

Contents

<i>CIMdata News</i>	3
CIMdata Releases eBook on how to Maximize Business Performance with A Production Digital Twin	3
CIMdata Releases eBook on Siemens' Solid Edge and Xcelerator Share.....	3
CIMdata Releases White Paper on Siemens' Approach to improving the A&D Certification Process.....	4
Meeting Sustainability Objectives: The Industrial Perspective – new blog from CIMdata	4
<i>Acquisitions</i>	5
Bentley Systems Completes Acquisition of Power Line Systems, Global Leader in Software for Power Transmission Engineering	5
Computer Guidance Welcomes Builder Software Tools to JDM Technology Group.....	5
Dr. Flender Holding GmbH acquires Flow Science, Inc.	5
IBM Takes on the 5G Era with Acquisition of Sentaca.....	7
<i>Company News</i>	8
Accenture Names Manish Sharma as Chief Operating Officer; Yusuf Tayob to Become Group Chief Executive — Operations	8
Accenture Talent Hub for Salesforce Launches in Albany, New York.....	9
Altair Expands System Integrator Network to Bring Data Analytics Solutions Faster to the French Market.....	10
Ansys Announces Strategic Collaboration with AWS to Transform Cloud-Based Engineering Simulations	11
Cadence Appoints Mary Louise Krakauer to Board of Directors.....	11
Dassault Systèmes Announces Executive Committee Evolutions.....	12
Egis unveils Connec(t)win – the light, modular and resilient Digital Twin for connected maintenance using ShareAspace iAIM.....	13
HCL Technologies Appoints Masayuki Nakayama as Country Head for Japan	14
Hexagon accelerates its smart digital reality focus, announcing multiple strategic organisational changes ..	14
iBASEt Promotes Dr. Sung Kim to Chief Product and Technology Officer (CPTO).....	15
Inria and Dassault Systèmes Form Strategic Alliance for a European Digital Trusted Platform	16
James Shih Joins Velo3D As Vice President of Supply Chain Management.....	17
OpenText and Google Cloud to Collaborate on Next Generation Content Services.....	17
Sandvik appoints Cecilia Felton as new Chief Financial Officer	18
TCS to Expand STEM Education Programs in New Jersey and Add 1,000 New Employees by 2023	18
Wipro Awarded Boomi Worldwide Spotlight Award 2021	19
Zemax wins prestigious SPIE Prism Award!.....	20
<i>Event News</i>	21
NX What's new live premiere event – Thursday February 10th 2022	21
Trimble Dimensions+ 2022 Call for Speakers Now Open	21
<i>Financial News</i>	22
Addnode Group - Year-End Report 1 January – 31 December 2021	22
Autodesk Extends Invitation to Join Financial Results Conference Call	22
Dassault Systèmes Delivers Strong 2021 Results, With Fourth Quarter Well Aligned With Guidance	22
DXC Technology Reports Third Quarter Fiscal Year 2022 Results	23
FARO to Announce Financial Results for the Fourth Quarter and Year End 2021 on February 16, 2022	25
Hexagon Year-End Report 1 January - 31 December 2021	25
Honeywell Delivers Strong Fourth Quarter Results, Full Year Operating Cash Flow Of \$6.0 Billion And Free Cash Flow Of \$5.7 Billion, Above High End Of Initial Guidance; Issues 2022 Guidance.....	26

CIMdata PLM Industry Summary

Synopsys Announces Earnings Release Date for First Quarter Fiscal Year 2022.....	34
Xometry Announces Unaudited Preliminary Fourth Quarter 2021 Results	34
Implementation Investments.....	35
Aker BP and Accenture Team Up on Data Factory in the Cloud to Improve Oil and Gas Operations.....	35
Ansys Propels First Flight by Air Race E Electric Race Plane.....	36
Copenhagen Admiral Hotel Checks in with Infor	37
HCL Technologies Expands Partnership with Husqvarna Group to Drive Digital Transformation	37
Lemahieu Chooses Centric Software to Bolster Growth.....	38
Mateo Goods Partners with BIMsmith to Launch New BIM Resources for Future of Hybrid Workspace Furniture	39
Mayo Clinic Selects Oracle Fusion Cloud Applications to Power Business Processes	40
Norway’s Largest Manufacturer Of Hydraulic Equipment, Servi Group, Moves To IFS Cloud	40
Touchplan and The Boldt Company Complete Enterprise Agreement	41
Union Bank of India Offers WhatsApp Banking powered by Infosys Finacle	42
Warsaw Metro Deploys New Infor ERP System.....	43
Product News.....	45
2022 Teamcenter 14.0 New Capabilities	45
ActCAD 2022 Update 1258 Released, Dt.30-Jan-2022	45
Altium and MacroFab Partner to Launch Industry-First Integrated PCB “Design WITH Manufacturing” Application	46
BETA CAE Systems announces the release of the v22.0.2 of its software suite	47
Chaos Releases V-Ray 5 for Revit, update 2.....	50
Datakit, specialist in 3D interoperability, announces the new version (2022.1) of its technical data conversion SDK.....	51
Elevate Engineering Simulation with Ansys 2022 R1.....	52
HOOPS 2022 Toolkits Enhance Manufacturing and BIM Workflows	53
iBASEt Solumina iSeries i060 Expands Quality, Process Planning, Process Execution, and Systems Integration.....	55
Newforma Centralized Project Information Further Enhances Data Sharing and Collaboration with New Connector to Autodesk Construction Management Software.....	55
Trimble Introduces Mixed Reality for Construction Layout with FieldLink MR	56
What’s New in IronCAD Mechanical 2022.....	57

CIMdata News

CIMdata Releases eBook on how to Maximize Business Performance with A Production Digital Twin

4 February 2022

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the release of an eBook titled “Maximizing Business Performance with A Production Digital Twin” describing issues within production processes for consumer-packaged goods (CPG) and how Siemens leverages its Xcelerator portfolio to improve the processes through the creation and use of a production digital twin.

To survive, CPG companies must deliver safe products that delight customers in a low margin, highly competitive market. High-speed, flexible production lines must be designed, configured, commissioned, and operated as effectively as possible for companies to meet consumer expectations while achieving their ROI requirements. The growing complexity of products and required product lines is driving a digitalization trend within the CPG industry.

Digitalization, digital thread, and digital twin have become well-understood concepts to improve innovation processes across the product lifecycle. Modeling, simulation, and IoT capabilities have grown in sophistication to the point that they can represent equipment, lines, and even factories with enough fidelity so that design and operations staff can make reliable decisions before products and production facilities physically exist. Mr. Tom Gill, CIMdata Senior Consultant and PLM Enterprise Value and Integration Program Manager, noted, “The products within Siemens’ Xcelerator portfolio such as Simcenter, NX, Line Design, Factory Design, Teamcenter, and Mindsphere enable engineers and operations staff to create and execute digital twins to simulate operations helping ensure fast, effective product launches and equipment commissioning. By doing this work on models rather than physical lines, better outcomes are achieved at lower cost and shorter timespans.”

The CIMdata eBook on Siemens approach to Maximizing Business Performance with A Production Digital Twin is available at: www.CIMdata.com.

CIMdata Releases eBook on Siemens’ Solid Edge and Xcelerator Share

2 February 2022

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the release of an eBook focused on Siemens Digital Industries Software’s Solid Edge and Xcelerator Share for collaboration.

Product manufacturing companies require the ability to collaborate with colleagues, partners, suppliers, and customers. When collaborating, there are vital capabilities and concerns that need to be addressed by multiple participants. They must have access to product design files that are secure and available on a wide range of devices. That access must be controlled to ensure that the most recent updates are available to all participants. Collaboration partners must be able to communicate any product changes they would like to make, and all communications should be tracked.

Dr. Ken Versprille, CIMdata Executive Consultant, noted, “Collaboration has always been a critical aspect of product development and more so these past two years. The industry has recently seen major

CIMdata PLM Industry Summary

improvements in collaboration solutions, and the same is true for Siemens. The Siemens' Xcelerator Share solution works across all Siemens applications but is especially suited for Solid Edge users who must communicate with other product stakeholders.”

The CIMdata eBook on Solid Edge and Xcelerator Share is available at www.CIMdata.com.

CIMdata Releases White Paper on Siemens' Approach to improving the A&D Certification Process

1 February 2022

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the release of a white paper focused on Siemens Digital Industries Software's approach to improving the A&D certification process.

Aerospace and defense companies are under extreme pressure to deliver safe products while meeting cost and schedule targets. The growing complexity of products makes certification of type, production, and airworthiness difficult to achieve without new processes and enabling technology.

Improvements in simulation technology and processes are enabling virtual testing to replace some physical testing. The complexity of products, especially with growing electronics and software content, makes certification more difficult due to the growing number of use cases that need to be verified and activity that need to be coordinated. Mr. Tom Gill, CIMdata Senior Consultant and PLM Enterprise Value and Integration Program Manager, noted “The digital thread and digital twin approaches enabled by Siemens' solutions are helping A&D companies make certification processes predictable and achievable. The Integrated Program Planning & Execution (IPP&E) ties together project management, product data, including BOMs and CAD data, and other product-related information including certification data ensuring all activities get completed on time and within budget.”

The CIMdata white paper on Siemens' Approach to Improving the A&D Certification Process is available at: www.CIMdata.com.

Meeting Sustainability Objectives: The Industrial Perspective – new blog from CIMdata

1 February 2022

The theme for CIMdata's 2022 PLM Market & Industry Forum series is "Sustainability: PLM Essential to Facing this Global Challenge." Sustainability has gone from one of many topics in corporate social responsibility (CSR) programs to a global imperative. Leading PLM software and service providers are defining the needed metrics, measurement approaches, and enabling technology for their industrial clients. Those clients are pushing toward the "triple bottom line," assessing CSR efforts based on impacts on people, the planet, and profit. With this in mind, let's consider how well industrial users are achieving their sustainability objectives. [Read More.](#)

Acquisitions

Bentley Systems Completes Acquisition of Power Line Systems, Global Leader in Software for Power Transmission Engineering

31 January 2022

Bentley Systems, Incorporated, the *infrastructure engineering software* company, announced the completion of its acquisition of Power Line Systems—a leader in software for the design of overhead electric power transmission lines and their structures—from private equity firm TA Associates for approximately \$700 million in cash (for a debt free business and subject to final working capital adjustments).

When announcing its full year 2021 operating results (scheduled for March 1, 2022), Bentley Systems will provide its full-year 2022 financial outlook, reflecting the inclusion of Power Line Systems.

Computer Guidance Welcomes Builder Software Tools to JDM Technology Group

1 February 2022

Computer Guidance Corporation, the leading developer of cloud-based ERP solutions for the construction industry, announced that its parent company, JDM Technology Group, has acquired Ottawa, ON-based Builder Software Tools. The transaction closed on January 31, 2022, after approval from Builder Software Tools' founders, Rick Wright and Elizabeth Stom.

Founded in 1996, Builder Software Tools is Canada's premier provider of ERP software for new home and condo builders. Their comprehensive, user-friendly solutions help new homebuilders streamline processes, gain efficiencies, and deliver superior customer service throughout the entire project life cycle.

"It's exciting to see the completion of the sale, which will ensure the long-term stability and growth of the business," said Wright and Stom in a joint statement. "The JDM Technology Group is a great fit for Builder Software Tools. Not only does JDM bring industry expertise and global resources to the business, but their focus on people means it will be a good home for our customers and our employees."

JDM Technology Group has acquired more than 30 companies since 2004 and has a proven strategy for integrating acquired companies into its existing infrastructure. The acquired companies retain their unique brand and staff, while benefiting from JDM's technical resources and extensive industry expertise. A unique aspect of JDM's strategy is to never end-of-life their software.

"We're pleased to be a part of the next phase of the Builder Software Tools story. Their exceptional builder software is a great fit for our global portfolio of construction software businesses," said JDM CEO Jim McFarlane.

Builder Software Tools will join Explorer Software, a JDM Technology Group company based out of Vancouver, BC. Explorer President Carmen Greene will lead Builder Software Tools and oversee day-to-day operations.

Dr. Flender Holding GmbH acquires Flow Science, Inc.

31 January 2022

Dr. Flender Holding GmbH, owner of MAGMA Giessereitechnologie GmbH and SIGMA Engineering GmbH, acquired 100% of the shares of Flow Science, Inc. in December 2021.

CIMdata PLM Industry Summary

The developer of the **FLOW-3D** family of products, Flow Science is a globally recognized and a successful provider of computational fluid dynamics (CFD) solutions for a wide variety of engineering applications. With its broad range of products and services, Flow Science will continue to operate as an independent company as part of the Dr. Flender Holding group. The mutually agreed acquisition ensures that all the management and staff at Flow Science stay with the company under the leadership of its current CEO, Dr. Amir Isfahani. Flow Science customers will see no changes or disruptions in their products, licensing, or workflows.

The best fit for our people, our customers, and our technology were at the heart of this agreement. This acquisition not only lets us maintain what we value the most, but also provides an exciting opportunity for us to grow our market share and accelerate our development through continued collaboration within the Flow Science group of global companies, as well as now with MAGMA and SIGMA's talented teams, said Dr. Amir Isfahani, CEO of Flow Science. Our customers can expect an expanded product development pipeline as well as the same best-in-class support that we have always strived to deliver.

Overall, there is a significant potential for synergies between the group of companies, especially in product development but also in marketing and distribution. Continuous and targeted improvements to the existing product portfolio and the development of new product offerings through the expanded team of experts are at the core of the strategy for this acquisition.

We were always impressed by Flow Science as one of the pioneers in the CFD industry as well as the level of innovation and competition that they have brought to the market for over 40 years. For us, this acquisition strengthens our presence in the market and opens new doors for us in other markets and application areas, said Dr. Erwin Flender, Owner of Dr. Flender Holding GmbH.

Flow Science, Inc., based in Santa Fe, New Mexico, USA, was founded in 1980 by Dr. C.W. (Tony) Hirt, one of the original developers of the VOF (Volume of Fluid) method. This approach was expanded and perfected in **FLOW-3D** to the **TruVOF** technology, with cutting-edge and groundbreaking improvements in speed and accuracy in the simulation of flow with different liquid and gas interfaces. Today, Flow Science products offer complete multi-physic solutions with diverse modeling capabilities, including fluid-structure interaction, moving objects, and multiphase flows. Flow Science's products and services enable customers worldwide to solve the toughest CFD problems.

MAGMA Giessereitechnologie GmbH was founded in 1988 and is headquartered in Aachen, Germany. MAGMA is a leading global provider of MAGMASOFT® programs for the simulation and virtual optimization of foundry and metallurgical processes. MAGMA products are used for the robust design and optimization of cast components for all applications, especially in the automotive industry and mechanical engineering. Worldwide, customers receive expert support including engineering services and a wide range of training courses, workshops and seminars provided by MAGMAacademy.

SIGMA Engineering GmbH improves and optimizes injection molding processes with its simulation solution SIGMASOFT® Virtual Molding for 23 years. These products enable the development and optimization of plastic components and the corresponding tooling by considering the complete process. In this way, high-performance products and cost-effective, resource-saving productions are achieved from the first part. A large number of process-specific models and 3D simulation technologies are integrated in SIGMASOFT® Virtual Molding, which is continuously developed, validated and optimized. SIGMA offers similar support to its customers as MAGMA and offers a special solution service.

With the acquisition of Flow Science, Inc., the Dr. Flender Holding group employs a total of 320 people worldwide. Its product portfolio now covers a wide range of applications and industries. This includes

CIMdata PLM Industry Summary

metal casting and metallurgical processes, civil and environmental, aerospace, automotive, additive manufacturing, laser welding, micro- and bio-fluidics, plastics, consumer products, electronics and chip making, maritime and energy.

IBM Takes on the 5G Era with Acquisition of Sentaca

1 February 2022

IBM announced it has acquired Sentaca, a leading telco consulting services and solutions provider. The acquisition will accelerate IBM's hybrid cloud consulting business, adding critical skills to help communications service providers (CSPs) and media giants modernize on multiple cloud platforms, innovate, and transform their businesses.

Headquartered in Boston, Massachusetts, Sentaca's team of highly experienced technology consultants across the U.S. and Canada build and migrate mission-critical applications on leading cloud service providers and open-source platforms like Red Hat OpenShift and OpenStack. Sentaca has supported digital transformation, next-generation networks and improved consumer experience for CSPs and media companies since its founding in 2008.

Sentaca will join IBM Consulting's fast-growing Hybrid Cloud Services business to solve clients' strategic and technology challenges such as cost-of-ownership, monetization, scalable and secure architecture, and address opportunities including 5G, IoT and streaming that can accelerate the creation and delivery of new services. Sentaca's domain expertise, assets and client relationships will help IBM meet industry demand and strengthen its position as a prime systems integrator for the emerging network and 5G market.

"Our goal is to help modern networks thrive in an open, hybrid cloud environment that will bring edge and 5G to life for enterprises and consumers," said John Granger, Senior Vice President, IBM Consulting. "The proliferation of mobile devices, wireless connectivity, and new media platforms is driving convergence among telco, media, and entertainment, which makes our acquisition of Sentaca all the more valuable for our clients."

Since Arvind Krishna became IBM CEO, the company has acquired more than 20 companies – 10 in Consulting alone – to bolster its hybrid cloud and AI capabilities. The announcement of the Sentaca acquisition follows several acquisitions by IBM of leading cloud consulting firms – Nordcloud, Taos, BoxBoat and SXiQ – in 2021, which significantly expanded IBM's multicloud transformation, management expertise and capabilities in Europe and North America.

"Sentaca's deep knowledge and experience of telecom networks, coupled with our expertise in hybrid multi-cloud and automation services and solutions, is a perfect fit to compliment IBM's telco/5G strategy," said Phil O'Neill, CEO of Sentaca. "We are very excited to join the IBM team and to be in a position to access additional resources and platforms to deliver on even larger and more ambitious enterprise cloud transformation projects within the telco and media industry sector."

