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CIMdata News

2022 3DS Industry Analyst Days: Virtual Twin Experiences for Resilience & Sustainability – a CIMdata Commentary

19 July 2022

Key takeaways:

- Dassault Systèmes returned to an in-person analyst event on 22-23 June 2022, with nearly 30 analysts from around the globe in attendance in Velizy, France or online.
- The sessions emphasized Dassault Systèmes' Industry Solution Experiences, an expansive platform-enabled solution offering that spans the product lifecycle embedding applications and technology from their numerous brand portfolios.
- While Dassault Systèmes' long-term focus has been in Manufacturing, they look to Life Sciences and Infrastructure & Cities as engines for stronger growth moving forward.
- Dassault Systèmes reported 11% overall growth for 2021. Medidata has been a major contributor to their success over the last two years, particularly in the cloud.

CIMdata was pleased to attend the 3DS Industry Analyst Days, hybrid session convened by Dassault Systèmes on 22-23 June 2022. Many attendees from the global firms represented attended in person with others joining remotely. The ambitious agenda packed a lot of content into the 1.5-day event.

Mr. Bernard Charlès, Vice Chairman of the Board & Chief Executive Officer for Dassault Systèmes (DS), welcomed the crowd in a short video. Dassault Systèmes has talked about the importance of experience for a decade, and Mr. Charlès emphasized the need for industries to move to an experience economy, where product use has more value than the product itself (e.g., product-as-a-service business strategies and opportunities for in-use purchases). At the same time, he emphasized that industry needs to move from a linear to a circular economy, with this vital topic central to Dassault Systèmes' three target sectors—Manufacturing, Life Sciences & Healthcare, and Infrastructures & Cities—and the twelve industries they address within those sectors. CIMdata has championed the Circular Economy concept since 2014 and is heartened to see a PLM market leader embrace the concept so strongly.

Next up was Mr. Pascal Daloz, Chief Operating Officer and Member of the Board, who was joined by Mr. Hubert Masson, R&D 3DEXPERIENCE Platform User Experience (UX) Senior Director. The company sees their platform, shortened in this commentary to 3DX, as central to their strategy in all sectors, not just their Manufacturing roots. Of course, this requires an expansive view of the term “platform” as not all of their solution is part of the same code base. But that is changing, according to Mr. Daloz, with their Medidata acquisition being quickly brought into the fold through integration. Medidata, a global leader in clinical trial management, was acquired by DS in June 2019, optimal timing for a world obsessed with clinical trials to help abate the COVID-19 global pandemic. This acquisition has been a major engine of DS' growth over the last two years, particularly in the cloud, where Mr. Daloz claimed DS received 20% of their software revenues in 2021, going to a third by 2025. Much of this cloud revenue will come from Medidata, which told Wall Street their revenues would grow at 16% year on year, with 85% of that being subscription, when they were acquired. And this was in late 2019 right before the pandemic. In a later session, Mr. Rouven Bergmann, Executive Vice President and Chief Financial Officer, claimed that 80% of their software revenue is recurring. This is impressive and important for revenue stability, which also pleases investors. Dassault Systèmes does not often take advantage of the investment community for funds, powering their own growth and funding mergers and

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acquisitions (M&A) with their internal funds. But access to capital has always been important to them and may be needed to fund their future M&A activities in their growth sectors. Their 2040 vision is even more ambitious, hoping to grow the company into three equivalent “companies” across their three sectors.

While the company’s legacy is in Manufacturing, the company sees opportunities for a higher growth rate in their two other sectors, Life Sciences & Healthcare and Infrastructure & Cities. The company’s perspectives on revenue growth are shown in Figure 1. This makes a lot of sense. They are competing tooth and nail in Manufacturing with their long-time foes Siemens Digital Industries Software and PTC, while also fending off rapidly growing firms like Aras. In contrast, the other two sectors have no dominant players and Infrastructure & Cities has a lot of point solutions that cry out for the collaboration, data management, and integration capabilities of the 3DX platform.



Figure 1—Revenue Growth Perspective (Courtesy of Dassault Systèmes)

As stated in the introduction, this was an ambitious agenda for the time allotted. Some presentations were a bit rushed but it was good to get an update on the breadth of what DS has to offer. Overall, DS continues to build out their Industry Solution Experiences (ISE), industry-focused offerings that span the product lifecycle. The company licenses role-focused capabilities within each ISE, designed to bring the needed support for users in a particular role. Based on the progress discussed, it appears that DS continues to offer more of their ISE capabilities on the cloud than on-premises. (This is a common strategy for software companies, i.e., putting the new and “cool” stuff where the company wants their customers to move, in this case the cloud.) DS also has a unique strategy as the only leading PLM solution provider to offer their solutions on cloud infrastructure they own (from their Outscale investment in 2017). With each release the company is improving the overall UX and bringing more of their vast brand resources to bear in their ISEs. The progress they have made is impressive but some of our industrial clients have suggested that many of the roles within the ISEs are not as deep as they had hoped. We and our industrial customers regularly provide that feedback to DS to help the offerings more effectively evolve.

DS also sees their brands (e.g., CATIA, ENOVIA, BIOVIA, and SIMULIA) as central to market success, working towards making each brand a “love mark,” a concept from business-to-consumer marketing that suggests the brand affection and loyalty of their customers. In a brand-focused session, Mr. Philippe Laufer, Executive Vice President, 3DS Global Brands, stated that the company now had 30 million users of their many offerings, up 20% over 2020. He claimed that 8 of the 12 DS brands were leaders in their domains. CIMdata agrees that DS does have many leading and strong brands, but perhaps not quite that many. These brands help power “irresistible user experiences” according to Mr. Laufer, delivering specialized expertise across 30 domains and 81 disciplines delivered in 470 Cloud

roles.

Additional highlights from the event follow.

Dassault Systèmes progress on one particular topic was impressive and much needed: the ability to support lifecycle assessment (LCA) within the 3DX platform. LCA is defined as the systematic analysis of the potential environmental impacts of products or services during their entire life cycle. The theme of CIMdata's 2022 PLM Market & Industry Forum series was Sustainability and LCA is an important tool to help industrial organizations meet their sustainability objectives. Ms. Florence Verzelen, EVP, Industry, Marketing & Sustainability, described six Industry Process Experiences (ISPs), components of ISEs, related to LCA:

1. Sustainability Driven Design
2. Sustainability Driven Engineering
3. Sustainable Design Orchestration
4. Weight & Sustainability Driven Engineering
5. Product Innovation
6. Packaging Innovation

This is a vital capability, and the demonstration was impressive. Only 22% of the industrial respondents to CIMdata's recent sustainability survey were calculating the carbon footprint of their production, with lower percentages for other contributors (product use, their supply chain, logistics support, etc.). LCA is a vital tool to be used across the value chain to help bring these percentages to where they need to be.

One phrase that has gained a lot of attention in the last several years is digital twin, which CIMdata defines as a virtual representation (i.e., digital surrogate) of a physical asset or collection of physical assets (i.e., physical twin) that exploits data flow to/from the associated physical assets. DS prefers to use the phrase "virtual twin" to describe much the same concept, with virtual twins being central to experience, a concept that has been key to the company since 2012. Over the last several years, CIMdata has executed multiple industrial surveys about adoption and use of digital twins, with interest and adoption growing each year. But in practice, they can be complex to develop and even more difficult to synch with physical products as they evolve over the lifecycle. To help industrial companies, DS is developing outcome-based virtual twin delivery models that can be delivered as managed services as described by Mr. Michel Tellier, Vice President of Outcome Based Engagement. It is early days but this approach bears watching as Mr. Tellier and his DS team flesh out the concept and can report on the outcomes achieved by their early adopters.

Medidata is not the only acquisition that has thrived as part of DS. In 2018, DS announced they had acquired a majority stake in Centric Software, a fast-growing company in retail footwear and apparel (RFA), an industrial segment that over the last several years has invested heavily in PLM. At the time of the investment, Centric Software claimed to support over 600-globally recognized brands. Today they support over 5,000 brands at over 600 customers, claimed Mr. Philippe Loeb, VP Home & Lifestyle and CPG-Retail. As his title suggests, they have expanded beyond just RFA into Home & Lifestyle and in 2021 expanded their offerings by acquiring Armonica, a cloud-native retail planning solution. In addition, they are planning a move into formulated products, leveraging technology from Enginuity, a 2011 acquisition, and Quintiq, acquired in 2014. Centric Software is another example of a great acquisition by DS.

While Medidata has been an engine for growth, only a small part of their revenues, about 5% come from patient care, an area targeted for investment and growth, claimed Mr. Sastry Chilukuri, co-CEO,

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Medidata. CIMdata was impressed by their work growing ecosystems of partners, influencers, and regulatory agencies. As is often the case with DS, they are talking about creating new paradigms in patient care. Working closely with these ecosystems is one way to accelerate change. As a point of comparison, it took the automotive and aerospace regulators many years to accept virtual testing as a replacement for physical testing. Mr. Chilukuri rightfully said that in patient care we cannot wait that long. CIMdata agrees, particularly given the global demographics of aging populations.

Mr. Patrick Johnson, Senior VP Corporate Research & Sciences, delivered a presentation on DS' approach to advancing the state of the art in the three supported sectors. Within Life Sciences & Healthcare, BIOVIA and Medidata are the core brands but the whole 3DX platform is used extensively within the medical device industry. The plan is to develop virtual twins of patients, hospitals, and healthcare systems. The platform supports all the fundamental sciences; mechanical, electronic, software, biology, chemistry, and perhaps most important, data, all potentially connected through system models that will enable full system of systems optimization. Previous work on the living heart and living brain is being expanded toward oncology, with a focus on a virtual twin of cancer cells and tumors. Medidata's data and processes are being leveraged for tasks such as automatic lesion identification and virtual trials, which improve the quality of data that comes from trial testing leading to products that improve outcomes faster.

The 3DX platform supports multiple scales starting with RNA modeling of biological reactions and materials scaling through design and manufacture of devices and therapies, into the design and optimization of healthcare systems. This is an audacious scope and DS has made significant progress. CIMdata believes their vision to tie the capabilities together using a system modeling approach will lead to breakthroughs that improve healthcare outcomes for all of us.

Within the Infrastructure & Cities sector, Mr. Johnson noted that DS is focused on supporting circularity and human centricity by using a system of systems approach. Some of the projects he mentioned included battery recycling, and analyzing homes for eldercare support and recommending changes. Another interesting capability discussed was the ability to scan buildings and factories using point clouds to quickly generate models and to leverage AI to recognize features such as equipment within production lines. The equipment could then be rearranged to improve performance. It is important to note that this capability can be applied across both the manufacturing and infrastructure sectors.

Ms. Laurence Montanari, Vice President, Transportation and Mobility Industry, reviewed industry trends for transportation and described how DS was addressing them. Ms. Montanari previously worked at Renault, leading two vehicle programs, including a program that designed an EV to address "last mile" delivery in urban areas. Electrification is a megatrend driving transportation and battery technology is critical for success. Ms. Montanari described how other DS industry capabilities from SIMULIA and BIOVIA are being leveraged to address massive scaling and technical issues such as battery chemistry. In addition to the industry solutions, the LCA horizontal application is being tailored to support transportation and to help alleviate the extreme pressure on the industry from consumers and regulators. She also noted that DS is helping customers address the supply chain issues that have ravaged industries over the past few years by using DELMIA Quintiq. The CIMdata takeaway is that while DS has organized into industry verticals, they are able to leverage the application of specific technologies across industries bringing innovation where it is needed.

Mr. Stéphane Sireau, Vice President, High Tech Industry, is responsible for all aspects of high-tech including electronics design, semiconductors, batteries, connected systems, and digital infrastructure. His remarks focused on the multi-scale approach DS is taking from material science, including leveraging BIOVIA to support chip design and manufacturing, and integration into systems and

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infrastructure. He described DS' end-to-end approach to help customers conceptualize, design, efficiently manufacture, and support products. As with transportation, he noted that sustainability is critical, and his team is leveraging the core LCA technology to ensure consistent support for sustainability across industries on the platform. CIMdata was impressed by the systems approach Mr. Sireau articulated as we strongly believe it's the only way to address the complexity of modern technology and products.

Mr. Philippe Loeb, Vice President, Home & Lifestyle and CPG-Retail industries, provided an overview of his industry purview that includes products ranging from sporting goods to shoes to power tools. Again, the solutions offered by the 3DX platform for design, simulation, and manufacturing are being leveraged to ensure that industry-specific roles have the correct tools to efficiently get their jobs done. He highlighted the HomeByMe product based on 3DVIA technology, which is used to help customers leverage virtual twins to furnish and decorate their homes. Ikea is using this product and is serving up to 100k users per day. DS has long had the vision of 3D everywhere, including in the hands of the general public, and the HomeByMe solution is a huge step in scaling up 3D adoption. Mr. Loeb also discussed how CPG companies, such as Pepsico, are leveraging 3DX platform capabilities such as sustainable package design, virtual testing (based on Medidata technology), adherence to sustainability, and formulation and specification development and materials development using capabilities from BIOVIA to bring new products to market.

As life sciences is one of DS three sectors and is the fastest growing, it's fitting that the agenda saved the "best for last." Mr. Tarek Sharif, Medidata Co-founder and Co-CEO, delivered an opening video to set the stage and Ms. Claire Biot, Vice President, Life Sciences & Healthcare Industry, Mr. Sastry Chilukuri, co-CEO, Medidata, and Mr. Reza Sadeghi, Vice President, BIOVIA Strategy, co-presented on how DS is approaching life sciences and healthcare.

Dassault Systèmes' goal is to transform how therapies get to patients by using biology platforms combined with multi-scale technology and AI to leverage data to bring new therapies to market much more quickly. A critical offering they brought to market based on this approach is "Design to Cure." Historically, medicine development was focused on small molecule products such as antibodies, Mr. Sadeghi described how DS is focused on supporting the much more complex process of biologics, as well as cell and gene therapies. He also noted the research DS has done on quantum dynamics to help pharmaceutical companies predict how well their therapies will interact or dock with their targets with high precision. This is exciting work that will have a large impact.

Conclusion

Dassault Systèmes has aggressive plans for growth in Infrastructure & Cities and Life Sciences & Healthcare, which they see as offering more growth potential than Manufacturing. CIMdata agrees with this assessment. Both of those sectors are currently supported by point solutions that could benefit from a unifying solution like the 3DEXPERIENCE platform. CIMdata is impressed by their continued work in the Manufacturing sector, and the depth and breadth of their work with influencers, government agencies, and other key actors in their growth sectors, as changing paradigms demands this level of engagement. Their financial goals are aggressive and CIMdata is happy to have a front row seat to monitor their progress.

Accelerating Software Development for Smart, Connected Products – a CIMdata Commentary

21 July 2022

Key takeaways:

- Smart, connected products are driving a major shift in how embedded software is developed due to additional product complexity, shorter development cycles, cost reductions, and quality improvements.
- A range of technologies is required to holistically support software development for smart, connected products including robust integrated tool chains that support DevSecOps, product line engineering to support reuse, PLM integration for collaboration, and AI/ML support.
- A platform approach to embedded software development is needed to support the complex requirements for developing smart, connected products.
- TCS brings thought leadership and in-depth understanding of the complex embedded software domain.
- The TCS Embedded Software Lifecycle Management offering integrates best-in-class tools into a platform with the capabilities customers need now and includes the ability to grow and change tools as requirements change.

Introduction

Most people are familiar with the growth in product complexity being driven by electrification—the addition of electronics, software, and network connectivity. We are in the middle of a massive transformation from mechanical devices driven by electrical motors and basic electrical and electronic parts to smart, connected products whose capabilities will evolve during their lifecycle. [1]

With vehicles the transformation driven by “smart, connected” is just beginning. Electric car adoption is now measurable, with many vehicles available and many more in product pipelines. The real transformation is coming from connectedness. Remote monitoring to support predictive maintenance is happening now. For example, the battery system, the heart of electric vehicles, is extremely complex with mechanical, electrical, electronic, software, and chemistry based sub-systems. Software is monitoring performance, and when anomalies are detected, they phone home to the manufacturer, let the driver know service is need, or in the most advanced cases, download new software over-the-air (OTA) to update the system.

Autonomy is currently the holy grail of automotive innovation, and if/when successful it will change how we think about car ownership and what we do in a car once we no longer need to drive. Vehicles will take themselves in for service when they can’t be upgraded OTA. Automotive is just one example: there are many other consumer and industrial use cases across industries including healthcare that will be impacted by electrification and smart, connected products.

Risks

The path to get to smart, connected products is not easy. Not only do new domains of expertise such as electrical, electronics, and software need to be established, they also need to be properly incorporated into organizations and processes, so risks are minimized and profitability and value to the customer are maximized. Complexity is a major contributor to risk, especially in products that directly interact with the physical world. In addition to complexity, connected devices have a much higher risk of security failures. Compromised devices interacting in the physical world can cause extreme failures.

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With the increased complexity leading to more interaction with the physical world, many elements of smart, connected products become safety-critical. Electrified vehicles and equipment operating in automatic let alone autonomous modes must work perfectly. Executives that don't lead their organizations to adopt new product development approaches required to address the consumer expectations and regulatory requirements will find themselves and their companies in an untenable situation.

Mitigating Risks

Fortunately, there are standards defined for the development of safety-critical systems including IEC 61508 for general industry, ISO26262 for automotive, IEC 62304 for medical, and IEC 61513 for nuclear. By defining a process to specify, code, inspect, document, test, verify, and analyze systems, safety can be ensured. But the rigors of these processes can extend development time and effort adding complexity.

