solid financial performance thus far in fiscal 2022, and we believe we are well positioned to deliver on our updated targets for the year."

| In millions except percentages | FY'22 Previous Guidance | FY'22 Guidance | FY'22 YoY Growth Guidance | Q3'22 Guidance |
|---|-------------------------|-------------------|---------------------------|-------------------|
| ARR at Constant Currency ⁽¹⁾ | \$1,625 - \$1,660 | \$1,640 - \$1,665 | 12% - 13% | \$1,580 - \$1,595 |
| Cash from Operations ⁽²⁾ | ~\$430 | ~\$430 | ~17% | ~\$110 |
| Free Cash Flow ^{(2),(3)} | ~\$400 | ~\$405 | ~18% | ~\$105 |

CIMdata PLM Industry Summary

| | | | | |
|--|-------------------|-------------------|---------|--------|
| Adjusted Free Cash Flow ^{(2),(3)} | ~\$450 | ~\$455 | ~16% | ~\$120 |
| Revenue | \$1,870 - \$1,975 | \$1,905 - \$1,975 | 5% - 9% | |

- (1) On a constant currency basis, using our FY'22 Plan foreign exchange rates (rates as of September 30, 2021) for all periods
- (2) FY'22 cash from operations and free cash flow guidance include expected restructuring payments of \$45 million (current estimate is \$40 million to \$45 million) and transaction-related payments of approximately \$5 million (already incurred in 1H'22), both of which are excluded from FY'22 adjusted free cash flow guidance; Q3'22 cash from operations and free cash flow guidance include expected restructuring payments of approximately \$10 million and transaction-related payments of approximately \$5 million (already incurred in 1H'22), both of which are excluded from Q3'22 adjusted free cash flow guidance
- (3) Free cash flow and adjusted free cash flow guidance are net of expected capex of approximately \$25 million (previously \$30 million) in FY'22 and \$5 million in Q3'22

Our FY'22 and Q3'22 financial guidance includes the assumptions below:

- We provide ARR guidance on a constant currency basis, using our FY'22 Plan foreign exchange rates (rates as of September 30, 2021) for all periods. Based on foreign exchange rate fluctuations as of the end of Q2'22, we currently expect a \$34 million headwind (previously \$13 million), relative to our constant currency ARR guidance for FY'22, and a \$32 million headwind, relative to our constant currency ARR guidance for Q3'22.
- We expect FY'22 organic churn to improve by approximately 100 basis points over FY'21.
- Due to invoicing seasonality, the majority of our collections occur in the first half of our fiscal year. Q4 is our lowest cash flow generation quarter.
- Costs are expected to ramp throughout FY'22 due to hiring and increased SaaS investments. At the mid-point of ARR guidance, we expect FY'22 GAAP operating expenses to increase approximately 3% to 4% (previously 4% to 5%) and non-GAAP operating expenses to increase approximately 2% to 3% over FY'21.
- FY'22 GAAP results are expected to include the items outlined below, totalling \$293 million to \$308 million (previously \$275 million to \$280 million), as well as their related tax effects:
 - \$160 million to \$170 million of stock-based compensation expense (previously \$178 million)
 - \$58 million of intangible asset amortization expense
 - \$35 million to \$40 million of restructuring charges (previously \$40 million to \$45 million)
 - \$35 million of FY'22 net realized losses from the sale of an equity investment (new)
 - Approximately \$5 million of transaction-related charges (new)
- Our FY'22 guidance does not reflect operating results of the Inland acquisition and the ITCI transaction, the impact of business combination accounting, incremental interest expense, or transaction-related charges not incurred as of the end of Q2'22.

CIMdata PLM Industry Summary

- Related to restructuring, for FY'22 we expect:
 - P&L charges of \$35 million to \$40 million (previously \$40 million to \$45 million), of which \$32 million was incurred in the first half of FY'22.
 - Cash outflows for restructuring payments of \$40 million to \$45 million (previously \$45 to \$50 million), of which \$28 million was paid in the first half of FY'22. We expect the majority of remaining payments to be made in Q3'22. Restructuring payments in FY'22 include \$5 million related to prior period actions, primarily the relocation of our headquarters in FY'19.
- Our FY'22 GAAP tax rate is expected to be approximately 20% and our non-GAAP tax rate is expected to be approximately 19%.
- FY'22 capital expenditures are expected to be approximately \$25 million (previously \$30 million).
- For the remainder of FY'22, we plan to focus on de-levering. In FY'23 and on a go-forward basis, assuming our Debt/EBITDA ratio is below 3x, our goal is to return approximately 50% of our free cash flow to shareholders via share repurchases.

PTC's Fiscal Second Quarter Results Conference Call

The Company will host a conference call to discuss results at 5:00 pm ET on Wednesday, April 27, 2022. To participate in the live conference call, dial (888) 330-2508 or (240) 789-2735 and provide the passcode 7328695, or log in to the webcast, available on [PTC's Investor Relations website](#). A replay will also be available.

Honeywell Delivers Strong First Quarter Results, Adjusted EPS Exceeds High End Of Guidance Range; Raises Full-Year Adjusted EPS Range By 10 Cents And Midpoint Of Sales Guidance

29 April 2022

Honeywell announced results for the first quarter that met or exceeded the company's guidance in a challenging operating environment. The company also raised the midpoint of its full-year sales guidance and increased its full-year adjusted earnings per share guidance.

The company reported first quarter organic sales growth of 1%, or 3% excluding the impact of lower COVID-mask volumes. Operating margin contracted by 260 basis points to 15.2% due to a \$183 million charge related to the substantial suspension of its operations in Russia, which translated to a loss of approximately \$30M in sales in the first quarter. Segment margin expanded by 10 basis points to 21.1%, or 40 basis points excluding the year over year Quantinuum impact, exceeding the high end of the company's guidance range by 10 basis points as a result of the company's commercial excellence efforts. Adjusted earnings per share¹ was \$1.91, down 1% year over year but one cent above the high end of the company's guidance range.

"Honeywell delivered a strong start to 2022, meeting or exceeding expectations in the first quarter despite considerable new macroeconomic challenges and the ongoing impact of supply chain constraints," said Darius Adameczyk, chairman and chief executive officer of Honeywell. "Organic sales growth was underpinned by double-digit growth in our commercial aviation aftermarket, building products, productivity solutions and services, and advanced materials businesses. Demand remained strong, with orders up 13% year over year and long-cycle orders growth of over 20%, which will help drive growth as we progress through 2022. Closing backlog was \$28.5 billion², up 9% year over year,

CIMdata PLM Industry Summary

led by strength in Aero, HBT, and PMT. Our strategic pricing actions allowed us to continue to stay ahead of the inflation curve, enabling us to expand segment margins and exceed the high end of our EPS guidance range. We also continued to leverage our strong balance sheet, deploying \$2.0 billion of total capital in the quarter with \$1.0 billion allocated to share repurchases as we executed on our updated commitment to buy back \$4 billion in shares in 2022. From an M&A perspective, we closed the acquisition of U.S. Digital Designs, a public safety communications hardware and software solutions provider."

Adamczyk continued, "As we look toward the rest of 2022, we are well positioned to navigate the macroeconomic environment and remain confident in our ability to execute on our rigorous operating principles and deliver strong results. We see solid recovery in our key commercial aerospace and energy end markets, and our ongoing investments in areas like our sustainable technology solutions business will provide additional sources of growth. Our operational excellence is enabling us to absorb the impact of external macroeconomic factors, and today I am pleased to announce that we are raising the midpoint of our sales guidance and improving our EPS outlook."

As a result of the company's first-quarter performance and management's outlook for the remainder of the year, full-year sales are now expected to be in the range of \$35.5 billion to \$36.4 billion, up 4% to 7% organically, or up 6% to 9% excluding the one-point impact of COVID-driven mask sales declines and one-point impact of lost Russian sales. Segment margin expansion³ is expected to be in the range of 10 to 50 basis points, including an approximate (30) basis point impact from investments in the Quantinuum business. Adjusted earnings per share³ is now expected to be in the range of \$8.50 to \$8.80, up 10 cents on both ends to reflect the updated share repurchase target announced at our investor day. Operating cash flow is expected to be in the range of \$5.7 billion to \$6.1 billion, and free cash flow is expected to be \$4.7 billion to \$5.1 billion. A summary of the company's full year guidance changes can be found in Table 1.

"As discussed in our recent investor day, we are turning our focus to the next phase of Honeywell's growth, including driving innovation that builds on our long-standing expertise in controls, automation, and software, as well as successful breakthrough initiatives," Adamczyk concluded. "We are executing on the capital deployment commitments we announced in March, which will help us achieve faster growth and innovation while delivering significant value to our shareholders now and in the future."

First-Quarter Performance

Honeywell sales for the first quarter were down 1% year over year on a reported basis and up 1% year over year on an organic basis. The first-quarter financial results can be found in Tables 2 and 3.

Aerospace sales for the first quarter were up 5% year over year on an organic basis. Both air transport aftermarket and business and general aviation aftermarket sales grew by over 25% in the first quarter as flight hours continued to improve. Commercial original equipment grew double digits in the first quarter as air transport original equipment returned to growth, partially offset by lower volumes in business and general aviation original equipment. Growth in commercial aerospace was partially offset by lower defense volumes. Segment margin contracted 160 basis points in the first quarter to 27.4%, driven by increased sales mix from lower margin original equipment products, cost inflation, and the absence of a one-time gain in 2021, partially offset by favorable pricing.

Honeywell Building Technologies sales for the first quarter were up 8% on an organic basis year over year driven by strength across the building products portfolio, partially offset by lower projects volume. Orders were up double digits as a result of strong demand for fire products and building management systems. Segment margin expanded 100 basis points to 23.5% due to pricing actions and favorable sales

CIMdata PLM Industry Summary

mix, partially offset by cost inflation.

Performance Materials and Technologies sales for the first quarter were up 6% on an organic basis year over year despite an approximately 1% headwind from Russia. Sales growth was led by strength across the advanced materials portfolio and demand for thermal solutions and lifecycle solutions and services within process solutions. This growth was partially offset by lower process technologies equipment within UOP. Orders increased double digits year over year, headlined by over 20% growth in process solutions. Segment margin expanded 230 basis points to 20.8% led by favorable pricing and sales mix, partially offset by cost inflation.

Safety and Productivity Solutions sales for the first quarter decreased 15% on an organic basis year over year due to lower personal protective equipment and warehouse automation volume. Excluding the impact of lower COVID-mask volumes, sales decreased by 6% in the quarter. However, productivity solutions and services, advanced sensing technologies, and gas detection sales all grew at double-digit rates in the quarter, highlighting the strength in much of the underlying SPS portfolio. Segment margin expanded 20 basis points to 14.5% led by favorable pricing and sales mix, partially offset by lower volume leverage and cost inflation.

Conference Call Details

Honeywell will discuss its first-quarter results and updated full-year guidance during an investor conference call starting at 8:30 a.m. Eastern Daylight Time today. A live webcast of the investor call as well as related presentation materials will be available through the Investor Relations section of the company's website. A replay of the webcast will be available for 30 days following the presentation.

Atos - Q1 2022

27 April 2022

Atos, a global leader in digital transformation, high-performance computing and information technology infrastructure, announces its revenue of the first quarter of 2022.

Rodolphe Belmer, Chief Executive Officer of Atos, declared: *“Revenue in Q1 was in line with our expectations, and fully consistent with the quarterly sequence embedded in our 2022 guidance. Albeit negative, revenue growth at constant currency improved sequentially, driven by an improvement in our Tech Foundations business while Digital and Cybersecurity remained well into positive territory.*

Atos actively laid the foundations of its transformation, with the swift adaptation of its governance under the helm of a strengthened senior executive team, while continuing to capitalize on its core expertise. Gartner recently ranked Atos the new number one company in managed security services worldwide. We also unveiled our new exascale-class BullSequana supercomputer, bolstering our position as the undisputed European leader in supercomputing.

We continued to press ahead with large-scale recruitment in our growth activities and exceeded our Q1 target with 8,200 gross new hires, mainly in offshore and nearshore locations.

These are encouraging signs that the Group is starting to reap the benefits of the energetic turnaround plan engaged since the beginning of the year. I am confident that we are taking the right steps to position Atos on a long-term value creation path.”

Q1 2022 revenue: -0.6% at constant currency, -2.4% organically

Atos' consolidated revenue was € 2,747 million in Q1 2022, up +2.1% on a reported basis, and down -0.6% at constant currency. On an organic basis, revenue decreased by -2.4%. Q1 2022 showed a significant sequential improvement compared to Q4 2021, where revenue contracted -5.4% at constant

CIMdata PLM Industry Summary

currency and -6.9% organically excluding the impact of the UK BPO contract reassessment.

The acquisition of Cloudreach was finalized on January 3rd, leading to full consolidation and reporting under the Americas as well as Northern Europe & APAC regions since that date. In total, acquisitions contributed +1.7% to the Group's revenue growth. Foreign exchange contributed +2.7%, mainly reflecting the appreciation of the American Dollar and the Pound Sterling against the Euro over the period.

Q1 2022 revenue by Regional Business Unit

Under Atos' new simplified governance, regional business units have been modified. The table below presents pro forma figures for Q1 2021 at constant currency. A reconciliation between former regional business units and the new ones is presented in the appendix of this press release.

| <i>In € million</i> | Q1 2022 | Q1 2021* | Change at constant currency |
|-------------------------------|--------------|--------------|-----------------------------|
| Americas | 647 | 637 | +1.5% |
| Northern Europe & APAC | 821 | 841 | -2.3% |
| Central Europe | 617 | 629 | -1.8% |
| Southern Europe | 601 | 607 | -1.0% |
| Rest of the World | 60 | 51 | +18.3% |
| Total | 2,747 | 2,765 | -0.6% |
| <i>* At constant currency</i> | | | |

Americas revenue grew by +1.5% at constant currency, driven by the contribution of recent acquisitions in multi-cloud services (Cloudreach) and in product lifecycle management (Processia). Growth in Digital activities, in particular with the ramp-up of a large contract in Healthcare & Life Sciences, was offset by a decrease in Unified Communication & Collaboration activities.