91% of high performing communications services providers surveyed by the IBM Institute for Business Value expect to outperform their current financial expectations in five years as a result of using 5G-enabled edge computing. 5G will allow CSPs to offer a range of tailored network experiences for use cases across industries. To innovate and modernize around 5G and edge, telcos are embracing a hybrid cloud future which is expected to grow into an estimated \$50 billion annual cloud professional services market¹ by 2025.

IBM has long been trusted by the world's leading CSPs to guide them through major technology inflection points, helping clients co-create unique solutions while supporting them on their network

CIMdata PLM Industry Summary

transformation journeys and enabling new revenue streams that deliver value to consumer and enterprise clients. Today, more than 80% of the world's largest telcos work with IBM, and more than 140 telcos are served by IBM and Red Hat.

This acquisition closed on January 31, 2022. Financial details were not disclosed.

Company News

Accenture Names Manish Sharma as Chief Operating Officer; Yusuf Tayob to Become Group Chief Executive — Operations

31 January 2022

Accenture announced changes to its executive leadership team, naming a new chief operating officer and a new group chief executive of its Operations service. Each of these leaders exemplify Accenture's Leadership Essentials.

Manish Sharma has been named chief operating officer, effective March 1, 2022, with responsibility for leading the company's business operations and executing business strategy, protecting the company's people and infrastructure and ensuring operational excellence, which includes the ongoing digital transformation of Accenture. Sharma most recently served as group chief executive — Operations, overseeing a comprehensive intelligent operations portfolio. Sharma also led the development of Accenture's SynOps platform, which orchestrates the optimal combination of human + machine talent, driven by AI, data and insights, to create an evolved, intelligent operating model to deliver targeted business outcomes. A strong advocate for inclusion and diversity, Sharma has played a key role in fostering gender equality in Operations. Sharma founded the Accenture Rural program, through which Accenture partners with small business process services firms in rural areas in India. He and his wife also have established a trust that focuses on children's education in India. Sharma is a 27-year veteran of Accenture and a member of the company's Global Management Committee.

"Manish brings enormous expertise and extensive knowledge of what our clients need and how to digitally transform," said Julie Sweet, chair and CEO of Accenture. "In his new role, Manish's client centricity will continue to build our shared success with our clients as we help them transform every area of their businesses, and his commitment to inclusion and diversity will further strengthen our effort to create 360° Value for all our stakeholders."

Jo Deblaere, who has served as chief operating officer since 2009, will continue in the position until March 1, 2022, and plans to retire on September 1, 2022, after a remarkable 38-year career at Accenture. Among his many accomplishments as COO, Deblaere led the evolution of Accenture's corporate investment and acquisition strategy for a decade. He helped design and implement two major operating model transformations; led the digitization of Accenture, which is now over 95% in the cloud and uses leading cloud-based software applications in all parts of its enterprise; created the company's information security function; and, he developed leading enterprise risk management and business continuity programs. In addition, he served as group chief executive of Europe. Deblaere was active with Junior Achievement for many years, chairing the Board of Directors of Junior Achievement Europe and serving as a board member. Most recently, Deblaere joined the board of a non-profit hospital in his hometown.

"I am deeply grateful for the tremendous impact that Jo has made in his nearly four decades at Accenture, and for the essential role he has played in our evolution during one of the most transformative periods in our history," said Sweet. "I want to particularly recognize Jo's critical

CIMdata PLM Industry Summary

contributions during the pandemic — his leadership in business resilience and in-depth knowledge of how Accenture operates helped us move quickly, provide our clients with seamless service, and protect our people.”

Yusuf Tayob has been named group chief executive — Operations, effective March 1, 2022. Currently, Tayob is market unit lead for the US Midwest. Before his current role, he ran the Accenture Salesforce Business Group, a team of Accenture people who lead complex digital transformations and, previously, led Accenture’s Northeast and Southeast business for the Communications, Media & Technology industries. During his career with Accenture, Tayob has worked with over 100 client organizations in over 20 countries, bringing extensive experience in business strategy, operating model change, business process optimization and large-scale technology implementation. He serves on the Board of Directors of the T. Howard Foundation, promoting diversity in media, entertainment and tech industries. Tayob is a member of Accenture’s Global Management Committee.

“Yusuf brings a broad, diverse set of experiences and skills to one of our most innovative services,” said Sweet. “As our clients continue to create the tech-enabled, future-ready enterprise, Yusuf will help us realize opportunities to build on our momentum in Operations, continue to diversify into new functional and industry services and bring together the full expertise of Accenture to innovate for our clients.”

Accenture Talent Hub for Salesforce Launches in Albany, New York

2 February 2022

Accenture has opened a Talent Hub for Salesforce in Albany, New York dedicated to recruiting, training and skilling people in Salesforce technology. As a founding member of the Salesforce Talent Alliance, this center brings to life Accenture and Salesforce’s desire to help address the growing need for Salesforce-skilled talent in the market.

The Accenture Talent Hub for Salesforce aims to create 100 new jobs in 2022 with plans for continued growth. In addition to the new jobs, Accenture and Salesforce intend to offer paid internships to college students and apprenticeships to people looking to reinvent their career paths.

By tapping into the high-potential and diverse talent market in New York’s Capital Region, Accenture will help address the increased demand for Salesforce skills and services from its clients, particularly for Service Cloud and Sales Cloud solutions.

“The Capital Region is home to a talented pool of job seekers looking to launch or enhance their careers in an exciting, up-and-coming industry,” said New York State Labor Commissioner, Roberta Reardon. “I’m thrilled to see Accenture and Salesforce expand their commitment to New York by investing further in the development of in-demand skills, benefiting students, workers and the local economy.”

Located within Accenture’s office in Albany, the Talent Hub will provide opportunities for both in-person and virtual skills development, meeting the flexible learning needs of today’s hybrid workforce.

Jack Azagury, Accenture’s market unit lead for the US Northeast, said, “In this time of compressed transformation, we’re seeing increased demand from our local clients for Salesforce technologies that can deliver value for their customers and employees. Through recruiting, training, and talent development, the new Talent Hub in Albany expands our commitment to diversity and inclusion while growing our community of Salesforce practitioners.”

Deborah Snyder, State of New York lead for Accenture, said, “With demand for digital and cloud capabilities growing throughout the public and private sectors, the Talent Hub reflects our dedication to growing the future workforce in New York.”

CIMdata PLM Industry Summary

The Accenture Talent Hub for Salesforce in Albany expands the company's commitment to the New York workforce. It builds on local initiatives, such as Accenture's New York apprenticeship program and its participation in the New York CEO Job Council, which includes a commitment to hire graduates of the City College of New York (CUNY).

Through the Salesforce Talent Alliance, Salesforce, organizational partners like Accenture, and workforce development organizations bring new talent into the ecosystem to build a diverse workforce that reflects the communities in which we live and work. To support their hiring efforts, Talent Alliance partners receive connections to a diverse talent pipeline and resources to build their Salesforce practice.

"Developing diverse Salesforce-skilled talent is a critical priority and we're proud to collaborate with Accenture to support its new Talent Hub in Albany," said Tyler Prince, EVP, Worldwide Alliances & Channels, Salesforce. "Initiatives like this can make a real difference in developing workforces of the future that reflect the communities they serve."

Altair Expands System Integrator Network to Bring Data Analytics Solutions Faster to the French Market

1 February 2022

Altair, a global technology company providing solutions in the areas of simulation, high-performance computing (HPC), and artificial intelligence (AI), has signed agreements with two new partners – CV Consultants, a system integrator, and Lendys, a consulting firm supporting financial departments – to bring more data analytics solutions to France and other French-speaking European countries.

These partnerships are part of the companies' joint efforts to increase the adoption and market penetration of Altair's data analytics and AI solutions. Each system integrator partner will provide customers with consulting and other services so they can easily implement data analytics and AI solutions into their processes.

"We are pleased to establish partnerships with CV Consultants and Lendys, each of which is a leader within their area of expertise, has demonstrated a keen understanding of their business, and are skilled at meeting the needs of their prospects and clients," said Piush Patel, senior vice president, strategic relationships, Altair. "Their knowledge and expertise offer synergies that will reduce implementation efforts at customer sites and increase the ROI of our data analytics and AI solutions."

Altair's data analytics and AI solutions are used by a range of customers in industries including aerospace, automotive, manufacturing, finance, banking, health, and insurance. Altair's data analytics technology enables organizations to operationalize data analytics and AI with secure, governed, and scalable strategies. With a no-code, cloud-ready interface, Altair's solutions deliver the unmatched capabilities organizations need to harness the full power of data analytics and AI throughout the complete data pipeline.

CV Consultants is an independent consulting firm and a leading expert in the human resources, payroll, and financial services market. It supports clients and partners in their payroll, finance, and HR projects with a high volume of data processing and automation to offer custom-made solutions according to their individual needs.

Lendys is a recognized player in the banking and insurance sector and has a diverse wealth of technical expertise in accounting, actuarial and risk management, and an in-depth knowledge of the financial industry.

Ansys Announces Strategic Collaboration with AWS to Transform Cloud-Based Engineering Simulations

2 February 2022

Ansys announced a strategic collaboration with Amazon Web Services, Inc. (AWS), identifying the CSP as the preferred and recommended partner for Ansys Gateway powered by AWS. The collaboration will enable deployment of Ansys products on AWS — making simulation workloads more user-friendly, while offering scalability and flexibility with easy access to software and storage solutions from anywhere with a web browser. By leveraging connected ecosystem applications in a cloud environment, Ansys customers will reduce time to market, reduce costs, and innovate faster.

Building on a longstanding relationship, the newly formed collaboration will provide a browser-based, location-independent solution for Ansys customers — particularly product developers, designers, and engineers that have traditionally utilized on-prem HPC resources. Customers will manage and advance their complete CAE, EDA, and Computer-aided design (CAD) product development in the cloud by leveraging scale, flexibility, elasticity, and global reach of AWS.

AWS offers an extensive framework, including products ranging from compute, storage, internet of things (IoT), Digital Twin, analytics and machine learning that Ansys can integrate.

With Ansys Gateway powered by AWS customers will be able to access Ansys applications, enabling faster, flexible, and highly-scalable engineering simulations. In addition to reducing time to market, customers will be able to reduce costs by paying for cloud resources only when they are being used. Ansys Gateway powered by AWS will be available in the AWS Marketplace, allowing customers to access their existing Ansys software applications and will be able to create, customize, and connect Ansys software with 3rd party applications using minimal technical skills via a user-friendly interface.

“This is an exciting opportunity to combine the forces of Ansys and AWS to help customers innovate faster. This work will make it easier for customers to use Ansys’s comprehensive portfolio of engineering simulation products leveraging a secure, reliable and agile cloud. It will remove barriers to scale globally for customers and they can perform more simulations and they can do so earlier in the design process,” said Bill Vass, Vice President of Engineering at AWS.

The benefits of cloud computing are far reaching with the ability to deploy globally in minutes to all target platforms. As an added benefit, customers maintain full control of their data throughout all projects, ensuring security.

“Cloud computing accelerates and expands simulation by removing hardware barriers and computer restrictions, streamlining all processes and workflows,” said Shane Emswiler, Senior Vice President of Products at Ansys. “By leveraging Ansys Gateway powered by AWS customers will have a stronger, three-layered approach to boost their innovation and efficiency by doing more simulations, faster, and with more flexibility on AWS.”

Cadence Appoints Mary Louise Krakauer to Board of Directors

31 January 2022

Cadence Design Systems, Inc. announced the appointment of Mary Louise (ML) Krakauer to its board of directors, effective January 31, 2022. Ms. Krakauer currently serves on the boards of Xilinx, Inc., Mercury Systems, Inc., DXC Technology and Proterra Inc. and previously held various executive roles at global technology companies.

“We are honored to welcome ML to our board of directors,” said Lip-Bu Tan, Cadence’s executive

CIMdata PLM Industry Summary

chairman of the board. “ML has had a highly distinguished career and her extensive experience at several global technology companies will provide Cadence with key strategic and operational insights, helping accelerate growth through our Intelligent System Design strategy and further enhancing our delivery of long-term shareholder value.”

Ms. Krakauer retired as executive vice president, chief information officer of Dell Corporation, a global information technology company, in January 2017. Prior to that, she served in various executive positions at EMC Corporation, a global IT infrastructure company, which she joined in 2008, including executive vice president, chief information officer in 2016, executive vice president, business development, Global Enterprise Services during 2015 and executive vice president, Global Human Resources for EMC Corporation from 2012 to 2015. Ms. Krakauer also held executive general management roles at Hewlett-Packard Enterprise, Compaq Computer Corporation and Digital Equipment Corporation.

Dassault Systèmes Announces Executive Committee Evolutions

3 February 2022

Dassault Systèmes announced changes to its current management structure to fully align the company's governance and operational performance with its long-term strategy.

Pascal Daloz will fully focus on his mission as Chief Operating Officer. He is leading the Operations Executive Committee, an organizational structure supporting the company's ambition to drive innovation in the Life Sciences and Healthcare, Manufacturing Industries, and Infrastructure and Cities sectors. He directs the operations for all strategic functions in the company worldwide including the 3DEXPERIENCE platform, brands, industries, human resources and administration.

Rouven Bergmann is appointed Executive Vice President, Chief Financial Officer and will report to Pascal Daloz. He has a faultless mastery of financial matters related to software and the cloud, and he has played an important role in the integration of MEDIDATA after its acquisition by Dassault Systèmes. He was previously COO Life Sciences for Dassault Systèmes, overseeing MEDIDATA's operations. He joined Medidata Solutions, a NASDAQ listed company based in New York, in 2015 as CFO. From 2015 until it was acquired, the business grew from \$300M to more than \$700M. Prior to joining Medidata, Bergmann was CFO of SAP North America, a multibillion dollar software business. Bergmann holds master's degrees in mechanical engineering and business administration from the Technical University of Kaiserslautern in Germany, and a Ph.D. in economics and finance from the University of Munich. Rouven is based in Paris.

Bernard Charlès, Dassault Systèmes' Vice Chairman and Chief Executive Officer commented:

“This is a rewarding moment for us, revealing unique talents – strong leaders who share our purpose, values and enthusiasm to work together to realize our ambitions. Pascal has demonstrated an unprecedented capacity to scale up the growth of the company and deliver higher value to clients. He will now fully focus on his mission as Chief Operating Officer to elevate and expand our value, empower a new generation of leadership, and support our strategic direction. He is the right person to help me implement Dassault Systèmes' vision of transforming industries, markets and customer experiences with the 3DEXPERIENCE platform, ensure the execution of the company's holistic, growth-centric strategy, and manage its performance.

Since 2019, Rouven had been Chief Operating Officer at MEDIDATA, having previously held the position of Chief Financial Officer. Prior to that, he had acquired executive management and financial experience notably at SAP. He will ensure continuity in financial operations, scale subscriptions and

CIMdata PLM Industry Summary

make the 3DEXPERIENCE platform our system of administration. Rouven brings the rigorous understanding of the key business drivers combined with finance and strategic skills to be the trusted partner directing the Group's financial affairs. We are delighted to welcome him onto the Executive Committee.

Dassault Systèmes has the right combination of talents to deliver on its mission, and provide businesses and people with 3DEXPERIENCE universes to imagine sustainable innovations capable of harmonizing product, nature and life.”

Egis unveils Connec(t)win – the light, modular and resilient Digital Twin for connected maintenance using ShareAspace iAIM

2 February 2022

The French engineering firm Egis unveils, through a demonstrator it invented, a concept of light and resilient Digital Twin aimed at local authorities and transport infrastructure operators using, among other systems/platforms, ShareAspace iAIM to federate, maintain and give partners access to their PLM infrastructure data.

Building on more than fifteen years of experience in BIM¹ on its main projects, Egis actively contributes to the development of openBIM digital exchange protocols for infrastructure (Rail IFC² or MINnD³ initiatives).

At the tradeshow InfraBIM Open 2022, which took place from 10 to 12 January 2022 in Lyon, Egis presented the result of a PoC (Proof of concept) achieved in the second half of 2021 with five partners from the digital and railway sectors: Catenda, Eurostep, Vossloh Cogifer, Ubiplace and CARL Berger-Levrault.

Named connec(t)win, this approach is based on a modular and collaborative vision of the Digital Twin. Rather than a monolithic product requiring both laborious development and integration which would be both long and costly to its clients, Egis imagined and shaped a service based on the connection of applications recently launched on the market (BIM¹, PLM⁴, IoT⁵, field data acquisition apps, etc.) and the reuse of programs already installed in the information systems of local government and operators (for example, CMMS⁶).

The first twins thus emerge much more quickly: this first experiment took merely six months! In addition to the rapidity and the low cost of implementation, the use of openBIM formats such as IFC² or BCF⁷ enables an architecture that will last over time.

This PoC demonstrated the feasibility and effectiveness of this strategy. The connection of existing software and solutions does indeed amplify their respective added values and helps provide a better response to the operational needs of users: quicker access to documentation, contextualisation of alerts, better traceability, continuity of information between one solution and another, easy access on-the-go, etc. This twin concept provides considerable potential for clients by facilitating the development of business applications that are better tailored to address the new challenges of organisations and are easier to use.

¹ BIM = Building Information Modelling; ² IFC = Industry Foundation Classes; ³ MINnD = Modélisation des informations interopérables pour les infrastructures durables (Modelling of interoperable data for sustainable infrastructure); ⁴ PLM = Product Lifecycle Management; ⁵ IoT = Internet of Things; ⁶ CMMS = Computer-aided Maintenance Management Systems; ⁷ BCF = BIM Collaboration Format.

HCL Technologies Appoints Masayuki Nakayama as Country Head for Japan

2 February 2022

HCL Technologies (HCL), a leading global technology company, has appointed Masayuki Nakayama as country head of HCL Technologies in Japan. He will be responsible for driving growth in the Japanese market and for supporting clients with their business transformation.