Software functionality and complexity have grown exponentially and will likely continue to do so. Over the past two decades agile development has become the software development methodology of choice for addressing rapid development of complex systems and has been adopted in some form by most software development organizations. More recent developments include DevOps and DevSecOps, that tightly couple development (Dev), security (Sec), and operations (Ops), especially for cloud-SaaS environments. This approach enables higher quality code to be put into production faster because updates are released continuously in smaller increments. Testing is mostly automated, and when something does go wrong the feedback loop is shorter and traceability is more detailed leading to faster fixes.

The agile development methodology implemented within a DevSecOps environment is helping embedded software teams to transform their process to deliver higher quality software, faster, and more cost effectively especially with the growing number of safety-critical systems. A DevSecOps solution must satisfy many requirements to support the complex embedded software domain. The characteristics required to fully support modern embedded software development are shown in Table 1.

Table 1—Characteristics of a Modern Embedded Software Development Solution

| Item | Description |
|--|--|
| Integrated toolchain | Uses workflows to ensure repeatable processes and support forward and backward traceability end-to-end from requirements through code management, testing, deployment, and change management |
| Reuse—product line engineering | Structures product items including software to maximize reuse of proven modules to meet product variability requirements |
| Automation | Manages data holistically, and manual steps are minimized during the software development lifecycle (SDLC) |
| Artificial Intelligence / Machine Learning (AI/ML) | Incorporates AI/ML capabilities in both the development of embedded solutions and the execution of embedded software to improve product performance |
| Analytics | Provides reports for all phases of the SDLC |
| Cloud-DevSecOps | Integrates development and operations of embedded software in smart, connected devices including proper security management, running on the cloud providing bidirectional |

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| Item | Description |
|-----------------------------------|--|
| | communication to support data acquisition and over-the-air (OTA) updates |
| Ability to manage large data sets | Captures and manages data from test phases and especially operations (e.g., test data management and IoT) and ensures data is consumable anywhere in the SDLC and product lifecycle, especially by analytics solutions |
| Domain specific capabilities | Provides industry-specific embedded software management such as to support A&D, automotive, and healthcare requirements and nomenclature, especially regarding compliance |
| Eco-system collaboration | Integrates SDLC into the product lifecycle management solution to ensure effective collaboration |
| Developer productivity | Supports tools and processes to help developers generate higher quality solutions faster |
| Compliance | Ensures industry specific compliance requirements are satisfied as required by their specific industries |

TCS's Approach

TCS has extensive experience in designing and managing embedded systems and has worked with leading OEMs to help them develop new products.

TCS's Recommendations for Smart, Connected Product Development ¶

- → Focus on requirements quality with requirement models, requirement in loop verification, and predictive analysis of requirement correctness. Prioritize reduction in cost of "Poor Requirements." ¶
- → Use a Validation-as-a-Service model on the cloud to address the increasing need for validation. Create a global pool of on-demand test benches to eliminate wait time for ML-based checks for software component code analysis. ¶
- → Increase automatic generation of test cases. ¶
- → Improve collaboration and adopt a cohesive way of working among OEMs, Tier-1 suppliers, development partners, chip makers, etc. ¶

Leveraging this experience, TCS has assembled a framework known as TCS Embedded Software Lifecycle Management solution that supports a variety of application lifecycle management (ALM) solutions such as IBM, Polarion, Atlassian, and Codebeamer^[2] and includes integration with leading PLM solutions such as Teamcenter, ENOVIA, and Windchill. Figure 1 shows the capabilities available within their framework which align with the previously described requirements in Table 1.

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Figure 1—TCS Embedded Software Lifecycle Solution Capabilities

The TCS solution is more than just software and integrations. It includes knowledge developed from many customer engagements as well as from internal use within TCS. TCS also helps clients develop an appropriate embedded software development strategy and select and deploy the best solutions to meet strategic requirements. The capabilities shown in Figure 1 are worth calling out individually.

1. **Requirements Management**—Software related product features and requirements captured in PLM are allocated to ALM to streamline the software development process. Requirements get decomposed in ALM with an appropriate level of abstraction and structure. Requirements modeling and requirements in loop verification ensure quality, coverage, and correctness. Compliance checks ensure requirements are robust.
2. **Product Line Engineering**—To deliver product variants within a short time, re-use of engineering artifacts is a must. The feature-based approach of product line engineering enables reuse. The solution includes a product feature library, to enable management and reuse of the artifacts (requirements, models, test plans, code, etc.).
3. **Validation Management**—Increases in complexity of product software and compliance requirements demands higher quality validation. System and software validation covers different model types such as model-in-the-loop (MIL), software-in-the-loop (SIL), and hardware-in-the-loop (HIL) as well as integration validation, etc. The integration of the ALM platform with test tools and automation improves validation coverage, efficiency, and reporting. TCS SIMPLE, a part of the Autoscape 3 suite analyzes complex test structures to identify edge cases.
4. **CI/CD**—Continuous Integration/Continuous Development along with verification, reporting and monitoring ensure software quality. Build time optimization, binary management, containerization, and test automation are key aspects of the solution. This state-of-the-art methodology effectively supports DevSecOps and ensure traceability across the entire SDLC.
5. **Reporting and Dashboards**—Common, organization-wide, role-specific, and real-time dashboards help stakeholders improve their decision-making process. Reports and dashboards support software lifecycle KPIs—validation coverage, requirement coverage, code quality, build status, compliance data (e.g., Automotive SPICE), etc. AI/ML-based reports help stakeholders monitor and optimize processes.
6. **Risk Management**—Identifying and mitigating risk is critical in all industries, especially when

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there is a need to comply with ISO14971. The TCS solution covers the digitization of risk analysis, evaluation, maturation, and control using ALM tools.

7. **Functional Safety**—Managing functional safety is critical for any product and organization’s need to comply with regulations such as ISO26262. TCS solution covers all aspects of managing the safety artifacts from item definition to identification of hazards to decomposition of functional and technical safety requirements.
8. **Integration**—PLM is the backbone of product lifecycle development and manages the release and maintenance of product related information. With Multi-domain changes it becomes critical to synchronize the software related changes between PLM and ALM. Once the software is ready for release the binary must be properly linked to the product configuration. ALM-PLM integration is the key to ensure collaboration between the domains. The TCS solution supports integration using various technologies such as OSLC, middleware, point-to-point, microservices, and REST-based solutions.

TCS’s Autoscape product discussed in this [commentary\[3\]](#) is based on the TCS Embedded Software Lifecycle Management Solution with TCS’s value-added products to round out the platform. CIMdata found this to be a compelling solution for the development of autonomous products as did the company

“In our ALM Transformation project, we needed a consultative engagement since the requirements and methods were not well defined. TCS team demonstrated a high level of expertise in Embedded Software release process management and brought clarity to the scope and process. I appreciate the level of skill demonstrated by TCS and bringing their Polarion expertise to complete the project with good speed and quality.”

Director | Advanced Electrical Architecture, Software and VAVE, US-based EV startup

mentioned in the commentary case study demonstrating the value a platform approach can deliver.

TCS Support for EV Startups

TCS was selected by a US-based EV startup organization to help them on their ALM journey. The organization wanted to implement an ALM platform to support their product software development lifecycle to help them meet a short vehicle launch timeline. The company expected the partner would bring domain and technology expertise and implement a solution using an agile methodology. TCS implemented appropriate solutions from their platform including requirements management, validation and test automation, CICD, device transmittals management, reporting and dashboards, ALM-PLM integration, and multi-domain BOM management within the stipulated time. This resulted in the solution being well accepted by the user community.

Conclusion

As smart, connected products grow in number, volume, complexity, and inter-connectedness the challenges of embedded software development grow in parallel. New development approaches, especially for embedded software, must be adopted to successfully meet quality, timeline, and cost requirements. The complexity challenge has many dimensions including application functionality, ever shortening timelines, security, reuse, and others. To successfully deliver products companies want a one-stop-shop but they also want to use best of breed tools, a divergence in approaches. TCS’s Embedded Software Development Framework delivers a best-of-breed platform that allows mixing and matching of the major PLM and ALM solutions along with focused tools to create a sustainable embedded software development platform. Systems integration is a sweet spot for TCS, and by building a platform based on

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best-in-class tools that is maintainable and supportable they can meet their customers' normally conflicting requirements. TCS has the software implementation skills to build and manage the platform and create specialized applications when needed. They also offer consulting services to help customers define, select, and deploy their ALM landscape. Contact TCS to learn more about their embedded software development solution.

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

[2] Recently acquired by PTC, <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/18428-ptc-acquires-intland-software-highlight>

[3] <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/15283-tcs-s-autonomy-framework-autoscape-commentary>

Advancing Data & Process Management With PLM - Engineering.com article

20 July 2022

In his newest publication on engineering.com Peter Bilello, President and CEO of CIMdata, Inc., writes about how data and process management is a fundamental and foundational element of an organization's digital environment. To read the full article please click here:

<https://www.engineering.com/story/advancing-data-process-management-with-plm>

CIMdata Publishes China PLM Market Report

20 July 2022

Focuses on Overall PLM Market Results in China

CIMdata, Inc., the leading global PLM strategic management consulting and research firm announces the release of the CIMdata 2022 China PLM Market Analysis Report.

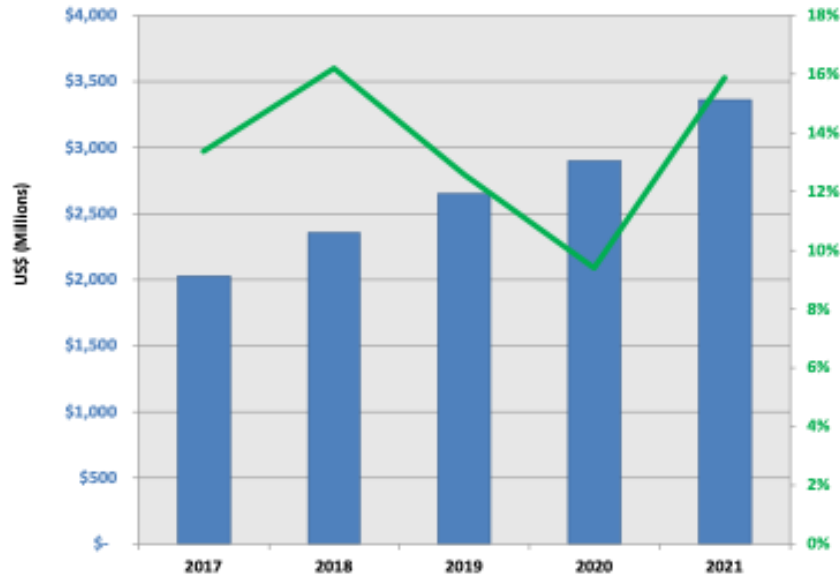
This report provides detailed information and in-depth analysis on the People's Republic of China's ("China") rapidly-evolving PLM market for calendar year 2021, with forecasts from 2022 through 2026. The report discusses the major PLM trends and issues, PLM purchase investments in software and services, PLM adoption in various industry sectors, and market growth forecasts that pertain to China; an important and quickly expanding economic region. The report provides insight into PLM market dynamics within the region and the revenue performance of the leading PLM solution providers operating within it, both China-based and international PLM solution providers headquartered elsewhere. It reports on revenues attributable to various PLM solution providers in the Chinese market. This report is a joint collaborative effort of CIMdata and China-based e-works Research (<http://www.eworksglobal.com/> in English and <http://www.e-works.net.cn> in Chinese).

Stan Przybylinski, CIMdata Vice President said, "In CIMdata's measurement the global PLM market grew 15.9% in 2021, well above our forecast. Chinese industries that are heavily investing in PLM include aerospace, automotive, high-tech electronics, and mechanical machinery. PLM investments in rail transit increased, and interest in PLM is growing in biotechnology, consumer electronics, and the construction industries." The following chart illustrates the growth and size of the China PLM market from 2017 through 2021.

Global PLM solution providers continue to invest in China and are expanding their partner networks and growing their customer bases. The leading international PLM solution providers including Dassault Systèmes, PTC, and Siemens Digital Industries Software are all showing continued growth in China, but

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local firms are growing as well. “Local Chinese solution providers continue to gain real market share as shown by their increased presence in the report’s charts,” stated Peter Bilello, CIMdata’s President and CEO. “We continue to have strong attendance at our annual China PLM Market & Industry Forum, held virtually again this year. The Chinese government is ramping up investment in local IT firms and it is starting to have a real positive impact on the China-based market. These Chinese competitors are closer to their local market and are expanding their offerings into new segments, a good sign for the vitality of the Chinese PLM market,” he added.



*China PLM Market from 2017 through 2021
(CIMdata Estimates)*

This report reflects the trend that Chinese manufacturers are paying more and more attention to product innovation and are rapidly improving their own R&D capabilities and processes by deploying PLM, not only in traditional discrete industries, but also in life sciences, food & beverage, and several emerging vertical markets.

CIMdata designed this report to be a valuable source of information to support the business and market planning processes of PLM solution providers that are targeting China, as well as industrial companies within China who would like to understand the PLM competitive landscape. Further details about the report including pricing information is available on CIMdata’s [website for publications](#).

Creo 9: An Instant Classic Digital transforms physical – a CIMdata Commentary

21 July 2022

Key takeaways:

- Creo 9 release strengthens support for designer productivity with added surface controls and editing.
- PTC introduces Multiphysics simulation for thermal/structural from within Creo 9.
- Users can now build their own additive manufacturing support structures in Creo.

The Launch

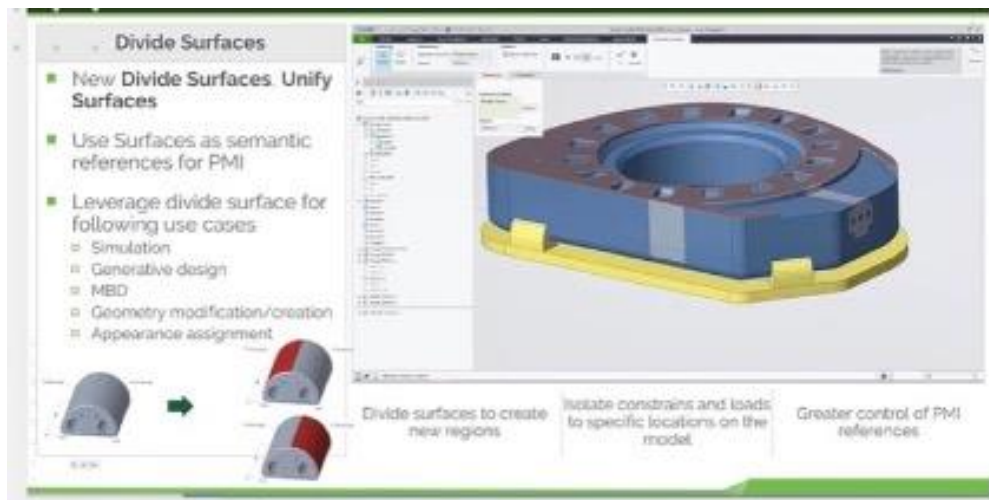
In May, 2022, PTC launched Creo 9 with a complimentary webinar showcasing the solution’s new

enhancements. [1] Mr. Paul Sagar, Vice President of CAD Product Management, noted that improvements centered in five areas of the product:

1. Usability and Productivity
2. Design for Ergonomics
3. Model-Based Definition and Detailing
4. Generative Design and Simulation
5. Additive and Subtractive Manufacturing

Usability and Productivity

Mr. Sagar explained that there are times when the designer needs to split a model surface to perform subsequent operations. The need may be to apply a specific surface finish to only a portion of the surface, or the designer may need to apply a load or constraint to a specific model location. PTC has introduced a new *Divide Surface* command to split a surface into different regions separated either by a curve or projected sketch—see Figure 1.



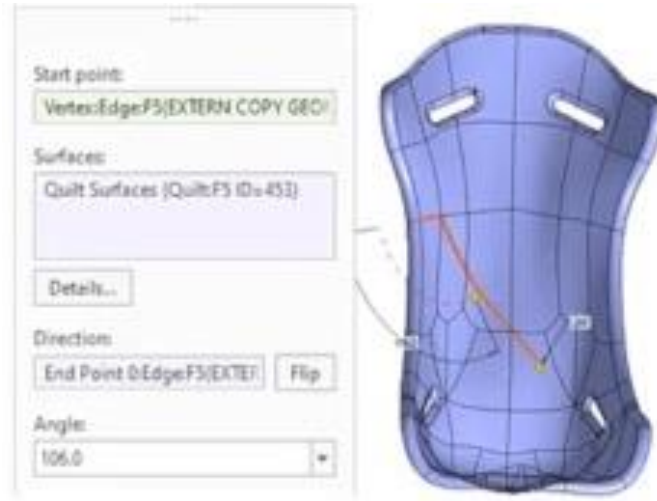
*Figure 1—Creo 9's Divide Surface
(Courtesy of PTC)*

The split surfaces can have different semantic references for PMI. The reverse operation of Unify Surface is also included to combine surfaces. CIMdata agrees that these operations will provide users the flexibility they require in many diverse design situations.

In the previous release PTC introduced the concept of a Design Items Folder to better capture and document design intent independent of the history tree. In Creo 9, the capability has been extended to allow users to place features into custom groups. The user can organize design items to help document design intent with flexibility and freedom.