Northern Europe & APAC revenue decreased by -2.3% at constant currency. Strong business growth in Manufacturing and Healthcare & Life Sciences was offset by a decrease in other industries, especially Telecom, Media & Technology, which suffered from a volume reduction in its "lab as a service" activity, and in Financial Services & Insurance, following the reassessment of the large BPO contract in Q4 2021, which effect was mitigated by the ramp up of other contracts.

Central Europe revenue decreased by -1.8% at constant currency, driven by a significant decrease in

CIMdata PLM Industry Summary

Telecom, Media & Technology due to the ramp down of contracts with two large telecom customers. Most of the other industries delivered growth, in particular Resources & Services with the start of new contracts for a global foodservice retailer and a leading logistic company.

Southern Europe revenue decreased by -1.0% at constant currency. The situation was contrasted across industries, with strong growth in Healthcare & Life Sciences' digital activities, as well as in Manufacturing, driven by the ramp-up of a large automotive contract and the catch up on High-Performance Computing deals that slipped from 2021 to 2022. Conversely, revenue decreased in Public Sector & Defense due to lower High-Performance Computing sales, in Financial Services & Insurance due to the termination of a contract with a major Spanish bank, and in Telecom, Media & Technology, due to lower hardware and software resale.

Rest of the World revenue grew strongly, by +18.3% at constant currency, supported by business related to the Beijing Olympics and a strong growth across most industries.

Q1 2022 revenue by Industry

The situation was contrasted across Industries with Manufacturing, Resources & Services and Healthcare & Lifesciences recording growth, while revenue decreased in Financial Services & Insurance, Public Sector & Defense and Telecom, Media & Technology.

| <i>In € million</i> | Q1 2022 | Q1 2021* | Change at constant currency |
|--------------------------------|--------------|--------------|-----------------------------|
| Manufacturing | 521 | 494 | +5.6% |
| Financial Services & Insurance | 539 | 563 | -4.3% |
| Public Sector & Defense | 573 | 589 | -2.7% |
| Telecom, Media & Technology | 347 | 386 | -10.1% |
| Resources & Services | 412 | 406 | +1.6% |
| Healthcare & Life Sciences | 355 | 327 | +8.4% |
| Total | 2,747 | 2,765 | -0.6% |
| <i>* At constant currency</i> | | | |

Manufacturing revenue grew by +5.6% at constant currency, rebounding from a low Q1 2021,

CIMdata PLM Industry Summary

supported by the acquisition of Processia in June 2021 and by increased volumes in the cloud computing sector.

Financial Services & Insurance revenue decreased by -4.3% at constant currency, following the reassessment of the large BPO contract conducted in Q4 2021, and the termination of a contract with a major Spanish Bank.

Public Sector & Defense revenue decreased by -2.7% at constant currency, due to lower High-Performance Computing sales and the ramp-down of digital workplace projects with a US State.

In **Telecom, Media & Technology**, revenue contracted by -10.1% at constant currency, driven by a volume reduction in the “lab as a service” activity, as well as contracts ramp-down in telecoms.

Resources & Services revenue grew by +1.6% at constant currency as solid growth in transport & logistics compensated a decrease in the energy sector.

Healthcare & Life Sciences posted a strong +8.4% growth at constant currency, with solid growth in most regions.

Commercial activity

Order entry was € 2.0 billion in Q1 2022, representing a book to bill ratio of 72%, compared to 96% in Q1 2021. This low level is not representative of revenue trends expected for the balance of the year, as it is primarily the reflect of (i) the timing of contract renewals, as significant renewals took place in prior quarters, including in Q1 2021 and (ii) a decrease in the average duration of new contracts.

Full backlog was € 23.3 billion, decreasing by € 0.7 billion at constant currency compared to the end of 2021 and representing 2.1 years of revenue. The **full qualified pipeline** reached € 6.9 billion, broadly stable compared to the end of 2021 at constant currency.

Human resources

Total headcount stood at **111,355** at the end of March 2022, up +2.0% compared to 109,135 at the end of December 2021 (+1.4% organically).

In the first quarter of 2022, Atos **hired 8,234 new employees** (gross) mainly in Digital and BDS, and predominantly in offshore and nearshore countries, and welcomed Cloudreach’s 742 employees.

2022 full-year objectives confirmed

Atos confirms its 2022 full-year objectives and reiterates that its performance will be back-end loaded towards the second half of the year.

While the first half of the year will be impacted by the continued decline in classic IT services, combined with personnel cost inflation and supply chain tensions, we target an improvement in the second half, with revenue growth at constant currency turning positive, and an uptick in operating margin. This improvement will be the reflect of performance optimization actions already implemented, an easier comparison basis and a more favorable revenue mix.

Free cash flow should improve compared to 2021, and will largely depend on operating margin delivery and further working capital fluctuations.

For the full-year, Atos expects:

- Revenue growth at constant currency of -0.5% to +1.5%;
- Operating margin of 3% to 5%;
- Free cash flow between €-150 million and € 200 million.

Atos confirmed managed exit of Russia-based operations

CIMdata PLM Industry Summary

Atos condemns the war in Ukraine. On April 5, the Group confirmed the managed exit of its Russia-based operations, that generated c. 0.4% of Group revenue in 2021. Atos delivers critical digital services to some of its global clients out of Russia.

The feasibility of exiting Russia has required significant planning in terms of implications for business operations and for Atos employees based there. Atos is focused on managing the impact on its employees as part of an orderly exit. In support of its global clients, the Group is moving services currently delivered from Russia to other countries, including India and Turkey.

Capgemini delivers record growth of 17.7% in Q1 2022

28 April 2022

The Capgemini Group reported Q1 2022 revenues of €5,167 million, up 21,0% year-on-year at current exchange rates and 17.7% at constant exchange rates*.

Aiman Ezzat, Chief Executive Officer of the Capgemini Group, said: *“Capgemini delivered an excellent start of the year with a further growth acceleration versus the previous quarter. This is the fourth consecutive quarter with double digit growth. It clearly demonstrates the change of the Group’s growth profile and our ability to gain market share.*

We are taking full advantage of the strong alignment of our capabilities and offerings portfolio with the structural demand for digital transformation from our clients. Our digital transformation capabilities coupled with our strong industry focus enable us to be positioned as our clients’ key partner for their most ambitious transformations.

Our brand is strong. We attract and develop the best talent in a very competitive market. We increased our global workforce by 16,000 in the last quarter to reach 340,000 employees worldwide.

I also have a special thought for our Ukrainian colleagues, who are showing exceptional courage and resilience. I would like to thank all our employees around the world, particularly in Poland and Romania, for their great solidarity in these difficult times.”

The Group’s activity experienced a further acceleration in Q1 2022, with growth of +17.7% at constant exchange rates*. The pace of growth has indeed strengthened compared to the 12.5% observed in Q4 2021, across all regions and sectors. Organic growth (i.e. adjusted for Group scope and exchange rates) reached +16.3%, up 3.1 points on Q4 2021.

This strong momentum was primarily driven by growth in Cloud and Data, as well as in the areas of Intelligent Industry and Customer First. Thanks to investment in these fields, the Group is able to capture the structural acceleration in client demand for digital transformation.

OPERATIONS BY REGION

All Group regions reported double-digit growth at constant exchange rates in Q1 2022, reflecting strengthened underlying organic momentum compared to Q4 2021 as observed in almost all regions.

The United Kingdom and Ireland region (12% of the Group revenues in Q1 2022) again enjoyed a particularly robust quarter with revenue growth of +21.3% at constant exchange rates, driven primarily by the Public Sector and Consumer Goods.

The North America (29% of Group revenues) and Rest of Europe (30% of Group revenues) regions grew at constant exchange rates +16.8% and +16.0% respectively. Those regions notably benefited from a stronger growth momentum in Financial Services.

France (20% of Group revenues) reported revenue growth of +11.1% at constant exchange rates, with a

CIMdata PLM Industry Summary

robust momentum in the Manufacturing and Consumer Goods sectors.

Finally, revenues in the Asia-Pacific and Latin America region (9% of Group revenues) increased sharply, by +42.6% at constant exchange rates, as Group acquisitions in the region added to strong organic growth.

This regional momentum was fueled by solid sector trends that remain relatively uniform on a global scale. All sectors posted improved growth rates on Q4 2021, in particular the Financial Services sector, as well as the Energy and Utilities sector which returned to growth after several quarters of slight contraction.

OPERATION BY BUSINESS

All of the Group's businesses also accelerated, as Q1 annual growth rates outpaced those of Q4.

Strategy & Transformation (8% of Group revenues in Q1 2022) and Applications & Technology (63% of Group revenues and Capgemini's core business) services continue to benefit from the broadbased demand for digital transformation, posting growth at constant exchange rates of +32.1% and +20.4%, respectively.

Operations & Engineering total revenues* (29% of Group revenues) grew +12.7% at constant exchange rates. This performance largely reflects strong growth in Engineering services. Infrastructure and Cloud services and Business Services continued to enjoy their solid underlying momentum observed at the end of 2021.

HEADCOUNT

At March 31, 2022, the Group's total headcount stood at 340,700, up +24% year-on-year. Workforce increased by 31% in offshore centers to 198,900 (58% of the total headcount) and by 16% onshore.

BOOKINGS

Bookings totaled €5,473 million in Q1 2022, up 26% year-on-year at constant exchange rates. The book-to-bill ratio also improved to 1.06, compared to 0.98 in Q1 2021.

SITUATION IN UKRAINE AND RUSSIA

As early as the end of 2021, Capgemini has proactively taken measures to ensure the safety of its teams and their families in Ukraine, and has implemented continuity plans for its clients. The Group continues to closely monitor developments in the conflict and to support its employees.

In Russia, the Group has clearly stated its intention to discontinue its presence – which is very limited in size and relates to very few international brands present in the country – while respecting the rights of its employees and in full compliance with the applicable legislation.

Capgemini's exposure to Ukraine and Russia combined is very limited with significantly less than 1% of its revenues and less than 1% of its staff. At this stage, the Group has not identified any impact of this conflict on client demand.

SHARE BUYBACKS

In line with its capital allocation and active share capital management policy, the Group bought back shares totaling €287 million in the first quarter.

OUTLOOK

As announced last February, the Group's financial targets for 2022 are:

- Revenue growth of +8% to +10% at constant currency;

CIMdata PLM Industry Summary

- Operating margin of 12.9% to 13.1%;
- Organic free cash flow above €1,700 million.

The inorganic contribution to growth should be 1 point at the lower end of the target range and 2 points at the upper end.

CONFERENCE CALL

Aiman Ezzat, Chief Executive Officer, and Carole Ferrand, Chief Financial Officer, will present this press release during a conference call in English to be held today at 8.00 a.m. Paris time (CET). You can follow this conference call live via webcast at the following [link](#). A replay will also be available for a period of one year.

All documents relating to this publication will be placed online on the Capgemini investor website at <https://investors.capgemini.com/en/>.

PROVISIONAL CALENDAR

May 19, 2022 – Shareholders' Meeting

July 28, 2022 – Publication of H1 2022 results

It is recalled that the payment schedule for the dividend – the amount of which (€2.40 per share) will be submitted for approval to the Shareholders' Meeting – is as follows:

June 1, 2022 – Ex-dividend date on Euronext Paris

June 3, 2022 – Payment of the dividend

Addnode Group - Interim report 1 January — 31 March 2022

29 April 2022

STRONG START TO THE YEAR AND STRATEGIC ACQUISITION IN THE USA

FIRST QUARTER SUMMARY, JANUARY – MARCH 2022

- Net sales increased by 28 per cent to SEK 1,326 m (1,036), of which 11 per cent was organic. Currency-adjusted organic growth was 7 per cent.
- EBITA increased to SEK 180 m (107), and the EBITA margin increased to 13.6 per cent (10.3). EBITA adjusted for a SEK 24 m capital gain from a property sale increased to SEK 156 m (107), an adjusted EBITA margin of 11.8 per cent (10.3).
- Operating profit rose to SEK 134 m (73), and the operating margin widened to 10.1 per cent (7.0).
- Profit for the period increased to SEK 106 m (54).
- Earnings per share increased to SEK 3.17 (1.62).
- Cash flow from operating activities increased to SEK 242 m (150).
- Acquisition of Claytex Services Ltd. of the UK with net sales of SEK 25 m.
- Acquisition of DESYS GmbH of Germany with net sales of approximately SEK 170 m.
- Acquisition of Microdesk, with net sales of USD 110 m (approx. SEK 1,000 m), with operations in the USA and UK.
- The Board of Directors is proposing a 4:1 share split.

CIMdata PLM Industry Summary

SUMMARY OF SIGNIFICANT EVENTS AFTER THE END OF THE REPORTING PERIOD

- No significant events have occurred since the end of the period.

Hexagon Interim Report 1 January - 31 March 2022

29 April 2022

- Operating net sales increased by 19 per cent to 1,163.4 MEUR (977.9). Using fixed exchange rates and a comparable group structure (organic growth), net sales increased by 10 per cent
- Adjusted operating earnings (EBIT1) increased by 24 per cent to 335.1 MEUR (271.3)
- Earnings before taxes, excluding adjustments, amounted to 329.3 MEUR (263.7)
- Net earnings, excluding adjustments, amounted to 270.0 MEUR (216.2)
- Earnings per share, excluding adjustments, amounted to 9.9 Euro cent (8.4)
- Operating cash flow decreased to 164.3 MEUR (211.9)

Wipro - Results for the Quarter and Year ended March 31, 2022 under IFRS

29 April 2022

Wipro Limited announced financial results under International Financial Reporting Standards (IFRS) for the quarter and year ended March 31, 2022.