With more than 30 years of experience in the IT industry, Nakayama brings a powerful combination of skills and experience to the table. He comes with an impressive track record of driving IT and business transformation for many large corporations. He previously held the roles of Vice President at IBM Japan and Senior Vice President at Tata Consultancy Services Japan. He also led business transformation in his role as Managing Executive Officer and Group Chief Information Officer at Japan Post Holdings.

“HCL Technologies has been present in the Japan market for more than 20 years, and I would like to take this opportunity to express my sincere gratitude to all our customers and partners who have supported us in our growth over the years,” Nakayama said. “We are committed to further evolving HCL’s capabilities in line with our customers’ digital transformation goals. Companies in Japan are working on digital transformation initiatives and require securing talented IT resources while incorporating cutting-edge technologies. I believe HCL Technologies is the best partner for Japanese enterprises, as it has been supporting the digitalization of many of the world’s leading global companies.”

“As a major contributor to the world’s IT industry, Japan is an important strategic high growth market for HCL Technologies,” said Swapan Johri, President, Growth Markets, HCL Technologies. “We are delighted to have Nakayama as our leader to strengthen relationships with Japanese customers and drive our business growth. With a strong track record, I am confident he will make a significant impact to the digital transformation needs of our Japanese customers.”

Hexagon accelerates its smart digital reality focus, announcing multiple strategic organisational changes

2 February 2022

Hexagon AB, a global leader in digital reality solutions, combining sensor, software and autonomous technologies, announced the following organisational changes, effective immediately:

To meet the fast-growing demand for real-time digital worlds, Juergen Dold, employed with Hexagon since 1995 and most recently serving in a strategic leadership role across Hexagon’s Geosystems, Geospatial and Safety & Infrastructure divisions, will assume the role of Executive Vice President Hexagon to lead key enterprise-wide initiatives. Specifically, Dold will oversee Hexagon’s focus on the content and platforms necessary to power and operate Smart Digital Reality™ applications and experiences that empower growth within Hexagon’s existing markets and offer rapid expansion into new market segments.

“Driving company strategy and growth in the metaverse ecosystem – the new digital reality that is emerging in both the professional and consumer markets – is key to Hexagon’s future,” says Hexagon President and CEO **Ola Rollén**. “Bringing together data sets of all types and formats where you can build, store and share digitalised objects and environments is our sweet spot.”

Dold’s focus will include advancing and expanding the market penetration of Hexagon’s HxDR ecosystem, which includes the **HxDR digital reality platform** and related business models. The platform allows the convergence and visualisation of almost any geospatial or reality capture data or file

CIMdata PLM Industry Summary

format for improved collaboration and decision making. AI-driven photogrammetry and point cloud meshing of terrestrial and aerial data enables a geo “supermesh”, essentially creating the visual foundation for any Smart Digital Reality. Such realities can be put to industry use, analysing and interpreting infinite data inputs from the real or digital world to solve business problems, or leveraged in the metaverse—which is described by many as the “quasi successor state” of the internet that focuses on social interaction.

“The metaverse isn’t a single place but many digital reality spaces and experiences that companies like Hexagon are working to make more accessible and immersive. Through virtual, mixed or augmented reality functionalities we can provide a higher sense of presence and engagement,” continued **Rollén**. “Additionally, by providing a connected space built from crowdsourced or professionally captured data we can improve collaboration and productivity, especially for remote users and teams. The digital worlds and objects can be used in everything from film making, gaming, and tourism applications to architecture, real estate, land or utilities management, city services, and more.”

Dold will continue to report directly to Hexagon President and CEO Ola Rollén as a member of Hexagon’s Executive Management team.

Thomas Haring, President of Hexagon’s Geosystems division, and Steven Cost, President of Hexagon’s Safety, Infrastructure and Geospatial division, will join the Hexagon Executive Management team, reporting directly to Rollén.

Thomas Haring will also assume all responsibilities for Hexagon’s AEC (Architecture, Engineering and Construction) business. This includes the software AEC business, which comprises the HxGN Smart Build portfolio previously managed under the PPM division and reported under IES, as well as Hexagon’s complementary sensor-software reality capture and visualization solutions, such as the award-winning BLK line, already managed by the Geosystems division and reported under GES.

Hexagon's financial reporting structure consisting of IES and GES will remain the same.

iBAsEt Promotes Dr. Sung Kim to Chief Product and Technology Officer (CPTO)

3 February 2022

iBAsEt, the company that simplifies how complex products are built and maintained, announced that Dr. Sung Kim has been promoted to Chief Product and Technology Officer (CPTO). As CPTO, Dr. Kim will be responsible for leading the product development and product management strategy at iBAsEt.

Dr. Kim is uniquely qualified to direct all activities in product management, technology research, product engineering and development, quality assurance, company IT infrastructure, and cybersecurity. With a centralized perspective on all aspects of iBAsEt’s product lifecycle, he can ensure the company continues to deliver innovative products that address the challenges faced by manufacturers operating in the complex discrete and highly engineered industries.

“Our customer’s digital transformation journeys require us to move faster, be more agile, and constantly improve. As both CPO and CTO, Sung will help us better meet the business challenges our customers face,” said Naveen Poonian, CEO of iBAsEt. “Under Sung’s leadership, I am confident in our ability to excel as an organization, provide the right products and technologies to be recognized as a market leader.”

Dr. Kim was instrumental in leading the transformation of iBAsEt’s product architecture and technology to a cloud-native, microservices architecture. This shift has enabled iBAsEt to offer

Software-as-a-Service (SaaS) solutions has can be deployed with significantly fewer resources for a lower total cost of ownership.

Inria and Dassault Systèmes Form Strategic Alliance for a European Digital Trusted Platform

3 February 2022

Dassault Systèmes and Inria, France's National Institute for Research in Digital Science and Technology, today announced a strategic alliance for European digital sovereignty. The two entities have decided to build a technological research roadmap that confirms their joint ambition to create long-term disruptive technologies in France and in Europe.

Inria and Dassault Systèmes have identified two major challenges to be met as part of this roadmap: virtual twin experiences in health, to benefit patients, hospitals and healthcare systems; and the evolution of technologies related to cybersecurity, to benefit digital trust.

In addition, thanks to this alliance, Inria and Dassault Systèmes plan to contribute to the development of French and European ecosystems in these two areas by engaging in ambitious public-private partnerships as well as open innovation projects, notably in relationship with France's Cyber Campus cybersecurity hub and PariSanté Campus digital health research and innovation initiative.

Society today is living in the experience economy with an accelerated virtualization of the world. New services are available to citizens, notably in health care, requiring a new framework of trust around technology. In this context, France and Europe have key technological capabilities in digital health and cybersecurity for developing and maintaining a sovereign industrial offer and globally leading scientific excellence. The objective is to provide people with new experiential solutions based on the highest levels of trust and services.

The alliance between Inria and Dassault Systèmes marks the next step in strengthening their 20-year collaboration dedicated to critical advances in digital technology and science. Most recently, they worked with a group of organizations in France to develop the country's contact tracing application during the COVID-19 pandemic, TousAntiCovid, to support the French Directorate General of Health's crisis management. They were also members of the BioIntelligence consortium of industrial and academic partners in France focused on digitally transforming drug discovery and development processes. Several startups stemming from Inria's proactive policy for technological entrepreneurship, such as Distène and Argosim, have now joined Dassault Systèmes.

"The virtualization of society requires new scientific and technological fundamentals to provide people with the highest level of experiences and trust. Europe and France have world-class research and technological capabilities, exemplified by the leadership of Inria and Dassault Systèmes as well as very innovative startups in their domains. New ecosystems are emerging to tackle these challenges, crossing the public-private divide for the benefit of all," said Bernard Charlès, Vice Chairman and CEO, Dassault Systèmes.

"This strategic alliance with world leader Dassault Systèmes is part of an action plan to strengthen the digital power of France and Europe. For Inria, engaging in such an alliance is another stepping-stone to build an active digital ecosystem combining world-class universities, startups and leading companies, with the same vision on sovereignty issues and the definition of joint roadmaps in terms of research, technology and innovation, and also on the issue of skills development," said Bruno Sportisse, CEO, Inria.

James Shih Joins Velo3D As Vice President of Supply Chain Management

1 February 2022

Velo3D, Inc., a leading metal additive manufacturing technology company for mission-critical parts, announced that James Shih joined the company as Vice President of Supply Chain Management. The new role will focus on building strong supply chains for Velo3D's Sapphire Systems, including mechanical parts and electronics—as well as materials used in the printing process—to help ensure the company can meet the growing demand for its end-to-end metal additive manufacturing solutions.

“Companies are continuing to rethink how they set up their supply chain ecosystems to ensure they have contingency plans to secure necessary materials through multiple trusted suppliers,” said Benny Buller, Velo3D CEO and Founder. “We’re fortunate to have James join us with 20 years of experience in the electronics, technology, and energy sectors, as well as a history of working with suppliers around the world. By bringing him on to lead our supply chain efforts, we can poise ourselves for growth by building healthy, sustainable supply chains.”

In his new role, Shih will focus on directing, planning, and advocating all aspects of Velo3D's supply chain, including strategies, objectives, policies, and other initiatives. He will be responsible for ensuring healthy inventories across the company's multiple manufacturing locations and distribution centers. Shih will also work with customers to understand their needs, resolve problems, and support Velo3D's broader customer satisfaction effort.

“Companies that are doubling or tripling their growth in a single calendar year encounter a unique set of supply chain challenges that require progressive, strategic solutions,” said Shih. “We estimate the current addressable market for additive manufacturing is more than \$2 billion and that will expand as machine and production costs decrease due to economies of scale. For Velo3D to make a significant impact in the market, and to meet its growth targets, we will need strong supply chain partners and I look forward to addressing these challenges.”

Shih's expertise includes strategic sourcing, price/cost analysis, quantifying value-added manufacturing, and contract review. He has worked with many successful companies to help them avoid disruptions within their supply chain ecosystems and capture market share. Shih has also worked in large-scale manufacturing environments to maximize throughput and lower costs.

Prior to joining Velo3D, Shih was a director of supply chain management at Bloom Energy, a company focused on making clean, reliable, and affordable energy. He also worked at Logitech's and Foxconn's production facilities in supply-chain, program management and business development-related roles. Shih has a bachelor's degree in business from The University of Queensland, Australia.

OpenText and Google Cloud to Collaborate on Next Generation Content Services

3 February 2022

OpenText™ announced that it is deepening its strategic partnership with Google Cloud by launching its OpenText Core Content as a service on Google Cloud, enabling customers to deploy OpenText's enterprise productivity suite on a global, trusted infrastructure. OpenText and Google Cloud will partner to deliver new capabilities to users, utilizing Google Cloud capabilities in secure software supply chains, SRE toolsets, and DevOps best practices for delivering a next-generation, cloud-native productivity platform, with low-latency and secure access for distributed teams.

Through this multi-year partnership, OpenText and Google Cloud will also jointly explore new functionalities and integrations to improve productivity for distributed and hybrid teams, including

CIMdata PLM Industry Summary

integrations between OpenText and Google Workspace to enable streamlined, secure, and governed access to data across entire organizations, and to deliver improved, cloud-based content services for enterprise customers. This partnership will enable customers to move from data-to-impact and create their information advantage, delivering innovative solutions that companies require for global collaboration, compliance, and business growth.

“Distributed work is here to stay and organizations must ensure they have the right technology, information and processes in place to deliver on employee and customer expectations,” said Mark Barrenechea, CEO & CTO at OpenText. “To meet and exceed those expectations, we are excited to build the next generation OpenText platform on Google Cloud. Our long-standing, strong partnership with Google Cloud, and our proven track record of industry-leading co-innovations will help us support customers’ hybrid work needs today and into the future.”

“OpenText is building for the future on Google Cloud,” said Thomas Kurian, CEO at Google Cloud. “Their platform for enterprise content services is widely adopted among global enterprises, and with hybrid work here to stay, it’s critical to enable secure, governed, and easy access to information across these large organizations. Delivering and building OpenText’s core platform on Google Cloud will enable businesses to deploy its capabilities at great scale, securely and quickly, while enabling future integrations with popular collaboration services like Google Workspace.”

Sandvik appoints Cecilia Felton as new Chief Financial Officer

31 January 2022

Sandvik has appointed Cecilia Felton as Executive Vice President and Chief Financial Officer, CFO, effective February 1, 2022. Cecilia Felton, who has served as interim CFO since November 1, 2021, will also be a member of the Group Executive Management.

“I am very pleased that we are appointing Cecilia Felton as Chief Financial Officer. She is a highly appreciated colleague and a strong leader, and I am confident that she with her solid background and extensive expertise will contribute significantly as we continue to execute our shift to growth strategy”, says Stefan Widing, President and CEO of Sandvik.

Cecilia Felton, born 1984, has been with the Sandvik Group since 2013. She has been Vice President of Group Control since 2018, and previously held the positions as Director of Group M&A and investments as well as Director of Group Business Control at Sandvik. Before joining Sandvik she worked at Ernst & Young in London (2007-2013). She is a chartered accountant and holds a Bachelor of Science in Environmental Policy and Economics from the London School of Economics.

TCS to Expand STEM Education Programs in New Jersey and Add 1,000 New Employees by 2023

3 February 2022

Tata Consultancy Services (TCS) announced plans to expand its operations in New Jersey by hiring nearly 1,000 additional employees by the end of 2023 to meet the growing needs of customers to digitally transform their businesses. To nurture a pipeline of local IT talent for the state, TCS will also grow the reach of its STEM and computer science education programs in New Jersey by 25 percent, expanding teacher training and student programs.

“We are thrilled to have Tata Consultancy Services expand its footprint in New Jersey and invest in our future workforce by expanding its STEM education programs,” said **New Jersey Governor Phil Murphy**. “TCS is creating thousands of highly-skilled jobs and delivering significant economic growth

CIMdata PLM Industry Summary

to New Jersey. Our economic mission trip to India in 2019 continues to bear fruit as we have seen deep investments from Indian companies in our state. We look forward to strengthening our ongoing partnership with TCS as we build a more diverse and inclusive innovation ecosystem where high-tech companies can grow and thrive.”

TCS’ Edison Business Center, one of 30 TCS facilities in the U.S., serves more than 100 customers in New Jersey. TCS has more than 3,700 employees in the state who provide IT and consulting services across industries, harnessing technologies such as artificial intelligence, machine learning, cloud computing, and enterprise software.

*“New Jersey is an important technology hub for TCS, and we are excited to be a part of its growing reputation as a center of innovation,” said **Surya Kant, Chairman of North America, TCS.** “TCS is committed to nurturing tomorrow’s technology leaders through STEM initiatives and volunteerism across New Jersey, so they can continue to drive economic growth and give back to their local communities.”*

TCS is among the nation’s top consulting and IT services providers and helps more than a third of the Fortune 500 companies to digitally transform and grow their businesses. It has been among the top two U.S. recruiters of IT services talent, hiring more than 21,500 employees in the past five years.

TCS understands the need to expand STEM and computer science education in schools across New Jersey and the U.S. Over the last five years, TCS has hired nearly 450 students from colleges and universities across the Garden State and has introduced its own student and educator STEM and computer science programs to help build a pipeline of local IT talent in New Jersey.

TCS’ **goIT™** program, a STEM training initiative which fosters digital innovation and career readiness, has directly impacted over 42,000 students in the U.S. and Canada, including more than 870 students in New Jersey at 25 unique events. Overall, more than 2,900 students in New Jersey have engaged in goIT programming, through teaching curriculums and other programs such as CSEdWeek and STEM Career Accelerator Day. In August 2021, TCS also celebrated the culmination of a month-long goIT STEM Camp with the Edison, New Jersey Board of Education, with 350 students participating.

TCS’ **Ignite My Future in School**, a pioneering, trans-disciplinary program for K-12 education, helps educators embed computational thinking into core subjects such as math, science, language arts, and social studies. Since its launch in 2017, over 26,000 teachers and stakeholders across North America have been impacted by the program. In 2021, TCS supported New Jersey teachers and students through two TECHademy events, which are professional development sessions for educators from school districts across the state.

Over the last 10 years, TCS employees have volunteered nearly 32,000 hours with organizations in New Jersey. TCS has also committed more than 2,600 hours to the Community Food Bank of New Jersey since 2014, been one of the top corporate fundraisers for the American Heart Association’s Go Red for Women New Jersey chapter over the last five years, and supported NPower, a nonprofit organization that provides free IT career training.

Wipro Awarded Boomi Worldwide Spotlight Award 2021

4 February 2022

Wipro Limited, a global leader in information technology, consulting, and business process services company, has received the 2021 Worldwide Spotlight Award from Boomi™, the intelligent connectivity and automation leader, at Boomi’s recent Global Partner Summit. The award recognized Wipro’s contributions to the development of the Digital Integration as a Service (DaaS) solution, built on

CIMdata PLM Industry Summary

the Boomi AtomSphere™ Platform.

Wipro's DIaaS solution enables companies to accelerate their integration modernization initiatives and drive better business outcomes with enhanced visibility into distributed integration landscapes. It also helps companies reduce their total cost of ownership through unified monitoring and management of the numerous IT systems and applications in their environments. The Boomi AtomSphere Platform is the leading integration platform as a service (iPaaS) for cloud-connected businesses. The company has connected more than 189,000 unique endpoints to date and has over 18,000 customers processing more than 4.5 billion integrations every month on its revolutionary platform.