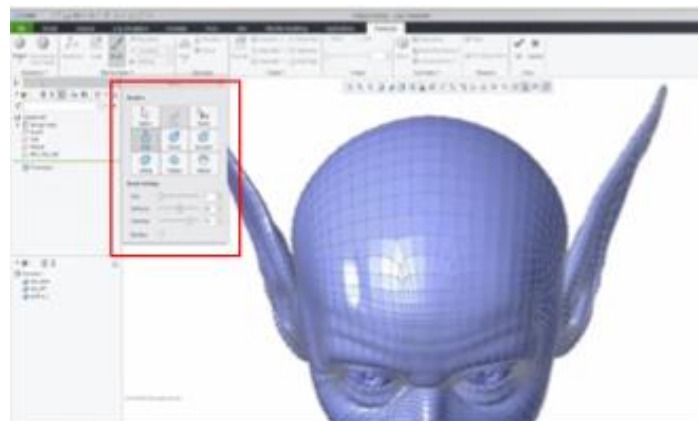
Creo 9 supports an enhanced parent/child viewer. The user can now dynamically show the parent or the children of a selected feature. CIMdata sees this as a strong tool in a user's arsenal when they need to explore the structure of a model.

Users can now generate a geodesic curve (Figure 2) on a surface by specifying a point and an angular direction. The curve path follows the shortest distance along the surface.



*Figure 2—Creo 9's Geodesic Curve Generation
(Courtesy of PTC)*

Creo 9 also introduces new sculpting brushes for free style surface modeling allowing the user to control the shape of the sub-divisional mesh. See Figure 3.



*Figure 3—New Brush Tools for Free Style Surfacing
(Courtesy of PTC)*

Design for Ergonomics

In Creo 9, a new Manikin editor allows a company to create custom manikin populations for their use in testing human interaction with their virtual design models. In addition, PTC has included usability enhancements (Figure 4) for better control over positioning a manikin in the design. The user can now identify and analyze gaps between actual and intended positions.



*Figure 4—Creo 9's Enhanced Manikin Manipulation
(Courtesy of PTC)*

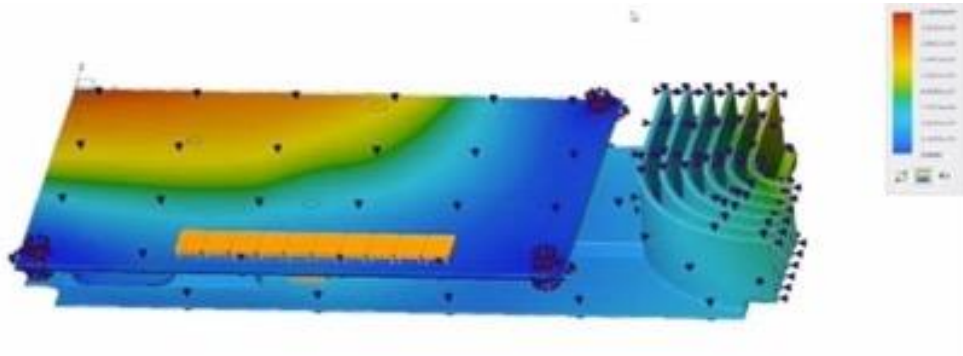
A new Vision Field Analysis capability shown in Figure 5 allows the user to analyze a manikin's line of sight and field of view. This capability helps ensure quality, safety, and adherence to visibility standards. CIMdata considers this tool useful in many design scenarios and helps avoid late minute design changes once a physical prototype is built.



*Figure 5—Creo's New Vision Field Analysis Capability
(Courtesy of PTC)*

Generative Design and Simulation

In Creo 9, PTC continues to build on their partnership with ANSYS broadening use cases for simulation-driven design. In what CIMdata believes is a major step, PTC takes their first step toward Multiphysics simulation with thermal stress computation in Creo Simulation Live, shown in Figure 6.



*Figure 6—Multiphysics Simulation with Thermal Stress
(Courtesy of PTC)*

CIMdata welcomes this step forward for Creo and believes users will appreciate this move toward Multiphysics simulation. In addition, Creo Simulate Live can now simulate the complex geometry of formula-driven lattices opening opportunities to perform fluid simulation on those lattices.

Often users want to evaluate using different input values for their simulations. The introduction of multiple projects in Creo 9 caught the eye of CIMdata. Users can now use the same model geometry and constraints, while varying parameters between projects to evaluate multiple design choices.

Additive and Subtractive Manufacturing

In release 9, users can now leverage the full geometric power of Creo to build their own supports and identify them as support structures for additive manufacturing. This allows the assignment of different printing parameters for supports versus actual part geometry. On the subtractive machining side of manufacturing, Creo 9 introduces full 5-axis geodesic finish toolpaths which parallel the generation of geodesic curves cited above under Useability and Productivity.

Summary

While PTC included many more enhancements in Creo release 9, CIMdata chose to highlight those discussed in this Commentary based on a belief that they will impact a majority of Creo user companies. CIMdata believes that PTC has focused their improvements in the proper areas, those that are most useful to end users and continues to enhance these as well as other areas.

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

PLM Industry Executive Mark Reisig joins CIMdata as Executive Consultant and Practice Manager

18 July 2022



The primary focus will be on developing and delivering new services to meet the expanding needs of CIMdata's industrial clients.

CIMdata, Inc., the leading global Product Lifecycle Management (PLM) strategic management consulting and research firm, has hired Mark Reisig as an Executive Consultant and Practice Manager. Mark will focus on Green Energy enablement.

Peter Bilello, President & CEO of CIMdata, commented, "We're excited to have Mark join CIMdata. He has a deep understanding of PLM both from a solution provider and industrial user perspective. His experience has given him a comprehensive understanding

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of how industrial clients' needs continue to evolve. Mark's extensive experience will help CIMdata support its clients in meeting existing and new market challenges."

Mark joins CIMdata after an extensive career in PLM with GE, Federation, Oracle, Auto-trol Technology, Kraft-Heinz, Catalytic, Day & Zimmermann, and most recently, Aras, where he was the Vice President of Product Marketing.

Mark has worked with all the major PLM solution providers from both an industrial user's perspective responsible for large global deployments as well as deploying those technologies from a solution provider and consulting perspective.

His experience spans engineering, manufacturing, supply chain, and operations for major global enterprises. He has held leadership roles related to the successful transformation and delivery of PLM solutions. He has also led sales, pre-sales, post-sales, and product marketing efforts that have delivered the value of these solutions.

Mark's industry experience includes energy, aerospace, defense, automotive, industrial, shipbuilding, high-tech electronics, medical devices, and food & beverage.

Mark holds a Bachelor of Science degree in Technology and Management from the University of Maryland.

Acquisitions

Accenture to Acquire Eclipse Automation to Help Clients Build Factories of the Future

21 July 2022

Accenture (NYSE: ACN) has agreed to acquire Eclipse Automation, a provider of customized manufacturing automation and robotics solutions headquartered in Cambridge, Ontario, Canada. The acquisition will allow Accenture to offer automated production lines that leverage the cloud, data and artificial intelligence (AI), making factories and plants smarter and thus, more productive, sustainable and safe. Financial terms were not disclosed.

Eclipse Automation creates automated manufacturing systems to produce sophisticated products for life sciences, industrial equipment, automotive, energy and consumer goods companies. Its technologists and engineers design, build, integrate and service advanced automation solutions for producing components and devices such as electric vehicle batteries and wearable blood-glucose monitors. Eclipse Automation's solutions include automation control systems, production machines and robots, with critical customized tooling manufactured in-house.

Founded in 2001, Eclipse Automation has offices in Canada, the US, Hungary, Germany, Switzerland and Malaysia. Its approximately 800 professionals will join Accenture's digital engineering and manufacturing service, Industry X.

Aaron Saint, North America lead for Industry X at Accenture, said: "Technology, data and AI are fundamentally transforming every part of a company. This includes engineering and manufacturing, our clients' next digital frontier. With Eclipse Automation, we will combine advanced automation capabilities with our deep digital expertise. This will position Accenture better than ever to help our clients reimagine their products and how they make them."

Jeffrey Russell, President of Accenture in Canada, said: "Many companies are bringing production back home to Canada and the US due to global supply chain disruptions. This gives them a unique

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opportunity to reinvent manufacturing with digital technologies and advanced automation. With Eclipse Automation, Accenture will provide technology and training capabilities that our clients need to develop a digital industrial workforce in markets where manufacturing skills are scarce.”

Steve Mai, CEO of Eclipse Automation, added: “For two decades, we have been leaders in delivering advanced automation solutions and high-tech manufacturing know-how to clients across multiple industries. By joining Accenture, we can also bring the advantages of data, AI and the cloud to our clients’ facilities at a scale that no other company can offer them.”

The acquisition marks the next milestone in Accenture’s expansion of its digital engineering and manufacturing capabilities. In 2020, Accenture bought Myrtle Consulting (US, Canada), a consultancy for strategic advisory on industrial operations, and Callisto Integration (Canada), a provider of manufacturing execution and shop-floor control systems. In 2021, Accenture added Pollux (Brazil), which engineers and deploys materials handling and autonomous mobile robots, paving its way into autonomous robotics systems. Later that year, Accenture made one of its largest acquisitions ever with international engineering services provider umlaut, headquartered in Germany, and strengthened its asset management and performance capabilities with Advoco (US) and T.A. Cook (Germany).

Completion of the acquisition is subject to customary closing conditions, including receipt of applicable regulatory approvals.

Hexagon extends presence in German mould and die market with the acquisition of Men at Work

19 July 2022

Hexagon AB, a global leader in digital reality solutions combining sensor, software and autonomous technologies, has today announced the acquisition of Men at Work GmbH, a reseller of Hexagon’s VISI CAD CAM software for the mould and die sector in South-West Germany.

As well as providing sales, training and support for VISI, Men at Work has also developed its own modules to improve the useability and productivity of the solution. Founded in 1995, Men at Work employs 20 people and serves more than 600 customers from its location in Bietigheim. The experienced Men at Work team will continue to support customers in the mould and die market as part of Hexagon’s EMEA team.

“The acquisition of Men at Work continues our efforts to better support and serve our production software customers across Europe,” said Stephen Chadwick, President – EMEA region for Hexagon’s Manufacturing Intelligence division. “The experience of the team and their knowledge of the CAD CAM sector in South-West Germany will be invaluable as we strive to offer the best possible user experience and value for our customers. I’m excited to bring the Men at Work team aboard and look forward to working with them.”

Men at Work will be consolidated within Hexagon’s Manufacturing Intelligence division. The acquisition has no significant impact on the results of Hexagon.

Sandvik completes the acquisition of US based custom tooling manufacturer Peterson Tool Company

15 July 2022

Sandvik has completed the previously announced acquisition of the assets of US based company Peterson Tool Company, Inc., (“PTC”) a leading supplier of machine-specific custom insert tooling

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solutions. The product offering includes custom carbide form inserts for high-production turning and grooving applications, primarily within the general engineering and automotive segments. The company will be reported in the GWS Tool business unit in Walter, a division within the business area Sandvik Manufacturing and Machining Solutions.

In 2021 the company had revenues of 9 million USD and an EBITA margin neutral to Sandvik Manufacturing and Machining Solutions. Impact on Sandvik's earnings per share will be limited, yet slightly positive.

SAP Acquires Search-Driven Analytics Company Askdata

21 July 2022

SAP SE announced that it has acquired Askdata, a startup focused on search-driven analytics.

With the acquisition of Askdata, SAP strengthens its ability to help organizations take better-informed decisions by leveraging AI-driven natural language searches. Users are empowered to search, interact and collaborate on live data to maximize business insights.

Available in multiple languages, Askdata's personalized experience connects live to source applications without moving data, while retaining the complete business context to return meaningful answers and proactive insights.

"The data and analytics market is evolving, and it is imperative that we provide simpler user experiences that will empower casual users to be able to make data-driven decisions independently," said Irfan Khan, president and Chief Product Officer, SAP HANA Database & Analytics, SAP. "The ability to cater to a wide range of user profiles will be the primary driver of data and analytics adoption. Askdata provides SAP with a path to lead this transition to the benefit of our customers."

Askdata applies cutting-edge artificial intelligence technology to natural language processing, which gives users the ability to answer any data question with a simple search. Users can interact with data in a simpler way, without having to learn a self-service analytics product, enabling them to extract maximum value from data quickly.

Askdata's IP will become part of SAP Business Technology Platform and contribute to a next-generation lightweight analytics experience for SAP Analytics Cloud solution customers and to line-of-business applications.

SAP and Askdata have agreed not to disclose the purchase price or other financial details of the transaction.

Siemens acquires ZONA Technology, Inc; increases Xcelerator capabilities for climate-neutral aviation

18 July 2022

With the global drive toward climate-neutral aviation gaining pace and the rebirth of interest in supersonic travel, innovations in aircraft configurations require careful and diligent use of aerodynamic and structural design optimization. Siemens Digital Industries Software today announces that it entered into an agreement to acquire ZONA Technology, Inc., a renowned specialist in the field of aeroelastic simulation solutions. The addition of the ZONA Technology, Inc. technology to Siemens' Xcelerator portfolio will assist customers in making their digital threads as comprehensive and as efficient as possible to help speed innovation, ensure on-time and on-budget delivery of more sustainable aerospace invention.

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The ZONA Technology, Inc. technology will become part of Siemens' Simcenter™ software portfolio, allowing the creation of a unique end-to-end airframe structure design and certification analysis digital thread, beginning with early concept studies, through high-fidelity aero-structural optimization and to the structural certification and documentation. The combination of ZONA Technology, Inc. high fidelity aeroelastic methods and industry leading Simcenter simulation can reduce dependency on third-party aeroelasticity tools and replace disjointed workflows for airframe analysis, simulation and verification.

"The aerospace industry is facing unprecedented technological challenges as it pursues the complexity of both climate-neutral aviation and the rebirth of supersonic travel," said Jean-Claude Ercolanelli, Senior Vice President, Simulation and Test Solutions, Siemens Digital Industries Software. "The addition of ZONA Technology, Inc. capabilities to the Xcelerator portfolio will help to support our customers going further with their digital transformation and will strengthen Siemens effort to build a comprehensive and cutting-edge end-to-end airframe structure design and certification workflow to the Aerospace industry."

"We are excited to join Siemens Digital Industries Software and bring our expertise and technology for aeroelastic simulation to improve the digital thread for aircraft structures and airframe design," said P.C. Chen, CEO, ZONA Technology, Inc. "A continuous digital connection between the flight physics and structural departments can reduce the number of iterations and speed up the airframe structure certification for aircraft companies striving to launch innovative new aircraft programs on time and on budget."

Based in Scottsdale Arizona, ZONA Technology, Inc. has been serving the aerospace community with commercial software since 1988, with a primary focus on aeroelastic simulation technology which helps to predict flight loads and flutter behavior. It is used by some of the world's largest aircraft OEMs.

The transaction is expected to close in the second half of calendar year 2022. Terms are not disclosed. Learn more about what this acquisition means for the aerospace industry on [our blog here](#).

Company News

Accenture Opens Advanced Technology Center in Coimbatore, India

20 July 2022

Accenture opened its newest Advanced Technology Centers in India (ATCI) located in Coimbatore, Tamil Nadu. Part of Accenture's global delivery network, the new facility will focus on building and delivering transformative technology services for global clients across industries.

"We are committed to expanding our presence to tier-II cities and Coimbatore is a preferred choice as the city is home to some of India's leading educational institutions and has emerged as a critical talent hub for technology professionals. The expansion will unlock new avenues for local talent and support our people looking for greater location flexibility," said Mahesh Zurale, senior managing director, lead — Advanced Technology Centers in India, Accenture.

"As we continue to further expand our facilities and capabilities in India, we are recruiting people who have deep skills in platforms, cloud, data and AI, metaverse and related areas," added Mahesh Zurale.

Interested candidates can log onto careers.accenture.com to apply to open roles.

Accenture is among the top employers in the country, recognized for its market leading people policies, investing in learning and development, and for offering boundaryless career opportunities across deep technology areas and industry domains. It is also widely recognized for its long-standing commitment to

building a culture of equality and is among the first companies globally to set a goal of achieving a gender balanced workforce by 2025.

Coimbatore joins Bangalore, Chennai, Delhi, Hyderabad, Indore, Kolkata, Mumbai, and Pune among the cities where Accenture's Advanced Technology Centers in India are located.

Ansys Wins Prestigious Best Paper Award at the IEEE HOST Conference for Pioneering Semiconductor Security Solution

19 July 2022

Ansys received the Best Paper Award from the Institute of Electrical and Electronics Engineers' (IEEE) International Symposium on Hardware Oriented Security and Trust (HOST), the world-leading hardware security conference. The winning paper introduces Ansys' latest semiconductor solution, Ansys RedHawk-SC Security, a new electronic design automation (EDA) tool to assess unintended data leakage vulnerabilities while providing fast and predictively accurate simulation integration. Unintended data leakage includes vulnerabilities stemming from power consumption, electromagnetic emission, thermal emission, and other multiphysics phenomena.

The paper, "Multiphysics Simulation of Electromagnetic (EM) Side-Channels from Silicon Backside with Machine Learning (ML)-Based Auto-Point-Of-Interest (POI) Identification," proposes a novel multiphysics simulation framework introducing Ansys RedHawk-SC Security to assess near-field electromagnetic (EM) side-channel leakage. Ansys RedHawk-SC Security also features built-in security analytics to explain results to designers or engineers unfamiliar with hardware security.

As stated in the paper, designers and engineers can leverage Ansys RedHawk-SC Security to gain a predictively accurate assessment of pre-silicon side-channel data leakage during early stages of chip design to identify the root cause and fix the issue. Further, the solution generates simulation results in hours, saving significant time and cost. Previously, it would require additional time and expenses for design correction and refabrication to "respin" the compromised chips leaking secret data unintentionally.

"IEEE HOST is the premier event aiming to facilitate the rapid growth of hardware-based security research and development, inviting original and innovative contributions in all areas of overlap between hardware and security and highlighting new results," said Professor Mark M. Tehranipoor, fellow of the Association for Computing Machinery (ACM) and IEEE, and general chair for HOST-2022. "Selected from 120+ excellent submissions, Ansys' paper demonstrates the innovation and usability of the novel multiphysics simulation framework introducing Ansys RedHawk-SC Security."