Highlights of the Results

Results for the Quarter ended March 31, 2022:

- Gross Revenue was ₹208.6 billion (\$2.7 billion¹), an increase of 28.4% YoY
- IT Services Segment Revenue was at \$2,721.7 million, an increase of 3.1% QoQ and 26.4% YoY
- Non-GAAP² constant currency IT Services segment revenue increased by 3.1% QoQ and 28.5% YoY
- IT Services Operating Margin³ for the quarter was at 17.0%, a decrease of 60 bps QoQ
- Net Income for the quarter was ₹30.9 billion (\$406.9 million¹), an increase of 4.0% QoQ and 3.9% YoY
- Earnings Per Share for the quarter was at ₹5.64 (\$0.07¹), an increase of 4.6% YoY
- Operating Cash Flow was at ₹23.3 billion (\$307.3 million¹), which is 75.5% of Net Income

Results for the Year ended March 31, 2022:

- Gross Revenue was ₹790.9 billion (\$10.4 billion¹), an increase of 27.7% YoY
- IT Services Segment Revenue was at \$10,355.9 million, an increase of 27.3% YoY
- Non-GAAP² constant currency IT Services Segment Revenue increased by 26.9% YoY
- IT Services Operating Margin³ for the year was at 17.7%, a decrease of 254 bps YoY
- Net Income for the year was ₹122.2 billion (\$1,610.5 million¹), an increase of 13.2% YoY
- Earnings Per Share for the year was at ₹22.35 (\$0.29¹), an increase of 17.0% YoY
- Operating Cash Flow was at ₹110.8 billion (\$1,460.4 million¹), which is 90.7% of Net Income
- Our closing strength of employees for IT Services was at 243,128, an increase of 45,416

CIMdata PLM Industry Summary

employees on a YoY

Performance for the Quarter and Year ended March 31, 2022

Thierry Delaporte, CEO and Managing Director said, “We have had an outstanding year, finishing with \$10.4 Bn in revenues, and an industry-leading growth of 27% year on year. This is our sixth straight quarter of strong revenue growth at or over 3%. We are excited with the addition of Rizing and the CAS Group to Wipro’s service offerings. With all markets, sectors and Global Business Lines now growing in double-digits year on year, we have a strong foundation for next year’s growth.”

Jatin Dalal, Chief Financial Officer said, “Our efforts on client mining have resulted in an addition of eight customers in more than \$100 Mn bucket on YoY basis. We delivered operating margins of 17.7% for the year, after significant investments on solutions, capabilities and talent. Net Income for the year was highest ever at \$1.6 Bn and delivered robust growth in EPS of 17.0% YoY.”

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 = ₹75.87, as published by the Federal Reserve Board of Governors on March 31, 2022. However, the realized exchange rate in our IT Services business segment for the quarter ended March 31, 2022 was US\$1= ₹75.91
2. Constant currency revenue for a period is the product of volumes in that period times the average actual exchange rate of the corresponding comparative period
3. IT Services Operating Margin refers to Segment Results Total as reflected in IFRS financials

Outlook for the quarter ending June 30, 2022

We expect Revenue from our IT Services business to be in the range of **\$2,748 million to \$2,803 million***. This translates to a sequential growth of **1% to 3%**.

*Outlook is based on the following exchange rates: GBP/USD at 1.34, Euro/USD at 1.12, AUD/USD at 0.73, USD/INR at 75.26 and CAD/USD at 0.79

Capital Allocation

The interim dividend of ₹1 and ₹5 declared by the Board at its meetings held on January 14th and March 25th, 2022 shall be considered as the final dividend for the financial year 2021-22.

IT Services

Wipro continued its momentum in winning large deals with our customers as described below:

- A US-based global healthcare company will leverage Wipro FullStride Cloud Services to engineer products for cloud and digital technologies based on a Product Oriented Delivery (POD) model.
- A US-based multinational technology company has renewed its existing contract to curate geospatial information that will enable the customer with evaluations and recommendations on map modelling processes.
- A leading US-based global benefits and payroll administration company has awarded Wipro a transformational business process services contract to optimize costs in health & wealth benefits and customer care.
- A multinational telecommunications network company, headquartered in the Nordics, has awarded Wipro a contract to drive transformation and digitalization of business processes that enhances customer value through high quality service delivery.

CIMdata PLM Industry Summary

- A leading Europe-based provider of transport solutions has partnered with Wipro to transform their digital workplace, supporting the shift towards sustainable transport solutions.

Digital Services Highlights

We continue to see increasing traction in digital oriented and other strategic deals as illustrated below:

- A leading global cosmetics company has selected Wipro to rollout their SAP S/4HANA in a region that will drive their business growth. This transformation will enable the customer to harmonize their business processes, accelerate time to market, innovate, and enhance user experience.
- A leading Asia-based multinational automotive electronics supplier has selected Wipro to develop the engineering blueprint for their next generation software defined vehicle platform using Wipro's Cloud Car architecture.
- Designit has been selected by a multinational technology conglomerate to design a digital onboarding experience and support hybrid working needs of employees of a large company in the mobility sector.
- A Smart City based in the Middle East has selected Wipro to build a secure, reliable on-demand 5G network using autonomous drones for the high-bandwidth requirements of residents, businesses, and visitors.
- A Europe based financial services company has renewed its Data Center and cloud infrastructure management contract with Wipro to support its transformation to a Hybrid Cloud model.
- A government body based in the Middle East has selected Wipro as the digital partner to build a data-led AI marketplace that will bring the local talent, government and private sector together.
- Wipro is engaged as the primary partner to design and develop hardware for a series of RUs (radio units) to enable end to end O-RAN 5G solution deployment for service provider customers with one of the leading US based telecommunications networking provider.

IT Products

- IT Products segment revenue for the quarter was ₹1.2 billion (\$15.8 million¹)
- IT Products segment results for the quarter was a loss of ₹0.02 billion (\$0.29 million¹)
- IT Products segment revenue for the year was ₹6.2 billion (\$81.4 million¹)
- IT Products segment results for the year was a profit of ₹0.12 billion (\$1.5 million¹)

India business from State Run Enterprises (ISRE)

- India SRE segment revenue for the quarter was ₹1.9 billion (\$24.6 million¹)
- India SRE segment results for the quarter was a profit of ₹0.17 billion (\$2.3 million¹)
- India SRE segment revenue for the year was ₹7.3 billion (\$96.2 million¹)
- India SRE segment results for the year was a profit of ₹1.2 billion (\$15.5 million¹)

CIMdata PLM Industry Summary

WIPRO LIMITED TO ANNOUNCE RESULTS FOR THE FOURTH QUARTER AND YEAR ENDED MARCH 31, 2022 ON APRIL 29, 2022

22 April 2022

Wipro Limited a leading global information technology, consulting, and business process services company, will announce results for the fourth quarter and year ended March 31, 2022, on Friday, April 29, 2022, after stock market trading hours in India. The results will be available in the Investors section of the company's website at www.wipro.com/investors/

At 7:30 PM IST* (10:00 AM US Eastern time) following the results announcement, the senior management will discuss the company's performance for the quarter and full year answer questions sent by 6:30 PM IST* (9:00 AM US Eastern time)

to: iyer.aparna@wipro.com or abhishekkumar.jain@wipro.com

The audio from the conference call will be available online through a webcast and can be accessed at <https://links.ccwebcast.com/?EventId=WIP290422>

Dial in details for the conference call are as below

| | |
|---|--------------------------------------|
| Time | 7.30 PM - IST* (10:00 AM-ET#) |
| <p>Click here for the diamond pass link</p> <p>Diamond Pass™ is a Premium Service that enables you to connect to your conference call without having to wait for an operator. If you have a Diamond Pass™ click the above link to associate your pin and receive the access details for this conference, if you do not have a Diamond Pass™ please register through the link and you will receive your Diamond Pass™ for this conference.</p> | |
| Primary Access Toll Number | +91 22 6280 1120 +91 22 7115 8021 |
| US Toll Free Number US Standby Toll Number | 1 866 746 2133 1 323 386 8721 |
| UK Toll Free Number UK Standby Toll Number | 0 808 101 1573 44 203 478 5524 |
| No passcode Required | |

Please dial any of the above numbers five to ten minutes ahead of schedule. The operator will provide instructions on asking questions before and during the call.

The replay of the call will be available two hours after the end of the call on following numbers

Call Playback Numbers:

CIMdata PLM Industry Summary

| | Phone Number | Passcode / Conference ID | Replay Dates |
|--------------------|------------------------------------|--------------------------|--------------------------|
| India Toll | +91 22 71945757 +91 22 66635757 | Access Code: 947765# | 29-April-22 to 28-May-22 |
| International Toll | +1 8332898317 | Access Code: 947765# | 29-April-22 to 28-May-22 |

Velo3D to Announce First-Quarter 2022 Results on May 10, 2022

21 April 2022

Velo3D, Inc. — a leading additive manufacturing technology company for mission-critical metal parts, announced that it will release its first quarter 2022 financial results after the market close on Tuesday, May 10, 2022.

The company will host an earnings conference call and webcast to discuss its financial results at 2:00 p.m. Pacific Time / 5:00 p.m. Eastern Time the same day. The U.S. dial-in for the call is (877) 704-2771 and (201) 689-8732 for non-U.S. callers. Please ask to be joined to the Velo3D call.

The live webcast of the call can be accessed from the Events page of the Investor Relations section of Velo3D’s website at ir.velo3d.com, along with the company’s earnings press release and presentation which will be posted prior to the start of the conference call.

Implementation Investments

Advancing Its Digital Factory Program, Faurecia Optimizes Automated Guided Vehicle Logistics with Dassault Systèmes’ 3DEXPERIENCE Platform

27 April 2022

Dassault Systèmes announced that Faurecia, a company that is part of the Group Forvia, one of the largest automotive suppliers in the world, expanded its use of Dassault Systèmes’ 3DEXPERIENCE platform to optimize its automated guided vehicle inbound logistics. Faurecia is addressing the increasing complexity of the supplier manufacturing environment by improving logistics flow, boosting efficiency, reducing costs, and delivering products to customers on time in a more sustainable way.

Faurecia is using Dassault Systèmes’ “On Target Vehicle Launch” industry solution experience based on the 3DEXPERIENCE platform to determine and validate the best logistics scenarios for make-to-order assembly lines. Faurecia can simulate and visualize AGV routing with regards to work stations, resource availability, assembly constraints and variabilities, line balancing and flow in one virtual twin experience, before starting production for a customer.

Automotive supplier manufacturing environments are increasingly complex, producing a greater number of product variants for simultaneous programs under tighter deadlines, while managing last-minute engineering changes in factories that are more and more automated.

CIMdata PLM Industry Summary

Optimizing AGV routing is a key step in Faurecia's digital factory program, which was initiated by its Clean Mobility business and now is used to transform the production processes of seats, interiors and electronics for connected, personalized and predictive automotive "cockpits of the future" in response to these trends. With the 3DEXPERIENCE platform, Faurecia can synchronize machines, optimize supplies, reduce the layout footprint of a shop floor, shorten cycle times, and improve energy and manufacturing efficiency, with full digital continuity across products, processes and a plant.

"We've committed to being carbon neutral by 2030, starting by reducing energy consumption in our factories by 15%. This means simultaneous engineering on new products and processes and reducing waste in terms of logistics flows," said Patrick Brionne, Group Industrial strategy & ME director, Faurecia. "With the 3DEXPERIENCE platform we are optimizing our AGV routing and boosting our production performance from day one. Already, we've identified a bottleneck before starting production and reworked the process design, layout and AGV flow to ensure that we can supply parts to our customer as promised."

"Suppliers must be able to introduce new products, launch new programs, and streamline production processes quickly and sustainably. AGV flow plays a key role in gaining a competitive advantage. The 3DEXPERIENCE platform enables suppliers like Faurecia to improve logistics at existing factories, and plan for future ones that are even more efficient," said Laurence Montanari, Vice President, Transportation & Mobility Industry, Dassault Systèmes.

Allbirds Selects Centric PLM™ to Track CO2e Emissions Alongside Margins

26 April 2022

Allbirds, the global lifestyle brand that innovates with naturally derived materials to make better footwear and apparel products in a better way, has selected Centric Software®'s Product Lifecycle Management (PLM) solution. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source and sell products such as apparel, footwear, sporting goods, furniture, home décor, cosmetics, food & beverage and luxury to achieve strategic and operational digital transformation goals.

Allbirds is based in San Francisco, California and was founded in 2015. A certified B Corp, the environment is at the forefront of their business. With products made with New Zealand wool, a sustainable resource, and other natural materials, Allbirds has retail stores worldwide and ships to 35 countries. The company has grown by leaps and bounds in the six years of its existence.

Joe Vernachio, Chief Operating Officer at Allbirds, says, "As we expand the breadth of our product offerings and the frequency of new launches, we need a more robust control center on the front end of our business." He explains his philosophy about making the right products. "The only thing that matters is the product until the product is there. So first, you have to make things people want. You have to have a relentless flow of compelling product. And once you do, then the marketing, the supply chain, the distribution, and all that other stuff counts. We are laser focused on creating a very compelling product pipeline. And to do that, we need more control and structure around how we bring product through the design, development, and commercialization process.

The company has about 4,000+ SKUs. Vernachio says, "We have the complexity of operations in North America, Asia, and Europe, all selling our product. We have offices for design and product in Portland, and a sourcing liaison in Vietnam. We have people working remotely. Keeping everybody on track through the product development process is really critical. We've been successful with how we're doing it—which is a little bit homegrown, and bits and pieces of other systems that we're using—but it's not

CIMdata PLM Industry Summary

integrated, and not anything that we could scale to the future.”

Allbirds decided they needed PLM to continue to grow. Says Vernachio, “We required a common source of truth for the product that’s coming through the pipeline. We wanted one place to go to find product in the line and details like color, price, technical specs, and where it is in the development process.”

“We searched for a system that we didn’t have to over configure to get started. The sweet spot was a system where we could start relatively small in its implementation and get good value out of it, then scale with it as we grow.” Vernachio describes their selection process, “We had as many as 12 vendors on the list. We cast the net as wide and as far as we could, then narrowed it down. With some, we had quick 30-minute calls but with others we had full demos. We got it down to two where ultimately, Centric won out.”