“The challenge that every organization faces today is navigating the transformation journey. DIaaS helps companies get in-depth visibility of their digital integration landscape, making them more agile, lean, and dynamic. This award recognizes Wipro's efforts to deliver intelligent solutions,” said **David Tavolaro, Vice President of Global Business Development, Boomi.**

“This award is a testament to Wipro and Boomi's shared commitment to building innovative solutions that deliver tangible business value for our customers. Digital Integration as a Service, built on Boomi's platform, enables enterprises to manage Application Programming Interface (APIs), events, and B2B partners with real-time data monitoring and interactive dashboards. We are honored to win this award, particularly as it recognizes the ability of DIaaS to accelerate clients' time to value,” said **Hemantha Kumar C, Practice Head, Digital Business Integration, iDEAS, Wipro Limited.**

Together, Wipro and Boomi provide comprehensive integration expertise that accelerates digital transformations across highly distributed environments. By collaborating on Digital Integration as a Service platform with Boomi, Wipro helps companies navigate complex integration architecture across the cutting-edge infrastructure. This is a critical step towards enabling cloud-native development and results in faster automation for better visibility, reduced costs, and improved application integration.

With DIaaS, companies can achieve greater accuracy, consistency, and reliability of their integration platform while removing manual errors and reducing individual development efforts.

Zemax wins prestigious SPIE Prism Award!

31 January 2022

We are honored and delighted to share that Zemax, an Ansys company, saw its innovative OpticStudio® Structural, Thermal, Analysis and Results (STAR) Module win the 2022 Prism Award in the Software category. SPIE, the international society for optics and photonics, and Photonics Media announced the Zemax win at the 14th annual Prism Awards ceremony this week, part of the 2022 SPIE Photonics West event.

The ceremony showcased a dynamic range of companies. Zemax was proud to celebrate with other category winners like Lumotive and LightPath Technologies, who continue to apply innovative and creative solutions to critical problems in such areas as augmented and virtual reality, biomedical devices, autonomous vehicles, and industrial lasers.

The industry-focused Prism Awards are the gold standard of recognition for photonics innovation. Each year, the awards reflect the latest exciting developments, exponential growth, and rich technical innovations across photonics and photonics-enabled industries. 2022 marks only the second year that the Software category has been included, and Zemax is especially thrilled to be among the first companies ever selected for this high honor.

“The OpticStudio STAR Module is the latest in ground-breaking innovations from Zemax, putting

CIMdata PLM Industry Summary

powerful structural, thermal, and optical performance (STOP) analysis within reach of everyday optical engineering workflows. I want to recognize and say thanks to the dedicated team members who worked together tirelessly to create the STAR module, as well as to the rest of my colleagues at Zemax who each had their part in achieving this great success” Sanjay Gangadhara, Director of R&D.

Esteban Carbajal, OpticStudio STAR Module Senior Product Manager said “We are excited to be recognized for innovation by the SPIE Prism Award committee. The STAR module is designed to provide accurate performance predictions in a package that fits into new and established workflows. This award validates the hard work and success to achieve that goal. Zemax and Ansys will continue to strive to provide more innovation in the years to come”

Event News

NX What’s new live premiere event – Thursday February 10th 2022

31 January 2022

Jamie Tyler announced the first ever launch of Siemens NX in a live event. The event is free to register and will take place on February 10, 2022 at 16:00 GMT. Please visit the blog post for additional information, registration, and a video teaser. <https://blogs.sw.siemens.com/nx-design/nx-whats-new-live-premiere-event-thursday-february-10th-2022/>

Trimble Dimensions+ 2022 Call for Speakers Now Open

2 February 2022

Trimble has opened its Call for Speakers for the Trimble Dimensions+ 2022 User Conference, which will be held November 7-9 at the Venetian Resort in Las Vegas, Nevada. With emphasis on education, technology and networking, this event will serve as an unmatched opportunity for speakers to share their real-world experiences and industry insights with peers from around the world.

Thousands of attendees will gather at Dimensions+ to attend sessions highlighting groundbreaking technology that can transform work and drive a sustainable future. Topics include autonomy; building design, construction and operation; civil engineering and infrastructure; forensics; forestry; local, state and federal government; land administration; mapping and GIS; marine construction; mobile mapping; monitoring; photogrammetry and remote sensing; scanning; surveying; utilities; sustainability and more. Dimensions+ 2022 also includes a unique Offsite Experience with Trimble technology in action in the field. Connect, learn and experience how professionals are using the latest technologies to transform and make work faster, safer, greener and more productive.

For those interested in submitting a proposal to present an educational session at Dimensions+ visit the **Call for Speakers** website.

Proposals will be accepted through March 31, 2022. Notifications of acceptance will be made in the following months and accepted speakers will receive a significantly reduced registration rate with access to the full Dimensions+ experience.

Additional information about Trimble Dimensions+ will be available in the coming weeks and months.

Financial News

Addnode Group - Year-End Report 1 January – 31 December 2021

4 February 2022

FOURTH QUARTER SUMMARY, OCTOBER–DECEMBER 2021

- Net sales increased by 21 per cent to SEK 1,114 m (921), of which 13 per cent was organic. Currency-adjusted organic growth was 12 per cent.
- EBITA increased to SEK 148 m (108), and the EBITA margin increased to 13.3 per cent (11.7).
- Operating profit rose to SEK 106 m (76), and the operating margin widened to 9.5 per cent (8.3).
- Profit for the period increased to SEK 80 m (55).
- Earnings per share increased to SEK 2.39 (1.65).
- Cash flow from operating activities increased to SEK 257 m (181).
- Changes to Group Management.
- The Board of Directors is proposing a dividend of SEK 3.00 (2.50) per share.

SUMMARY OF SIGNIFICANT EVENTS AFTER THE END OF THE REPORTING PERIOD

- Acquisition of Claytex Services Ltd. of the UK, with net sales of SEK 25 m.
- The Board of Directors is proposing a 4:1 share split.
- Office property in UK divested with an estimated capital gain of approx. SEK 20 m.

Autodesk Extends Invitation to Join Financial Results Conference Call

1 February 2022

Autodesk, Inc. announced it will broadcast its fourth quarter fiscal 2022 financial results conference call via its website Thursday, February 24, 2022, at 2:00 p.m. Pacific Time. Autodesk will host a live webcast call Thursday, February 24, 2022, at 2:00 p.m. PT at www.autodesk.com/investors. An audio replay webcast will also be available after 5:00 p.m. PT on Autodesk's website at www.autodesk.com/investors.

For more information, please call Autodesk Investor Relations at 415-507-6373.

Dassault Systèmes Delivers Strong 2021 Results, With Fourth Quarter Well Aligned With Guidance

3 February 2022

Dassault Systèmes, announced IFRS unaudited financial results for the fourth quarter and year ended December 31, 2021. The Group's Board of Directors approved these results on February 2, 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, in constant currencies, diluted EPS)

- As reported, 4Q21 IFRS EPS increased 15% to €0.18, non-IFRS EPS grew 17% to €0.29
- 4Q21 total revenue and software revenue increased 10%, with licenses & other software revenue

CIMdata PLM Industry Summary

up 15% and support & subscription up 8% (non-IFRS)

- FY21: as reported IFRS EPS increased 56%, non-IFRS rose 26%; IFRS & non-IFRS total revenue grew 11%; IFRS software revenue rose 12%, non-IFRS software revenue was up 11%; non-IFRS operating margin of 34.3%
- FY21 non-IFRS 3DEXPERIENCE software revenue rose 15%, driven by strong subscription growth
- FY21 cash flow from operations increased 30% to €1.613 billion (IFRS)
- FY2022 non-IFRS objectives: revenue growth of 9%-10% to €5.30-€5.35 billion; EPS reported growth of 3%-6% to €0.98-€1.00

DXC Technology Reports Third Quarter Fiscal Year 2022 Results

2 February 2022

DXC Technology reported results for the third quarter fiscal year 2022.

“Our third quarter results show the strong progress we are making with our transformation journey. Our focus on operational execution drove continued improvement in revenue, margins, and EPS, as well as an exceptionally strong bookings quarter of \$5 billion (for a book-to-bill of 1.23x), and an outstanding cash flow result,” said Mike Salvino, DXC President and Chief Executive Officer. “By operating a more disciplined and focused organization, we continue to strengthen both our position in the market and our balance sheet, resulting in improved margins and substantial free cash flow. Finally, I would like to thank my colleagues across the organization for continuing to deliver excellence for our customers in the midst of COVID-19 challenges.”

Financial Highlights - Third Quarter of Fiscal Year 2022

Revenue was \$4.09 billion for the third quarter of fiscal year 2022, down 4.6% as compared to prior year period, and down 1.4% on an organic basis. Third quarter revenues came in at the bottom of the previous guidance range, as the strengthening of the U.S. dollar reduced third quarter fiscal year 2022 revenues by \$26 million as compared to the currency rates used in our prior earnings guidance.

Net income was \$102 million, or 2.5% of sales, for the third quarter of fiscal year 2022, compared to \$1,103 million, or 25.7% of sales, in the prior year quarter. EBIT was \$189 million or 4.6% of sales. Net income and EBIT in the quarter included the following items: amortization of intangible assets of \$106 million, debt extinguishment costs of \$2 million, restructuring costs of \$36 million, mark-to-market pension loss of \$7 million, loss on disposition of \$4 million, and transaction, separation, and integration costs of \$11 million. Excluding these items, Adjusted EBIT margin was 8.7% in the third quarter, an improvement of 170 bps as compared to the prior year quarter. Third quarter adjusted EBIT margin came in within our guidance range. In the third quarter of fiscal year 2021, net income and EBIT benefited from the sale of a business.

Diluted earnings per share was \$0.38 and Non-GAAP diluted earnings per share was \$0.92 for the third quarter of fiscal year 2022, driven by the improvement in margins, lower interest expense, and the lower number of outstanding shares. Non-GAAP EPS met the Company's previous guidance range.

Book-to-bill for the quarter was 1.23x. Over the trailing four quarters, the company delivered a book to bill of 1.08x.

During the third quarter, the Company repurchased 6.8 million shares of common stock for a total of \$213 million. Year-to-date, the company repurchased 10.6 million shares for a total of \$363 million.

CIMdata PLM Industry Summary

GBS segment revenue was \$1.946 billion in the third quarter of fiscal year 2022, up 1.3% compared to prior year period and up 7.0% on an organic basis. The GBS performance was driven by strong growth in the Analytics & Engineering businesses, where revenue increased 17.3% and by continued improvement in our Applications business, where revenue increased 3.6% as compared to prior year period. GBS segment profit was \$315 million and segment profit margin was 16.2%, up 200 bps as compared to the third quarter of fiscal year 2021. GBS bookings for the quarter were \$2.48 billion for a book-to-bill of 1.28x.

GIS segment revenue was \$2.143 billion in the third quarter of fiscal year 2022, down 9.5% compared to prior year period, and down 8.3% on an organic basis. GIS segment performance was driven by improving ITO revenues, which declined by 2.7%. GIS segment profit was \$102 million with a segment profit margin of 4.8%, a 110 bps margin expansion as compared to third quarter of fiscal year 2021. GIS bookings were \$2.53 billion in the quarter for a book-to-bill of 1.18x.

Cash Flow

Cash flow from (used in) operations was \$696 million in the third quarter of fiscal year 2022, as compared to \$(187) million in the third quarter of fiscal year 2021, and capital expenditures were \$146 million in the third quarter of fiscal year 2022. Free cash flow (cash flow from operations, less capital expenditures) was \$550 million in the third quarter of fiscal year 2022, as compared to \$(406) million in the third quarter of fiscal year 2021. Third quarter of fiscal year 2022 operating cash flow included two previously disclosed payments totaling approximately \$130 million. The third quarter benefited from stronger cash flow performance resulting from favorable timing on both payments and receipts in the quarter. Fourth quarter cash flows are expected to be negatively impacted as this timing impact reverses.

Guidance

The Company reaffirmed its longer-term guidance:

- Positive organic revenue growth of 1% to 3% for fiscal year 2024
- Adjusted EBIT margin of 10% to 11% in fiscal year 2024
- Non-GAAP diluted EPS of \$5.00 to \$5.25 in fiscal year 2024
- Free cash flow of approximately \$1.5 billion in fiscal year 2024
- Restructuring and TSI of approximately \$100 million in fiscal year 2024

DXC does not provide a reconciliation of Non-GAAP measures that it discusses as part of its guidance because certain significant information required for such reconciliation is not available without unreasonable efforts or at all, including, most notably, the impact of significant non-recurring items. Without this information, DXC does not believe that a reconciliation would be meaningful.

Ken Sharp, Chief Financial Officer, commented: "Our focus driving the business in a disciplined fashion is yielding results. We have made solid progress addressing our debt and related interest expense, restructuring expense, transaction, separation and integration expense, capital expenditures, capital lease originations and our facility footprint. These initiatives, and the ongoing strong business execution of our DXC colleagues, allowed us to deliver robust cash flows in the quarter. With our improved cash flow, coupled with the progress we are making on our portfolio shaping efforts, we expect to have \$1 billion in excess cash that we intend to use to repurchase our shares over the next twelve months."

Earnings Conference Call and Webcast

DXC Technology senior management will host a conference call and webcast to discuss these results on

CIMdata PLM Industry Summary

February 2, 2022, at 5:00 p.m. EDT. The dial-in number for domestic callers is +1 (888) 330-2455. Callers who reside outside of the United States should dial +1 (240) 789-2717. The passcode for all participants is 4164760. The webcast audio and any presentation slides will be available on DXC Technology's Investor Relations website.

A replay of the conference call will be available from approximately two hours after the conclusion of the call until February 9, 2022. Phone number for the replay is +1 (800) 770-2030 or +1 (647) 362-9199. The replay passcode is 4164760.

FARO to Announce Financial Results for the Fourth Quarter and Year End 2021 on February 16, 2022

1 February 2022

FARO®Technologies, Inc., a global leader of 3D measurement, imaging and realization solutions for the 3D Metrology, AEC (Architecture, Engineering & Construction), and Public Safety Analytics markets, announced that after market close on Wednesday, February 16, 2022, it will release its financial results for the fourth quarter and full year ended December 31, 2021. In conjunction with the release, Michael D. Burger, President and Chief Executive Officer, and Allen Muhich, Chief Financial Officer, will host a conference call on Wednesday, February 16, 2022 at 5:00 p.m. ET.

Interested parties can access the conference call by dialing (866) 518-6930 (U.S.) or +1 (203) 518-9797 (International) and using the passcode FARO. A live webcast will be available in the Investor Relations section of FARO's website.

A replay of the 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 remain available for approximately 30 calendar days.

Hexagon Year-End Report 1 January - 31 December 2021

2 February 2022

Fourth quarter 2021

- Operating net sales increased by 17 per cent to 1,216.7 MEUR (1,044.1). Net sales including the reduction of acquired deferred revenue amounted to 1,210.4 (1,038.0). Using fixed exchange rates and a comparable group structure (organic growth), net sales increased by 7 per cent
- Adjusted operating earnings (EBIT1) increased by 24 per cent to 373.1 MEUR (299.7)
- Earnings before taxes, excluding adjustments, amounted to 367.6 MEUR (292.4)
- Net earnings, excluding adjustments, amounted to 299.7 MEUR (239.8)
- Earnings per share, excluding adjustments, amounted to 11.0 Euro cent (9.2)
- Operating cash flow decreased to 237.3 MEUR (353.4)
- The Board of Directors proposes a dividend of 0.11 EUR (0.09) per share, an increase of 22 per cent

This information is information that Hexagon AB is obliged to make public pursuant to the EU Market Abuse Regulation. The information was submitted for publication, through the agency of the contact person set out above, at 08:00 CET on 2 February 2022.

CIMdata PLM Industry Summary

Honeywell Delivers Strong Fourth Quarter Results, Full Year Operating Cash Flow Of \$6.0 Billion And Free Cash Flow Of \$5.7 Billion, Above High End Of Initial Guidance; Issues 2022 Guidance

3 February 2022

Honeywell announced results for the fourth quarter and full year 2021 that met or exceeded the company's guidance despite an extremely challenging operating environment. The company also provided its outlook for 2022.

The company reported a fourth-quarter year-over-year sales decline of 3%, down 2% on an organic basis, due to supply-related constraints, a tough comparison versus 2020 due to lower COVID mask volumes, and six fewer days in the quarter. Demand remained strong, with orders up high-single digits. Closing backlog was \$28 billion, up 7% year over year. Fourth-quarter operating margin declined 130 basis points to 17.5% and segment margin expanded 30 basis points to 21.4% as a result of the company's commercial excellence efforts. Honeywell delivered fourth-quarter adjusted earnings per share of \$2.09, above the midpoint of the company's guidance.

For the full year, sales increased by 5%, or 4% on an organic basis, and operating margin expanded 50 basis points with segment margin expanding 60 basis points. The company reported full-year adjusted earnings per share⁵ of \$8.06, above the high end of its initial guidance of \$7.60 to \$8.00.

“Honeywell had a strong finish to another challenging year. We remained resilient, focusing on operational excellence to deliver the commitments we made to our shareowners,” said Darius Adamczyk, chairman and chief executive officer of Honeywell. “Our focus on differentiated solutions drove double-digit organic sales growth in 2021 in our warehouse and workflow solutions, productivity solutions and services, business and general aviation, advanced materials, and recurring connected software businesses. Our disciplined cost management, swift pricing actions to stay ahead of the inflation curve, and improved productivity resulted in 60 basis points of segment margin expansion for the year. As a result, our full-year adjusted earnings per share⁵ increased by 14% year over year. We also were strong cash generators in 2021, delivering \$6.0 billion in operating cash flow with 109% conversion and \$5.7 billion of free cash flow⁶ with 102% adjusted conversion and free cash flow margin of 17%.”

Adamczyk continued, “Our balance sheet remains strong, and we maintained our focus on executing our capital deployment strategy, including investing in high-return capital expenditures, repurchasing \$3.4 billion of Honeywell shares, completing four acquisitions, and increasing the dividend for the 12th time in the past 11 years. We deployed capital in excess of our operating cash flow and will continue to follow this playbook in 2022.”