"We are honored to receive this coveted award from IEEE HOST and share our latest security solution for semiconductors," said John Lee, vice president and general manager of the electronics, semiconductor, and optics business unit at Ansys. "We are confident that Ansys RedHawk-SC Security will significantly enhance chip design and hardware security going forward."

Autodesk Expands Learning Resources to Boost Digital Skills of Construction Teams in the Office, Trailer and Field

20 July 2022

As part of its strategy to provide customers with digital tools for a competitive advantage in the market, Autodesk, Inc. launched the next phase in its effort to upskill current construction workers and help the industry engage the next generation of prospective recruits. The company's latest

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initiatives, Construction Master Class and the Autodesk Construction Cloud Learning Center, allow construction industry professionals to learn new skills, advance their career and future-proof their businesses.

The construction labor shortage and digital skills gap are global challenges. According to the latest annual survey by Associated General Contractors of America and Autodesk, 89 percent of construction firms in America are having a difficult time filling hourly craft positions and 86 percent are struggling to fill salaried positions. Sixty-one percent of firms surveyed said their projects are being delayed because of workforce shortages. Globally, according to a recent Core Research survey commissioned by Autodesk of 300 construction professionals in Ireland, most professionals attributed their recruitment challenges to a lack of available skilled labor (59 percent) and a subset of this group (43 percent) believes labor is available, but company recruitment efforts are unable to attract the right talent.

To help its customers and the construction industry more broadly address challenges around the digital skills gap, Autodesk has launched two new programs: Construction Master Class and the Autodesk Construction Cloud Learning Center.

Construction Master Class provides online tutorials from industry leaders that are free to everyone. Hosted by top construction experts, the videos provide practical insights to empower participants with best practices on workflows and career advancement. Construction Master Class allows viewers to hear directly from industry leaders and Autodesk experts on how to deliver critical project outcomes like better cost control, improved quality management and standardized field collaboration workflows – all through a mix of personal stories, use cases and examples of “what not to do.”

Autodesk Construction Cloud Learning Center houses easy-to-follow courses free to everyone and translated into five languages on how to use Autodesk Construction Cloud products, including Autodesk Build, Autodesk Takeoff and Autodesk Docs. Learning paths include videos that provide specific and practical instructions on using Autodesk Construction Cloud solutions to excel with digital construction skills such as setting up project templates, tracking issues, managing RFI and submittal workflows and collaborating with project members. Since the launch of the Learning Center in the spring of 2021, there have been more than 42,000 course enrollments with registration from 134 countries.

Autodesk has also established several other initiatives to help develop tech acumen in current construction workers and encourage a new and diverse set of workers to join the profession. These include:

- The Autodesk Membership Training Provider Program: More than 215 trade unions and industry associations are now enrolled in Autodesk’s program that aims to increase the digital skills of members. Training centers in the MTP Program are provided with Autodesk software products, such as Autodesk Construction Cloud and Revit, for an annual subscription license fee. The program’s benefits enhance BIM and CAD training efforts at current training sites and allow new sites to offer enhanced training initiatives with Autodesk technology.
- Autodesk’s Make It Real program: A community education program encouraging young people to apply design thinking to real problems related to construction and the built environment. The program offers inspiration, learning and funding opportunities, including this year, \$50,000 worth of microgrants provided through the Building Changemakers Giveaway. Recipients decide for themselves how to apply the funds where they are needed most, such as expenses to support training – ranging from tuition and certification fees to safety equipment and childcare.

“As we have all acutely felt, the industry is facing major obstacles when it comes to hiring and retaining labor and skilled trades workers,” said Ronald McGuire, program administrator at the International

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Training Institute. “There’s huge demand not just for labor in and of itself, but for workers who have digital skills under their belt. Project-ready professionals need to be adept at using technology on the jobsite and in the trailer, as well as in the office. Autodesk’s learning resources will enable us to upskill current members and provide new ones with the right tools to get quickly up to speed.”

“The labor shortage in the construction industry will only get more dire as the current workforce retires, with about 41 percent of current US construction professionals expected to age out by 2031, according to McKinsey,” said Allison Scott, director of customer experience and industry advocacy at Autodesk. “Our customers consistently voice concerns that though there will be an influx of new projects and roles, the industry is not bringing in enough people to fulfill their increasing needs or grow the right skillsets. Autodesk’s construction learning initiatives are being employed to help companies move fast, so they can remain competitive and stay ahead of the curve during the industry’s digital transformation.”

Campfire Expands Executive Leadership Team to Meet Growing Demand

21 July 2022

Campfire Interactive, Inc. (Campfire), provider of the leading solution for portfolio profitability management, announces that Scott Whetter has joined the company as Vice President of Sales & Strategy, Automotive. In this capacity Mr. Whetter is responsible for continuing to build upon the company’s record growth from providing solutions within the automotive supplier market.

Throughout his career, Mr. Whetter has accumulated significant experience within the automotive industry having worked at Ford Motor Company and having held leadership positions with ZF, Siemens VDO Automotive, The Woodbridge Group, and North American Stamping Group. His background includes general management, global sales and key account management, and engineering along with other operational roles.

Whetter explained that his familiarity with the Campfire Interactive team and products contributed significantly to his decision to join the company.

“With product volumes down and supply chain disruptions, automotive suppliers face a difficult market environment,” said Whetter. “Campfire enables these businesses to meet the rising challenges of managing profitability during such times. Having been a Campfire customer, I’ve found the company’s software and support to be best in class and have seen the measurable results it delivers. This made my decision to join the team an easy one. I look forward to introducing Campfire to automotive suppliers who will benefit from the solutions we provide.”

The addition of Whetter allows Campfire’s Noelle Schiffer to assume the new role of Vice President of Business Development. With the dramatic increase in sales opportunities coming from partnerships and increasing market awareness of Campfire, the company requires an executive fully dedicated to growing the sales pipeline. Together, Whetter and Schiffer will work to meet the high market demand for Campfire solutions and expand the global community of Campfire users.

Record Growth

Suppliers have been quick to embrace Campfire solutions in their pursuit of maximum profitability. Campfire COO, Dan Meyer, reports that the company recorded its largest quarterly sales growth to date in the first quarter of 2022, fueled by the addition of new customers along with expansions at multiple current user sites.

“Despite a global pandemic and severe supply chain challenges within the auto sector, Campfire has achieved unprecedented growth in terms of new business, staffing, strategic partnerships, and revenue,”

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said Meyer. “We’re taking aggressive steps to keep pace with demand by filling a variety of new positions within the sales organization.”

Campfire President and CEO, Pradeep Seneviratne, says that these added resources allow the company to better serve the industry with the level of expertise and knowledge that customers have come to expect.

“The Campfire team knows automotive; this is something that sets us apart,” said Seneviratne. “Scott has an excellent reputation throughout the automotive supplier community and further enhances our experience base. While we’re naturally excited to have him join the company, the true beneficiaries are automotive suppliers. As a long-time automotive sales executive and previous Campfire customer, Scott provides a unique perspective to assist current and prospective customers in identifying opportunities for improvement and quantifiable benefits. We welcome Scott to the team and look forward to his contributions.”

Capgemini Invent collaborates with Boston University on scholarship fund supporting future business leaders

21 July 2022

Capgemini Invent, the digital innovation, design and transformation brand of the Capgemini Group, together with Boston University Questrom School of Business, announced the Capgemini Invent Scholarship Fund. Established in memory of Alessandro Di Fiore, the scholarship will support generations of business students in their pursuit of management education.

This fund will provide annual, need-based scholarship awards to one or more deserving undergraduates at the Questrom School of Business honoring the outstanding contribution of the late Alessandro Di Fiore (1965-2021) to the world of management practice. As part of the Century Challenge, Boston University will match the income from the scholarship fund over the next 100 years.

Di Fiore was an influential voice in strategy and innovation, recognized for developing the concept of the insight-driven organization and a leading thinker on the power of democratization. He was the founder and CEO of the European Center for Strategic Innovation (ECSI), a management research and advisory center, which became part of the Capgemini Group in 2021. The team now forms The Management Lab by Capgemini Invent where it works with leading professors and thinkers globally to bridge the latest in management ideas into real business practice for clients.

“We are delighted to have Capgemini Invent as a valued scholarship donor. I am proud that my dear friend and colleague, Alessandro, will now permanently be associated with access and excellence at our school, recognizing his significant contribution to management strategy,” said Marshall Van Alstyne, Questrom Professor in Management; Professor, Information Systems. *“The collaboration with Capgemini Invent’s Management Lab ensures organizations worldwide understand and put in practice the latest in platform strategies and business models. Now, I am excited to extend our engagement to invest in the management minds of the future.”*

At the Ninth Annual Platform Strategy Research Symposium event held yesterday at Boston University, Professor Marshall Van Alstyne, accompanied by Alessandro’s wife, Letizia Affinito, was honored to announce the establishment of the Capgemini Invent Scholarship Fund. Elisa Farri and Paolo Cervini from Capgemini Invent’s Management Lab were also present to award the first annual Best Platform Paper prize to Bobby Zhou and Tianxin Zou for their research on “Competing for Recommendations: Their Strategic Impact in Online Markets.” This scholarship and award reflect Capgemini Invent’s ongoing commitment to fostering innovation and motivating the next generation of management

thinkers.

“At Capgemini Invent, we value education and continuous learning and recognize the importance of making it accessible to all regardless of socioeconomic background. We are delighted to partner with Boston University to create this fund in the legacy of Alessandro, one of the greatest management minds, and to ensure generations of students can fulfil their dreams and open doors to new ideas,” said Laurence Metzke, Chief HR Officer at Capgemini Invent. *“Our partnerships with the academic world strengthen our ability to bridge the latest management ideas into practice helping clients reinvent, transform, and grow.”*

Carahsoft to Distribute HPE GreenLake Edge-to-Cloud Platform, Solutions and Services to the Public Sector

21 July 2022

Carahsoft Technology Corp., The Trusted IT Solutions Provider[®], announced that the entire HPE GreenLake cloud services portfolio, as well as HPE products, solutions and services are now available to the Public Sector through Carahsoft. HPE hybrid cloud solutions and services are now available to all HPE Medallion Partners through Carahsoft.

The HPE GreenLake edge-to-cloud platform enables customers to accelerate data-first modernization and supports a broad ecosystem of channel partners. HPE enables partners to deliver a unified experience across edge to cloud through the HPE GreenLake platform while adding their own service offerings through the HPE GreenLake marketplace. Building on Carahsoft’s initial focus on the State, Local, and Education (SLED) market with HPE, Carahsoft is now authorized to distribute HPE solutions to the entire Public Sector and Authorized Reseller Partners.

Our expanded distribution agreement with HPE is testimony to both companies’ commitment and capabilities to serve the needs of our Public Sector customers and our reseller partners,” said Craig P. Abod, Carahsoft President. “HPE has entrusted us with a full range of their solutions and in just a few months, we have fielded a dedicated 50-member sales and marketing team and added HPE to more than a dozen Federal, State, Local and Education contract vehicles to make their solutions more broadly available to all of these customers. We have also partnered with an expanding set of reseller and integrator partners to bring complete solutions to the market. We very much look forward to growing this business together.”

Carahsoft is the largest new distribution partner that HPE has added in the past several years, and the only distributor with multiple Public Sector contracts that carry the full line of HPE and complimentary solutions like Nutanix, NVIDIA, Splunk, VMware, and Red Hat. Moreover, to further extend HPE GreenLake availability to Federal, State, Local, and Educational markets, Carahsoft added HPE’s industry solutions and enterprise services to its GSA Multiple Award Schedule and additional contracts including NASA Solutions for Enterprise-Wide Procurement (SEWP) V, Information Technology Enterprise Solutions – Software 2 (ITES-SW2), E&I Cooperative Services Contract, OMNIA Partners and The Quilt.

“The availability of HPE GreenLake through Carahsoft and their reseller partners provides tremendous opportunity to deliver cloud services to help customers modernize their environments to deliver new business outcomes,” said George Hope, worldwide head of partner sales, HPE. “The HPE GreenLake as a service model allows both partners and customers to capitalize on a scalable, pay-as-you go platform that also delivers robust security, compliance and control.”

Hewlett Packard Enterprise products and services are now available through Carahsoft’s GSA Schedule

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No. 47QSWA18D008F, SEWP V contracts NNG15SC03B and NNG15SC27B, ITES-SW2 Contract W52P1J-20-D-0042, E&I Contract #EI00063~2021MA, OMNIA Partners Contract #R191902, NASPO Cloud, and The Quilt Master Service Agreement Number MSA05012019-F.

CoLab Named an Inaugural Partner for Xometry's New Workcenter Platform

19 July 2022

CoLab, the world's first Design Engagement System for mechanical engineering teams, will be one of the first developers to work collaboratively with Xometry to integrate into the Workcenter platform.

Xometry, Inc., the global online marketplace connecting enterprise buyers with suppliers of manufacturing services, recently unveiled two new products—including Workcenter, the cloud-based and API-enabled manufacturing execution system for suppliers. Xometry is opening up Workcenter to third-party developers, creating an ecosystem of interconnected solutions for suppliers. CoLab was announced as an initial software developer for Workcenter during the Xometry Marketplace Summit: Powering Tomorrow's Supply Chain.

"We hear all the time from suppliers that they want to be able to leverage their expertise more to help their customer actually get a better product," says Adam Keating, CoLab's CEO and co-founder. "Then on the other hand, we hear from our engineering customers that they want to get closer to suppliers to actually work tighter and have faster feedback loops. CoLab helps turn suppliers into true partners, by enabling closer collaboration and stronger relationships. So much design communication today is largely over emails and calls, which makes it hard to track but easy for mistakes to slip through the cracks. CoLab is here to fix that."

"We're opening up the API-enabled Workcenter to third-party developers to deliver even more innovative products and services to our suppliers," says Randy Altschuler, CEO of Xometry. "CoLab shares our mission of enabling suppliers to continuously innovate so they can do their best work and grow their business. We're incredibly excited to be working collaboratively with CoLab, a trusted partner for manufacturers and suppliers to communicate detailed designs. We can't wait to see what CoLab develops for Workcenter."

"With CoLab, engineering teams and suppliers can engage in meaningful, productive design conversations to catch preventable mistakes and get to market faster," continues Keating. "Partnering with Xometry is going to give us the closest pulse on what's actually happening in the ecosystem, on both sides of the market—which ultimately means we can build the best product possible and get it into as many hands as we can around the world. Workcenter is a unique opportunity for CoLab, and our goal is to make this a seamless experience."

Digital Twin Consortium Signs Agreement with the University of Melbourne

18 July 2022

Digital Twin Consortium® and the University of Melbourne, through its Centre for Spatial Data and Infrastructure and Land Administration (CSDILA), have signed an agreement to accelerate the development, deployment, and adoption of digital twin technologies through joint projects. Under the agreement, Digital Twin Consortium and the university will identify joint projects and training programs and will explore grants and other forms of funding and collaboration opportunities with the Digital Twin Consortium Australia and New Zealand Regional Branch.

"We are delighted to share our knowledge and capabilities and contribute to the Digital Twin Consortium in their mission towards creating consistency and interoperability of digital twin

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technology,” said Professor Abbas Rajabifard, Director of CSDILA, The University of Melbourne. “This agreement facilitates our collaboration with Digital Twin Consortium on developing research and development cases and training sessions for capacity building and awareness of digital twin use cases across governments and industries,” said Dr. Soheil Sabri, Co-chair of Academia and Research Working Group, Digital Twin Consortium and Digital Delivery Lead, Digital Twin at CSDILA, The University of Melbourne.

“We’re excited about the CSDILA’s mission to leverage digital twins to conduct research on digital innovations, educate, and train the future workforce required for digital governments and industries,” said Dan Isaacs, Chief Technology Officer, Digital Twin Consortium. “We look forward to working on joint projects and training programs that further the adoption of digital twins in industry and government.”

Guardhat Opens Lithuania Office

13 July 2022

The US start-up Guardhat, a company that develops innovative products to improve work conditions for industrial workers, is setting up an office in Vilnius. Here Guardhat will establish an excellence center that will become the first Guardhat site in the European Union. In 2022, the company plans to hire 30 software specialists.

Guardhat develops a platform and smart wearables designed to protect workers from injuries and improve work conditions and efficiency in remote or hazardous environments. The company’s inventions have been recognized by numerous awards, including Time magazine’s Best Invention of the Year.

In Lithuania, Guardhat will create an excellence center where the local team will be responsible for software development and ensuring the life cycle of Guardhat products.

“Lithuania is a start-up hotspot that generates a lot of great talents contributing to the success of many foreign companies that invest in Lithuania. In addition, Lithuania has an investment-friendly environment and a strategically favorable position in the European Union and the euro area. For these reasons, we have decided to create a new generation platform in Vilnius, which will become the backbone of our products and the basis of our ecosystem,” says Saikat Dey, Guardhat co-founder and CEO of Guardhat.

Guardhat plans to grow the Lithuanian entity beyond software and product development to become the European headquarters for Guardhat sales and marketing activities in the EU and surrounding regions.

Will strengthen the competencies of the Lithuanian IT community

In 2022, Guardhat intends to hire 30 software specialists in Lithuania to work on the development of its platform that helps create an Industrial Internet of People. This new version of the platform will help users to be able to ensure the health and safety of their workers, operate more efficiently, use resources sparingly and increase compliance with regional safety regulations.