The willingness and capability of Centric to work on Allbirds’s groundbreaking approach to carbon calculations was a factor. “Right next to margin, we will be calculating our CO₂e emissions. So those two numbers will be locked together through the development process,” says Vernachio. “I think normally, people configure PLM to look at margins—putting raw material cost in BOMs, calculating consumptions all the way through to what you think your FOB will be. For us, the carbon score is first and the margin is second. So, before we even look at the margin, we will look at whether or not we’re achieving the carbon score that we set out for ourselves.” He confirms, “Centric was very willing to work with us on finding new and fundamental ways of calculating our CO₂e through the entire process, and not have it be this bolt-on after the fact.”

Getting down to the details, Vernachio says, “Every raw material will have a CO₂e value associated with it. And every step in the manufacturing process that creates CO₂e consumption—the factories that we source materials from, the transportation—will have a CO₂e score. Then you’ll evaluate, just like you do with the margin, going down the list, and you might say, ‘look what that material does to our CO₂e score; we’ve got to switch it out.’”

Vernachio says that Allbirds is very committed to the implementation of Centric PLM. “We are putting our legacy process into PLM. I think we’re going to see really great adoption. And I also think that how we configure the carbon calculation has the potential to lead the industry. We are happy to freely share our carbon calculator with other brands. We hope to be a resource for any of Centric’s customers that want to calculate their CO₂e because we’re not in competition to reduce CO₂e. We should all be supporting each other to try to make it as low as possible.”

President and CEO of Centric Software, Chris Groves, says, “I am proud to be partnering with such an environmentally forward company who could very well change the standard for how companies calculate CO₂e emissions. Centric is truly committed to enabling the industry to be more sustainable through innovation, developing new features and integrations. We can’t wait to learn more from the leader in sustainable footwear as we move forward together.”

Companies Across North America Turning to SAP for Cloud Transformation

29 April 2022

SAP SE announced that companies across North America chose SAP in the first quarter of 2022 to help drive their cloud transformations and future-proof their businesses, driving solid cloud bookings growth performance and current cloud backlog for the region.

“SAP experienced outstanding cloud revenue growth in North America last quarter thanks to companies of all sizes and industries betting more and more on the RISE with SAP solution and our flagship cloud

CIMdata PLM Industry Summary

solutions,” said DJ Paoni, President, SAP North America. “We also saw strong growth in SAP Business Technology Platform and strong performance in our intelligent spend management and HXM lines of business. This momentum, coupled with stability in our support business, is driving more predictable revenue to new heights.”

North American companies that chose SAP in the first quarter of 2022 include **PetSmart Inc.**, **Rivian Automotive Inc.** and **The Chemours Company**, among many others. Others, such as **Chipotle Mexican Grill** and **The Kroger Company**, continued to place their confidence in software from Qualtrics, contributing to its strong growth.

Microsoft Corporation announced it would become the first public cloud provider to adopt the RISE with SAP solution and SAP S/4HANA to transform the deployment its own SAP ERP software.

Other highlights include:

- **TELUS Communications Inc.** is a dynamic, world-leading communications technology company with US\$17 billion in annual revenue and 17 million customer connections spanning wireless, data, IP, voice, television, entertainment, video and security. TELUS will be using RISE with SAP to transition its ERP to the cloud. By using SAP S/4HANA, business process intelligence solutions and SAP Business Technology Platform, TELUS aims to unlock the full potential of its SAP S/4HANA transformation. SAP will help TELUS further meet its customer needs and improve experience as well as support its growth ambitions.
- **Zero Motorcycles Inc.** is a global leader in the production of high-performance electric motorcycles and powertrains. To help scale its manufacturing operations to meet rising demand, Zero Motorcycles selected SAP to serve as its digital core in an end-to-end replacement of its legacy technology systems. With the implementation of SAP S/4HANA using the RISE with SAP solution, as well as solutions such as the SAP Ariba Supply Chain Collaboration solution, Zero Motorcycles expects SAP to serve as the foundation of its future scale and growth ambitions.

Defending America’s Cup champions select Siemens Xcelerator to fast-track yacht development

28 April 2022

Siemens Digital Industries Software today announced that defending America’s Cup winners, Emirates Team New Zealand, has selected Siemens Xcelerator portfolio of software for the design and development of its next racing yacht. Seeking to extend their winning streak to three successive victories, the New Zealand-based team is expected to benefit from turning digital twin design concepts and iterations into a race winning yacht more quickly and seamlessly, thereby saving time in design and rework.

Siemens is an official supplier partner to the team and its software will allow Emirates Team New Zealand to move through design iterations of the yacht more quickly and overcome design problems prior to construction as the team prepares to defend their title. Siemens' NX™ computer-aided design software will be used to model the entire yacht, including the layout of all the mechanical, electrical and hydraulic systems.

“The America’s Cup is the oldest sporting trophy in the world, and one of most technically challenging. The yachts that race this famous regatta are precise instruments of engineering that are designed with efficiency to extract optimum performance from the wind,” said Dan Bernasconi, Head of Design, Emirates Team New Zealand. “As defending champions of the America’s Cup, we wanted to build on

CIMdata PLM Industry Summary

our design fundamentals and also create process efficiencies that help us maximise our most precious commodity... which is time.“

“The beauty of designing a digital twin of our yacht is the confidence that when we build something, the final product will be what we want it to be. Not only does this help prevent delays and time when commissioning the boat, but it significantly helps collaboration amongst our small, passionate team. The race is fought as much on a computer screen as it is in the water. We want the best winning chance every step of the way and that’s where Siemens’ software will play a crucial role.”

Part of the Xcelerator portfolio of software, services and an application development platform, Siemens’ NX™ computer-aided design (CAD) software, integrated with Teamcenter® Product Lifecycle Management (PLM) software, will enable Emirates Team New Zealand to be efficient in editing and viewing complex models. This is expected to help the team speed up product development and more effectively manage the design process by creating a digital thread, a single source of truth, through the design process. In addition, Teamcenter, combined with NX CAD, will support the development of the lightest, strongest and fastest vehicle possible whilst ensuring that time and cost savings are realised at every stage of the process.

“Be it auto-racing, space satellites or yachts, our software has been instrumental in designing the digital twin of final products that have to perform under extreme pressure and circumstances,” Samantha Murray, Managing Director, Siemens Digital Industries Software, Australia and New Zealand. “There are no second chances when it comes to designing and testing a multi-million dollar yacht or a racing car, which is why a digital twin is so important as it allows you to rapidly test design ideas in a virtual world first. We’re very excited to be the official supplier for Emirates Team New Zealand and look forward to supporting their journey to the next America’s Cup competition.”

The announcement comes one year since Emirates Team New Zealand won the best-of-13 race series in March 2021. Emirates Team New Zealand have won the America’s Cup four times (1995, 2000, 2017, 2021) making it the most successful team in modern history.

Frontier Co-op Manages Business Process Risk with Infor Governance Risk and Compliance

25 April 2022

Infor, the industry cloud company, announced that leading American food manufacturer Frontier Co-op has implemented Infor Governance Risk and Compliance (GRC) to manage business process risk.

“When you modernize your ERP, you need precise business process controls to avoid risk, especially in the manufacturing process,” said Eduardo Pulido, Frontier Co-op vice president of IT. “You can take the path of doing it manually, but it’s resource intensive, slow, and error prone. With Infor GRC, the entire process is automated, with industry standard controls available out of the box, so we can immediately start to monitor violations and resolve.”

Frontier Co-op® is a member-owned cooperative manufacturer of natural and organic products, founded in 1976 and headquartered in Norway, Iowa. It sells products under the Frontier Co-op, Simply Organic®, Plant Boss® and Aura Cacia® brands. Products include culinary herbs, spices and baking flavors; bulk herbs and spices; plant-based organic meal solutions; and aromatherapy products with a wide selection of organics. Frontier Co-op manufactures and distributes products throughout the United States and Canada.

Frontier Co-op has been an Infor customer for three years, after swapping out its legacy ERP solution for Infor CloudSuite Food & Beverage in 2019. Modern ERP systems require precise business process

CIMdata PLM Industry Summary

controls to reduce errors during the manufacturing process and help mitigate the risk of theft or fraud. Frontier Co-op's small IT team knew that manually performing audits and user provisioning was time intensive and error prone. Working with Infor, Frontier Co-op implemented Infor GRC in less than three months and has seen 10% less demand for IT support.

“The goal with Infor GRC is to provide customers more automation so they can efficiently and effectively manage security access,” said Infor Chief Technology Officer & President of Products Soma Somasundaram. “We do this by integrating with applications to continuously monitor segregation of duties within and across applications, run what-if scenarios and generate alerts and audit reports. With Infor GRC, we are pleased that customers such as Frontier are finding it easier and less costly to diagnose business risks and make decisions to remediate and mitigate violations.”

Infor GRC provides Frontier Co-op out-of-box risk and compliance software, enabling finance, audit, and IT users to share a common platform to monitor controls for Infor CloudSuite Food & Beverage. In addition to the lower demand on IT resources, Frontier Co-op has realized a number of other benefits from Infor GRC, including:

- User provisioning was reduced from days to minutes
- Industry-specific business process compliance controls and segregation of duties
- Simplified audit preparation with centralized repository and real-time reporting
- Employees protected from creating errors in the new ERP system

“What’s great about GRC is that it’s integrated in our platform, and our business users can easily see what they need to see without leaving the application,” explains Rick Ledford, Frontier Co-op IT operations and infrastructure manager. “GRC was very easy to deploy. Infor helped us configure and walked us through the basics, but the rest of it was just understanding the rule books, which are created by Infor and are industry standard. So, we didn't have to recreate the wheel. We could just run analysis against the rule books and find out violations. It was very simple to implement. We could add additional components easily because they’re intuitive, like the approval process or adding a rule to the rule book. GRC was really easy to implement, and we were able to get value from it almost from day one.”

Infosys Collaborates with Nu Skin to Drive Social Commerce-led Transformation in the Beauty and Wellness Sector

26 April 2022

Infosys, a global leader in next-generation digital services and consulting, today announced its collaboration with Nu Skin Enterprises, Inc., a global leader in beauty and wellness. Nu Skin will take advantage of the Infosys Equinox human-centric digital commerce platform to deliver engaging and innovative experiences for consumers and affiliates. The platform aims to help Nu Skin scale its business model exponentially with social commerce-based capabilities.

Infosys Equinox will help Nu Skin to sharpen its focus on creating unique, personalized, and innovative consumer engagement. Powered by Infosys Equinox’s microservices-based, API-first and cloud-native design, Nu Skin plans to deliver engaging shopping experiences across multiple touch points, including websites, mobile apps and smart connected devices.

Ryan Napierski, Chief Executive Officer, Nu Skin Enterprises, Inc. said, “We look forward to our collaboration with Infosys to help transform our business and stay ahead of changing consumer behavior curves. We believe that Infosys can help us harness the right digital capabilities to reimagine how we connect with our customers and create a new industry paradigm for personalized beauty and wellness

shopping experiences.”

Infosys Equinox will bring Nu Skin a choice of digital advances including conversational commerce, augmented reality, and voice commerce, which if implemented will enable the company to engage with consumers through rich digital experiences.

Joe Sueper, Chief Technology Officer, Nu Skin Enterprises, Inc. said, “Infosys Equinox will give us the end-to-end social commerce capabilities we need to transform our business model and provide innovative customer engagement. We're creating best-in-class architecture foundations that will power digital experiences well into the future.”

Karmesh Vaswani, Executive Vice President & Global Head Consumer, Retail & Logistics, Infosys, said, “Beauty and wellness brands are committing to bold changes in the way they connect with consumers, matched by systematic digital investments that can help them realize their aspirations to transform. We are excited to bring Infosys Equinox to help accelerate the development of Nu Skin’s social commerce-based business model. We look forward to Nu Skin’s creation of a new playbook for success in the beauty and wellness industry.”

Amit Kalley, Chief Executive Officer, Infosys Equinox, said, "We are excited to partner with Nu Skin in their vision of transforming the beauty and wellness industry by creating personalized and socially-connected commerce experiences. Infosys Equinox's headless and cloud-native microservices will allow Nu Skin to compose unique and delightful digital journeys across ever evolving channels for their consumers across the globe."

Jernia Making a Home in the ERP Cloud with Infor and Columbus

26 April 2022

Infor, the industry cloud company, announced that Jernia has decided to work with Infor and its partner Columbus Norway to replace an old enterprise resource planning (ERP) system with Infor Cloudsuite Distribution Enterprise, a standardized industry solution for retail trade.

Jernia was established in Norway in 1951 as a purchasing collaboration to offer home goods. Today, Jernia AS is a holding, marketing and distribution company for household items, kitchen equipment, hardware, tools, paint, grills, and interiors.

“Moving our ERP solution to the multi-tenant cloud is an important part of the digitalisation journey for the entire group and lays the foundation for tomorrow's solutions that will give us the competitiveness we need to give our customers the best help,” says Sondre Eftedal, CIO at Jernia. “Infor CloudSuite Distribution Enterprise has a lot of the functionality we need today and, as a cloud solution, it covers our strict requirements for uptime, scalability and security.”

Espen Enger, head of Infor solutions at Columbus, emphasizes that Infor’s multi-tenant solution, powered by Amazon Web Services (AWS), is very competitive with its low operating costs. “At the same time, functionality is at the forefront because the solution is developed with customers in the retail trade worldwide by solving ever-new needs and requirements for relevant functionality, reliability and stability. This combination is one of our strongest competitive advantages,” Enger says.

Jernia expects that the new ERP platform will contribute to better and more efficient collaboration throughout the group. The platform, which includes a user-friendly interface, is constantly updated with new and relevant functionality as well as more integrated processes across various functions in the company.

“The ERP system is the hub of our business with touch points throughout the organization. A significant

factor in this choice has been that we enable further investment in our omnichannel concept, which is already among the best in the country. That is why our ERP platform is an important driver for our competitiveness,” Eftedal says.

Infor CloudSuite Distribution Enterprise is updated monthly for customers in the retail trade, with a team dedicated to IT security and a cloud solution that ensures strict requirements for uptime. In addition, Infor has a strong focus on automating and streamlining business processes using AI.