Adamczyk concluded, “I am proud of the way Honeywell continues to respond to the challenging macroeconomic environment. We quickly took action to mitigate supply chain challenges and inflation by bringing on alternate suppliers, redesigning parts and implementing pricing actions. We also remained focused on growth, investing in new markets and technologies such as our environmental, social and governance (ESG) enablement solutions and the creation of Quantinuum, the world's largest, most advanced integrated standalone quantum computing company. We entered 2022 with positive momentum and a strong backlog, and I am confident we are well positioned to continue to perform for our shareowners, our customers, and our employees in the short and long term.”

Honeywell also announced its outlook for 2022. The company expects sales of \$35.4 billion to \$36.4 billion, representing year-over-year organic growth of 4% to 7%, or 5% to 8% excluding the impact of COVID-driven mask sales declines; segment margin expansion of 10 to 50 basis points, including the

CIMdata PLM Industry Summary

(30) basis point impact of its newly combined Quantinuum business; earnings per share⁵ of \$8.40 to \$8.70, up 4% to 8% adjusted; operating cash flow of \$5.7 billion to \$6.1 billion, and free cash flow of \$4.7 billion to \$5.1 billion. A summary of the company's 2022 guidance can be found in Table 1.

Fourth-Quarter Performance

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

Aerospace sales for the fourth quarter were down 3% year over year on an organic basis. Business and general aviation original equipment, business and general aviation aftermarket, and air transport aftermarket all grew double digits as build rates and flight hours improved, offset by lower U.S. defense volumes which were impacted by supply chain constraints and lower demand. Commercial aviation aftermarket sales were up over 16% year over year, demonstrating momentum in the aftermarket recovery. Segment margin expanded 140 basis points to 29.0% driven by pricing and productivity, partially offset by higher cost of materials.

Honeywell Building Technologies sales for the fourth quarter were down 1% on an organic basis year over year due to lower projects volume and continued supply chain constraints in the products businesses. Orders were up 4% as a result of demand for fire products, building management systems, and building projects. Building solutions backlog grew double digits year over year, positioning the business for growth in 2022. Segment margin contracted 30 basis points to 21.1% driven by lower volume leverage and cost inflation, mostly offset by favorable pricing.

Performance Materials and Technologies sales for the fourth quarter were up 2% on an organic basis year over year, driven by petrochemical catalyst and gas processing shipments in UOP, continued growth in advanced materials, and demand for thermal solutions within process solutions, partially offset by delayed projects recovery and softness in smart energy. Orders grew 10% year over year driven by double-digit growth in both UOP and process solutions projects, a positive indicator for 2022 and beyond. Segment margin expanded 430 basis points to 23.0% driven by favorable pricing and productivity, net of inflation.

Safety and Productivity Solutions sales for the fourth quarter were down 6% on an organic basis year over year, driven by lower personal protective equipment volume, partially offset by double-digit growth in productivity solutions and services and advanced sensing technologies. Backlog remained strong at over \$4 billion dollars as declines in COVID-related mask demand were mostly offset by growth in advanced sensing technologies, productivity solutions and services, and gas detection. Segment margin contracted 450 basis points to 10.8% driven by lower volume leverage and Intelligrated project inefficiencies, partially offset by favorable pricing. These results exclude a \$105 million charge (in Repositioning and Other) for certain long-term contract labor cost inefficiencies due to severe supply chain disruptions (attributable to the COVID-19 pandemic) related to the warehouse automation business. For more detail, please see the footnotes for the reconciliation of segment profit to operating income below.

Conference Call Details

Honeywell will discuss its fourth-quarter results and updated full-year guidance during an investor conference call starting at 8:30 a.m. Eastern Standard Time today. To participate on the conference call, please dial (301) 715-8592 approximately 10 minutes before the 8:30 a.m. EST start. The meeting ID is 922 0876 1191. The password is 576684. 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.

CIMdata PLM Industry Summary

TABLE 1: FULL-YEAR 2022 GUIDANCE

Sales	\$35.4B - \$36.4B
<i>Organic Growth</i>	<i>4% - 7%</i>
<i>Organic Growth Excluding Impact of COVID-Driven Mask Sales Declines</i>	<i>5% - 8%</i>
Segment Margin	21.1% - 21.5%
<i>Expansion</i>	<i>Up 10 - 50 bps</i>
Segment Margin Excluding the Impact of Quantinuum	21.4% - 21.8%
<i>Expansion Excluding Impact of Quantinuum</i>	<i>Up 40 - 80 bps</i>
Earnings Per Share ³	\$8.40 - \$8.70
<i>Adjusted Earnings Growth⁴</i>	<i>4% - 8%</i>
Operating Cash Flow	\$5.7B - \$6.1B
Free Cash Flow	\$4.7B - \$5.1B
<i>Excluding Impact of Quantinuum</i>	<i>\$4.9B - \$5.3B</i>

TABLE 2: SUMMARY OF HONEYWELL FINANCIAL RESULTS

CIMdata PLM Industry Summary

	FY 2021	FY 2020	Change
Sales	34,392	32,637	5%
<i>Organic Growth</i>			4%
Segment Margin	21.0%	20.4%	60 bps
Operating Income Margin	18.0%	17.5%	50 bps
Reported Earnings Per Share	\$7.91	\$6.72	18%
Adjusted Earnings Per Share ⁵	\$8.06	\$7.10	14%
Cash Flow from Operations	6,038	6,208	(3)%
<i>Conversion</i>	109%	130%	(21)%
Free Cash Flow	5,729	5,302	8%
<i>Adjusted Free Cash Flow Conversion⁶</i>	102%	105%	(3)%
	4Q 2021	4Q 2020	Change
Sales	8,657	8,900	(3)%
<i>Organic Growth</i>			(2)%

CIMdata PLM Industry Summary

	FY 2021	FY 2020	Change
Segment Margin	21.4%	21.1%	30 bps
Operating Income Margin	17.5%	18.8%	-130 bps
Reported Earnings Per Share	\$2.05	\$1.91	7%
Adjusted Earnings Per Share ²	\$2.09	\$2.07	1%
Cash Flow from Operations	2,663	2,782	(4)%
<i>Conversion</i>	186%	205%	(19)%
Free Cash Flow	2,593	2,491	4%
<i>Adjusted Free Cash Flow Conversion³</i>	178%	170%	8%

TABLE 3: SUMMARY OF SEGMENT FINANCIAL RESULTS

AEROSPACE	FY 2021	FY 2020	Change
Sales	11,026	11,544	(4)%
<i>Organic Growth</i>			(5)%
Segment Profit	3,051	2,904	5%
Segment Margin	27.7%	25.2%	250 bps

CIMdata PLM Industry Summary

AEROSPACE	FY 2021	FY 2020	Change
	4Q 2021	4Q 2020	
Sales	2,896	2,978	(3)%
<i>Organic Growth</i>			(3)%
Segment Profit	839	822	2%
Segment Margin	29.0%	27.6%	140 bps
HONEYWELL BUILDING TECHNOLOGIES	FY 2021	FY 2020	Change
Sales	5,539	5,189	7%
<i>Organic Growth</i>			4%
Segment Profit	1,238	1,099	13%
Segment Margin	22.4%	21.2%	120 bps
	4Q 2021	4Q 2020	
Sales	1,404	1,426	(2)%
<i>Organic Growth</i>			(1)%

CIMdata PLM Industry Summary

AEROSPACE	FY 2021	FY 2020	Change
Segment Profit	296	305	(3)%
Segment Margin	21.1%	21.4%	-30 bps
PERFORMANCE MATERIALS AND TECHNOLOGIES	FY 2021	FY 2020	Change
Sales	10,013	9,423	6%
<i>Organic Growth</i>			3%
Segment Profit	2,120	1,851	15%
Segment Margin	21.2%	19.6%	160 bps
	4Q 2021	4Q 2020	
Sales	2,605	2,556	2%
<i>Organic Growth</i>			2%
Segment Profit	598	478	25%
Segment Margin	23.0%	18.7%	430 bps
SAFETY AND PRODUCTIVITY	FY 2021	FY 2020	Change

CIMdata PLM Industry Summary

AEROSPACE	FY 2021	FY 2020	Change
SOLUTIONS			
Sales	7,814	6,481	21%
<i>Organic Growth</i>			22%
Segment Profit	1,029	907	13%
Segment Margin	13.2%	14.0%	-80 bps
	4Q 2021	4Q 2020	
Sales	1,752	1,940	(10)%
<i>Organic Growth</i>			(6)%
Segment Profit	189	297	(36)%
Segment Margin	10.8%	15.3%	-450 bps

Q4 Financial Release Tables

¹ Capital deployment includes a \$270M investment in Quantinuum that is consolidated in our financial statements

² Adjusted EPS and adjusted EPS V% exclude pension mark-to-market, changes in fair value for Garrett equity securities, and the 2020 non-cash charges associated with the reduction in value of reimbursement receivables due from Garrett.

³ Adjusted free cash flow conversion excludes pension mark-to-market, changes in fair value for Garrett equity securities, and the 2020 non-cash charges associated with the reduction in value of reimbursement receivables due from Garrett.

⁴ Adjusted EPS V% guidance excludes pension mark-to-market, changes in fair value for Garrett equity

CIMdata PLM Industry Summary

securities, a non-cash charge associated with a further reduction in value of reimbursement receivables following Garrett's emergence from bankruptcy on April 30, 2021, an expense related to UOP matters, gain on the sale of the retail footwear business, a 2Q20 favorable resolution of a foreign tax matter related to the spin-off transactions, and the 2020 non-cash charges associated with the reduction in value of reimbursement receivables due from Garrett.

⁵ Adjusted EPS and adjusted EPS V% exclude pension mark-to-market, changes in fair value for Garrett equity securities, a non-cash charge associated with a further reduction in value of reimbursement receivables following Garrett's emergence from bankruptcy on April 30, 2021, an expense related to UOP matters, gain on the sale of the retail footwear business, a 2Q20 favorable resolution of a foreign tax matter related to the spin-off transactions, and the 2020 non-cash charges associated with the reduction in value of reimbursement receivables due from Garrett.

⁶ Adjusted free cash flow conversion excludes pension mark-to-market, changes in fair value for Garrett equity securities, a non-cash charge associated with a further reduction in value of reimbursement receivables following Garrett's emergence from bankruptcy on April 30, 2021, an expense related to UOP matters, gain on the sale of the retail footwear business, a 2Q20 favorable resolution of a foreign tax matter related to the spin-off transactions, and the 2020 non-cash charges associated with the reduction in value of reimbursement receivables due from Garrett, if and as noted in the release.

Synopsys Announces Earnings Release Date for First Quarter Fiscal Year 2022

2 February 2022

Synopsys, Inc. announced it will report results for the first quarter fiscal year 2022 on Wednesday, February 16, 2022, after the market close. A conference call to review the results will begin at 2:00 p.m. PT (5:00 p.m. ET) and will be hosted by Aart de Geus, chairman and co-chief executive officer, and Trac Pham, chief financial officer.

Financial and other statistical information to be discussed on this conference call will be available on the corporate website at www.synopsys.com, immediately before the call. A live webcast will also be available on this site. Participants should access the live webcast at least 10 minutes prior to the start of the call. A webcast replay can be accessed on the corporate website beginning Wednesday, February 16, 2022, at approximately 4:00 p.m. PT. The replay will be available until Synopsys announces its second quarter fiscal year 2022 results in May 2022. In addition, a dial-up replay of the conference call will be available beginning February 16, 2022, at 5:45 p.m. PT, ending on February 23, 2022, at midnight. The replay telephone number is USA +1-866-207-1041, and International +1-402-970-0847, access code 6376313.

Xometry Announces Unaudited Preliminary Fourth Quarter 2021 Results

31 January 2022

Xometry, the AI-driven digital marketplace that connects enterprise buyers with manufacturers globally, announced estimated unaudited preliminary revenue and gross profit margin for the three months ended December 31, 2021.

- Preliminary total revenue for the fourth quarter 2021 is expected to be in the range of \$65.5 million to \$67.5 million.
- Preliminary total revenue includes revenue from Thomas Publishing Company (“Thomas”) from the date of acquisition on December 9, 2021, which is expected to be in the range of \$3.5 million to \$4.5 million.

CIMdata PLM Industry Summary

- Excluding Thomas, preliminary Xometry revenue for the fourth quarter 2021 is expected to be in the range of \$62.0 million to \$63.0 million, compared to \$38.0 million for the fourth quarter 2020. This represents year-over-year growth of 63-66%, and year-over-year growth of 80-83% after further excluding sales of masks by one customer from both periods.
- In addition, we expect Xometry gross profit margin for the fourth quarter 2021, excluding Thomas, to be in the range of 27.3%-27.6% compared to 25.0% for the three months ended December 31, 2020.

Xometry expects to report its full fourth quarter and fiscal year 2021 financial results after the market close on March 17, 2022. The preliminary financial results ranges described herein have not been audited and are subject to adjustment based on Xometry's completion of year-end financial close processes.

Implementation Investments

Aker BP and Accenture Team Up on Data Factory in the Cloud to Improve Oil and Gas Operations

31 January 2022

Accenture is helping Aker BP, one of Europe's largest independent oil companies, become a data-driven enterprise by building a cloud-based foundation and data factory to improve its operations.

Aker BP launched the project to accelerate its goal of digitalizing the full lifecycle of its operations to cut costs, improve productivity, and lower its carbon footprint.

Many oil and gas companies have only been able to use a fraction of the data they generate and own, with information locked in functional areas with differing legacy applications, rendering it unusable across their organizations. A modern data foundation can help overcome common barriers to value, which may include data accessibility and trustworthiness.

Based on its technology, innovation and upstream oil and gas data management experience, Accenture was selected by Aker BP to develop a data factory solution in collaboration with Cognite and Aker BP. Cognite, an industrial software company, has applied its Cognite Data Fusion software at Aker BP to more rapidly implement the transformation by freeing and contextualizing data across IT and operational technology siloes.

"This project is key to our vision of being the leading offshore oil and gas exploration and production company," said Per Harald Kongelf, SVP Improvements of Aker BP. "We look forward to working closely with Accenture and Cognite, as we create a culture of innovation and experimentation to build the data foundation with a high degree of automation. All three companies share a similar approach of driving value through digital technologies, which will greatly benefit this project."

Managed like a factory, the data foundation will be focused on delivering business results at scale, with automation and innovation, predictable delivery schedules and quality controls. New ways of working will be enabled by this model, including agile and DataOps.

"By applying automation, innovation and technology, the project team can deliver more reliable data to help improve the company's operations," said Sven Erik Skjæveland, managing director and Nordic

Energy lead for Accenture. “Aker BP will be better positioned to take advantage of cloud-native services and more efficient workflows that promote greater efficiency and collaboration.”

Other goals include exploring the Open Group OSDU™ Forum’s data standards and formats for wells and seismic data.

Ansys Propels First Flight by Air Race E Electric Race Plane

28 January 2022

The Nordic Air Racing Team, an official Air Race E team, successfully completed the world’s first flight of an all-electric racing plane – the plane was designed and engineered with the help of Ansys simulation solutions. As the official simulation software partner of Air Race E, Ansys enables teams to overcome some of the key engineering challenges of fully electric flight.

Air Race E, the world’s first and only all-electric airplane racing championship, is a competitive platform that will accelerate the development of more electric and fully electric propulsion for aerospace applications. These technological advancements are critical for the aviation industry as companies and countries around the world work to reduce carbon emissions — especially those related to travel.

The competing teams are racing to prove their planes are airworthy in advance of the official Air Race E series, which launches in 2023. The Nordic Air Racing Team used Ansys software along with the Ansys Learning Hub, and collaborated with Ansys technical experts to reduce the overall project lead time by 40%.

“This first manned electric Air Race E race plane flight is a historic moment and a landmark achievement in the aviation industry,” said Jeff Zaltman, CEO at Air Race E. “It’s the culmination of months of planning, designing, concept developing, testing and manufacturing by the engineers — none of which could have been achieved without the support and expertise of Ansys and our other visionary partners. Everyone at Air Race E is extremely proud to be part of the burgeoning electric vehicle revolution, and we are grateful to Ansys for their role in making this defining milestone possible.”

Engineers on The Nordic Air Racing Team used Ansys multiphysics simulation solutions as they retrofitted a piston engine racing aircraft with an electric powertrain. Ansys was also used to modify the nose of the plane, optimize the center of gravity, air cooling system and aerodynamics, and develop the composite motor compartment.

“Ansys simulations made us feel extremely confident about our aircraft and shortened the timeline to achieving our first flight,” said Sathvik Rao, an engineer for The Nordic Air Racing Team. “I was surprised to see how Ansys software can integrate each and every parameter requirement for a system as complex as our battery. Without simulation in the early stages, our team would have had approximately 250 additional hours of experimental work around the battery pack’s heat dissipation and propagation.”

The Nordic Air Racing Team is one of seven official teams currently registered to compete in Air Race E. The official racing series involves up to eight small propeller airplanes taking off simultaneously, flying at 30 feet at speeds of 250 mph. It is the only motorsport of its kind.

“Competitions in motorsport have a habit of leading to exciting technological breakthroughs,” said Shane Emswiler, senior vice president of products at Ansys. “The Nordic Air Racing Team’s first flight is a testament to that, and to Air Race E’s incredible work in gathering all of the building blocks necessary for innovation. We’re honored to have been a part of this milestone and look forward to being a part of future advancements that allow aviation to reduce its reliance on fossil fuels.”

Copenhagen Admiral Hotel Checks in with Infor

1 February 2022

Infor, the industry cloud company, announced that the 366-room Copenhagen Admiral Hotel has selected Infor Hospitality Management Solution (HMS) and Infor EzRMS Revenue Management System (RMS). Infor HMS went live in Q4 2021 and will be followed by Infor EzRMS in 2022, replacing a legacy property management system (PMS) that restricted growth and limited the guest experience.