“The establishment of this platform and its excellence in Lithuania is an important strategic step for Guardhat that uses and innovates upon cutting edge technologies to propel us to the forefront of a rapidly developing worker safety technology market. We seek to identify opportunities for growth for local talent and to increase expertise within the local Lithuanian IT community,” says Jens Grebner, Head of Guardhat Lithuania.

In order to develop sustainable relations with the Lithuanian IT community, Guardhat intends to

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establish a talent development program fund and work closely with Vilnius University, Kaunas Technology University, and Vilnius Tech University. Guardhat, which has so far attracted a total of \$42 million in investment, is also interested in working together with local venture capitalists.

Creating a revolution in worker safety

Guardhat is changing how safety of workers in hazardous workplaces is managed. The company started its activities by developing a smart hardhat with industrial sensors, advanced positioning technology, and more.

Following this invention, a highly accurate and reliable positioning system has been developed. From there, Guardhat developed a software platform to improve how data is collected, analyzed, and used in industrial workplaces. Currently, Guardhat is expanding its safety solutions ecosystem via software apps and integrations with partner wearables, sensors, and software.

The Guardhat's technologies are used by or invested in by major international industrial companies, including 3M, Caterpillar, Westinghouse, and others. Guardhat has earned international recognition for its innovative employee safety solutions. This year, Guardhat was listed as one of the most innovative companies by Fast Company magazine and ranked second in the manufacturing sector.

Elijus Čivilis, General Manager at Invest Lithuania, asserts that he is confident Guardhat will easily integrate into the rapidly growing community of technology companies in the country and that Lithuania will successfully become a strategic division of Guardhat in Europe.

"We are thrilled that yet another technology company has noticed Lithuanian talents and favorable investment climate. The potential of Guardhat in strengthening the Lithuanian technology ecosystem is certainly big: specialized products in the digitization of industry will bring great added value and strengthen the competencies of local talents in the development of Internet of People solutions," said Mr Čivilis.

KOGNIA research project by University of Augsburg & CADENAS at the Long Night of Science

21 July 2022

Showcase of the research on a mechanical design recommender with AI and Machine Learning

CADENAS is part of the KOGNIA research project, which is a "Machine Learning-based Recommender System for Mechanical Design". The project was presented in the Golden Room of the Augsburg City Hall at the Long Night of Science on July 16, 2022. Under the slogan "Digital Transformation at your fingertips", representatives of the Faculty of Applied Computer Sciences showcased state-of-the-art software technology, including the KOGNIA project, which is sponsored by the Bavarian State Ministry of Economic Affairs, Regional Development and Energy.

KOGNIA: Machine Learning-based Recommender System for Mechanical Design

Together with the Institute for Software & Systems Engineering at the University of Augsburg, CADENAS is researching the possibility of automatically processing and using the knowledge of experienced engineers from past designs for future constructions. The expert knowledge, originally bound to individuals, is thereby bundled in a system, processed and made available to all employees of a company. Machine learning is used to recognize patterns, such as shared parts, in existing and newly created designs. On this basis, the system provides engineers with useful suggestions for the next required purchased and proprietary parts during the design process, or it recognizes unusual parts in the design. Both young and experienced engineers benefit from this knowledge transfer.

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The Long Night of Science in Augsburg took place for the second time. The city center became a lecture hall, research laboratory and experimental field. There were various lectures and presentations in the town hall, the city library, the Maximilian Museum and the Schaezlerpalais. The research topics ranged from climate change and digitalization in healthcare to self-learning machines and AI.

LTI wins Honda Supplier of the Year Award 2022

21 July 2022

Larsen & Toubro Infotech, a global technology consulting and digital solutions company, has won the ‘Supplier of the Year’ award at the Honda Indirect Procurement Supplier Conference in Dublin, OH. LTI has also won the ‘Challenging Spirit’ award for the third year in a row, a title that recognizes commitment to Honda’s core value of embracing a challenging spirit ‘above and beyond’ expectations to ensure the success and/or delivery of a service, product, or a project.

LTI belongs to a stellar list of 22 suppliers that were selected from more than 5,000 North American indirect procurement suppliers that provide a wide variety of equipment, products, and services supporting Honda’s U.S. business operations and the manufacturing of automobiles, engines, transmissions, power sports, and power equipment products in America.

Rohit Kedia, Chief Business Officer, Manufacturing and Consulting Services, LTI said, “We are truly proud of this recognition, and what makes it even more special is that we have won it in the 10th year of our relationship with Honda as a strategic IT partner. Further, this is the third year in a row that LTI has been awarded by Honda, an honor extremely rare for any company. We will stay committed as a prime partner to Honda, by providing innovative solutions to meet their growth requirements.”

LTI was honored as the “Supplier of the Year” for 2022 and Honda cited LTI as “Representing the Best of the Best”, outperforming all of the others in the key business characteristics of Quality, Cost, Delivery (QCD), as well as Safety and Service.

Monica Oliverio, assistant vice president and division lead of the North American Indirect Procurement Division, American Honda Motor Co., Inc said, “We are grateful for the opportunity to honour Honda’s top indirect suppliers in-person for the first time in two years. Our award-winning suppliers made a big contribution to our success during the past year and set the standard for the passion and Challenging Spirit we strive for at Honda.”

LTI and Honda have been strategic partners since 2012 across Applications Management Services (AMS) and major IT programs. LTI has also partnered with Honda for Data & Analytics, SAP S/4HANA implementation and Salesforce implementation. During this time, LTI has supported more than 450 applications, handled 70+ development & consulting projects while supporting 65,000+ users.

Oracle and Claro Partner to Expand Global Cloud Services in Colombia

14 July 2022

Oracle and Claro announced a partnership to jointly offer Oracle Cloud Infrastructure (OCI) services to public and private sector organizations and enterprises in Colombia. Claro will become the host partner for an Oracle Cloud region in Colombia, which will enable Claro to offer OCI platform services along with professional and managed services to help customers adopt cloud solutions. In addition, to help improve its customer service and billings processes, Claro will migrate over 100 on-premises servers running mission-critical workloads to OCI.

“Partnering with Claro accelerates the technology modernization of businesses and consumers across

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Latin America. Our collaboration with Claro will also accelerate cloud adoption, stimulate economic recovery, and spur competitiveness in these countries,” said Germán Borrromei, managing director, Oracle Colombia and Ecuador.

Claro has one of the broadest managed and professional services offerings in the Colombian market, including cloud infrastructure and platform-as-a-service capabilities. Businesses from all industries and the public and private sector in Colombia rely on Claro and its team of highly qualified professionals, who maintain the highest certifications in cloud and cybersecurity services. Oracle's hybrid offerings align with Claro's mission to respond to the needs of businesses and support the technology modernization in Colombia.

“We’ve reached another milestone in Colombia by hosting Oracle’s first public cloud region in the country. With this, we continue to support the modernization of organizations in the public and private sector with a comprehensive and differentiated portfolio. Oracle chose our Triara Data Center, certified with ICREA 5, that complies with the highest security standards so that local businesses have access to database services and middleware applications from one of the leading cloud providers in the market,” said Carlos Zenteno, CEO, Claro Colombia.

Revalize Expands Leadership Team with Key Hires

19 July 2022

Revalize, the worldwide leader in revenue operations software for manufacturers, their distributors, and their specifiers, announced the appointment of three key executives to drive the continued success of the company.

David Kuhl, joining as Chief People Officer (CPO), will be a champion of the Revalize values, drive clarity and alignment across the global organization, and leverage people analytics to improve overall company performance. Kevin McAdams joins as Chief Financial Officer (CFO) to drive effective planning, reporting & forecasting, implement business systems and controls, and guide the in-house legal function. Among Kevin’s direct reports will be Don Stockslager, who joins as VP of Business Systems. In this role, Don will drive internal efficiencies, enable a positive customer experience, and swiftly integrate newly acquired businesses onto the Revalize business systems platform.

“We are pleased to have David, Kevin, and Don join us as we look to steer the company towards continued growth and scale,” says Jim Contardi, CEO of Revalize. “With the creation of a Chief People Officer role specifically, we are being intentional about the importance of people and our need to attract and retain top talent. All three of these roles contribute a critical capability to the company, and I am confident that they will quickly create value and deliver on the experience we envision for our employees and customers.”

Each executive joins Revalize with extensive industry experience:

David Kuhl, CPO, brings significant experience in human resources, general management, and law. Most recently, he was General Manager of Salo, a large talent firm; before that, he served as Chief People Officer for ACI Worldwide, ABRA Auto, and Ventyx/ABB. David started his career as an employment law attorney for Littler Mendelson P.C. in San Francisco.

Kevin McAdams, CFO, is a CPA who began his career in public accounting with KPMG. Kevin most recently served as CFO of Aptean, a global enterprise software company, where he successfully executed an extensive Finance transformation while helping the company drive significant organic and inorganic growth.

Don Stockslager, VP of Business Systems, was most recently VP of Strategy & Transformation at Equifax, where he improved experiences for consumers seeking to improve their credit score or protect themselves from identity theft. Previously, Don spent twenty years at First Data Corporation driving change in technology, operations and product management.

Simulations Plus Celebrates 25-Year Anniversary with \$25,000 Gift to Nonprofit International Organization for Childhood Cancer

21 July 2022

Simulations Plus is celebrating 25 years in business and continuing the commitment to improve public health through innovative solutions with a \$25,000 donation to St. Jude Children's Research Hospital headquartered in Memphis, TN.

During this 25th anniversary year, which commenced in July 2021, teams of long-tenured Simulations Plus employees researched various organizations and selected recipients aligned with the organization's vision and mission. This was our third \$25,000 donation, and the group chose the internationally recognized St. Jude Children's Research Hospital. The donation was made on June 17, 2022.

"St. Jude creates more clinical trials for cancer than any other children's hospital and turns laboratory discoveries into lifesaving treatments that benefit patients. This strongly aligns with our mission to optimize treatment options and improve patient lives," said Shawn O'Connor, CEO of Simulations Plus.

"Simulations Plus is committed to supporting organizations whose mission aligns with our core values. St. Jude's commitment to developing innovative treatments that support children and families across the globe makes this a great addition to the charities we have supported as part of this program," said Lindsay Luke, Executive Director of HR of Simulations Plus.

Wipro Limited appoints Päivi Rekonen to its Board

20 July 2022

Wipro Limited, a leading technology services and consulting company, announced the appointment of Ms. Päivi Rekonen to its Board of Directors for five years effective October 1st, 2022, subject to the approval of shareholders.

Päivi Rekonen will serve as an Independent Director on the Board, bringing over 25 years of experience in technology as well as in banking and services. Ms. Rekonen is Chair of The Board of Directors of SEBA Bank AG in addition to being a Member of the Board at Konecranes Plc, WithSecure Plc, and Efecte Plc. Her international career has been shaped by executive leadership roles in functions including technology, human resources, and consulting at global organizations such as Nokia, Cisco, Credit Suisse, Adecco, and UBS.

Welcoming Ms. Rekonen to the Board, **Rishad Premji, Chairman, Wipro Limited** said, "I am delighted to have Päivi on our Board. Wipro will greatly benefit from her knowledge and focus on digital and technology transformation, strategy creation in international markets, risk management, and organizational development."

Commenting on her appointment, Päivi Rekonen said, "I am honored to join the Board of Wipro, a company which has innovated at scale over its seven-decade long history while remaining committed to its values and establishing a presence in over 60 countries. I look forward to contributing to its next phase of growth."

Ms. Rekonen holds Master's degrees in Social Sciences, and Economics and Business Administration from the University of Jyväskylä, Finland.

Event News

ESI Group at the Farnborough International Airshow 2022

18 July 2022

ESI Group, a global simulation and virtual prototyping software partner for the industry, will be present at the Farnborough International Airshow (18 and 22 July 2022). ESI Group will present an outline of aircraft Acoustics for both interior and exterior noise. Besides, The Group will illustrate how virtual reality solutions help power industry 4.0, showcasing and demonstrating its solution for human-centric virtual simulation and collaborative work with [IC.IDO](#).

2 software solutions presented:

- ESI's flagship Virtual Reality software [IC.IDO](#) for human-centric process validation and product integration: facilitating agile design processes, robust manufacturing, and safe maintenance operations.
- ESI's vibro-acoustics software [VA ONE](#) for aircraft interiors and electric aircraft like eVTOL concepts: meeting interior noise level comfort and optimizing exterior noise impact in urban areas

Promising progress in the aircraft industry thanks to digitalization and virtual reality

Digitalization plays a major role in developing sustainable aviation, hydrogen planes, electric aircraft, urban mobility, eVTOLs... Virtual reality helps industries achieve sustainability goals, to secure "first time right", reduce costs, time and go to market. Throughout the years, Virtual reality upgraded processes, allowing faster turnaround for foundries and composite parts manufacturers, lower scrap rates, manufacturability despite new geometries. Industrials have been able to achieve their desired vibro-acoustic performance and virtually pre-certified products. Besides, the need for physical try-outs and prototypes significantly decreased, paving the way to more efficient assembly steps, increased productivity and output, reduced maintenance costs, and decreased industrial risks for operators.

ESI Group has been operating in the aircraft industry for the last decades. ESI's aerospace customers leverage the benefits of virtual reality solutions, helping them achieve their goal to producing clean, safe, and productive.

eVTOLS: ESI Group helps foster innovations – interior external noise and comfort

ESI has the mission to help aerospace companies in gearing their digital transformation, to be a partner they can trust to help foster innovations, such as the eVTOLS, that will change the landscape of urban mobility. ESI Group is already helping the pioneers of that segment achieve their product performance and safety targets while meeting stringent noise regulations, reducing noise impact in urban areas and meeting interior aircraft noise comfort levels. ESI Group's [VA One](#) software solution help manufacturers to predict and resolve potential noise and vibration challenges in very early stages of their development process. Thus, meeting safety standards and their objectives for aircraft acoustics, and minimizing weight and controlling costs.

ESI Group's software solutions for a clean, safe, and productive industry

1. Power systems manufacturer **Rolls-Royce** uses ESI casting simulation software [ProCAST](#) for Product-Process co-design and to **collaborate more efficiently with their supply chain** towards

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greater quality parts, **avoiding late design changes and eliminating scrap rates in a more sustainable manner.**

2. **Saab Aerospace Systems** relies on ESI composites manufacturing simulation software [PAM-COMPOSITES](#) to refine their injection strategies for **the next generation aircraft doors**, supporting the advanced manufacturing of ever lighter structures.
3. **Latécoère** counts on the advanced **virtual reality capabilities provided by IC.IDO** (1), to **connect manufacturing engineering teams** from around the world on the same virtual platform to **secure “First Time Right” production** and to **train operators remotely**, cutting down on travel emissions, yet providing a “learning by doing” approach.

(1) ESI Group at the exhibition: France Pavillion. ESI Group will be part of the GIFAS (& “AsTech”) area in HALL 1 – Booth 13.60 Village ASTech

ZWSOFT Attended MTA Vietnam 2022

15 July 2022

ZWSOFT attended MTA 2022 in Vietnam from July 6th to July 9nd with the latest versions of ZWCAD and ZW3D.

The MTA Vietnam exhibition acts as a bridge between the international manufacturing industry and the Vietnamese market. It is the largest manufacturing event in the country, bringing the most modern and diversified manufacturing products, technologies and solutions in the world to the domestic manufacturing industry.

During the exhibition, ZWSOFT Vietnam presented its all-in-one CAD/CAE/CAM solutions which attracted over 1,200 visitors from across the country. Many visitors showed their interest in new features of ZWCAD and ZW3D such as sheet set manager and enhanced full machine simulation. Most of them were satisfied with the solutions which meet their requirements, especially easy-to-use commands, a familiar interface, and strong DWG compatibility.

In the first three days, visitors were invited to participate in the lucky draw organized by ZWSOFT. Each visitor had the chance to win a Samsung Galaxy Tablet or a ZWSOFT Backpack.

MTA is an important stop of ZWSOFT Global Tour 2022, and ZWSOFT valued the chance to communicate with Vietnamese users.

ZWSOFT is thankful for all visitors stopping by and strives to provide better solutions tailored to user needs.

Financial News

Xometry to Announce Second Quarter 2022 Financial Results on August 10, 2022

14 July 2022

[Xometry, Inc.](#), a global online marketplace connecting enterprise buyers with suppliers of manufacturing services, today announced it will report its second quarter 2022 financial results before the market open on Wednesday, Aug. 10, 2022.

Xometry will host a conference call and webcast to discuss the results at 8:30 a.m. ET (5:30 a.m. PT) on Aug. 10. In addition to issuing a press release, Xometry will post an earnings presentation to its investor website at investors.xometry.com.

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Xometry, Inc. Second Quarter 2022 Earnings Presentation and Conference Call

- 8:30 a.m. Eastern / 5:30 a.m. Pacific on Wednesday, August 10, 2022
- To register please use the following link: <https://register.vevent.com/register/BI35b5aa7646bb4334bcde4a94727a4d05>.
- You may also visit the Xometry Investor Relations Homepage at investors.xometry.com to listen to a live webcast of the call

3D Systems Announces Date of Second Quarter 2022 Financial Results

18 July 2022

3D Systems announced it will release its financial results for the second quarter 2022 after the U.S. stock markets close on Monday, August 8, 2022. The company will hold a conference call and simultaneous webcast to discuss these financial results on Tuesday, August 9, 2022, at 8:30 a.m. Eastern Time.

Second Quarter 2022 Financial Results Conference Call

Date: Tuesday, August 9, 2022

Time: 8:30 a.m. Eastern Time

Listen via webcast: www.3dsystems.com/investor

Participate via telephone: 201-689-8345

The webcast replay will be available approximately two hours after the end of the conference call at www.3dsystems.com/investor.