“We have chosen an established partner that has good knowledge of Jernia's organization, business processes, and how we will implement the solution together. Columbus also has the ideal conditions to assist Jernia in both the management and the further development of our business processes. And not least, we have good chemistry that makes us look forward to further collaboration,” Eftedal concludes. “This project will be important to strengthen our competitiveness and ability to develop and renew the business.”

KLM Royal Dutch Airlines Adopts Matterport Digital Twins to Transform Ground Operations and Engage Passengers

26 April 2022

Matterport, Inc., the leading spatial data company driving the digital transformation of the built world, announced that KLM Royal Dutch Airlines (“KLM”), part of the Air France-KLM Group and a member of the SkyTeam airline alliance with services across 90 European cities and 70 intercontinental destinations, has adopted Matterport to create a digital twin of each type of aircraft in the fleet. KLM is using Matterport to train ground crews and to provide an immersive virtual experience for customers. The global air carrier has received nearly 1 million views of its digital twins from ground crews, flight attendants, pilots, and travelers.

“Matterport digital twins have permanently changed the way we train our employees and we have expanded our use of them over time for customer engagement,” said Chris Koomen, Virtual Reality Specialist at KLM. “Digital twins are now integral to our business. We regularly use them for training across our global operations. Cleaning crews work more efficiently, flight attendants learn the layout of an aircraft ahead of time, and pilots reference digital twins during safety checks. With remote access to digital twins, trainees avoid disrupting the maintenance work of an aircraft, enabling our fleet to return to service faster. All of this adds up to performance efficiency.”

KLM began using Matterport in 2017, capturing the first digital twin of a Boeing 787 Dreamliner to train ground crews on cleaning the aircraft. When crews reduced cleaning time by 30 percent, KLM recognized the potential of Matterport digital twins to streamline training for other departments and utilized Matterport to further capture digital twins of its entire fleet. Today, KLM manages a library of 104 digital twins that have been viewed nearly 1 million times, including multiple versions for each of the 14 types of Boeing, Airbus, and Embraer aircrafts that make up its fleet. Flight attendants utilized Matterport’s digital twins to learn where important safety and hospitality items are located such as beverage carts, while an annotated digital twin for ground crews illustrates where service trolleys are stowed. Meanwhile, pilots easily refer to an aircraft’s digital twin during a pre-flight safety check if an issue is detected.

Equipped with Matterport digital twins, KLM employees do not need to travel to Amsterdam Airport Schiphol for training and instead use immersive digital twins. Since virtual trainees no longer interrupt the maintenance work of an aircraft with in-person visits. It helps to get the aircraft to return to service faster and with less downtime. In addition, KLM’s digital twins have helped streamline its fleet

CIMdata PLM Industry Summary

management. For example, when upgrading the Wi-Fi routers used on a specific aircraft, KLM used the highly accurate data within a digital twin to confirm measurements and optimize the placement of new routers.

Beyond training its internal teams, KLM uses digital twins to showcase its aircraft cabins to travelers. Passengers can virtually experience a cabin, compare sections, and view their ideal seat before purchasing. KLM's Boeing Dreamliner digital twin, which has garnered more than 70,000 views to date, highlights the individual privacy partitions and top-tier entertainment systems available to business class travelers.

“As the transportation industry reinvents itself to drive growth and operating efficiencies, airlines like KLM have demonstrated the value of accelerating digital strategies to provide a better experience for customers and within their organizations,” said Bill Linehan, Head of Global Strategy for Travel & Hospitality at Matterport. “By using Matterport across its entire fleet of aircraft, KLM has created leading, visually rich, immersive training programs, best-in-class maintenance processes, and an engaging customer experience. We look forward to continuing to help KLM to improve its operations with Matterport-enabled solutions.”

Korea Customs Service selects HPE Ezmeral to advance smuggler crackdown and inform policy decisions

28 April 2022

Hewlett Packard Enterprise announced that the Korea Customs Service (KCS) has selected the hybrid analytics and data science platform HPE Ezmeral to accelerate decision making, increase tax revenues and reduce operational costs. KCS will use the HPE Ezmeral Data Fabric to capture and analyze data from a variety of sources to support customs use cases, including an initiative to reduce smuggling, and pan-governmental responsibilities, such as policy design.

KCS is the administrative agency of the Republic of Korea in charge of tariffs and customs clearance with the mission to protect national finance and economy, prevent the inflow of hazardous goods, and to promote legitimate international trade and travel. KCS' goal was to increase its effectiveness and efficiency in executing on this mission by integrating and analyzing the growing volume of trade data – such as export and import transactions or trade agreements – as well as data from other government bodies, and external data.

The HPE Ezmeral Data Fabric gives the data analysts at KCS a unified real-time access to all relevant sources of internal and external, structured and unstructured data – including, for example, customs and trade data bases, scanned documents, photos, or mass data such as system logs. Moreover, HPE Ezmeral provides a catalogue of pre-integrated analytics and AI tools which can be installed with a few clicks. As a result, data analysts can, within minutes, combine the relevant data sources and tools required to deploy a new use case.

With help of HPE Ezmeral, KCS expects to increase smuggler crackdown by 5% every year, which corresponds to a tax revenue of roughly 42 billion Korean Republic won (KRW), or \$34 million US-dollars. The agency also expects to save about KRW 30 billion (USD 24 million) in operation costs by increasing the efficiency of data analytics and customs processes. Finally, the platform will enable KCS to support policy design across all of Korea's government bodies by providing customized information on trade and industry trends or transaction patterns.

“We are pleased to help KCS advance their important mission by capitalizing on the value of data,” said Young-cha Kim, managing director, Hewlett Packard Enterprise, South Korea. “We believe this project

CIMdata PLM Industry Summary

can serve as a role model for government agencies across the country, and indeed globally, because it demonstrates the opportunities of data innovation to improve government services and ultimately the way our people live and work.”

The HPE Ezmeral software portfolio is a purpose-built, hybrid cloud platform for data science and analytics workloads for enterprises to build and accelerate their modern data analytics initiatives at scale. The portfolio includes the HPE Ezmeral Data Fabric, which operates as the persistent store facility, spanning multiple edge sites, multiple clouds, and hybrid environments, as well as a complete orchestrated Kubernetes container platform, HPE Ezmeral Runtime Enterprise, and cloud-native HPE Ezmeral Unified Analytics, which are now available to customers globally, providing frictionless access to data edge to cloud.

Lands’ End Chooses Centric Solution Suite as the Foundation for Future Growth

27 April 2022

Lands’ End, the classic American lifestyle brand and multi-channel retailer, has selected Centric Software®’s Product Lifecycle Management (PLM) solution including 3D Enablement and Centric’s Visual Planning Board for product assortment optimization. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source and sell products such as apparel, footwear, sporting goods, furniture, home décor, cosmetics, food & beverage and luxury to achieve strategic and operational digital transformation goals.

Lands’ End was founded in 1963 as a retailer of sailing equipment before evolving its focus to apparel and accessories for men, women, children, and the home. In 1978 the company began migrating to Dodgeville, Wisconsin where the headquarters still remain. Lands’ End has become synonymous with legendary quality and honest value.

Lands’ End is looking to improve its end-to-end business processes across the enterprise, with the goal of improving transparency, communication, integration and the elimination of manually re-entering data into disparate systems.

Having monitored tech development in the market over the past several years, Lands’ End launched a search for a new PLM solution, going through an extensive selection process. Lands’ End sought a partner and a solution that would align system with business strategy goals, leverage industry best practices, eliminate customizations, and islands of information with the ability to easily upgrade, taking advantage of potential future developments.

Ultimately, it was Centric PLM that fulfilled their requirements. Chieh Tsai, Chief Product Officer of Lands’ End, stated, “Centric was the clear choice for all selection process participants, from both a process and a functional coverage aspect. We were also convinced by their innovations in the area of 3D enablement and the Visual Planning Board, which go well beyond traditional PLM solutions. Rounding out our decision for Centric were their references and reputation in the industry, as well as the experience of their consulting team.”

The company has high expectations for their new suite of Centric solutions, Tsai says, “We anticipate seamless integration between PLM and connecting systems, automated and consistent data flows, standardized cross-team processes, clear communication and fully enabled process and system functionality across business models.”

Lands’ End is looking forward to end-to-end transparency, providing a higher degree of efficiency in developing product, connecting 3D across system platforms to gain workflow productivity and thus continuing to reduce physical sampling and waste. With one source for all product development data,

CIMdata PLM Industry Summary

everyone will have access to the latest information, invigorating collaboration across departments. Adds Tsai, “Centric PLM will also support the pursuit of our sustainability goals.”

President and CEO of Centric Software, Chris Groves, says, “We are delighted that Lands’ End, an iconic American company, has placed their trust in Centric. Our suite of solutions work in concert to deliver one unified experience for users, boosting efficiency and future-proofing against further market disruptions while driving growth.”

Manhattan Beachwear Selects CGS’s BlueCherry as its Cloud-based Solution for End-to-End Global Supply Chain Management

21 April 2022

CGS, a global provider of business applications, enterprise learning and outsourcing services, announced **Manhattan Beachwear, the leading swimwear manufacturer in the United States, has selected the award-winning, industry-leading BlueCherry® Enterprise Suite as its end-to-end ERP, PLM and AWS cloud-based solution to modernize its operations.**

Manhattan Beachwear has grown from humble beginnings to become one of the largest swim and active wear manufacturers in the U.S. The company’s proprietary and licensed brands can be found in major department stores, such as Nordstrom, Saks Fifth Ave, Bloomingdales, Dillard’s, Macy’s, specialty chains like Everything But Water, and small independent retailers located across the United States and internationally.

Headquartered in Southern California, Manhattan Beachwear’s campus is home to a 25,000 square foot, state-of-the-art corporate office housing design, production, finance, customer service, sales and marketing, as well as a 100,000 square foot distribution center in Buena Park, Calif. International operations include manufacturing facilities in Mexico, China and Vietnam.

Next Level Apparel® Takes its Demand and Inventory Planning to the Next Level with the Logility® Digital Supply Chain Platform

26 April 2022

Logility, Inc., a leader in supply chain innovation powering the sustainable and resilient enterprise, today announced the addition of Next Level Apparel® (NLA) to its customer community. One of the leading wholesale producers and sellers of premium quality blank apparel in the United States, Next Level Apparel has implemented the Logility® Digital Supply Chain Platform to modernize its demand and inventory planning processes.

Using the Logility platform, Next Level Apparel can better:

- Optimize its inventory and production strategy to eliminate a surplus of supply and the additional costs that come with oversupply,
- Position maximum sell-through,
- Accommodate highly fluctuating consumer buying behavior, and
- Respond to spontaneous product demand and new market opportunities, which have been amplified by the COVID-19 pandemic.

“Although early in our adoption, our team has experienced great success with Logility. Their team of experts made our transition from legacy systems and manual processes to total digital supply chain management an easy experience,” said Paul Volkman, CIO at Next Level Apparel. “We expect

CIMdata PLM Industry Summary

efficiency, without question, but also plan to gain greater effectiveness through our new digital approach to supply chain management.”

Before implementing the Logility platform in January, Next Level Apparel used a mix of Excel spreadsheets and a legacy proprietary ERP system to manage its supply chain. Now, Next Level Apparel uses Logility’s planning technology in conjunction with Microsoft Dynamics ERP. The integration between Logility and Microsoft Dynamics helps Next Level Apparel synchronize activities, and gain time, accuracy and efficiency.

“The pandemic has exemplified supply chain complexities and has shown organizations the manual way of doing things must be replaced for digital solutions,” said Allan Dow, president of Logility. “Next Level Apparel knew that to grow, it had to transition to digital demand and inventory management. Upgrading its technology stack and processes has helped the brand improve supply chain visibility and has provided the ability to optimize inventory and keep on top of changing consumer demand.”

Simulations Plus Successfully Delivers FDA-Funded Project

28 April 2022

Simulations Plus, Inc., a leading provider of modeling and simulation solutions for the pharmaceutical and biotechnology industries, announced the completion of a newly funded project from the U.S. Food and Drug Administration (FDA) and the Center for Research on Complex Generics (CRCG), through a collaboration of its Lixoft and Cognigen divisions, to establish the suitability of model-integrated evidence to demonstrate bioequivalence (BE) for long-acting injectable (LAI) and implantable drug products.

For this project, a novel model-integrated design for bioequivalence studies of LAI products was proposed by the scientific team at Simulations Plus with the MonolixSuite complete framework. To alleviate the low power or long duration of bioequivalence trials for long-acting injectables (LAIs), Simulations Plus proposed a novel two-treatment, two-period, one-sequence “reduced crossover” design with no or limited washout, combined with a model-based correction of the data of the second period. Individual parameters were estimated based on the data of the first period (reference) and used to predict the carryover concentration into the second period, which is subtracted from the second period data before usual BE analysis. The results were presented at an FDA-sponsored workshop on Nov. 30, 2021.

Dr. Jonathan Chauvin , President of the Lixoft division at Simulations Plus, said: “Our efficient NCA calculation engine in PKanalix, with our cutting-edge PK/PD modeling approaches in Monolix and Simulx, were not used to support LAI previously, therefore this project was a great opportunity to show the need and relevance of the population modeling approach for LAI products and the bioequivalence calculations. The complete framework available in MonolixSuite shows the efficiency of our tools through its interoperability between applications and its flexibility to go from NCA and bioequivalence to population modeling and simulation. Finally, it is a notable achievement to deliver a joint solution to this challenge via the global complementarity of the scientific teams in each division at Simulations Plus.”

Jill Fiedler-Kelly , President of the Cognigen division of Simulations Plus, added: “This project was a great demonstration of the synergistic combination of the scientific expertise and innovative capabilities of our teams; in particular, lead investigator Géraldine (Ayril) Cellière , and the excellent software tools of Simulations Plus. We are thrilled to have contributed to the development of a novel solution to this challenging problem.”

Southwest Airlines goes live with IFS maintenance management for entire Boeing 737 fleet

25 April 2022

IFS, the global cloud enterprise applications company, announces that Southwest Airlines has deployed IFS as its enterprise maintenance management standard to optimize operational performance by safeguarding aircraft reliability and availability. IFS is now live across the airline's total fleet of almost 730 aircraft including the Boeing 737-700, 737-800 and 737 MAX 8.