Facing operational limitations due to the poor integration options of their legacy PMS, and following a thorough review of the market, Infor HMS was chosen not only because of its connection to a range of third-party systems, but also its innovative features. These include digital registration for guests, self-service options for corporate bookings and improved workflows for housekeeping staff.

Infor EzRMS was chosen to help deliver an intelligent, responsive revenue management strategy as the hotel seeks to increase the proportion of revenue derived from its 366 rooms.

“Better integration has already helped enable a range of improvements for our guests, from check-in options such as kiosks or via mobile phones, to freeing front-of-house staff from their desks to interact with guests in lobby spaces and throughout the property,” said Jens Christensen, COO, Copenhagen Admiral Hotel. “It has also enabled us to improve booking options for our corporate business, and the integration with our guest communication system has been a key part of our response to the pandemic. Elsewhere, behind the scenes, we have already realised substantial time savings for our housekeeping staff as they get live updates on when rooms are ready for cleaning.”

“The benefits of integrated software are often overlooked by many hotels,” said Stan van Roij, Infor’s vice president of hospitality solutions. “They want the improved processes and better guest experience, but because they believe the central property management software cannot possibly connect to all the necessary third-party options, they remain stuck. The deployment of Infor HMS at the Copenhagen Admiral Hotel shows that, in fact, connecting these systems is quick, easy and, most importantly, leads to real, tangible improvements in the guest experience.”

“Crunch IT is very proud to be part of the implementing of Infor’s HMS system at Copenhagen Admiral Hotel,” said Søren Kjelstrup, partner at Crunch IT. “The hotel is one of the most significant hotels on the market in Copenhagen, and taking the lead in integrated software solutions will, without doubt, be of great inspiration to other hotel operators in Denmark. We look forward to the coming implementation of Infor’s Revenue Management System during 2022.”

HCL Technologies Expands Partnership with Husqvarna Group to Drive Digital Transformation

31 January 2022

HCL Technologies (HCL), a leading global technology company, has expanded its partnership with Husqvarna Group with a new multi-year IT services contract. The engagement will advance Husqvarna’s digital transformation journey by leveraging automation and facilitating an agile and customer-focused workforce.

The Husqvarna Group is a leading global producer of outdoor power products, watering products, cutting equipment and power tools. The expanded partnership builds upon HCL’s existing infrastructure and application development agreement to deliver leading-edge hybrid cloud management, digital workplace and security services. These services will establish a world-class IT foundation, enabling

CIMdata PLM Industry Summary

Husqvarna to enhance service delivery and user experience for its more than 10,000 employees worldwide. In addition, HCL will join forces with Husqvarna on its innovation journey to create products and services for global clients.

The engagement represents HCL and Husqvarna's commitment to achieving transformation through joint business outcomes. The contract follows University of Tennessee's award-winning Vested® business model. Together organizations create highly collaborative win-win relationships where both partners are equally committed to each other's success.

"We are excited to take our relationship with HCL Technologies to the next level," said Pavel Hajman, Senior Vice President of Global Information Services and CIO, Husqvarna. "Both organizations are focused on creating business value and this is a fantastic foundation for us to continue to transform our IT operations and business. The partnership will enable us to deliver an outstanding service to our end clients and further drive our transformational programs."

"The trust between the two organizations gives us a ringside view of Husqvarna's operations," said Pankaj Tagra, Corporate Vice President and Nordic and DACH Head, HCL Technologies. "As our collaboration grows stronger, we are committed to supporting Husqvarna's digitalization to meet its business goals. The Vested principles mark a significant chapter in our Nordics success story. HCL has worked closely with Husqvarna and University of Tennessee to create a contract that has trust and transparency at its heart."

Lemahieu Chooses Centric Software to Bolster Growth

31 January 2022

Lemahieu, a manufacturer of family- and environmentally friendly knitwear clothing and underwear, 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.

Since 1947, Lemahieu has been designing and manufacturing sustainable and ethical clothing and underwear in its *ateliers* in Saint-André-lez-Lille in the Hauts-de-France. Products – boxers, panties, t-shirts, menstrual underwear, etc. – are knitted on site, then cut and assembled by a team of 70 seamstresses.

Lemahieu is both a manufacturer and a retailer and is committed to creating a positive social and environmental impact. The manufacturer's mission is to **Make the cleanest garments in the world.**

Lemahieu distributes its own brands: *Achel* and *Hekla*, and also manufactures products for brands that have environmentally sustainable practices and values including Le Slip Français, les petites culottées and 1083. Lemahieu manufactures a million units per year, but its characteristic is to handle projects with low volume manufacturing, starting from 200 units.

Since Martin Breuvert and Loïc Baert took over the company in 2018, Lemahieu aims to relocate textile production in France, and the company has an ambitious CSR plan for the future — to become a Certified B Corporation by 2024 and be carbon neutral by 2030. Lemahieu has been experiencing rapid growth, with e-commerce sales increasing tenfold since the pandemic and almost doubling their employee base from 90 to 150 in less than three years.

Martin Breuvert and Loïc Baert knew that they needed a digital transformation solution when they embarked on updating the company's mass production legacy ERP system from the late 1990s.

CIMdata PLM Industry Summary

Internally, knowledge of the tool had been lost. They were partnering with more brands and needed an agile system to manage diversified production on a small scale. They began the process of upgrading their ERP system in March 2021 and quickly realized the system was limited. They needed a solution which could both support the entire product development lifecycle and their CSR strategy.

Loïc Baert, Director General of Lemahieu explains, “Centric PLM takes costing into account. It will help us to more accurately measure the industrial cost price. Given our CSR objectives, we needed additional robust units of measurement, including carbon impact and a two-level accounting system, which analyzes accounting in Euros and environmental accounting in CO₂.”

“We assessed multiple PLM solution vendors and selected Centric PLM based on their expertise in the fashion and knitwear industry and easy to use interface,” he continues. “Centric’s reputation and renowned customer references also made a difference.”

Lemahieu expects Centric PLM to easily integrate with their ERP system, free up valuable time for their design teams, and propel their CSR vision. Their web team will use PLM to deliver visual data and product descriptions instantaneously. Lemahieu’s B2B customers will be able to follow the progress of their orders and validate the products in real time like they would do using a Product Information Management solution (PIM).

“Our goal is to improve communication and information flow, easily update our cost prices, better manage design planning and support our online strategy,” says Baert.

“Lemahieu is a flagship of the French textile industry and we are proud to support its strategy of preserving textile know-how, relocating textile production to France and social and environmental responsibility goals,” says Chris Groves, President and CEO of Centric Software. “Centric PLM will empower Lemahieu to streamline its product lifecycle management solution and meet its ambitious CSR goals.”

Mateo Goods Partners with BIMsmith to Launch New BIM Resources for Future of Hybrid Workspace Furniture

2 February 2022

Mateo Goods, a designer and manufacturer of human-centric workplace furniture and accessories, 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 architecture and design professionals.

The partnership involves the creation of data-rich digital models of Mateo products that architects and designers can use in their digital designs. Each product model contains valuable geometric and material data, allowing designers to create highly accurate project renderings and make informed project decisions earlier in the design process. Each BIM file integrates seamlessly with Autodesk Revit, the leading architectural design software in the industry.

The partnership also places products from Mateo Goods on BIMsmith Market, the leading building product research platform, so architects and designers from around the world can discover and download Mateo’s modern workplace accessories for their BIM projects.

“Mateo Goods is helping pioneer a new world of workspace and productivity solutions designed for the way we work in a post-pandemic society. With today’s new hybrid work conditions and work-from-home program stipends, there’s a clear need for our differentiated offering,” said Paris Daniell, Marketing Director at Mateo Goods. “Our new BIM resources follow suit, aiming to assist commercial

CIMdata PLM Industry Summary

architects and designers in crafting workplaces that combine the comfort and familiarity of home with the productivity of work.”

“The future of work is an important and ongoing discussion throughout the field of architecture and design,” said Benjamin Glunz, CEO of BIMsmith. “Mateo Goods provides building professionals with fresh insight and an appealing product portfolio to adapt and meet the needs of our evolving world of work.”

Mayo Clinic Selects Oracle Fusion Cloud Applications to Power Business Processes

27 January 2022

Mayo Clinic, a leading nonprofit healthcare organization, has chosen Oracle Fusion Cloud Applications Suite and Oracle Fusion Analytics to power its business processes as it transforms the future of health care. With Oracle, Mayo Clinic will be able to support its path to 2030, an ambitious strategy to cure, connect and transform healthcare, by improving the administrative services experiences and scaling functions and business analysis to support its global growth.

Mayo Clinic is a nonprofit organization committed to innovation in clinical practice, research, and education. Recently ranked No. 1 for the sixth consecutive year in the U.S. News and World Report’s Best Hospitals Honor Roll, Mayo Clinic is setting the gold standard for quality care and treatment of complex diseases and is committed to adopting new technology to help transform patient and clinician experiences. After careful evaluation, Mayo Clinic selected Oracle for its ability to provide a complete solution on a single administrative platform with industry leading functionality.

“At Mayo Clinic, patients come to us for answers and treatments they can’t get anywhere else. To enable our teams to focus on patients while transforming the way health care is delivered, it’s critical to have the right administrative infrastructure to support our business,” said Dennis Dahlen, Mayo Clinic’s chief financial officer. “As a partner with deep health care experience, we chose Oracle Cloud to simplify processes that enable our teams to deliver unparalleled experiences.”

Mayo Clinic selected Oracle Fusion Cloud Applications for enterprise resource planning, supply chain management and HR, as well as Oracle Fusion Analytics. With Oracle Cloud Applications, and the help of PwC as its Implementation Partner, Mayo Clinic will more easily gain a complete view of its organization’s finances, optimize financial planning and forecasting, simplify procurement and supply chain management, modernize human resources processes, and improve the employee experience. With Oracle’s prebuilt Analytics, Mayo Clinic will be able to more easily process relevant data, access actionable insights, and evaluate predictions to make timely business decisions.

“The healthcare industry has seen and continues to power through significant disruption brought on by the pandemic and the need to deliver best-in-class medicine and quality of care remains critical,” said Steve Miranda, executive vice president of applications development, Oracle. “We are committed to being a valuable partner within the healthcare industry and look forward to helping Mayo Clinic streamline its business tools to further enable its teams to focus on what truly matters: caring for patients.”

Norway’s Largest Manufacturer Of Hydraulic Equipment, Servi Group, Moves To IFS Cloud

1 February 2022

IFS, the global cloud enterprise software company, announced that Servi Group, Norway’s largest producer of hydraulic equipment, has advanced their long-standing relationship with IFS. Since 2001,

CIMdata PLM Industry Summary

IFS has supported their full ERP processes - now the company has moved to IFS Cloud™ to boost their operational efficiency.

With roots dating back to 1912, Servi Group is Norway's leading supplier of Power and Motion Control. Today, Servi Group consists of eight locations in Norway covering production, sales and service operations. Servi Group provides machines and hydraulics to the aquaculture, marine and offshore industry as well as defense and mainland industries. They are a major supplier of pneumatic, vacuum, electromechanical, slide bearing and testing equipment for the road and construction sector, and of windscreen wipers for the marine and offshore sector.

Servi Group has been using IFS to support sales, manufacturing, procurement, finance, document management, quality assurance and service management and is now moving to IFS Cloud to add the latest functionality to their IFS portfolio. The company is particularly excited about IFS's unified user experience that will empower all of Servi Group's 310 employees, as well as its forward-looking adoption of technology, such as business process automation for driving digitization initiatives. Being able to access IFS Cloud on any device, anywhere, will also hugely benefit Servi Group's sales and service personnel.

In the past, Servi Group has made extensive use of IFS Lobbies, which received much praise from business users as it provided each employee with the information most important for their role. Servi Group has now extended the success of the IFS Lobby concept by adding the integrated business intelligence IFS offers. The company is expected to go live with IFS Cloud mid-2022. The implementation will be supported by IFS partner Addovation, who have a long-standing relationship with Servi Group.

“We are expecting considerable benefits with IFS Cloud. Not only will our employees be able to work more efficiently, but we may also be able to reduce the number of other systems, improve integration to other systems through RESTful APIs – so we have access to all information on one common platform,” says Øyvind Hurrød, VP Digitalization at Servi Group. “IFS is providing us with the ability to deliver on the Moment of Service™ to our customers, as we have all the historic data in the system, so we can quickly respond to all customer demands.”

Glenn Arnesen, President, IFS Northern and Central Europe, added, “Servi Group is a longtime partner of IFS and we are happy that they trust in us to continue to be their preferred technology partner. IFS Cloud was designed to offer manufacturing enterprises with complex businesses an uncomplicated way to become data-driven, improve decision-making, and, ultimately, deliver better Moments of Service™ to their customers. We look forward to continuing our successful collaboration with Servi Group as we implement a future-proof solution for sustainable and efficient manufacturing.”

Touchplan and The Boldt Company Complete Enterprise Agreement

1 February 2022

Touchplan, an award-winning collaborative construction planning software technology platform that helps make construction project outcomes more predictable and profitable, and The Boldt Company announced that they have entered into a definitive enterprise-wide agreement.

The deal provides the Wisconsin-based construction firm and their selected subcontractor partners unlimited use of Touchplan's intuitive daily planning software on all of its construction projects. Along with collaboration capabilities that link the master schedule to the daily plan anywhere and anytime, Touchplan intends to provide unique jobsite data and analytics across all Boldt projects via its planning software platform and through the development of its API capabilities to increase overall project

CIMdata PLM Industry Summary

efficiency for one of the largest, employee-owned, professional construction services firms in the United States.

Started in 1889 by Martin Boldt, Boldt has grown to over 2,000 employees with 17 offices across the country. The company focuses on nine core markets including healthcare, power & energy, industrial, automotive, education, commercial, science & technology, religious, and the public sector.

With annual revenues exceeding \$1 billion, the firm is ranked as the 115th largest construction company in the United States by Engineering News-Record.

“At Boldt, we are committed to enhancing best practices to drive continuous improvement,” said Nick Loughrin, Group Manager for Project Delivery Services at Boldt. “To be successful we needed a digital tool to keep our construction teams on time and under budget. Touchplan provides first-class software at a tremendous value.”

Touchplan’s innovative daily project planning and analytics platform is trusted by more than 46,000 design and construction professionals around the world. To date, more than 3,300 project teams have used Touchplan successfully to optimize the delivery of more than \$55.4 billion in construction.

“Touchplan enables clients to improve project ROI by identifying and reducing the root cause of uncertainty on construction projects,” said Jimmy Suppelsa, Chief Revenue Officer at Touchplan. “We are thrilled to be working with Boldt as they continue to enhance their construction operations by utilizing construction planning software to improve their overall project success.”

Union Bank of India Offers WhatsApp Banking powered by Infosys Finacle

3 February 2022

Infosys Finacle, part of EdgeVerve Systems, a wholly-owned subsidiary of Infosys and Union Bank of India, a leading public sector bank in India, today announced the availability of its banking services on WhatsApp following the successful implementation of Finacle Conversational Banking, Finacle Remote Banker, and Finacle Mobile Teller solutions. The new service from the bank, called Union Virtual Connect (UVConn), will give its retail customers personalized, daily banking services, at their preferred time, place, and in seven languages initially. With Finacle, the bank has also transformed its branch banking experience, by optimizing branch and teller performance, minimizing queues, enabling relationship manager mobility, and improving operational efficiencies.

Highlights:

- Finacle Conversational Banking and Remote Banker ensure an engaging conversational experience throughout a customer’s digital journey with the flexibility of human assistance as required. The capabilities include - text, voice, or video messaging, along with sharing images, documents, and other content
- Union Bank’s customers can now safely connect with the bank’s official number, via the end-to-end encrypted WhatsApp messaging interface, from their registered mobile numbers with added levels of authentication
- Finacle’s solutions offer comprehensive capabilities to customers for banking on the go, on a device of their choice. These include requests like account balance, mini statements, cheque status, cheque book request, stop cheque payment, locker rent enquiry, and auxiliary services like doorstep banking, UMobile app, account opening (retail loan, saving, and NPS), linking Aadhaar number, ATM/Branch Search, grievance redressal, nomination registration, and cyber security tips

CIMdata PLM Industry Summary

- Union Bank will be able to onboard new customers remotely and instantly, via secure messaging on WhatsApp in a quick, frictionless, and digitized manner
- Finacle Remote Banker is agnostic to any messenger interface and can work seamlessly with multiple messenger ecosystems. This enables the bank to extend conversational banking experiences to other popular chat messenger platforms as well

Shri Rajkiran Rai G, Managing Director & CEO, Union Bank of India, said, “It has always been our endeavor to build lasting relationships with customers by offering simple, fast, and contextual banking solutions and experiences with improved convenience. In line with this vision, we have introduced this service on WhatsApp, one of the most popular instant messaging applications in the world. Our retail customers can execute a host of their banking requirements on their own, without visiting a branch, instantaneously and securely. With Finacle Conversational Banking and Remote Banker we can now tap into the growing prominence of social media in everyday life. We expect this simple and convenient form of banking to add immense convenience to our customers and hope to see its rapid adoption in the months to come.”

Sajit Vijayakumar, Senior Vice President and Chief Operating Officer, Infosys Finacle, said, “Union Bank of India is adapting to the constantly changing needs of their customers and meeting them with new-age banking experiences. WhatsApp has been one of the most popular messengers, revolutionizing the way people interact, and India has one of the largest WhatsApp user bases in the world. With Finacle Conversational Banking, Finacle Remote Banker, and Finacle Mobile Teller, Union Bank of India continues its journey towards making banking faster, easier, and more engaging, building on its illustrious heritage while reinventing itself for digital-first banking.”