AECOM announces planned dates for third quarter fiscal 2022 earnings results and conference call

19 July 2022

AECOM, the world's trusted infrastructure consulting firm, announced that it intends to release its third quarter fiscal 2022 financial results after market close on Monday, August 8, 2022. The Company will also host a conference call and webcast with analysts and investors on Tuesday, August 9, 2022 at 8 a.m. Eastern Time, during which management will present the Company's third quarter fiscal 2022 financial results, strategic accomplishments, and market and business trends.

The live webcast and a replay will be available online at <https://investors.aecom.com>. The site will also host the presentation slides containing additional financial and operating information.

The conference call can be accessed directly by dialing 844-200-6205 (U.S.) or 929-526-1599 (international) and entering passcode 724161.

FARO to Announce Financial Results for the Second Quarter 2022 on August 3, 2022

19 July 2022

FARO[®] Technologies, Inc., a global leader in 4D digital reality, announced that after market close on Wednesday, August 3, 2022, it will release its financial results for the second quarter ended June 30, 2022. 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, August 3, 2022 at 5:00 p.m. ET.

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Interested parties can access the conference call by dialing (800) 245-3047 (U.S.) or +1 (203) 518-9765 (International) and using the passcode FARO. A live webcast will be available in the Investor Relations section of FARO's website at: <https://www.faro.com/about-faro/investor-relations/events>

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.

iBASEt Reports Record Revenue, Profitability and Backlog for Fiscal 2022, Driven by Surge in New and Expanded Licensing

19 July 2022

iBASEt, the company that helps its customers simplify how complex products are built and maintained, announced the completion of a successful fiscal 2022, as validated by another year of record revenue, profitability, and backlog. iBASEt continues to invest in product innovation with significant updates to its flagship Solumina iSeries, the industry's first microservices-based, cloud-native Manufacturing platform, which is disrupting the way customers are managing through a period of unprecedented manufacturing and sustainment volatility.

Company innovations will be on display at the [Farnborough International Airshow](#) (Stand 4315, Hall 4), July 18 through July 22, which features leading innovators from the aerospace, aviation and defense industries.

The company continues to execute on its growth strategy, delivering on its aggressive goal to drive repeatable revenue, supported by new strategic partnerships and acceleration of customer time-to-value through fast deployment of Software-as-a-Service value-added use cases. iBASEt also expanded its leadership team with key strategic hires and the creation of a formal [Advisory Board](#) to support growing demand, continuous innovation and revenue growth.

"I am very proud of the solid execution by our team in achieving strong growth over the prior fiscal year," said Naveen Poonian, CEO at iBASEt. "We continue to prioritize investment in product innovation to support the business transformation of our customers' entire value chain from supplier quality management to direct manufacturing while capturing maintenance repair and overhaul services."

"Our strategy continues to drive profitable growth for the business while also achieving stellar customer and industry recognition for our product and world-class team," added Poonian. "We look forward to further growth in the next fiscal year by remaining focused on where it matters most; being customer centric and laser focused on leading the industry in solving the most complex manufacturing and sustainment challenges."

Product Innovation

Solumina iSeries underwent several product updates during the past year culminating with its most recent version i070, delivering a more comprehensive user experience and enhanced quality interface. This year, iSeries also became available on both the AWS Marketplace and Microsoft Azure Marketplace.

In addition, the company launched a Model-based Enterprise (MBE) offering designed to accelerate a manufacturer's Industry 4.0 journey, as well as its self-service Knowledge-Centered Services program to help customers quickly resolve support inquiries.

Partner Engagement

iBASEt established several new partner agreements during the past fiscal year to leverage channel

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relationships and strategic partners in driving overall growth and expanded global reach. This includes a global partnership with ATS Global, which is supporting delivery of iBASEt's visionary solutions across manufacturing, quality, and MRO operations, as well as a partnership with Cyient, which helps iBASEt offer faster software solutions implementation, while expanding its complex discrete manufacturing industry markets and geographies.

iBASEt also partnered with Purdue University, on a joint initiative to implement iBASEt's Solumina iSeries at the university's Indiana Manufacturing Competitiveness Center (IN-MaC) in West Lafayette, IN to usher in the next generation of manufacturing operations innovation.

IBM RELEASES SECOND QUARTER RESULTS

18 July 2022

IBM announced second-quarter 2022 earnings results.

"In the quarter we delivered good revenue performance with balanced growth across our geographies, driven by client demand for our hybrid cloud and AI offerings. The IBM team executed our strategy well," said Arvind Krishna, IBM chairman and chief executive officer. "With our first half results, we continue to expect full-year revenue growth at the high end of our mid-single digit model."

Second-Quarter Highlights

- Revenue
 - Revenue of \$15.5 billion, up 9 percent, up 16 percent at constant currency (about 5 points from sales to Kyndryl)
 - Software revenue up 6 percent, up 12 percent at constant currency (about 7 points from sales to Kyndryl)
 - Consulting revenue up 10 percent, up 18 percent at constant currency
 - Infrastructure revenue up 19 percent, up 25 percent at constant currency (about 7 points from sales to Kyndryl)
 - Hybrid cloud revenue, over the last 12 months, of \$21.7 billion, up 16 percent, up 19 percent at constant currency
- Cash Flow
 - On a consolidated basis, year to date, net cash from operating activities of \$4.6 billion; free cash flow of \$3.3 billion

SECOND QUARTER 2022 INCOME STATEMENT SUMMARY

| | | Gross | Pre-tax | Pre-tax | Net | Diluted | | | |
|--|-----------------|----------------|----------------|----------------|------------------|----------------|---|--|--|
| | Revenue | Profit | Income | Income | Income | EPS | | | |
| | | | | Margin | | | | | |
| GAAP from Continuing Operations | \$ 15.5B | \$ 8.3B | \$ 1.7B | 11.1 | % \$ 1.5B | \$ 1.61 | | | |
| Year/Year | 9 | %* 6 | % 89 | % 4.7 | Pts 81 | % 79 | % | | |
| Operating (Non-GAAP) | | \$ 8.5B | \$ 2.5B | 16.2 | % \$ 2.1B | \$ 2.31 | | | |

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Year/Year 5 % 48 % 4.2 Pts 45 % 43 %

*16% at constant currency

"We are a faster-growing, focused, disciplined company with sound business fundamentals," said James Kavanaugh, IBM senior vice president and chief financial officer. "Our recurring revenue stream and solid cash generation position us well to continue to invest in R&D, acquire new companies, and strengthen our talent in every part of the business, while also returning value to shareholders through our dividend."

Segment Results for Second Quarter

- *Software (includes Hybrid Platform & Solutions, Transaction Processing)*— revenues of \$6.2 billion, up 6.4 percent, up 11.6 percent at constant currency (about 7 points from sales to Kyndryl):
 - Hybrid Platform & Solutions up 4 percent, up 9 percent at constant currency (about 1.5 points from sales to Kyndryl):
 - Red Hat up 12 percent, up 17 percent at constant currency
 - Automation up 4 percent, up 8 percent at constant currency
 - Data & AI flat, up 4 percent at constant currency
 - Security flat, up 5 percent at constant currency
 - Transaction Processing up 12 percent, up 19 percent at constant currency (about 22 points from sales to Kyndryl)
 - Software segment hybrid cloud revenue up 14 percent, up 18 percent at constant currency
- *Consulting (includes Business Transformation, Technology Consulting and Application Operations)*— revenues of \$4.8 billion, up 9.8 percent, up 17.8 percent at constant currency:
 - Business Transformation up 9 percent, up 16 percent at constant currency
 - Technology Consulting up 14 percent, up 23 percent at constant currency
 - Application Operations up 9 percent, up 17 percent at constant currency
 - Consulting segment hybrid cloud revenue up 20 percent, up 29 percent at constant currency
- *Infrastructure (includes Hybrid Infrastructure, Infrastructure Support)*— revenues of \$4.2 billion, up 19.0 percent, up 25.4 percent at constant currency (about 7 points from sales to Kyndryl):
 - Hybrid Infrastructure up 34 percent, up 41 percent at constant currency (about 7 points from sales to Kyndryl)
 - IBM z Systems up 69 percent, up 77 percent at constant currency
 - Distributed Infrastructure up 11 percent, up 17 percent at constant currency
 - Infrastructure Support down 2 percent, up 5 percent at constant currency (about 8 points from sales to Kyndryl)
 - Infrastructure segment hybrid cloud revenue up 24 percent, up 30 percent at constant currency
- *Financing (includes client and commercial financing)*— revenues of \$0.1 billion, down 29.9 percent, down 26.6 percent at constant currency

Cash Flow and Balance Sheet

On a consolidated basis, in the second quarter, the company generated net cash from operating activities of \$1.3 billion or \$2.6 billion excluding IBM Financing receivables. IBM's free cash flow was \$2.1 billion. The company returned \$1.5 billion to shareholders in dividends in the second quarter.

On a consolidated basis, for the first six months of the year, the company generated net cash from

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operating activities of \$4.6 billion or \$4.2 billion excluding IBM Financing receivables. IBM's free cash flow was \$3.3 billion, which includes cash impacts from the company's structural actions initiated at the end of 2020.

IBM ended the second quarter with \$7.8 billion of cash on hand (which includes marketable securities), up \$0.2 billion from year-end 2021. Debt, including IBM Financing debt of \$12.3 billion, totaled \$50.3 billion, down \$1.4 billion since the end of 2021.

Full-Year 2022 Expectations

- Revenue growth: The company continues to expect constant currency revenue growth at the high end of its mid-single digit model. The company also expects an additional 3.5 point contribution from incremental sales to Kyndryl. At mid-July 2022 foreign exchange rates, currency is expected to be about a six-point headwind.
- Free Cash Flow: The company now expects about \$10 billion in consolidated free cash flow.

Presentation of Information in this Press Release

On November 3, 2021, IBM completed the separation of Kyndryl. Unless otherwise specified, results are presented on a continuing operations basis. All references to revenue impacts from sales to Kyndryl are incremental sales post-separation.

In an effort to provide investors with additional information regarding the company's results as determined by generally accepted accounting principles (GAAP), the company has also disclosed in this press release the following non-GAAP information, which management believes provides useful information to investors:

IBM results —

- adjusting for currency (i.e., at constant currency);
- presenting operating (non-GAAP) earnings per share amounts and related income statement items;
- consolidated free cash flow;
- consolidated cash from operating activities excluding IBM Financing receivables;

The rationale for management's use of these non-GAAP measures is included in Exhibit 99.2 in the Form 8-K that includes this press release and is being submitted today to the SEC.

Conference Call and Webcast

IBM's regular quarterly earnings conference call is scheduled to begin at 5:00 p.m. EDT, today. The Webcast may be accessed via a link at <https://www.ibm.com/investor/events/earnings-2q22>. Presentation charts will be available shortly before the Webcast.

Financial Results Below (certain amounts may not add due to use of rounded numbers; percentages presented are calculated from the underlying whole-dollar amounts).

Altair Announces Date of Second Quarter 2022 Financial Results Conference Call

21 July 2022

Altair, a global leader in computational science and artificial intelligence, will release its financial results for the second quarter ended June 30, 2022, after the market close on Thursday, August 4, 2022. On that day, management will hold a conference call and webcast at 5 p.m. ET to review and discuss the Company's second quarter results and third quarter and full year 2022 outlook. A recorded version of this webcast will be available after the call and accessible at <http://investor.altair.com>.

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What: Altair's Second Quarter 2022 Financial Results Conference Call
When: Thursday, August 4, 2022
Time: 5 p.m. ET
Webcast: <http://investor.altair.com> (live and replay)

DXC Technology to Report First Quarter 2023 Results on Wednesday, August 3, 2022

20 July 2022

DXC Technology announced that it will release financial results for the first quarter of fiscal year 2023 on Wednesday, August 3, 2022, at approximately 4:15 p.m. Eastern Daylight Time (EDT).

DXC Technology senior management will host a conference call and webcast on the same day at 5:00 p.m. EDT. The dial-in number for domestic callers is 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 through a link posted on DXC Technology's [Investor Relations website](#).

A replay of the conference call will be available until August 10, 2022, at 800-770-2030 for domestic callers and at +1-647-362-9199 for international callers. The replay passcode is 4164760. A transcript of the conference call will be posted on DXC Technology's [Investor Relations website](#).

SAP Announces Q2 and Half-Year 2022 Results

21 July 2022

[SAP SE](#) announced its financial results for the second quarter and half-year ended June 30, 2022.

SAP Announces Q2 and Half-Year 2022 Results

- Cloud revenue up 34% and up 24% at constant currencies to become the largest revenue stream
- Current cloud backlog exceeds €10 billion, up 34% and up 25% at constant currencies
- SAP S/4HANA current cloud backlog extends its growth trend, up 100% and up 87% at constant currencies
- Cloud gross profit up 39% (IFRS), up 38% (non-IFRS) and up 28% (non-IFRS at constant currencies), leading to a strong cloud gross margin expansion
- IFRS operating profit down 32%, non-IFRS operating profit down 13% and down 16% at constant currencies, primarily due to the impact of the war in Ukraine
- SAP reaffirms 2022 revenue and free cash flow outlook, updates operating profit outlook range

“As our Q2 results demonstrate, SAP’s portfolio is more relevant than ever. Our transition to the cloud is ahead of schedule and we have exceeded topline expectations, with cloud revenue becoming SAP’s largest revenue stream. Our pipeline is strong, and we are winning market share underpinned by the very strong 100% growth of S/4HANA current cloud backlog.”

Christian Klein, CEO

“This quarter again proves that our strategy is resonating, even in an increasingly challenging external environment. We continued to deliver strong topline growth, exceeding revenue expectations and increasing cloud profitability. This quarter, we have recognized the main impact of the war in Ukraine.

CIMdata PLM Industry Summary

We believe that we are now able to capitalize on our substantial growth investments of the last 18 months, by delivering sustained growth and profitability expansion.”

Luka Mucic, CFO

Infosys to Announce First Quarter Results on July 24, 2022

18 July 2022

Infosys will announce results for the first quarter ended June 30, 2022 on Sunday, July 24, 2022.

Schedule of events

[Press release on schedule of events](#)

Velo3D to Announce Second-Quarter 2022 Results on August 9, 2022

18 July 2022

Velo3D, Inc.— a leading additive manufacturing technology company for mission-critical metal parts, announced that it will release its second quarter 2022 financial results after the market close on Tuesday, August 9, 2022.

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

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

ANSYS TO HOST 2022 INVESTOR UPDATE ON AUGUST 9, 2022

20 July 2022

ANSYS, Inc. announced that it will host a virtual Investor Update on Tuesday, August 9, 2022.

Ansys' Investor Update will begin at 8:30 a.m. ET and will conclude by 10:30 a.m. ET. The event will be a virtual presentation followed by Q&A and will feature an update on long-term strategy and financial outlook from Ajei Gopal, president and chief executive officer, and Nicole Anasenes, chief financial officer and senior vice president of finance, as well as other members of the Ansys senior leadership team.

VIRTUAL EVENT INFORMATION:

What: Ansys 2022 Investor Update

When: August 9, 2022 at **8:30 a.m. Eastern Time**

To register for the virtual event, go to <https://investors.ansys.com/events-and-presentations/events-calendar> and click on the registration link.

The virtual event will be video webcast live. The following will be available on the corporate website <https://investors.ansys.com> at or prior to the time of the event: a link to the live video webcast as well as a supplemental 2022 Investor Update presentation. A replay of the video webcast will be available after the event has concluded.

For those who do not have internet access, simply join on the day of the event by dialing (855) 239-2942 (US), (855) 669-9657 (toll-free Canada) or (412) 542-4124 (INT'L). Ask the operator to join you into the Ansys 2022 Investor Update.

The video webcast will be recorded with replay available within two hours after the call at <https://investors.ansys.com> or at (877) 344-7529 (US), (855) 669-9658 (toll-free Canada) or (412) 317-0088 (INT'L). Passcode: 3205490.

Implementation Investments

AECOM selected by Arizona Department of Transportation to develop plan for the statewide deployment of electric vehicle charging stations

18 July 2022

AECOM, the world's trusted infrastructure consulting firm, announced it has been selected by the Arizona Department of Transportation (ADOT) Multimodal Planning Division to develop a plan for the statewide deployment of electric vehicle (EV) charging stations, which will demonstrate how ADOT can deploy EV charging stations adjacent to state alternative fuel corridors and interstates and will comply with Federal National Electric Vehicle Infrastructure (NEVI) guidance. The development of an EV infrastructure deployment plan will also educate the public, with the goal of reducing range anxiety and encouraging vehicle purchasers to consider EVs as a viable alternative to gasoline or diesel-powered vehicles.

“With the creation of the Joint Office of Energy and Transportation, there is an immense opportunity to transform how mobility is addressed within our communities,” said Jennifer Aument, chief executive of AECOM's global Transportation business. “As a leader in emerging electrification technologies, we're intimately familiar with NEVI guidance and have a deep bench of capabilities to support our clients as they navigate the transportation-energy nexus. We look forward to partnering with ADOT to deliver a data-driven, strategic plan for the siting of EV chargers and assisting the state in receiving significant benefits from federal funding sources.”

In addition to delivering an EV infrastructure deployment plan, AECOM's scope is expected to include project management to support goals and objectives; stakeholder engagement and outreach to help the public understand opportunities and capture feedback; existing and future conditions analysis, including charging demand and grid capacity assessment; support and guidance for future EV charging infrastructure deployment, including siting and charging location cost analysis; and federal funding compliance, such as NEVI guidance.