Southwest, the U.S.' largest domestic carrier by enplanements, servicing over 100 destinations, has undertaken an initiative to replace multiple legacy maintenance and compliance systems to harmonize mission critical processes into a single solution. This solution allows Southwest to stay true and focused on its principles of quality and compliance while further modernizing its already industry-leading processes.

Now live, the IFS solution provides Southwest maintenance personnel the information they need to streamline configuration control and compliance management processes. The additional insights delivered by IFS are helping drive efficiencies through the transformation and automation of processes enabled with a mobile user experience. As part of its MRO digital transformation, Southwest conducted an end-to-end review and refinement of its processes to identify a greater optimization of its technical operations as well as promote a more digital way of working and moving away from paper. The digitization of processes is also positively impacting compliance by providing real-time validation at the point of maintenance.

Southwest becomes the latest airline to deploy IFS, alongside other industry leaders that include Air France-KLM Group, China Airlines, LATAM Airlines, Qantas, and more.

"Effectively operating and delivering a fleet of safe and reliable aircraft is our utmost priority and this starts with maintenance. IFS gives us the peace of mind and control we need to not only maximize the airtime of our fleet but deliver what is important to our customers – on-time flights and a great travel experience," said Landon Nitschke, Southwest Airlines Senior Vice President, Technical Operations. "The value of IFS does not stop at aircraft maintenance – the solution's open architecture means we have embedded it and made it an integral component of our enterprise-wide IT ecosystem. With careful planning and preparation, we are proud to have successfully undertaken the largest single MRO system migration in the history of our industry."

Scott Helmer, IFS President, Aerospace and Defense, added, "Southwest is an innovator among the world's airlines, and this milestone achievement speaks to the company's ambition and commitment to excellence. Throughout this project, IFS demonstrated an ability to handle the scale and volumetrics of the world's largest airlines and was subjected to load testing that simulated a fleet of 1,000 aircraft. I am delighted that again IFS commitment to this industry is acknowledged with Southwest's choice; it is now well positioned to continue its industry leadership in delivering world-class moments of services for its customers."

In deploying IFS for aviation maintenance, Southwest has implemented comprehensive and built-for-purpose airline maintenance functionality built into IFS Cloud.

Spanish Logistics Company MRW Speeds Deliveries with DXC Technology and Nutanix

27 April 2022

MRW, a leading Spanish provider of urgent transport and logistics services, managing an average of 70 million shipments per year, has awarded DXC Technology and Nutanix a five-year contract to transform MRW's IT systems with hybrid cloud technologies. With the move, MRW plans to increase the speed and agility of its delivery business while increasing protection against cybersecurity threats.

"Thousands of clients depend on MRW to ship goods to more than 200 destinations around the globe," said Belen Arrazola, CIO of MRW. "Hybrid cloud technologies from DXC and Nutanix provide us with a flexible platform to accelerate MRW's ambitious transformation and growth plans, while ensuring the stability and security we need to protect our operations around the clock."

MRW's logistics business is powered by two data centers in Barcelona. By deploying hybrid cloud technologies running on Kubernetes containers, MRW expects significant efficiencies across several areas. For example, MRW's DevOps teams will be able to modernize applications and deploy them to the cloud faster in order to improve the time-to-launch for innovative new services. Priced on a pay-per-use model, the new solution aims to provide MRW with a cost-effective and flexible model to support its growth and development.

As part of the agreement, MRW will tap DXC's leading security capabilities and expertise to build an immutable backup system, which enables data to be protected and quickly restored in case of a potential ransomware attack.

"MRW is a leading player in logistics and urgent transportation which has seen significant growth in the past couple of years in line with the surge in ecommerce," said Juan Parra, General Manager, DXC Technology, Iberia. "We will work closely with MRW using hybrid cloud technologies to bring greater flexibility and security to their operations. This project has reinforced our collaboration with Nutanix around hyperconverged infrastructure solutions in Iberia and strengthens our ability to serve customers across multiple industries in the region."

"We are delighted to be working with MRW and DXC Technology to transform MRW's IT environment and securely migrate their IT infrastructure," said Jorge Vázquez, Country Manager of Nutanix Iberia. "We value the great collaboration with DXC, a leader in IT services globally, and look forward to a long future of helping our customers across Spain and Portugal to succeed and grow."

University of Tennessee System Upgrades Finance and HR Tech with Oracle Fusion Cloud Applications

26 April 2022

The University of Tennessee (UT) System has selected Oracle Fusion Cloud Applications to unite its system-wide finance and HR operations on a single, cloud-based platform. With Oracle Fusion Cloud Enterprise Resource Planning (ERP) and Oracle Fusion Cloud Human Capital Management (HCM), the campuses and institutes within the UT System will be able to automate processes and better use data to make more informed decisions.

The University of Tennessee System, which includes five public higher education campuses and two statewide institutes, enrolls nearly 54,000 students every year. As part of its "Dynamic Administrative Systems for Higher Education" (DASH) program, the UT System decided to replace its on-premises IRIS and SAP finance, HR, and payroll systems. After a competitive review, the UT System selected

CIMdata PLM Industry Summary

Oracle Fusion Applications Suite for its ability to provide a complete view of operational processes and integrate data on a single platform. The UT System also selected Accenture as its strategic partner for the migration to Oracle Fusion Cloud Applications. Accenture's team will work side-by-side with UT System project team members to help employees transition to the new system, provide guidance on how the finance and human resource processes should flow, configure the processes and integrate with other applications.

"It's critical for universities to find ways to serve faculty and students more efficiently. Cloud-based systems can help campuses do that by improving and automating business functions," said UT System President Randy Boyd. "We are confident that the DASH initiative, bolstered by Oracle Fusion Applications, will enhance operational efficiency and position the UT System for continued innovation."

With Oracle Cloud ERP and Oracle Cloud HCM, University of Tennessee System leaders will be able to gain real-time visibility into business processes, increase efficiency, improve reporting, and provide a better experience for employees. With quarterly update cycles, Oracle Fusion Applications will also give the UT System continuous access to the new features that are added every 90 days, without downtime or business disruption.

"With Oracle Fusion Applications, the University of Tennessee System will be able to centralize and simplify finance and HR processes to keep its operations nimble," said Rajan Krishnan, group vice president of product development, Oracle. "Every bit of efficiency gained frees up resources to be dedicated back to universities' core purpose, serving students."

Zenni Optical Prescribes NetSuite for Enhanced Business Visibility

27 April 2022

Zenni Optical, a leading online eyewear retailer, is using Oracle NetSuite to support its mission to deliver stylish and affordable prescription eyewear for everyone. With NetSuite, Zenni has been able to take advantage of an integrated business platform to enhance business visibility, increase efficiency across its financial operations, and improve decision-making as it rapidly scales to meet increased global demand.

Founded by two scientists in a Bay Area garage in 2003, Zenni has grown into an online optical industry leader that employs more than 1,200 people and has sold nearly 50 million pairs of glasses. To ensure that it could continue to deliver the most affordable eyeglasses with the highest quality optical lenses and the best customer support as its business expanded in scale and complexity—Zenni now offers more than 3,000 styles of glasses—Zenni needed to replace its existing financial system with a new enterprise resource planning (ERP) system. After careful evaluation, Zenni replaced QuickBooks with NetSuite to improve efficiency and remove barriers to global expansion.

"Our business is much more complex than when we started, especially as we've increased our manufacturing capabilities to offer a greater selection of styles," said Erin Stryker, VP of Finance, Zenni Optical. "By consolidating financial and accounting operations on NetSuite, we've improved business visibility and eliminated many manual processes, which has allowed us to focus on reaching new audiences and explore new lucrative business opportunities. We are in a much stronger position to execute on our ambitious expansion plan with NetSuite."

With NetSuite, Zenni has been able to streamline and automate financial processes and make faster and more informed business decisions. NetSuite has enabled Zenni to consolidate its accounting and financial operations, including accounts payable, accounts receivable, budgeting, and reporting, on a single platform and help ensure consistent and compliant processes across countries and subsidiaries. In

CIMdata PLM Industry Summary

addition, by automating previously manual processes, NetSuite has enabled Zenni to close its books 50 percent faster. To build on its success with NetSuite, Zenni has also recently implemented NetSuite CRM for its growing corporate wellness and safety eyewear business segments and is exploring NetSuite inventory management and warehouse management for its 348,000 square-foot state-of-the-art production center in Ohio.

“Many thriving companies reach a point where the software that they started on is no longer suited for the challenges associated with scaling production and global expansion,” said David Rodman, SVP of Customer Success, Oracle NetSuite. “By replacing QuickBooks with NetSuite, Zenni has been able to consolidate systems and apply automation across its financial processes to enhance productivity and improve insights. We are now working together to build on that success as Zenni continues to rapidly expand its operations.”

Product News

Accenture Announces Accenture Song

26 April 2022

Accenture announced that Accenture Interactive will now go to market as Accenture Song. The move reflects the company’s post-pandemic world-class services that reinvent customer connections, sales, commerce and marketing and business innovation to meet clients’ accelerated demand for business growth through sustained customer relevance at the ever-changing speed of life.

Building on Accenture’s longstanding culture of change, the name Accenture Song conveys an enduring and universal form of human craft, connection, inspiration, technical prowess and experience — unleashing the imagination and ideas of its people to deliver tangible results.

“Accenture Song symbolizes the post pandemic growth journey we’re on with our clients,” said David Droga, CEO and creative chairman, Accenture Song. “Since its infancy, Accenture Interactive has helped clients build and grow their business by being experience-led. Today’s needs are strikingly different. To capture the next waves of growth, businesses now need to operate at the speed of life, perpetually demonstrating their relevance to their customers, their people and the world at-large.

We have the best talent in the business — people who will help shape the futures of many industries. Combining the forces of creativity and technology help us not only see problems differently, but also solve them with simplicity and scale. As Accenture Song, our opportunities are boundless, both for our clients and for our people,” added Droga.

Soon-to-be published research from Accenture Song found that nearly 90% of C-suite executives say that the current needs of customers and employees are changing faster than leaders can change their businesses, emphasizing the demand for new growth models.

“The pandemic fundamentally changed how B2C and B2B companies must engage with customers and employees; the speed at which they need to operate and innovate; and the opportunities to create new products, services and growth models,” said Julie Sweet, chair and chief executive officer, Accenture.

The companies that will lead in the next decade will undertake total enterprise reinvention, and Accenture Song is uniquely operating at the intersection of creativity, technology, intelligence and industry to help our clients reinvent connections and meaningful experiences, including in the metaverse continuum, sales, commerce, marketing and new business platforms. From idea to build to operate with strategic managed services, we are enabling our clients to access ideas, talent and results much faster.”

CIMdata PLM Industry Summary

Accenture Song — which is projected to hit \$14 billion in revenue by the end of FY22 (August 31, 2022) — works with future-facing brands including Coinbase, General Mills' Blue Buffalo and Shiseido. Additionally, Accenture Song is teaming with Capri Holdings, a global fashion, luxury group consisting of the iconic brands Versace, Jimmy Choo and Michael Kors to translate its rich in-store luxury shopping experience to a digital experience that aligns with the unique desires of their customers and accelerate sustainable growth.

Accenture Song continues to be on the leading edge of harnessing the on-going technology revolution with its deep understanding of customers and enterprises to create new growth frontiers and opportunities. Most recently, it announced the Accenture Metaverse Continuum services — with deeply skilled professionals and market-leading capabilities to design, execute and operate clients' metaverse journeys.

Our more than 40 acquisitions from over the past decade will begin to go to market as Accenture Song to strengthen our synergies in product innovation, experience design, marketing and commerce. Droga5 will continue to operate under its own brand name.

Altair Simulation 2022 Released

26 April 2022

Altair, a global leader in computational science and artificial intelligence (AI), announces the release of its latest simulation solutions, which focus on next-generation connectivity, architecture, engineering, and construction (AEC), as well as circuit board and electronic design capabilities; the release also includes a myriad of updates to Altair's traditional solutions. The latest release includes new features and capabilities that broaden, strengthen, and further specialize Altair's comprehensive simulation toolkit.

“The release of Simulation 2022 continues Altair's tradition of leading in computational science and artificial intelligence,” said Sam Mahalingam, chief technology officer, Altair. “By adding more features, tools, interfaces, and workflows that let users work faster and more efficiently, we're enabling a better and more sustainable future. Better simulation makes better, smarter products, and we're proud to be at the forefront of tomorrow's connected future.”

Developing Products for a More Connected Future

This release's connectivity updates include features that help users simulate antennas with exceptional accuracy, get results and solve bigger problems faster, and broaden users' toolset for advanced driver-assistance systems (ADAS) applications. Altair Simulation 2022 supports the automation of realistic 5G envelope beam patterns and includes features like new hybrid ray-tracing patterns and rotating doppler effects for ray-based solvers.

Additionally, more connectivity features include support for improved computational performance when simulating larger, more complex antennas and their operating environment. Users will benefit from the power to better simulate full-wave antenna and array characterizations so they can reliably analyze wireless systems.

Users will also gain improved ADAS tools that can better consider sensor types like ultrasound, which increases the number of sensors that can be simulated together. Other new ADAS features include the addition of more application-specific and post-processing tools, such as frequency-modulated continuous-wave (FM-CW) radar simulations that target ADAS applications.

Tools for Resilient, Sustainable AEC Design

CIMdata PLM Industry Summary

Altair Simulation 2022 also includes a myriad of updates for AEC, including support for several new construction standards. Now, users can access every solution with Altair Units licenses and can choose the right AEC solutions for them at the right time throughout the project workflow; newly available Altair Units-accessible capabilities include the former S-FRAME software products as well as SimSolid rapid analysis, HyperWorks advanced meshing, computational fluid dynamics (CFD) wind load simulations, and more.

Tools like S-CONCRETE, S-FRAME, and S-FOUNDATION, which reduce design time and project costs for structural engineers, continue to expand in Altair Simulation 2022 and now include built-in design codes for different American, Canadian, European, and Asian/Oceanian nations so projects and designs are compliant with the latest safety and material regulations.