Warsaw Metro Deploys New Infor ERP System

31 January 2022

Infor, the industry cloud company, announced the completion of an enterprise resource planning (ERP) software implementation of Infor LN™ at the Warsaw underground company Metro Warszawskie by Infor partner S&T.

Warsaw’s underground railway services are used by up to 750,000 commuters a day, totalling nearly 200 million passengers annually. As the network is expanded — the second line extension is nearing completion and the construction of the M3 line is planned — these numbers will grow. The company employs 2,600 staff. In addition to passenger transport, the company has responsibility for the day-to-day maintenance and operation of the tunnels, stations, rolling stock and equipment as well as supervision over construction works.

New challenges, new solutions

With the ongoing expansion of its business and increasing scale of its operations, the Warsaw Metro was looking for a modern software-based solution to effectively manage the increasingly complex technologies, operations, information and resources; facilitate taking the right decisions to boost operational excellence and lead to top customer satisfaction levels. After an in-depth analysis of the market and available solutions, the Infor LN enterprise application was chosen.

Metro Warszawskie was looking for a system that would support its operations in a holistic manner. The absolutely top priorities were support for the day-to-day business and the tools for advanced analytics to turn its abundant data into actionable business insights.

“A key to the project was the migration of data involving the transfer of over 95,000 records from

CIMdata PLM Industry Summary

previously-used applications. Without this process and the involvement of key users, it would not have been possible to launch the new solution,” said Radosław Zacharewicz, S&T’s enterprise solution architect.

One of the main expectations for the new system was to accommodate business requirements as much as possible through standard system functions. As a result, it was possible to shorten the time necessary for the implementation of the new solution and to reduce expenditures on system maintenance. Thanks to the Infor LN technology, the business-critical maintenance and traffic continuity assurance management requirements were delivered immediately without customisation or software modifications.

The system was activated based on infrastructural solutions that use cloud technologies available as platform-as-a-service (PaaS). The software was additionally provided with Infor’s cloud platform, Infor OS[®], interworking with the domain systems of the Warsaw Metro and ensuring support and management of the IIoT (Industrial Internet of Things).

The business results

The new system supports an effective fulfilment of the Warsaw Metro’s business needs and technical requirements. Thanks to the implementation of the cutting-edge ERP system, the Warsaw Metro can optimise and boost the effectiveness of managing the key area processes, such as traffic maintenance and continuity, overhauls, finances and controlling, sales, procurement, or inventory management. Since Infor LN combines data and processes with business applications and technical and operations knowledge resources, it is capable of delivering detailed business insights using the information retrieved from the measurement and control automation systems.

The new system was delivered and commissioned for over 400 direct users. Thanks to S&T ensuring a virtual maintenance environment in a PaaS model, the legacy financial book-keeping software was efficiently and safely decommissioned.

Additional statements

“We have delivered the Warsaw Metro implementation using the Prince2[™] compliant project management methodology. The system development and commissioning were split into two stages. Though all the commissioning work was performed during the pandemic, thanks to the use of environment available in the PaaS model, we could perform the majority of operations remotely, thus limiting all the physical customer contacts to an absolute minimum. The solution delivered by S&T met the majority of customers’ business requirements without the need for any software modifications to be made to the standard software release. The quick and effective contract performance proves our high competencies in the implementation of the state-of-the-art IT business management support tools,” concludes Radosław Zacharewicz.

“Warsaw Metro users often do not realize the challenges involved in managing such a highly specialised company to provide them with efficient transportation. The Infor LN system implemented in the Warsaw Metro is software developed for the leading global enterprises with complex business needs. This is why we are confident that it will exceed what was expected of it and will contribute to speeding up the company’s digital transition and to further improvement of its operational agility and give it a business effectiveness boost in all the key areas,” said Mariusz Siwek, Infor’s sales director for Poland and Baltics.

Product News

2022 Teamcenter 14.0 New Capabilities

31 January 2022

Teamcenter 14.0 has new capabilities, which were detailed by Bill Lewis on the Siemens Blog. These capabilities include improvements to Analytics and Dashboard Management, Requirements Management, Cost Management, and additional configurations and customizations. To see the full list of updates please visit the blog. <https://blogs.sw.siemens.com/teamcenter/teamcenter-14-0/>

ActCAD 2022 Update 1258 Released, Dt.30-Jan-2022

30 January 2022

ActCAD announces the release of its new version 1258 for ActCAD 2022 Professional, Standard and Prime Versions.

This is a general maintenance release of 2022 version. Below is a list of improvements:

- Added new command UPDATEFIELD
- Added new command REVERSE
- Added new command MATCHCELL for Table
- Fixed slide display issue even after zoom
- Fixed DTEXT is not creating multiple lines correctly when placed at steep angle
- Added button for reversing the order of sheets in the list of Publish dialog
- Fixed QLEADER set to 3 points, after specifying 2 points
- Fixed error generating QLEADER by running script file
- Fixed incorrect rendering in some camera views of GLES mode
- Fixed background geomap not placed properly
- Fixed the properties pane doesn't update properly when editing layers using the Explorer
- Fixed zoom and pan slow issues in GLES mode
- Fixed LISP Command "\\"(PAUSE) behavior issues
- Fixed DSD file load, the value of Publish to is displayed differently than in OtherCAD
- Fixed Publish Options information location value while loading DSD file
- Fixed editing MTEXT modifies a locked viewport in certain circumstances
- Fixed internal error and unexpected output to the command line during undo
- Fixed STARTPAGE activation delay by execution of MNL
- Fixed some string resources not loading to SHEETSETMANAGER
- Fixed PRINT log messages related to print commands started & completed
- Replaced text buttons with icon in Publish dialog
- Fixed incorrect nearest snapping to a polyline
- Fixed white image frame is visible on white background

CIMdata PLM Industry Summary

- Fixed entities appear under the background in GLES mode
- Fixed crash running UNITS command during startup
- Fixed displaying dynamic input controls when running a script
- Fixed some links in documentation
- Fixed extend issue of non-uniform block
- Fixed new Linetype displays incorrect message attempting to save to an inaccessible file
- Fixed no output file in republishing process when using PublishToWeb JPG/PNG.pc3
- Disabled some buttons on publish dialog when no sheet is selected
- Implemented UI changes for New Excel Data Link dialog box for Table
- Fixed the issue of renaming a datalink closes all Table dialog boxes
- Fixed the issue of New Linetype takes the current not the selected one
- Fixed Domodal crash during Russian localization
- Fixed selection cursor reset on any keyword or transparent command
- Fixed WSCURRENT set in MNL file reverted to the initial value by the file opening process
- Fixed OLE linked Excel sheets do not update on opening
- Fixed the issue of Samples folder being created in Program Files
- Fixed print preview should display a message instead of a grey button in unsupported printer
- Added function to edit the publishing location in the PDF Publish Options window
- Fixed crash issue while accessing null pointer in a particular function
- Fixed PUBLISH icons not scaling properly on 4k screens
- Fixed some prompts don't match in some dimension commands
- Fixed Dimensions not associative with intersection snapping at model space
- Fixed Properties editing scale of non-uniformly scaled annotative block messes up the scale
- Fixed exception trimming using block as cutting edge
- Fixed MTEXT FONTALT set to . has wrong interaction with MTEXT command
- Implemented view and visual Style controls in View Menu
- Fixed crash issue while switching view using View Controls
- Fixed error displaying current layer in EXPLORER

Altium and MacroFab Partner to Launch Industry-First Integrated PCB “Design WITH Manufacturing” Application

27 January 2022

Altium LLC and MacroFab, Inc. announced that Altimade, the electronics industry’s first “design WITH manufacturing” application, is now available to the Altium user community. Available on the Altium 365 cloud platform and connected directly to MacroFab’s fully digital, elastic manufacturing platform, Altimade enables customers to request an instant quote and place an order to produce their PCB assembly without ever leaving their design environment.

CIMdata PLM Industry Summary

While the electronics industry is known for producing very high-tech products, the process of getting a newly designed printed circuit board manufactured has remained stubbornly low-tech. Old-school communication methods, incompatible tools and data formats, and a lack of up-to-date supply chain information slow the process and lead to costly rework for both design engineers and their manufacturers. Altimade modernizes and accelerates the prototype manufacturing process by connecting design, manufacturing, and supply chain data and professionals on the Altium 365 cloud platform to provide an easy, convenient user experience.

“By integrating Altium’s cloud platform for PCB design with MacroFab’s modern, digital-first manufacturing platform, Altimade represents a huge step towards the digital transformation of the electronics industry,” said Ted Pawela, Chief Ecosystem Officer of Altium. “We’re no longer designing FOR manufacturing as a separate activity, but designing WITH manufacturing in a collaborative environment.”

“Altium and MacroFab have modernized PCB design and manufacturing, by bringing them to digital-first, cloud platforms,” stated Misha Govshteyn, CEO at MacroFab. “Combining them truly redefines the PCB design to the manufacturing process and has the potential to accelerate product development and unlock enormous value for our customers.”

Using Altimade, Altium customers have access to continuously updated component and manufacturing prices and lead times at their fingertips and can place an order to produce their printed circuit boards directly within the design environment. All data required for manufacturing is shared via the secure, cloud-based Altium 365 platform, without file translations and exports. Orders are fulfilled by MacroFab’s network of manufacturers in a fraction of the time and effort compared with the traditional process of going from design to manufacture. Altimade creates, maintains, and displays a complete and continuous digital data trail that represents a true “golden record” for every step in the design, procurement, and manufacturing processes of a PCB. Any changes to the original bill of materials or design details automatically update the golden record.

Altimade helps customers achieve higher quality PCBs by maintaining a digital thread between the design intent and what is physically produced, leaving no room for errors from misinterpretation. In addition, Altimade helps engineers ensure manufacturability since the Altium Designer software runs design rule checking (DRC) to ensure the design meets MacroFab’s manufacturing specifications.

The MacroFab digital platform is used by supply chain teams to build everything from PCB assemblies to fully tested and packaged electronics products. MacroFab aggregates unused capacity at 75+ factories in the US, Canada, and Mexico to give mid-market companies an alternative to offshoring, where capacity is increasingly constrained and lead times are impacted by supply chain and freight disruptions. MacroFab turns its network of factories, logistics centers, and warehouses used in manufacturing into a cloud resource, driven by software and connected to Altium 365 through modern APIs.

Altimade is now available to all Altium Designer 22 and Altium 365 users.

BETA CAE Systems announces the release of the v22.0.2 of its software suite

28 January 2022

About this release

Aiming to further upgrade your workflow processes while eliminating numerous error-prone factors, a second bug-fix release for v22.0.x series is now deployed for ANSA/EPILYSIS/META and KOMVOS.

Known issues resolved in ANSA

CIMdata PLM Industry Summary

General

Unexpected termination would occur while editing a material database path within Settings. Moreover, Transform and Transform [Move] actions, such as pasting CONS/ Perimeters with underlying Volume entities, could also lead to abrupt termination.

Model Browser

Unexpected termination would occur when an empty configuration was activated.

Data Management

ANSA would terminate unexpectedly when adapted Subsystems or Group Subsystems containing adapted Subsystems were saved in DM.

DECKs

Unexpected termination would occur throughout the following cases:

- upon activation of Auxiliaries > GEB [GEB GN], when GEB was attached to Rigid material - upon Input/Output of A_POINTs, due to erroneous definition of not Applied entities - upon editing of an existing Thermal loadset, under NASTRAN > THERMAL [Applied Heat]

Plugins

The Beam Optimization tool would terminate unexpectedly right after starting, when no model was open in ANSA.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Known issues resolved in EPILYSIS

General

WEIGHTCHECK/GRDPNT would not be calculated correctly in SOL101 case with DMIG (M2GG).

MUMPS linear solver would fail, when memory was set to "unlimited" during an "IN ANSA" solution.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Known issues resolved in META

General

META would unexpectedly terminate, when deleting a window during animating.

Read Results

Default settings for loading stress results on shell elements corners were not respected and scalar results on nodes of CBAR beams could not be read correctly.

Cases of wrongly interpreted results have been combatted including:

PIDs from conjugate heat transfer Converge cases in .h5 format and Vector results on nodes of CBAR beams for Ensignt.

User Toolbars – Crash & Safety

FMVSS 201U: File paths on Windows OS were not read correctly from the configuration file.

Low Speed Impact:

The toolbar could not read results in Linux.

EU-NCAP MPDB:

The Hide Flying Elements function had been fixed.

Automation

Memory leak could occur when using script function results.StartChangingCentroidScalar().

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Known issues resolved in KOMVOS

The variance estimation of the predictions was not computed correctly.

Feature based group prediction would return zero (0) values for all but the last predictor, when few predictions were requested.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

New Documentation in ANSA

User Guides

Tutorials:

- Map Block

New Documentation in META

User Guides

- Toolbars
 - Participation Analysis
 - Deployable Bonnet Systems Assessment

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

Compatibility and Supported Platforms

ANSA files saved by all the first and second point releases of a major version are compatible to each other. New major versions can read files saved by previous ones but not vice versa.

META Project files saved from version 22.0.2 are compatible and can be opened by META version 16.0.0 or later.

Support for Mac OS has been discontinued.

Support for 32-bit platform has been discontinued for all operating systems.

Download

Where to download from

Customers who are served directly by BETA CAE Systems, or its subsidiaries, may download the new software, examples and documentation from their account on our server. Contact us if you miss your account details. The Downloads menu items give you access to the public downloads.

Customers who are served by a local business agent should contact the local support channel for software distribution details.

Chaos Releases V-Ray 5 for Revit, update 2

2 February 2022

Chaos releases V-Ray 5 for Revit, update 2, bringing new visualization powers to architects who want to see how their choices play out in real time and beyond. Now users can manage more complex models, make hassle-free updates to linked documents and scatter entourage for more realistic renderings without leaving Revit.

New Capabilities

New features help users do more within Revit, so architects can visualize design decisions without distractions or technical delays.

- **Linked document replacements** — For the first time, Revit users can render and replace objects and materials from linked documents with a higher-fidelity version. Whether it's applying a photoreal V-Ray material or replacing a low-resolution model with a fully detailed one, replacement overrides bring more control to the creative process, without disrupting the original files.
- **Scatter** — The new scattering tool makes it easy to distribute models of plants, trees, cars and other entourage items, including models from Chaos Cosmos. With full control over size, orientation and density, these models can be placed on any surface or terrain. This is a fast and memory-efficient way to create realistic scenes and detailed environments.
- **V-Ray Material improvements** — With the updated V-Ray Material, users can quickly create transparent and translucent materials. Two new controls have been added: thin-walled for materials like single-sided glass and volumetric subsurface scattering for realistic marble, plastic and wax.

Chaos Cosmos Updates

In V-Ray 5 for Revit, Chaos introduced its first 3D content library, Chaos Cosmos, now filled with over 1,300 free render-ready models and HDRIs that reduce the process of populating environments to a few clicks. New updates include:

- **Materials** — Designers can now take advantage of 200 new material assets, including terrain, tiles, wood floors, brick walls and more.
- **Customizable assets** — Users can now adjust the materials of any Cosmos model, helping them fine-tune key parameters like color, bump and gloss as they dial in a desired look.
- **Improved asset management** — All Cosmos family items are now conveniently organized into a separate sub-tab of Revit's Families tab, making it easier to find and manage them.

New Real-Time Advances

Designed to serve everything that comes before a final render, V-Ray Vision offers a real-time view of your Revit model that updates while you work. The latest update expands on its core feature set, bringing more options into its always-on viewport. New V-Ray Vision features include:

- **Shareable real-time projects** — Users can package their V-Ray Vision work for others to experience in real-time 3D on their own machine — no license or additional software required. Just hit export and reviewers can experience your full Revit design with the full functionality of V-Ray Vision, including navigation controls, color correction parameters and more.
- **Sun animation support** — Revit's native solar studies can now be loaded into Vision for quick explorations, then exported as video to share with peers and clients.

CIMdata PLM Industry Summary

- **Grass support** — A grass preset can now be added to any surface to help build realistic terrains in an intuitive way.
- **IES lights support** — Photometric IES light profiles can now be visualized within V-Ray Vision, adding real-world lighting into any interior.
- **Larger project support** — Architects can now explore larger, more detailed models in real time.

If designers need higher-fidelity real time, they can turn to Chaos Vantage, which can be now directly accessed through a new Live Link. With Vantage, even the most complex Revit model can be explored in fully ray-traced real time with no extra setup. Vantage is currently free for all users.

Datakit, specialist in 3D interoperability, announces the new version (2022.1) of its technical data conversion SDK

1 February 2022

Since 1994 Datakit facilitates the exchange of 2D and 3D data for users and developers of CAD, CAD/CAM, 3D visualization, simulation, metrology, and modeling applications. The latest version of CrossManager (Datakit software for file-to-file conversion of most 3D and 2D formats) and CrossCadWare (reading and writing libs for 2D and 3D software editors) improve once again the interoperability between different standard and native formats.

Datakit conversion libraries V2022.1 bring new reading functionalities for Inventor, OBJ, REVIT 3D. They also add CATIA V5 writing functionalities.

Software editors integrating release 2022.1 of Datakit SDK will now be able to:

- Read the predefined views, as well as the FDT (PMI) from the INVENTOR 3D assembly files
- Read the alpha channel of colors (transparency) from OBJ 3D and RHINO 3D.
- Write in CATIA V5 the Views named by the users.

Datakit is constantly upgrading its SDK to remain compatible with the latest versions from publishers, as well as with their previous versions.

Datakit V2022.1 adds new versions and now makes it possible to:

- Read JT files up to version 10.7
- Read older REVIT versions (2011,2012,2013 and 2014) in complement with REVIT 2015 to 2022 versions.
- Extract data from Solid Edge 2022, the latest version of Solid Edge.
- Read the 2022 SP0 version of Solid Works, but also its ancestors from 2006 to 2008.
- Read NX 1992, 1996, 2000, the last versions of NX.