“Transportation electrification is key to improving environmental and public health while bolstering transit mobility, parity, and sustainability. Our team of experts, who reflect nationwide best practices and local experience, are thrilled to support Arizona's deployment of a convenient, affordable, reliable, and equitable EV network in this capacity,” said Travis Boone, chief executive of AECOM's U.S. West region. “In line with our Sustainable Legacies strategy, we're proud to work with clients such as ADOT to help them achieve their electrification goals and are excited to partner with the Multimodal Planning Division to execute a successful and expedited EV infrastructure deployment plan.”

AECOM is committed to delivering transformative environmental, social, and governance objectives through its *Sustainable Legacies* strategy, so that the work it does in partnership with its clients leaves a positive impact for years to come.

Ansys Validates Safety of NASCAR's Next Gen Race Car with Simulated Crash Tests That Enable Cost Savings

14 July 2022

NASCAR used Ansys' simulation solutions to ensure the safety of its Next Gen race car in time for the 2022 season with virtual crash tests that accelerated validation time and reduced material costs for physical testing by \$1 million. The crash simulations allowed NASCAR to overcome pandemic-induced physical testing challenges and meet its goal to debut the car in February at the Daytona 500 motor race, the 500-mile season-opener considered the most prestigious and important race in NASCAR.

By integrating Ansys® LS-DYNA® into crash testing, NASCAR was able to analyze, test, and validate multidirectional influences, including nonlinear and linear contact to the entire vehicle, spanning frontal impacts, roof crashes, lateral side impacts, rear impacts, and oblique impacts. This high-fidelity data, compiled by virtual crash simulations, slashed typical validation timing and material costs by reducing physical crash tests — estimated at \$500,000 each — to only two full scale vehicle physical crash tests.

Further, Ansys' predictive accuracy and results gave NASCAR the engineering confidence and ability to build parts without physical crash test data during early development stages in 2020 when on-site crash facilities were shut down due to COVID-19. When physical crash tests were later performed, Ansys' robust and comprehensive simulation models were verified. Similarly, the software's cloud computing capabilities allowed NASCAR to run and manage a large volume of simulations remotely using Ansys® Cloud™.

“Ansys LS-DYNA was an important tool in getting the Next Gen car ready for the 2022 season,” said John Probst, senior vice president of Racing Innovation at NASCAR. “The ability to simulate crash tests with highly-reliable results helped us work through the pandemic and prepared us for our physical crash tests.”

NASCAR, working together with Elemance, LLC, performed the engineering and simulation work leveraging the software's built-in design optimization tools to enhance the crash performance of the front and rear bumpers via simulation.

“Ansys' crash simulation software provides a unique opportunity to safely analyze, test, and visualize an extensive amount of variables and conditions with confidence and precision,” said Walt Hearn, vice president of global sales and customer excellence at Ansys. “In addition to increasing safety, virtual testing significantly reduces development and validation time as well as material costs. We are proud that our simulation solutions supported NASCAR in each of these areas and helped get Next Gen ready to race for the 2022 season.”

AUSTRIAN PIONEER FOR AUTOMOTIVE AND INDUSTRIAL CABLING AND DUCT SYSTEMS RELIES ON CENIT FOR DIGITAL PRODUCT EVOLUTION

21 July 2022

Gebauer & Griller (GG Group) and CENIT have agreed to collaborate on creating a global, digital process platform that will drive the company's product engineering. A software solution by CENIT integrates the platform components built on standard products by SAP and Dassault Systèmes.

In modern economies, energy and information are two of the most valuable commodities. Millions of people rely on the easy flow of energy and data, whether in their own vehicles or industry at large. As a leading producer of cables and cable harnesses for automotive and industrial applications and as partner

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to premium car makers, GG Group has evolved into a major global player in the field of electric mobility. To meet – and keep meeting – demand in this growth sector, GG (approx. 4000 employees) decided to transform its approach to digital product development.

To succeed in this strategic venture, the Austrian innovation leader is relying on expertise by IT and software provider CENIT. The shared goal of the collaboration, launched in June 2022, is to establish a consistent global digital platform that will merge the entire range of product creation and engineering processes, through to the individual, operational workflows.

Hybrid platform architecture – CENIT software as connecting element

Building on a consistent company-wide SAP strategy, CENIT and GG began by defining a hybrid platform architecture. To achieve this, the cloud version of the 3DEXPERIENCE platform by Dassault Systèmes will be deployed to complement the existing SAP ERP system. An integration product by CENIT ensures optimal connectivity between the two worlds – the tried and proven “cenitCONNECT SAP Integration for 3DEXPERIENCE Cloud”. This solution enables all-round integration of cloud-based and/or hybrid approaches and ensures consistent process and data integration. Based on the underlying SAP strategy, another project step will be efficiently realized and integrated at a later stage: Replacing the current SAP ERP architecture with the SAP S/4 HANA platform.

“The strategic goal of the partnership is to offer GG Group a high-performance platform for globally seamless digital processes, based on the standard software architectures by Dassault Systèmes and SAP and the potentials inherent in cloud technology. The platform will drive all processes from ideation through to series manufacturing”, says CENIT CEO Peter Schneck. “We are pleased that technology frontrunner GG is relying on CENIT’s expertise in implementing this strategic initiative”.

GG has a clear objective as well: “In future, we want to be even more agile and flexible in bringing new products to market. To achieve this, we have to perfectly align our product development and our production with the needs of our OEM customers. We are certain that our collaboration with CENIT will let us continue to expand our leading position as a supplier in the electric mobility sphere”, says Mag. Eva Schinkinger, CEO of GG Group.

Success as a combination of technology and process optimization

Regarding project scope, the collaboration between CENIT and GG Group was preceded by an intensive evaluation phase. Together with GG Group’s management, CENIT applied a two-step assessment approach to closely examine GG’s corporate goals, business model and digitalization strategy. Next came an analysis and evaluation of the methods and tools used to drive virtual product development at GG. Combining the results of these exercises produced a step-by-step plan that will ensure sustainable and efficient implementation of the shared digitalization targets.

Blackline Safety’s Technology Selected in \$2 Million UK Water Company Deal

21 July 2022

Blackline Safety Corp., a global leader in connected safety technology, announced a new water and wastewater company in the United Kingdom has selected Blackline Safety’s technology to protect its people and support its digital transformation. This marks the sixth out of the UK’s 12 water and wastewater companies to now use Blackline’s cloud-connected gas detection products and services.

Blackline Safety’s technology was selected through a highly competitive and rigorous tender process. The three-year award includes an option to extend for an additional five years of service, which would bring the total value to over \$4.2 million. The utility will replace their existing gas detection units with

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over 2,600 Blackline Safety G7c wearable devices and associated services.

“As one of Britain’s largest water companies with operations across more than 100 sites, this water authority needed a flexible, multifunctional safety solution to accommodate the diverse risks and work situations their people face while supporting data-informed decisions that drive safety towards zero reportable incidents,” said Simon Rich, Sales Director - Europe, Blackline Safety.

“The value of real-time cloud-connected data, paired with scalable technology that adapts to changing work environments, allows Blackline to continue to see strong adoption of our connected safety solutions across the water and wastewater industry.”

Blackline’s G7 lone worker and personal gas detection devices are robust and intelligent connected wearables that accurately detect gas hazards, instantly notifying both workers and managers in real time, enabling contact tracing as well as corrective action to be taken to mitigate future incidents. Supported by Blackline’s professional 24/7 live monitoring service, they ensure maximum worker protection with automated safety incident and health event monitoring, including features such as no-motion and fall detection, and missed check-ins.

Brandili Adopts Infor Solutions to Digitally Transform its Business

21 July 2022

Infor, the industry cloud company, announced that Brandili, a Brazilian textile company founded more than 55 years ago, is implementing Infor CloudSuite Industrial Enterprise to digitally transform its business. Brandili selected Infor LN as its ERP, and Infor OS, a low-code platform that enables easy integration with other software, providing a comprehensive and integrated solution connected to several other systems.

Implementation of Infor CloudSuite enables Brandili to have a centralized database with information such as purchases, including prices, quantity, terms, suppliers, and taxes, minimizing manual errors and evaluating production costs.

Infor OS is a low-code platform that facilitates integration of ERP with other IT solutions used by Brandili, both Infor and third-party solutions. This characteristic is mentioned by Gartner in its Magic Quadrant for Cloud ERP for Product-Centric Enterprises. OS also adds Infor ERP tools such as business intelligence, business analytics, artificial intelligence (AI) and machine learning to help automate processes in business management.

All Infor CloudSuite solutions are hosted on AWS (Amazon Web Services), which provides benefits such as scalability, lower operational costs, less need for IT professionals responsible for infrastructure maintenance of data center, security tools against cyber-attacks and natural disasters, and high availability, with redundant infrastructures and backups.

Brandili’s partnership with Infor is part of the textile manufacturer’s industrial modernization plan, which includes investing R\$10 million reais (Brazilian currency) in new technology and launching its own e-commerce solution. Approximately 80% of resources are assigned to process management tools, with Infor CloudSuite as the main application.

“Infor solutions are developed with HTML5, which enables ERP information to adjust to any device, desktop or mobile connected to internet. ERP information can also be accessed with mobile applications connected to the solution. The goal of this strategic activity is to obtain operational efficiency, and it clearly shows Brandili’s desire to provide better products and services to customers as well as tools that help employees better execute their tasks,” states Jônatas Schmitt, Brandili digital transformation

manager.

Strategic and lasting partnership

Brandili has more than 15,000 customers in 25 countries. It has partnered with Infor for more than a decade with on-premises solutions. When Brandili decided to develop a roadmap to the cloud, Infor was selected due to its robust solutions, portfolio of products needed for the digital transformation, user support and trust.

“Customers are our priority, and we are happy with services Infor has provided, so we renewed our partnership to help us on this road to transform our business that, due to textile industry complexity, requires implementation of more robust software,” Schmitt adds.

Infor solutions provide integration in the plant with all business management. “Our tool is developed to fulfill specific needs of the manufacturing sector, and to enable activities management in agile and efficient operations,” says Waldir Bertolino, Infor Brazil country manager. “We are enhancing Brandili’s value chain and collaborating to guarantee growth in the long term. This involves reducing costs in data maintenance, infrastructure and upgrades.”

HCL Technologies to Accelerate Digital Transformation at DSM

18 July 2022

HCL Technologies (HCL), a leading global technology company, has signed a multi-year deal to drive the modernization of DSM’s core IT business systems and transition to a product-based IT operating model. HCL will help accelerate the digital transformation of DSM, a purpose-led science-based global leader in health, nutrition and bioscience, with a cloud-first strategy, agile delivery and next-generation security and network practice. By creating a seamlessly connected group-wide digital work environment, HCL will support DSM’s sustainable product innovation efforts and growth ambitions.

“To underpin DSM’s strategy and our purpose to improve the health of people and the planet, we are in the midst of a digital transformation so that we can better serve our customers,” said Ipek Ozsuer, DSM’s Chief Digital Officer. “We wanted to transition from a multi-vendor landscape and work with a sole integration partner that has the deep expertise to help drive our digital ambitions. HCL shares DSM’s values in placing sustainability at the heart of our digital roadmap, making them an ideal transformation partner.”

HCL’s Fenix 2.0 digital execution framework will drive best practices and accelerate transformation at scale across DSM’s business units and product lines. Through harnessing next-generation automation and analytics, HCL plans to enhance IT service delivery for approximately 18,000 end users across 200 sites in more than 50 countries.

“We’re delighted DSM chose HCL to support its digital transformation,” said Ashish Kumar Gupta, Chief Growth Officer, Europe and Africa, HCL Technologies. “DSM is a pioneer in responsible business and led by a purpose that is very much aligned with HCL’s own culture, values, and commitment supporting our global communities. This engagement is a testament to our successful track record in working closely with clients to support digital transformation across their business.”

Qingdao Glamour Garment to Better Serve Their Global Customers with Centric PLM™

19 July 2022

Qingdao Glamour Garment Co., Ltd. (Glamour), the sleepwear and loungewear supplier, 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.

Glamour is a world-leading developer and manufacturer of sleepwear and loungewear, providing quality OEM and ODM services to thousands of international brands. Glamour is a vertical supplier with presence across the supply chain including fiber, yarn, weaving, dyeing, design and garment production. With an R&D team of more than 50 people, Glamour develops and produces some 5,000 new products every year to serve over 470 satisfied brands around the world.

Glamour follows a typical OEM/ODM business process of receiving foreign trade orders, organizing order information, style and fabric sampling, sample reviews and tracking the progress of production and material shipments. Until recently, this process was managed manually using spreadsheets. This caused issues with a lack of unified standards, inefficient collaboration, poor management visibility, delayed deliveries and the loss of historical data needed to aid decision-making. Glamour decided to implement Centric Manufacturing PLM to use data more effectively, unify processes and improve management.

Glamour will work with Centric to build a digital management platform across all departments. The PLM project aims to standardize data formats and processes to establish a framework for business growth. The project team will organize scattered R&D data into a structured database; clarify business processes and departmental responsibilities to improve team collaboration; and integrate customer data to identify best practices for the future.

Mr. Jiang Shanfeng, General Manager of Glamour, says, "I believe that with Centric PLM, Glamour can better provide customers with full-process services at their request, covering fabric R&D, style design, raw material procurement, sample manufacturing, customer feedback, mass production, logistics tracking and market feedback, so as to improve their market competitiveness with our enhanced R&D and production capacity."

"We are delighted to announce that Glamour has decided to implement Centric PLM," says Chris Groves, President and CEO of Centric Software. "With the close collaboration of both teams and our practical expertise in PLM for textiles and apparel manufacturers, we are looking forward to launching a project that will enable Glamour to provide customers with a top-quality service."

Product News

Agiloft And Mainspring Consulting Group Partner To Accelerate Digital Transformation With AI-Driven CLM

21 July 2022

Agiloft, the global standard in contract lifecycle management (CLM), and **Mainspring Consulting Group**, a leading services provider of innovative business solutions for the Middle Office, today announced a strategic partnership to drive expansion of Agiloft's Contract Lifecycle Management Suite

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across several high-growth sectors.

Mainspring will offer services to implement, maintain, and then drive adoption of Agiloft's AI-driven Contract Lifecycle Management (CLM) software. Mainspring works with municipalities and multinational clients across many highly regulated verticals, including Health Life Sciences, Finance, High Tech, and others. By combining industry best practices, proven technology, and rigorous systems implementation, its teams deploy innovative business solutions that increase profits and shareholder value while minimizing risk.

"Mainspring is a great example of the expertise that is available throughout Agiloft's partner network," said Elisabeth Bykoff, VP of Agiloft's Global Alliances. "Their experience of helping organizations streamline their contracting processes, and then maximize the returns they see on their contracts, is seriously impressive. That expertise combined with Agiloft's unique ability to automate the workflows associated with initiating, executing, and monitoring contractual agreements, will enable organizations of all sizes to cut costs, drive new revenue, and reduce risk in the process."

Charlene Dickey, VP of Sales and Alliances, "We are delighted to join Agiloft's partner network and believe their solution suite offers our customers a clear path to a powerful and cost-effective business solution for agile contract management. Mainspring has a long history of working with leading-edge AI solutions, with a unique focus on people, processes, and data. We believe Agiloft will streamline our customer's contracting organizations and enable them to realize value and promote user adoption.

"By connecting Agiloft's Contract Lifecycle Management Suite with Mainspring's proven technology and rigorous systems implementation, our customers can see an increase in profits and a decrease in risk," said Mauro Caputi, Partner and CRO, at Mainspring Consulting Group. "We are proud to partner with Agiloft and look forward to continued success in helping clients digitally transform their middle office operations with AI-driven digital technology."

BIMcollab Cloud's newest release

18 July 2022

We're adding some most requested features!

BIMcollab Cloud's newest release is here! We are always researching and developing our solutions towards your needs to make your BIM life easier. Why work harder when you can work smarter?

Some of our newest features includes:

- Save filters
- Create new issues based on previous ones (cloning)
- Simplified 2 Factor Authentication setup
- Improved menu structure

And many more! Check out our [release notes](#) for more details.

But we are not done, more to come later this summer, stay tuned!

Digital customs tariffing made easy with new netwykZOLL interface in PARTsolutions

18 July 2022

Correct customs tariff numbers and transparent documentation with a few clicks

Determining the correct customs tariff numbers is not an easy task for many companies that export to other countries, are facing a Customs audit, or whose products are on embargo lists. An extensive and complicated set of rules and regulations, as well as a shortage of skilled personnel, are part of the problem. Due to the complex structure of the numbers, there was hardly any software for this on the market for a long time, which meant a great deal of manual effort and high process costs. At the same time, customs tariffing should have a high priority in a company, as errors in goods tariffing can quickly have legal consequences.

Henning Uiterwyk, CEO of netwyk.com, recognized this problem and developed netwykZOLL, a cloud-based SaaS solution for individual and mass determination of customs tariff numbers according to current specifications. This time-saving tool is now integrated into the Strategic Parts Management PARTsolutions by CADENAS via an interface. With a netwykZOLL license, PARTsolutions users can now determine correct customs tariff numbers directly from the parts management and add them to the article master.

Quick and error-free determination of customs tariff numbers via netwykZOLL interface in PARTsolutions

Here is how it works: Select a standard or purchased part from the parts library or from your own parts list and transfer the product label to the customs tariff number determination tool by pressing a button. The correct material group is assigned to the product. After the following configuration of some attributes like material and type, the correct customs tariff number is transferred back to PARTsolutions and added to the master data.

"This workflow allows a time saving of around 50% for each part compared to manual customs tariffing. In case of a Customs audit, the audit trail of the respective customs tariff number is transferred to PARTsolutions and stored for tracking," explains Henning Uiterwyk. In the joint webinar, Alen Blechinger, CEO of CADENAS Solutions GmbH, and Henning Uiterwyk talked about the new interface and used practical examples to show how easy digital customs tariffing can be with netwyk.com and CADENAS.