And solutions like S-TIMBER help engineers and architects address the ever-growing demand for sustainable buildings and structures. S-TIMBER includes advanced analysis capabilities and can simulate the structural response to seismic loading according to NBCC, ASCE, and IB codes. Additionally, it gives users enhanced control over panel modeling to design CLT, Glulam, and Sawn lumber elements for code compliance, so they can deliver projects on time and within budget and design parameters.

Accelerating Smart Device Development

Altair Simulation 2022 includes more capabilities for circuit board and electronic design tools that enhance users' abilities to design and implement smart components, products, and systems. Altair PolEx now features expanded design verification, signal integrity, and printed circuit board (PCB) modeling functionalities. It also includes cross probe verification like DfX Excel results and a direct ECAD link to Pulsonix and Altium Designer; the latter feature is also included in PolEx for Altium, a free, recently released tool available to all Altium Designer customers.

Users will benefit from updates to Altair SimLab, which include typical application functionalities like drop test, multiphysics analysis for PCBs, and thermal management simulation that can cover entire systems. And Altair Simulation 2022 also introduces new tools for power electronics and motor drives, including PSIM, which can handle simulation and design for power supplies, motor drives, control systems, and microgrids.

Solutions for Every Stage of Product Development

Altair Simulation 2022 also includes a host of updates that bolster Altair's system-modeling, finite element analysis, design ideation and exploration, and manufacturability solutions' capabilities. Updates to Activate, Compose, HyperWorks, and the Inspire products help users take on new challenges and give them new machine learning libraries, an interactive toolkit to no-code user interface creation, more advanced simulation and manufacturability workflows, and other analysis features so they can optimize designs and visualize even the most complex products and challenges.

Lastly, Altair Simulation 2022 includes new features that greatly augment Altair's fluid, thermal multiphysics, and structural analysis solutions. Tools like AcuSolve, nanoFluidX, EDEM, MotionSolve, Flux and FluxMotor, OptiStruct, Radioss, and SimSolid give users the power to apply simulation to new fields of application, utilize new physics solvers, better integrate related tools for electrification, simulate strength, stiffness, and other physical measures, and take advantage of new optimization features that make better, more efficient designs.

COMSOL Completes the Working Environment for Modeling and Simulation Projects with the Model Manager Server

26 April 2022

COMSOL announces a major update to the COMSOL Multiphysics® software version 6.0. The update builds out the Model Manager server with a web interface — an asset management system — to make it easier for COMSOL® users and nonusers alike to manage models, simulation apps, and supplementary and auxiliary files.

COMSOL Multiphysics®: From Building Models and Apps to Managing Simulation Projects

Through two decades of development, COMSOL Multiphysics® evolved from a software that solved partial differential equations to one that defines the nature of multiphysics modeling: being able to build models with any combination of physics phenomena via the Model Builder. Thereby, engineers versed in the underlying physics and using software to build models began using COMSOL Multiphysics® across technology-driven industries, academia, and research organizations for modeling and simulation. Next, COMSOL introduced the Application Builder and concept of simulation apps to expand the realm of who could access simulation to include those who had not traditionally been able to work with models and simulations.

Today, COMSOL completes the environment for managing modeling and simulation projects for product and process design through the recently introduced Model Manager and the Model Manager server with its accompanying asset management system.

About the Model Manager Server and Its Asset Management System

Released in December 2021, the Model Manager allows you to:

- Search through models for particular parameter names and feature strings.
- Track model development through version control with model comparison and merging capabilities.
- Upload, link, and administrate supplementary and auxiliary files to a modeling and simulation or development project.

The Model Manager has now been complemented by the Model Manager server's asset management system, which is accessible through a web interface. In the asset management system, an asset can be considered as a container for links to your model versions, attached supplementary and auxiliary files, as well as various custom metadata fields. With the asset management system, you can itemize assets through model and app files, adding abstracts, setting permissions, and even include thumbnail images of the model at hand.

“As an extension of the COMSOL Multiphysics® simulation platform, the Model Manager server's asset management system is useful for administrating and managing your models, apps, and simulations in a corporate network environment set up to your own liking,” says Sr. VP of Sales Phil Kinnane. “This could be project-based, model-based, team-based, or similar, according to how you want your organization to structure and organize such work.”

A Collaborative Environment to Cover All Elements of an Organization

The Model Manager server is a database system that can be managed from either the COMSOL Desktop® or a web-based UI. A local installation of any license type of COMSOL Multiphysics® with the Model Manager and a local database is usually the initial step for a modeling engineer to acclimatize themselves to how this system can be best used within their

CIMdata PLM Industry Summary

organization. From there, full deployment can occur by installing the Model Manager server on a central server. Local installations of COMSOL Multiphysics® can connect to the central server with the Model Manager server. “I think organizations will start by moving the tens and hundreds of COMSOL models they have been developing over the years to their asset management systems as a communal model library,” adds Kinnane. “Instead of chasing down the many engineers using the software for different purposes, they can now find and search through those models as a centralized repository instead.”

The Full Power of the Model Manager Server

COMSOL CTO Ed Fontes describes how the Model Manager server will take an organization’s simulation-driven project to the next level: “The true power of the Model Manager is not only in its ability to manage your simulation data, but in being able to version control and audit your actual model-building process.” He adds, “there are a number of simulation data management systems out there, but COMSOL has focused the Model Manager on the model-building process, such as to easily browse through the model tree of certain models or search for specific features like domain settings, boundary conditions, or study types to revisit, update, or even reuse.”

Internal or external customers may use the database system to keep track and use results from a project. They may also use simulation apps and provide feedback about their measurement and test data by uploading them and reports to the relevant asset. And, of course, contributors on the model development can also add their auxiliary data, such as CAD files and specifications, to the project. “In all,” says Fontes, “the Model Manager server and asset management system truly provide the complete working environment for modeling and simulation projects.”

Digital partnership between AUSSCHREIBEN.DE and CADENAS combines product information, tender texts and BIM CAD data on one platform

28 April 2022

Cooperation simplifies processes in digital building planning for both planners and manufacturers

More than 1 million tender texts and additional product information are available for download on the online portal for tender texts AUSSCHREIBEN.DE. Thanks to the new technology partnership between CADENAS and AUSSCHREIBEN.DE, building products can now be displayed as illustrative 3D graphics and offered for free download in various native and neutral CAD formats. The new cooperation simplifies processes in digital building planning and offers many advantages to both planners and manufacturers of building products.

Anyone planning a construction project is faced with countless challenges while being under a great deal of time pressure. An effective workflow becomes the deciding factor, especially when in product research and the selection of suitable construction solutions. By providing high-quality, digital data on AUSSCHREIBEN.DE, architects, engineers and planners can achieve maximum efficiency and security in this respect. AUSSCHREIBEN.DE now provides numerous CAD & BIM data free of charge in addition to tender texts and product information such as images, videos, assembly instructions, certificates and drawings. This data is based on CADENAS technology, a specialist for 3D CAD product catalogs. The data is created in cooperation with the respective component manufacturer and is therefore manufacturer-verified. After registering on the platform, users can view selected products in the integrated 3D viewer, check them by zooming in and download them in most common CAD formats. These include cross-manufacturer formats such as IFC, DWG or DXF as well as numerous native formats for CAD systems such as ARCHICAD, Allplan or Revit. The desired product can then be imported directly as a component into the CAD design. This procedure ensures that the product is

CIMdata PLM Industry Summary

suitable for the respective project, saves time and increases the accuracy of detailed planning, especially for configurable products.

"Together with CADENAS, a specialist for 3D engineering data, AUSSCHREIBEN.DE not only offers a comprehensive service for the integral and productive planning of construction projects. It also opens up far-reaching opportunities and added value potential for product manufacturers," says Manfred Scholz, Managing Director of ORCA Software GmbH, which manages the platform for tender texts.

Digital transformation as a competitive advantage for product manufacturers

Manufacturers of technical components who make their product data available to engineers, architects and planners digitally and in high quality significantly strengthen their position in the market. According to a CADENAS survey of 128,000 engineers and architects, planners are the driving force behind product decisions since the selection of a specific component already takes place in the planning phase. Once a component has been added to the design, it is very likely that it will subsequently be procured.

One manufacturer that has recognized this potential and optimized its digital services and product data for the target group of architects, engineers and building services planners is strawa Wärmetechnik GmbH. The specialist for heating technology is one of the pioneers who provide CAD & BIM data of their products on the search engine for 3D CAD manufacturer components 3DfindIT.com by CADENAS as well as on AUSSCHREIBEN.DE. As a manufacturer of technical components, the company's product data is available to planners 24/7 and thus always in the right place at the right time. Sebastian Jeschke, head of Data Management, is pleased about the new cooperation between CADENAS and AUSSCHREIBEN.DE: "We have been waiting for this as a manufacturer. This is an important signal for the entire industry. By providing high-quality information and relevant metadata on one platform, we are offering our customers excellent service and real added value. We will continue to successively expand the digital catalog so that we can offer our customers maximum convenience."

The strawa catalog on AUSSCHREIBEN.DE comprises 6,570 items, 9,180 images & videos as well as 11,010 documents, including CAD & BIM data. A hotspot of information which benefits not only planners but also the executing trades in the further project stages. This is an example that shows a pioneering step towards digital transformation.

"The cooperation between AUSSCHREIBEN.DE and CADENAS is an important step to further advance the digitalization offensive in the construction industry," Jürgen Heimbach, CEO of CADENAS GmbH, is convinced. "Together with the manufacturers of building components, we are creating the basis for supporting architects, planners as well as the trades involved with digital product information for the most error-free object planning possible."

Durasein and BIMsmith Partner to Provide New BIM Resources to Architecture and Design Community

26 April 2022

Durasein, a global manufacturer of premium solid surface products for the building industry, and BIMsmith, the leading building product research platform for building professionals, have partnered to provide a new suite of Building Information Modeling (BIM) resources to the architecture and design community.

The partnership involves the creation of digital product models for Durasein's solid surface materials. The new digital assets are custom-built to operate within Autodesk Revit, the leading BIM software platform. As highly-realistic digital representations of Durasein products, the materials are essential to equipping architects and interior designers to design with Durasein solid surface in their BIM projects.

CIMdata PLM Industry Summary

As a result of the partnership, the Durasein BIM Library is also now available to architects and designers worldwide on BIMsmith Market, the leading platform for building professionals to perform product research and download Revit families.

“Durasein helps designers around the world push the limits of creativity,” said Brandon Guthrie, Brand Manager at Durasein USA. “Our BIM resources on BIMsmith will further equip these creatives to make a statement in every one of their projects.”

“Durasein is able to bring together quality craftsmanship of their products with exceptional support for building professionals,” said Benjamin Glunz, CEO of BIMsmith. “Their products are a valuable addition to the BIMsmith platform.”

EnSuite-Cloud ReVue enhances SmartPicking tools for CAD Assemblies

26 April 2022

CCE, a leading provider of advanced CAD interoperability solutions, announced recent enhancements to the “SmartPicking” tools in ReVue software aimed at users who collaborate using large CAD assembly files.

Since its introduction of SmartPicking tools in ReVue earlier in the year, CCE has made significant enhancements to the toolset to provide better user experience for people who need to collaborate using large CAD assemblies. Users now have the option to **selectively toggle and pick parts and sub-assemblies** from the interactive 3D viewer area and either **hide that component from the viewable area or open it in a separate full-screen display** for further review. This is particularly useful for design review of large assembly files where some parts might be hard to view or navigate to for inspection.

“Given that ReVue is the ideal solution for engineering design reviews, it is our constant endeavor to enhance the product in ways that make the user more efficient when they collaborate with their team or suppliers. The recent enhancements we have made to the SmartPicking tools make it easy for people to navigate through and analyze large complex CAD assemblies. We have some more features we are working on to create better user experiences that we are scheduled to release in the coming months,” said Vinay Wagle, CCE’s V.P. of Sales and Marketing.

EnSuite-Cloud ReVue is a revolutionary web-based real-time engineering design review software that allows users to securely collaborate across the Product Development Lifecycle. Whenever there is a need to review 2D/3D CAD data in the product development process, ReVue provides a secure platform for collaboration with your team or suppliers.

Users can review 2D/3D designs of all the latest versions from **CATIA V5, 3DXML, NX, Creo, SOLIDWORKS, Inventor, Solid Edge, JT, Parasolid and glTF** among others.

Key benefits of using EnSuite-Cloud ReVue for secure online meetings for engineering collaboration include:

- **Independent Local control** of collaboration session without compromising intellectual property
- **High-quality 3D rendering** with zero loss of fidelity of viewable data
- **Natural collaboration experience** without any overhead for data or session preparation
- **Ultra-low latency** allowing for excellent response/refresh rates
- **Low bandwidth usage** allowing for easy sharing of large CAD models
- **Screen-sharing option for non-CAD documents for richer collaboration**

CIMdata PLM Industry Summary

All new users can **Test Drive ReVue** to evaluate the product using just their Google or Microsoft emails. Users can visit the EnSuite-Cloud ReVue page for additional product and pricing information.

eSUB Construction Software Announces the Launch of eSUB Cloud 2.0

26 April 2022

eSUB Construction Software is proud to announce the newest iteration of its innovative construction software. Designed to help trade contractors increase both productivity and profitability, eSUB Cloud 2.0 will maximize efficiencies, strengthen communication between the field and office, and provide a modern user experience that is intuitive and easy.

The construction industry has seen the rapid adoption of innovative technological solutions to digitize workflow, increase productivity, and manage risks. eSUB Cloud 2.0 will take construction project and field management to the next level with in-depth job cost reporting and project analytics. “Trade contractors deserve an easy-to-use project and field management solution. Software that is easy and compelling to use drives more value and return for construction companies and allows them to capture more data through the system, allowing for more robust reporting and a full understanding of what’s happening across all projects,” says Erich Litch, CEO of eSUB.

eSUB Cloud 2.0 will release in phases throughout the year. Upon the initial phase, trade contractors can immediately leverage 2.0’s enhanced field-to-office communication capabilities by documenting jobsite activities through daily reports and field notes with unlimited image and video capture. Additional releases will quickly follow and come regularly throughout the year and will include items such as change order management, document control, and labor productivity. “We’ve worked closely with our client advisors and technology partners to deliver a truly revolutionizing project and field management solution. There will be significant enhancements and additional features across the entire platform,” says Cindi Karl, Vice President of Product.