Continuous improvement governs Datakit's 2D and 3D interoperability solutions updates.

The Datakit technical data exchange API is constantly reworked to improve the quality, reliability, speed and security of reading/writing 2D and 3D formats functionalities.

These improvements are integrated into CrossManager. CrossManager is the stand-alone software published by Datakit, which allows you to convert files from most CAD formats.

How to integrate Datakit 2D and 3D conversion toolkit.

Software developers wishing to save development time and to improve overall performance will contact

Datakit. They can also visit the CrossCad/Ware overview page.

How to test Datakit file-to-file software

End users of 2D and 3D applications can download the software and obtain a demo license on the official pages of CrossManager and CrossCad/Plg

Elevate Engineering Simulation with Ansys 2022 R1

1 February 2022

Ansys software and services reduce obstacles to enable customers to solve today's complex engineering challenges. Engineering simulation has expanded beyond highly specialized experts and into mainstream product design and development, enabling more companies to save time, reduce costs, and innovate. At the same time, engineering complexity has skyrocketed, requiring organizations to scale like never before, driving demand for advanced computing resources and cross-discipline engineering solutions. The new products, technologies, and tools that make up Ansys 2022 R1 enable experts to go deep with custom workflows for industry-specific applications while also extending broad ease-of-use features that turbocharge collaboration across teams.

"Schneider Electric leverages Ansys simulation to accelerate key business initiatives, improving the quality of our products while making them smarter. This is an enabler of our vision for a more sustainable, energy-efficient future," said Jayaraman Raghuraman, senior vice president of Schneider Electric. "Ansys expertise and cutting-edge technology accelerate our digital transformation and help us simplify the application landscape across our engineering organization."

New, industry-focused solutions are expanding the definition of what is possible. Ansys 2022 R1 includes a dedicated aerospace workspace in Ansys Fluent that tailors the user interface to external aerodynamics simulations, enabling aircraft designers to evaluate aircraft efficiency and study dynamics from subsonic to very high-speed flows. Similarly, the new Ansys Forming product enables engineers to digitally design and validate every step of the sheet metal forming process commonly found in automotive, appliances, aerospace, and packaged goods industries. Ansys RF Advisor On Demand is targeted specifically to help engineers solve the challenge of radio frequency interference for the next generation of high-tech devices.

With 2022 R1, Ansys continues to bring ground-breaking technologies to address printed circuit board (PCB) and 3D IC (integrated circuit) package design challenges as well as advancements in 5G, autonomous, and electrification simulation. Building on the success of HFSS Mesh Fusion, the introduction of the Phi Plus meshing technology brings extraordinary speed and robustness to complex system simulation including 3D IC packaging challenges. In semiconductors, 2022 R1 introduces RedHawk-SC SigmaDVD, a technology breakthrough that identifies the worst-case dynamic voltage-drop in hours instead of months. This novel, statistically realistic modeling technique makes it possible to achieve near 100% coverage of all relevant switching scenarios of neighboring cells, making chip designs more robust and giving chip designers greatly expanded confidence in RedHawk-SC's golden signoff analysis. New workflows and integrations in Ansys 2022 R1 produce even greater insight into product performance. In this latest release, Ansys Sherlock features a new, semi-automated workflow that takes advantage of integrations with Ansys AEDT Icepak to deliver more predictively accurate thermal analysis simulations for PCBs.

"The importance of electronics is continuously increasing in the automotive industry," said Dr. Pascal Schirmer, development engineer Power Electronics at BMW Group. "The use of simulation tools from Ansys, such as Ansys Sherlock, allows us to optimize, in a very early design phase, the performance and

CIMdata PLM Industry Summary

reliability of the electronic components while managing for the growing complexity.”

Managing complexity to achieve both speed and predictive accuracy is critical to nearly every industry. Increasingly, these next-generation products require integrated semiconductors and electronics along with embedded software, advanced sensors, and displays. Product success requires consideration of how a full system will operate in a broad context that encompasses traditional design and extends into operation effectiveness. Ansys solutions help design teams meet stringent requirements for functional safety, industry-standards’ compliance, and long-term operational reliability. Ansys 2022 R1 delivers product offerings that complement traditional multiphysics with safety, reliability, cybersecurity, digital mission engineering, and digital twins.

The optical technologies offered by Ansys span from Ansys Lumerical at the microscale, to Ansys Zemax at the macroscale, all the way to human and sensor perception for systems with Ansys Speos. The Ansys 2022 R1 release delivers increased functionality supporting Ansys’ unique and comprehensive solution for the design of optical and photonic devices in datacom, consumer electronics, automotive, aerospace, healthcare, and more. On the other end of the scale are enormous simulations to support digital mission engineering like Ansys STK (Systems Tool Kit) that now includes enhanced tools to support large satellite mega-constellations being evaluated and designed across the commercial space industry. In between are examples from nearly every industry where fast, high-fidelity simulations of increasingly complex phenomena are needed to meet tight product development deadlines.

Another means to meet those deadlines is to pair advanced simulation with high-performance computing (HPC) resources. With Ansys 2022 R1, many more applications support Ansys Cloud and take advantage of the power that the latest graphics processing units (GPUs) can provide. For example, a new Multi-GPU solver available in Fluent accelerates steady-state computational fluid dynamics (CFD) simulations, producing results that show four high-end GPUs provide the same performance as more than 1,000 CPUs, while reducing hardware costs by up to 7x and power consumption by up to 4x. Ansys 2022 R1 also expands Ansys Discovery’s astonishing live physics in the critical area of thermal management through the addition of coupled fluid-solid multiphysics simulation. This fast, fault-tolerant approach means that the simulation of heat exchangers, liquid cooling devices, and exhaust systems is now markedly easier to perform and up to 50x faster allowing for even greater design exploration.

“Speed, fidelity, and scalability are crucial to integrating simulation across the enterprise, enabling engineers to connect with global collaborators to keep pace with innovation in high-growth areas, such as autonomous vehicles, electrification, and artificial intelligence,” said Shane Emswiler, senior vice president of products at Ansys. “The new features in Ansys 2022 R1 enable engineers to both solve more complex challenges and expand the reach of simulation’s benefits.”

HOOPS 2022 Toolkits Enhance Manufacturing and BIM Workflows

1 February 2022

Tech Soft 3D, the leading provider of engineering software development toolkits (SDKs), announces the release of the HOOPS 2022 SDKs. HOOPS technology powers world-class engineering applications across the globe and multiple industries. The enhancements to the 2022 toolkits focus on providing remarkable animation, data access and exchange, simulation and rendering capabilities to enable Tech Soft 3D partners to remain competitive in their industries by developing cutting edge applications with proven 3D technologies.

With HOOPS SDKs, developers can reduce product development costs and bring desktop, web, mobile, and AR/VR applications to market faster.

CIMdata PLM Industry Summary

"Technology continues to advance at a rapid pace, and our team is laser focused on making sure that our partners have the most sophisticated, robust and high-performing component technologies that will enable them to create the applications they need quickly and easily," said Eric Vinchon, Vice President of Partner Success at Tech Soft 3D. "Staying ahead of trends and getting to market faster than competitors is the main priority of our partners, and Tech Soft 3D is the best-in-class engine for 3D graphics, CAD data translation and 3D data publishing that will enable our partners to deliver those applications."

Key feature enhancements include:

Support for Apple Silicon: Apple's recent shift from Intel-based chips to their new ARM-based architecture requires partners to port their applications to provide the best experience for their users. We are now providing an official build of our HOOPS toolkits to enable this process.

Animation Manager: New animation capabilities, including a new animation manager, are designed to meet various engineering animation needs, ranging from BIM 5D simulations, through Digital Factory animations, and Work Instruction authoring.

Physically Based Rendering (PBR): PBR has been added to HOOPS Communicator to provide higher quality rendering for web applications and is now also available in HOOPS Visualize for mobile platforms.

Spatial Relationships: Support for "Spatial Relationships" that are part of the Industry Foundation Class (IFC) model definition enables the ability to navigate in the model, query the model in the context of Quantity Takeoff (QTO) and more.

Enhancements to SDKs include:

HOOPS Exchange

- Native CAD and standard format support for Inventor 2022, ACIS 2021 1.0 and Parasolid 34.0
- Accessing mates for CATIA V5 files to help optimize workflows for applications in manufacturing simulation, robotic, kinematics analysis and more.

HOOPS Visualize

- New culling mechanism where front faces can be culled, allowing the user to see inside objects easier, and more easily show the results of analysis.
- Android AR Sandbox application refresh, which includes updating the ARCore SDK, using ARCore to match the 3D lighting to the environmental lighting (as seen by the camera), and adding a broader range of models. HOOPS Communicator
- Supports assembly level features across different shattered workflows, allows users to view all the parts or a building or mechanical assembly at once and easily switch versions/revisions of individual parts or sub-assemblies without having to reconvert or process the entire set of 3D objects.
- Supports generating multiple output SC files for each body which is affected by an assembly level feature resulting in correct assembly conversion.
- New rendering modes (sketched mode and conceptual mode) based on standard AEC application interactions, enables users to replicate the environment they are used to in AEC workflows.

HOOPS Publish

- Improvements to HTML export regarding quality and fidelity with 3D PDFs.

HOOPS toolkits are also available through the HOOPS Native and HOOPS Web Platforms. HOOPS Platforms combine market-leading 3D technologies for CAD data exchange, visualization and data publishing, along with tight connections to popular modeling kernels. With a single licensing fee, these offerings are the most cost-effective way to leverage the full spectrum of HOOPS functionality for both existing applications and future development projects.

Developers interested in evaluating HOOPS SDKs can sign up for a free 60-day evaluation. Users can now interact with demos, videos, download a free evaluation, walk through tutorials, read partner success stories, and browse the updated documentation. Learn more by clicking on the links below and begin a free trial today:

- HOOPS Exchange (CAD Data Import)
- HOOPS Visualize (Graphics Engine for Desktop, Mobile & AR/VR)
- HOOPS Communicator (Graphics Engine for Web)
- HOOPS Publish (Export 3D PDFs, HTML and Standard CAD)

iBASEt Solumina iSeries i060 Expands Quality, Process Planning, Process Execution, and Systems Integration

1 February 2022

iBASEt, the company that simplifies how complex products are built and maintained, released new features now available on Solumina iSeries version i060. These updates can help streamline and simplify how manufacturers manage complex production and quality processes spanning their entire value chain.

This latest update continues to add new functionality to the company's iSeries, an operations management platform that can simplify implementation and how to apply future upgrades. New Supplier Quality Management capabilities include an enhancement of dashboards and inspector screens, including how to filter and view escapes, discrepancies, and dispositions. Expanded integration and support for SAP S/4HANA Production along with enhanced synchronization of process and inspection plans can reduce resource requirements. User Interface updates offer expanded configurations for menus and input forms.

“We are committed to maintaining a regular release cadence of iSeries enhancements that add new value and performance for our customers,” said Sung Kim, CTO, iBASEt. “Demand continues to grow for our cloud-native Solumina iSeries as a starting point or next step to move forward a manufacturer's move to digital operations.”

Solumina iSeries is an ideal way to drive a paperless strategy that removes manual, error-prone processes from the shop floor. The iSeries offers resource-constrained manufacturers and suppliers an affordable option to accelerate the adoption of new digital technologies that can quickly drive business value when deployed as a cloud-hosted, managed SaaS solution.

Newforma Centralized Project Information Further Enhances Data Sharing and Collaboration with New Connector to Autodesk Construction Management Software

2 February 2022

Newforma, the leading provider of project information management (PIM) software for architects, engineers, contractors, and owners worldwide, announced the latest release of Newforma Project Center®. This release includes the highly anticipated Newforma Connector for Autodesk® BIM 360®,

CIMdata PLM Industry Summary

a construction management software that is part of Autodesk Construction Cloud™, connecting data and workflows so customers can collaborate more easily and drive productivity on their projects.

“The comprehensive view of the project record is so important. Because there are different products focused on maximizing collaboration in different ways, it’s nice to have a ‘platform agnostic’ way to see all these components together, including files from BIM 360, SharePoint Online, and your different network folders. Using Newforma, our firm leadership and technical staff have the benefit of quick access to all information in a familiar environment” said Greg Hempstead of Schmidt Associates, a full-service architecture and engineering firm.

The Newforma Connector for Autodesk BIM 360 allows project teams to access, share, and work with information stored in both products and streamline RFI and Submittal workflows between the design and construction teams.

“The pace of changes on construction projects and the need to communicate those changes across a wide range of stakeholders can make collaboration and information sharing difficult,” said James Cook, head of integrations at Autodesk Construction Solutions. “Integrating Newforma Project Center with Autodesk Construction Cloud’s collaboration solutions unifies critical project information for customers so they can stay up-to-date and collaborate effectively across workflows.”

Slater Latour, Chief Marketing and Product Officer at Newforma, remarks, “Our continuing mission is to create solutions that deliver unprecedented value to the design and construction industry. The latest release of Newforma Project Center furthers our goal of bringing people, data, and process together so our customers can provide better service to their clients and streamline project delivery.”

Trimble Introduces Mixed Reality for Construction Layout with FieldLink MR

31 January 2022

Trimble announced an innovative mixed-reality solution for construction layout with the introduction of the FieldLink MR app. Built on the powerful Trimble Connect® collaboration platform, Trimble FieldLink MR offers a completely new way to perform construction layout, enabling professionals to quickly navigate to tasks on the jobsite—getting more done in less time. The app runs on the Trimble® XR10 with HoloLens 2, a hardhat-integrated mixed-reality device.

Trimble will demonstrate this new innovation at the International Air-Conditioning, Heating and Refrigerating (AHR) Expo 2022 in Las Vegas this week, booth number N9922.

With Trimble FieldLink MR, field crews can easily visualize construction data without relying on a handheld controller for step-by-step navigation to locate each point. Visual cues presented through the mixed-reality hardhat naturally lead workers directly to each point for them to physically lay out pertinent information on the construction site. Attracting and retaining skilled workers remains a key challenge for many contractors, reducing the complexity of layout in the field will be essential to enable less experienced staff to deliver quality work the first time.

“Trimble’s FieldLink solution enables users to precisely position digital construction information in the physical world. FieldLink MR is an extension of this application, which seamlessly integrates cutting edge mixed-reality technology to help construction professionals be more effective on site. This integration offers more efficient and intuitive workflows by making the layout process more natural and contextual,” said Martin Holmgren, general manager for Trimble’s Building Construction Field Solutions Division.

Trimble's layout and mixed-reality solutions are part of the Trimble **Connected**

CIMdata PLM Industry Summary

Construction ecosystem, leveraging the Trimble Connect collaboration platform. Contractors from different trades and in all phases of the construction lifecycle can work together to enable more automated layout and fabrication. Field productivity solutions are driven directly by constructible data, reducing the need for data conversions and the potential for error. Using constructible data and real-time collaboration, project stakeholders can work together seamlessly, optimizing the design, build and operate lifecycle.

Availability

Trimble FieldLink MR is expected to be available in the first half of 2022 from Trimble and BuildingPoint™ distribution partners and will be downloadable through the Microsoft Store.

What's New in IronCAD Mechanical 2022

3 February 2022

We're excited to officially announce the release of IronCAD Mechanical 2022, the powerful mechanical tools add-on for the IronCAD Design Collaboration Suite. As a leader in CAD productivity, IronCAD continues to support mechanical designers and increase their productivity at all levels with the release of the IronCAD Mechanical 2022 design extension. IronCAD Mechanical 2022 adds brand new features and improvements to existing tools, including the Face to DXF and IPROActiveManager tools. Below are more specific details about the many new customer-driven productivity enhancements in IronCAD Mechanical 2022 that further extend IronCAD's capabilities.

Add Post-It Note

A newly added option to remove Post-It Notes.

View Manager

1. Newly added UI items for a precise camera control: target rotation setting (even with TriBall), setting the correct orientation upwards, fine rotation control (with angular step) and precise pan movement.
2. Added the button to save all images at once.

Numbering PartNumbers

A newly added option to apply the same PartNumber to all elements in the active selection.

Steels – CustomSteel – Pipe – Flange

Added option to generate PartNumbers using the IPRONumbering tool.

Steels

1. Consolidated and improved cutting tools.
2. Improved positioning of Caps and Stiffener for steels. Depending on the type of cap placed, a prefix character modifies the PartNumber. Caps on steels are distinguished by cap at the base (prefix F), on top (prefix T) and end (prefix E), The Prefix Username and PartNumber options are also automatically checked and filled with the correct character.

Code Generator

Added a new option to detect the number of parts linked to each other.

Face to DXF – Export Unfolded Part

Lines and Bend Labels are grouped into two separate layers according to the direction of bend. There is

CIMdata PLM Industry Summary

also an option for setting the text height of bend labels.

Create Params By EXCEL

This tool is used to create/set the parameters from an Excel file. The selection on the Excel file is interactive, and the parameter will be created if they don't exist. The value of the parameter will be driven by the Excel value.

An icon close to the part will show this condition. Furthermore, using the right click of the mouse will be possible to open the excel file, see the associated parameters, and update the parameters to the current value of the Excel file.

IProActiveManager

The IProActiveManager tool has been powered adding several new features that improve the productivity and made simple operations that otherwise require a lot of time and management.

UI Improvement

Improved the selection of Assembly treated as part, now there are two icons, one excludes the other.

Sort Ordering

Performance improvement in the calculation of reordering in the BOM.

Search Text

Added the possibility in the dialog of Search/Replace Text to convert the texts in UPPERCASE – lowercase – Title case.

Export to Excel

Added an option to export the IProAttachment files (pdf, dxf, doc, web link, etc ...) and insert the link to the attachment in the Excel file.

Rename Part

Added option < ParentName+PartName > to rename the parts so that they include the father assembly name.

BOM Configuration

Added the “Where Used” option in the BOM Configuration.

The field whit this option is filled with the father's element PartNumber.