HCL Technologies Launches All Access Media Marketplace Platform to Streamline Content Creation and Deliver Seamless User Experience

27 April 2022

HCL Technologies (HCL), a leading global technology company with deep expertise in the media and entertainment (M&E) industry, launched a new product at NAB Las Vegas that will streamline the pre-production, production and post-production processes of content creation and distribution. HCL’s All Access Media Marketplace Platform is being developed in coordination with Microsoft and CoreSite, an American Tower Corporation company (“CoreSite”) to solve the pain points faced by many media creators related to workflow development, applications and vendor discovery.

The platform will enable media creators to build workflows in HCL Workflow Creator (the core application of All Access Media Marketplace), leveraging MovieLabs Visual Language and enabling them to acquire the best vendor quotes. The HCL Workflow Creator will serve as the human-to-machine interface, helping in developing software-defined workflows and providing a secure movement of digital assets from studio/set through telcos and carriers to private data centers, co-location providers, SaaS cloud-based tools and hyperscalers.

Microsoft 365 will streamline communication between content creators and service providers while Azure Cloud and its cybersecurity engineers facilitate All Access’s alignment with MovieLabs 2030 Vision. CoreSite’s interconnection services, including the Any 2 Exchange® and Open Cloud Exchange®, enable All Access users to rapidly create secure, low latency software-defined networks.

CIMdata PLM Industry Summary

CoreSite data centers are major media and entertainment hubs and support a robust ecosystem of content suppliers, studios and cloud providers, which optimizes content production, distribution and the digital supply chain.

In the future, the platform will have an integrated secure e-commerce backend, leveraging HCL's own suite of digital experience and commerce software products, further simplifying transactions across the media lifecycle. In addition, major studios, independent production companies, ad agencies and corporate video producers will be able to securely leverage the global resources in All Access through HCL's cybersecurity practice. This functionality will be enabled through HCL's Zero Trust Security Framework and suggested Common Security Architecture for Production of MovieLabs 2030.

"Our deep M&E industry expertise – combined with our proven track record of developing and transforming digital solutions – uniquely positioned HCL to develop the All Access Media Marketplace," said Anil Ganjoo, Chief Growth Officer, Americas, TMT and RCPG Industries, HCLTechnologies. "We're happy to embrace the MovieLabs 2030 Vision and believe our expertise in this space will ultimately enhance the overall quality and ease of operations across the content creation lifecycle."

"The addition of HCL Technologies to our partner ecosystem enhances the services and solutions that we offer the media and entertainment industry," said Brian Eichman, Vice President Business Development and Solution Architecture at CoreSite. "With content development platforms like All Access, media creators can optimize their digital supply chain, improving performance, enhancing security, and reducing total cost of ownership."

"The integration of HCL's All Access Media Marketplace with Microsoft Outlook & Teams is a great way to facilitate B2B communication between Content Originators and Media Services companies for discovery and acquiring quotes. We look forward to enhancing this platform with the scale & applications available on Azure," said Simon Crownshaw, Worldwide Media and Entertainment Strategy Director at Microsoft Corp.

How EagleView's New Solar Solution Will Revolutionize Your Workflow

26 April 2022

We're thrilled to announce that EagleView has launched its new **TrueDesign™ solar design solution**, making it possible for solar installers to provide install-ready designs at the start of a project.

Before TrueDesign, solar installers typically created both a pre-design and a verified final design for plan sets and installation. This approach creates operational inefficiencies that drive up the cost of customer acquisition and other soft costs, which account for **more than 60% of total solar project costs**. It also drastically increases the risk of change orders based on inaccurate designs, which can lead to longer cycle times and canceled projects.

What Benefits Can Customers Expect?

"TrueDesign revolutionizes the workflow for solar contractors, enabling more automated and virtual operations through a design tool that is accessible for nearly any skill level."

Pete Cleveland, Vice President of Solar Business, EagleView

TrueDesign significantly reduces soft costs with install-ready PV system designs from day one, accelerating the sale-to-installation timeline for residential solar companies.

In fact, unlike any other solution on the market, TrueDesign enables your solar sales team to auto-generate a top-performing PV system in minutes using simple, web-based software. Our beta testers and

CIMdata PLM Industry Summary

early evaluators noted the benefits of not only having an install-ready design at the proposal stage, but also the ability to incorporate homeowner design feedback during the consultation, without having to rely on more expensive design talent or back-office support.

Ultimately, TrueDesign is helping customers get from solar sales to installation at least two weeks faster with lower soft costs. Here are some of the top benefits noted from participants in our early evaluators program:

- Eliminate the need for an exterior site visit with accurate measurements and shade analysis available remotely
- Dramatically reduce time spent on quality assurance and rework with more confidence in the underlying data
- Utilize talent more effectively by reducing design rework and providing design-ready CAD files for plan and permit sets
- Scale quickly and easily with customizable design specifications and increased automation for your processes

The Most Trustworthy Residential Solar Data Available

By leveraging EagleView's *portfolio of high-resolution ortho and oblique imagery* with 70X the accuracy of standard satellite imagery, TrueDesign provides remote exterior measurements and shade analysis that are more precise than publicly available LIDAR data or satellite-derived 3D models, as well as manual roof sizing and shading analysis methods.

In fact, a recent **DNV GL technical study** found that the average difference in annual solar access values between EagleView's data and onsite measurements using a handheld shade measurement tool was between negative one percent and zero percent.

TrueDesign uses this data to automate solar panel placements and give you a real-time energy output forecast based on your desired specifications.

"Our high-quality data underpins a new era of smooth, efficient sales, design, and installation for the solar industry, ultimately resulting in happier customers who become ambassadors for solar in their communities."

Pete Cleveland, Vice President of Solar Business, EagleView

Start Using TrueDesign

TrueDesign is available at two levels.

TrueDesign for Solar, Residential Sales, is available for just \$30 and is designed to be purchased as soon as a homeowner confirms a sales appointment. This solution enables your sales rep to auto-generate and customize an install-ready PV design during the initial sales consultation using our simple web-based interface.

Once the homeowner signs a contract, upgrade to TrueDesign for Solar, Residential Planning for just \$70 more to access the full working design files in CAD, plus all of the underlying data sets for installation.

IDS GeoRadar launches Ai.DA, the AI based software monitoring tool for an intelligent support to radar data interpretation

27 April 2022

IDS GeoRadar, part of Hexagon, announces today the new solution for geotechnical professionals that pioneers the introduction of Artificial Intelligence in slope stability monitoring - Ai.DA, the AI-based software monitoring tool for Guardian.

Ai.DA is an Artificial Intelligence based software tool providing an additional smart processing layer to radar data. Ai.DA, through the use of AI algorithms, simplifies the identification of movements from possible residual noise by evaluating the consistency of the detected movement trend with typical slope instabilities behaviors and models, helping professionals to optimize processes and take better decisions.

Ai.DA is an intelligent support to radar data interpretation and is fully integrated with Guardian, IDS GeoRadar's powerful and user-friendly software to manage slope stability risks in both open pit mining operations and natural geo-hazards. Guardian's processed radar data is automatically pushed to Ai.DA providing an additional smart processing layer that highlights quick moving areas through an intuitive interface with a clear and detailed view on a 3D map.

Ai.DA can provide simultaneous data processing of radar data originating from one to six different radars and highlights timely localized and quick moving areas, which are often difficult to manage, for improved decision-making.

“With Ai.DA we are pioneering the use of Artificial Intelligence in slope stability monitoring, and we commit to providing customers with state-of-the-art technology solutions to support radar data interpretation,” said Angela Patera, Guardian Product Owner at IDS GeoRadar. “Interpreting the big amount of available data is the new challenge for geotechnical engineers and Ai.DA represents a valuable support to this demanding task.”

Launched: Infosys Cobalt Financial Services Cloud, an Industry Cloud Platform to help Firms Unleash the Power of Cloud-Driven Transformation

26 April 2022

Infosys, a global leader in next-generation digital services and consulting, announced the launch of Infosys Cobalt Financial Services Cloud, an industry cloud platform for enterprises to accelerate business value and innovation in the cloud across the financial services industry. Adopted by enterprises globally for enhanced business process transformation and rapid innovation, Infosys Cobalt Financial Services Cloud is a secure, vertical cloud platform that enables enterprises to accelerate cloud adoption, rapidly build cloud native business platforms, drive business agility and growth, foster innovation, and deliver a personalized customer experience.

The Infosys Cobalt Financial Services Cloud platform offers:

- Security and regulatory compliance designed and built into the platform.
- Financial services-specific assets, use case solutions, and microservices, along with reusable frameworks, blueprints, and patterns.
- Capability to rapidly deliver cloud native business platforms with composable components and services leveraging an open architecture.
- Low-code apps for use by business and citizen developers and machine learning models offering intelligence and amplification of financial services use cases.

CIMdata PLM Industry Summary

- Accelerated cloud migration with tools, automation templates, and prebuilt services, and the ability to run on public cloud.
- Strong alliance partner ecosystem offered through Infosys Cobalt Cloud.
- Capability to create an integrated ISV and developer marketplace.

Dave Cosgrove, Global Head of Settlements & Middle Office, MarketAxess, said, “MarketAxess is leveraging the Infosys Cobalt Financial Services Cloud platform for reconciliation as a service on cloud. This is helping us scale the reconciliation process on-demand while improving accuracy and transparency. Leveraging the reconciliation service on Infosys Cobalt Financial Services Cloud enabled us to go-live quickly without significant capex investments and ongoing maintenance thereby, bringing the power of cloud agility and usage-based pricing model to a critical business process.”

Mohit Joshi, President, Infosys, said, “The Financial Services industry is seeking to harness the power of cloud for business outcomes, agility and innovation – not just for hosting applications and data. This business focus requires an effective and secure cloud platform for financial services. The Infosys Cobalt Financial Services Cloud is designed ground up exclusively for enterprises across the vertical to achieve these outcomes and drive speed to value.”

nanoCAD 22 launched

25 April 2022

Nanosoft, nanoCAD software vendor, announces the release of nanoCAD 22 – an updated version of nanoCAD platform and its specialized modules.

The recent release of nanoCAD 21 was a big step for Nanosoft and its community, but it is time to prove the brand is ready to face the challenges of 2022. With the help of valuable feedback from our users and beta testers, the development team has fixed all the bugs, increased productivity, improved commands and prepared an upgrade we are ready to present to the public in the newest version of nanoCAD 22 platform.

What's new in nanoCAD 22:

- Floating document windows
- Optimized performance on 4K screens
- Faster file opening
- 3D snaps for solid objects
- Associative Arrays By Path
- Bounding Prism interface redesigned
- Drawing Explorer redesigned
- Updated Spell Check toolbar
- Purge Document command is purging a Sort Table
- Big improvements in Point Clouds - new point cloud formats, geotagging, point clouds data recalculation, and API

New functionality was also introduced to the professional modules. Users will see the updates in 3D Solid Modeling, Construction, Mechanics and Topoplan modules.

New in the 3D Solid Modeling Module:

- 3D Block Editor
- Section of 3D Objects command
- Direct Insertion of 2D views into Layouts
- Automatic constraints in Sketch mode

New in the Topoplan Module:

- Specialized tools for splitting a drawing into sheets for printing
- Creating a Slope
- Improved import of geopoints
- New commands for Meshes
- Measurements Archive
- Lots of updated commands and improvements

New in the Mechanica Module:

- Broken-out section views
- New features for working with Sheet bodies
- Fasteners' properties changed
- New Materials in the Database

New in the Construction Module:

- New Features of Fasteners

SAP Business Journeys Provide Prescriptive Services Packages to Deliver Targeted Outcomes

28 April 2022

SAP SE announced the SAP Business Journeys portfolio.

With predefined scope, timeline and cost, this packaged set of offerings combines expertise and insight to address customers' compelling business and technology events as they move to the cloud and the latest SAP technology.

Complementing the recently reimagined cloud services and support portfolio, SAP Business Journeys are designed to rapidly address different aspects of customers' cross-business challenges – such as how to grow the business, make processes more sustainable or innovate to compete – delivered in a concise, consumable way.

“Many of the current challenges customers face reach across multiple business units, processes and technical landscapes,” said Kurt Bauer, Global SVP, Premium Engagements, Cloud Success Services, SAP. “Solving them can become quite complex. We created the journeys with the clear goal of offering a simple way to tackle complexity and to deliver outcomes critical to the strategy of our customers.”

Each journey outlines the steps a business must take to gain tangible, measurable value from an SAP software investment by achieving specific goals. SAP Business Journeys are created for dedicated business events with appropriate timelines and efforts. A team of experts, including a journey lead from SAP, facilitates the execution between SAP and the customers using a proven methodology and accelerators. The SAP team orchestrates the entire process, from planning to execution and reporting.

CIMdata PLM Industry Summary

The team drives knowledge transfer and keeps customers informed every step of the way.

To start, SAP has created four specific SAP Business Journeys:

- **Discovery business journey for RISE with SAP** helps customers prepare for the transition to the RISE with SAP solution and identifies steps to help them make the move. Experts guide customers throughout the preparation and discovery phase of the journey.
- **Hyperscaler transition business journey for RISE with SAP** helps customers transition to a hyperscaler infrastructure efficiently and with confidence. It covers the planning and execution phases of moving a system landscape to a hyperscaler or cloud environment running RISE with SAP.
- **Optimization business journey for RISE with SAP** provides insights and transparency on the business processes and custom-code footprint of a system. The aim is to optimize the move to the cloud and help customers plan modern back-to-standard scenarios.
- **Business journey for SAP Sustainability Control Tower** drives sustainable business ambitions with SAP's holistic enterprise-wide sustainability performance management. It helps set targets, monitor progress and gain actionable insights from dependable sustainability data.

During the coming year, SAP plans to offer additional SAP Business Journeys.