EnSuite-Cloud ReVue introduces "Spotlight" tool

21 July 2022

CCE, a leading provider of advanced CAD interoperability solutions, announced a new "Spotlight" tool as part of the latest enhancement of its flagship engineering collaboration software, EnSuite-Cloud ReVue.

Users can now use the "**Spotlight**" tool to draw attention to specific parts of the CAD model for discussion. This allows for a richer collaboration experience where all participants know the exact context of the discussion. This is especially useful for discussions of large and complex CAD data models and eliminates miscommunication.

"The latest enhancement was a direct result of listening to the customer. We had customers dealing with large data sets who clearly believed that the ability to hone in on particular parts of the model would make collaboration sessions more productive. It would eliminate any miscommunication during engineering design reviews. The introduction of the Spotlight tool should make them very happy," said

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Vinay Wagle, CCE's V.P. of Sales and Marketing.

EnSuite-Cloud ReVue is a revolutionary **web-based real-time** engineering design review software, with **built-in audio**, that allows users to securely review CAD data across the Product Development Lifecycle. Whenever there is a need to review 2D/3D CAD data in the product development process, ReVue provides a secure platform for collaboration with your team or suppliers. Users can review 2D/3D designs of all the latest CAD versions from **CATIA V5, 3DXML, NX, Creo, SOLIDWORKS, Inventor, Solid Edge, JT, Parasolid and glTF** among others.

Last month, CCE introduced an Experience Center to provide new users 1-click access to EnSuite-ReVue and explore the power of the software without creating an account. This 1-click access to the Experience Center gives users a sandbox to experience the product, review multiple sample files from different CAD formats and then seamlessly transition to creating an account whenever they are ready.

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

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

Hexagon announces HxGN NetWorks, rebrands utilities and communications offerings

19 July 2022

Hexagon's Safety, Infrastructure & Geospatial division announced the rebrand of its portfolio of infrastructure solutions to HxGN NetWorks. The new name signifies the cohesive, integrated offerings within the portfolio and symbolizes Hexagon's continued dedication to advancing technology that supports critical infrastructure across the globe.

Used by over 600 customers around the world, HxGN NetWorks is a geospatial asset management solution with lifecycle management capabilities spanning all phases - from planning and design to maintenance. It enables organizations to design, build, manage and maintain physical networks for electric, gas, water, wastewater, multi-utility and telecom. Utilities and telecommunications providers can use HxGN NetWorks to build digital twins of their physical networks, topology and assets. A flexible, integration-ready solution, it provides a single source of accurate, up-to-date information and a full spectrum of tools for various roles and users across an organization.

As part of the rebranding, Hexagon's industry-leading products, including Intergraph G/Technology, Fiber Optic Works, G/Connect and G!NIUS, have been renamed as HxGN NetWorks suites.

More than a name change, HxGN NetWorks builds on Hexagon's more than 40 years of industry experience with additional feature enhancements to the product suites. Users can now improve field and mobile workflows, better manage network capacity and utilization, simplify fiber planning processes and more.

"The HxGN NetWorks portfolio is a fresh commitment to the utilities and communications industry,"

said Maximillian Weber, senior vice president, Global Infrastructure, Hexagon's Safety, Infrastructure & Geospatial division. "With the rise of fiber deployments, distributed energy resources, microgeneration, electric vehicles and more, utility and telecommunication organizations need to adapt and prepare for the evolving requirements to grow in the future. HxGN NetWorks empowers them to increase efficiency and enable intelligent operations today, as well as transform to unlock new business value and opportunities tomorrow."

Hexagon has pioneered the development and application of location-based systems for utilities and communications companies for decades. The company supports hundreds of utilities and communications customers around the world with solutions for network engineering, network operations and other business functions.

New MakerBot CloudPrint™ 2.0 Strengthens 3D Printing Workflow to Boost Productivity

19 July 2022

MakerBot, a Stratasys company, announced a major upgrade to its print preparation and management solution, MakerBot CloudPrint™. MakerBot CloudPrint now includes an enhanced interface for a smoother user experience and several new and upgraded features that enable users to go from CAD file to 3D-printed part faster than before.

MakerBot CloudPrint is a cloud-based application that allows users to prepare, print, manage, and monitor 3D print jobs easily and securely from their browser. The software aims to provide professional and education users with a more efficient and seamless 3D printing workflow to help accelerate design, testing, and iteration cycles. CloudPrint 2.0 seamlessly integrates cloud-based print preparation and workspace management with an enhanced user interface and improved queuing and notifications. It allows users to go from CAD to part faster with new features such as the ability to import multi-body parts and automatically adjust parts for the least support material used during printing with Smart Orient. "The secret to successful 3D printing goes beyond just the hardware and includes the full ecosystem of materials, accessories, and software. The improvements we have made to MakerBot CloudPrint are designed to provide a more streamlined approach so that users can focus on other important tasks," said Nadav Goshen, CEO at MakerBot. "CloudPrint takes the guesswork out of print preparation and workspace management. With an easy-to-use and secure workflow, CloudPrint gives users better control and management of their prints from start to finish."

New features of MakerBot CloudPrint 2.0 include:

- **Faster CAD to Part Workflow:** Several new features allow users to go from CAD file to printed part faster. Users are now able to import native, multi-body CAD parts and auto plate them on the build plate. This means users don't have to convert their native CAD files and import them individually. With the New Smart Orient feature, parts can be automatically oriented, so they use the least amount of support material during the printing process, helping reduce print and post-processing times.
- **Seamless Integration of Print Preparation and Workspace Management:** MakerBot CloudPrint provides a fully cloud-based workflow for the entire 3D printing process, from print preparation to workspace management and print monitoring. Workspaces allow users to collaborate with other users and manage their printers and prints. The new updates to the user interface integrate print preparation and workspace management more closely. Users can now easily toggle back and forth between the two and the latest part will automatically be saved in the print preparation

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part of the application, so users can easily go back and make edits.

- **Improved Queue Management:** Users can maximize their printer usage by slicing and queueing print jobs for later. Once a print is done and removed from the build plate, the next one can be started from the printer display immediately. A user can now also add a print to the queue when the material selected in CloudPrint is different from the material in the printer. This improves the workflow by allowing users to queue more prints in advance and change the materials as needed.
- **Improved Monitoring and Notifications:** CloudPrint allows users to easily keep track of their printers and print jobs. In addition to seeing the status of a print and a camera feed from their printers, an updated printer detail page now also includes chamber and extruder temperatures as well as the ability to add user notes to a print. A new notification tab provides a centralized location to receive notifications about the status of a printer, queue, or print, helping to streamline the printing process for more efficient utilization and a reduction of downtime.

CloudPrint offers industry standard security and advanced encryption that protects data from unauthorized access. Team members can be added to workspaces and their levels of access can be tailored and adjusted. The easy-to-use dashboard and advanced reporting features offer a better glimpse into workspace activity, including past jobs, errors, and upcoming prints. Users also receive notifications when a print is added to the queue or if account details have changed.

CloudPrint is packed with the latest print preparation and management capabilities needed to streamline the 3D printing workflow and includes regular updates to ensure users have access to more features. CloudPrint is free to use, and is compatible with the MakerBot METHOD® platform, MakerBot SKETCH® 3D printers, and MakerBot Replicator® 3D printer series.

Newforma Project Center New Release Strengths Security and Boosts Collaboration with the Autodesk Construction Cloud Connector

19 July 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 strengthens security with Multi-Factor Authentication (MFA) features for Newforma Info Exchange and Microsoft SharePoint Online. This release also includes a new connector for Autodesk® Construction Cloud® and enhancements for the Microsoft SharePoint Connector.

Newforma has proactively addressed cyber security concerns by adding Multi-Factor Authentication to the primary applications used for sharing project information: Project Center Info Exchange and the Microsoft SharePoint Online Connector. Users accessing SharePoint Online through Project Center for the first time will be prompted to authenticate.

MFA, also known as Two-Factor Authentication (2FA), adds a second layer of security beyond traditional username and password access which can be easily compromised. MFA has proven to be an effective tool to prevent unauthorized access to information and to prevent data theft. Chief Marketing and Product Officer Slater Latour remarks, “The construction industry is a major target for cyber criminals mainly due to the type and amount of data that is transferred between multiple parties on a daily basis. Newforma Project Center users now have added security protection when sending or sharing sensitive project information.”

Newforma’s latest Connector for Autodesk Construction Cloud (ACC), enables users to access, view, and share ACC documents directly from Newforma Project Center. Users have a unified view of ACC documents alongside all other related information such as RFI’s, submittals, and action items. In

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addition, ACC documents are scanned, indexed, and OCR'd by Newforma's best in class search allowing any word embedded in an ACC file to be found.

The Project Center Connector for Microsoft SharePoint Online has also been significantly enhanced. Project creation has been streamlined by linking to SharePoint Online Documents through one backend connection eliminating the need to create a separate connection for each project. The SharePoint Online Connector also includes a major new feature which allows users to open, edit, and save SharePoint documents directly from Project Center. There is no need for a separate upload of modified documents to SharePoint.

In this new release, Newforma has also included support for Autodesk 2023 and Microsoft Windows 11. Newforma customers will also notice a change in our release numbering system. We have simplified our release naming convention by using the release year, followed by the number of the release for that year. This new release is numbered 2022.2 since there was an earlier release of Project Center in February 2022.

Procore Launches Workforce Management, a New End-to-End Solution for the Construction Industry

19 July 2022

Procore Technologies, Inc., a leading global provider of construction management software, announced the launch of a new solution, Procore **Workforce Management**, which features two key products — **Field Productivity** as well as, **Workforce Planning**, formerly known as **LaborChart**.

Paired together, Field Productivity and Workforce Planning offer the industry's most comprehensive construction workforce management solution, allowing contractors visibility into their workforce to accurately forecast and manage human resources to help meet or beat estimated schedules and budgets.

“The skilled labor shortage is the most pressing challenge our industry faces,” said Tooey Courtemanche, Founder, President and CEO of Procore. “It's also the number one thing stopping them from capitalizing on the massive demand that exists for construction. Our new Procore Workforce Management solution will help our customers manage their most precious resource more effectively, their people, so they can take on more work and ultimately grow their businesses.”

By enabling real-time capacity tracking without administrative burden, double entry, or complex spreadsheets, Field Productivity helps improve the following functions:

- **Manage:** Collect time easier and faster
- **Organize:** Uncover real-time labor productivity information to make daily decisions that can positively impact project schedules, budgets, and profitability
- **Analyze:** Access historical productivity rates by cost code to help bid future jobs more accurately and competitively

Workforce Planning creates a single source of truth for contractors to manage the most important asset — people. Unlike spreadsheets, whiteboards or in-house built solutions, Workforce Planning helps improve the following functions:

- **Plan:** Centralize scheduling and communication with real-time insight into workforce availability and skill set
- **Track:** Uncover how the workforce is performing by tracking employee time, out of scope work and materials installed to help maximize productivity and protect the labor budget

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- Forecast: Use historical data to understand what resources are needed from one job to the next
- Connect: Integrate human resources and enterprise resource planning to provide one holistic business view

“The new Workforce Planning product provides real-time insights into scheduling resources and future labor requirements,” said Ben Schultz, former CEO of LaborChart and Procore’s new Head of Workforce Management. “The product not only gives contractors real-time, accurate data they need to power their workforce, but when combined with Field Productivity, it also creates an end-to-end Workforce Management solution for the entire industry.”

Sage and Microsoft expand partnership to simplify workflows for small and medium businesses

21 July 2022

Sage, the leader in accounting, financial, HR and payroll technology for small and medium-sized businesses (SMBs) announced an expanded partnership with Microsoft. The news includes plans to integrate Microsoft Business Products, including Microsoft 365 and Microsoft Teams, as embedded services in Sage products and the Sage Digital Network.

“Increasingly SMBs are digital businesses- but connecting the tools they use can be a barrier to their success,” said Steve Hare, CEO, Sage. the widespread issue they face is connecting the tools to manage their business in a simple and productive way. Microsoft products have long been the tool of choice for collaboration, with Sage powering the back office. Through our expanded partnership, we will simplify life for millions of SMBs, removing friction and helping them to achieve real productivity gains.”

As SMBs navigate a digital world, businesses increasingly rely on the flexibility and productivity gains that the cloud provides. The partnership supports Sage in giving customers a choice of cloud platform, as well as the ability to collaborate and communicate where work happens – helping business to flow while making it simpler for them to do business.

In July, Sage published its first early release of Sage Active with select customers. Sage Active is a new, easy-to-configure, integrated Business Management Solution built on Microsoft Azure. Available first to customers in France, with Spain and Germany to follow, this new native cloud solution is purpose-built to support SMBs to manage compliance and operations – as well as offering the benefits Azure brings.

“SMBs play a vital role in our global economy,” said Scott Guthrie, executive vice president, Cloud + AI, Microsoft. "Bringing together Sage’s financial expertise with the power of the Microsoft Cloud, our partnership will deliver reliable, secure, and scalable solutions that will empower millions of SMBs around the world to be more productive, reduce costs, and grow their businesses."

The expanded partnership will provide:

Simplification – With Sage as a system of records for everything from financials, people, and payroll, and Microsoft 365 as the de-facto choice for millions of businesses around the world, integration between the two platforms is critical for SMBs today. Linking the communication and collaboration tools available in Microsoft 365 to back-office functions such as accounting will simplify workflows and reduce manual processes, saving businesses time.

Improved Reliability – Benefiting from Sage Products on Azure, the partnership will provide customers with improved reliability, security, performance, and scalability, enabling end-users to access virtual apps and desktops, Microsoft OneDrive, and SaaS apps on their devices with a single sign-on (SSO), all as part of their Sage membership.

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Productivity - Together, Sage and Microsoft will deliver streamlined digital work experiences, with outstanding performance and reliability, to help SMBs be more productive and businesses more agile. As data becomes a more strategic asset for organizations, being able to upload and download between Microsoft Excel and Sage will improve workflows, governance, and security.

“The need for more business flexibility and resilience has never been greater. Together, Sage and its partners are helping to accelerate the transformation of customers’ businesses into intelligent and frictionless organizations that run with confidence in the cloud,” said Stacy Schuettler, president, LBMC Technology Solutions. “Sage has been at the forefront of supporting businesses for 40 years - we are excited by the new horizons this partnership provides and the opportunities it will give our customers to be more productive and simplify their operations.”

The Sage partnership with Microsoft also reflects both businesses’ aligned sustainability objectives. Our shared goal is to promote sustainable development and low-carbon business practices globally through our sustainable business practices and cloud-enabled technologies.

Simulations Plus Realizes Early Success with its Concierge Program

14 July 2022

Simulations Plus, Inc., a leading provider of modeling and simulation software and services for pharmaceutical safety and efficacy, recently invested in the creation of their Concierge Program, facilitating value-added strategic partnerships with customers through alliance management.

The Concierge Program is designed to provide customer support through true partnership and planning. It includes regular meetings and communication, detailed understanding of customers’ future needs, key performance indicators to measure progress, and a central point of contact to provide guidance and answers along the way.

To date, multiple large pharma, contract research organizations (CROs), and regulatory partners have enrolled in the Concierge Program. These customers have already experienced the benefits of this program and have accelerated their development programs, aligned with the strategic vision of Simulations Plus. Examples of recent successes include bespoke training programs for regulatory scientists in Canada, Europe, and South America, customized software development for new research programs, and escalated consulting support to meet filing deadlines.

“I truly believe that the key to success for our customers hinges on our ability to understand their needs now and into the future,” said Nate Musser, Director of Alliance Management. “By engaging regularly and transparently, we can support our partners in making nimble research decisions while aligning with their goals. That kind of partnership and forward thinking makes a world of difference in bringing timely solutions to the people who need them.”

THEOREM-XR Q2 2022 DELIVERS EASE OF USE AND ADOPTION FOR XR

21 July 2022

In a new blog post by Oliver Large Theorem Solutions announces the Q2 2022 update release of Theorem-XR. He says “Theorem-XR’s Q2 2022 release brings a whole host of exciting new features, and user-friendly updates to support the requirements of the growing Extended Reality (XR) community. With a focus on handheld Augmented Reality devices in this release, XR is now easier to use, deploy and adopt across the enterprise using existing hardware (Windows, Android, and iOS devices).” Read the full post here: <https://www.theorem.com/news/whats-new-theorem-xr-q2-2022>

Velo3D Partners with Hartech Group to Distribute its End-to-end Solution and Deliver a Turn-key Process for Federal Government Customers

21 July 2022

Velo3D, Inc., a leading metal additive manufacturing technology company for mission-critical parts, and Hartech Group, an advanced technology equipment supplier for the U.S. federal government, today announced a partnership to distribute Velo3D's technology to government agencies, including the Department of Defense. The partnership makes Hartech Group a preferred distributor for the federal government for Velo3D. Together, the companies will deliver full-service project execution for the sale, installation, and onboarding of Velo3D's advanced metal additive manufacturing solution.

“Our team has deep experience delivering solutions to customers in the federal government and we know what it takes to not only supply the piece of technology, but also supply everything needed to make the equipment fully operable to the DoD end user,” said Gary Bredael, Hartech Group Director of Additive Manufacturing. “We are a well-known prime contractor specializing in providing complicated turn-key solutions to top subtractive machining manufacturers, which is why we have decided to build these same solutions in the AM world. We have chosen Velo3D and its end-to-end solution for our federal government customers interested in acquiring advanced additive manufacturing technology due to the company's very high quality and reputation. We will use our top ratings with the federal government to make sure we supply a full Velo3D solution.”

Hartech Group exclusively works with federal government customers and has extensive experience working with Indefinite Delivery/Indefinite Quantity (IDIQ), General Services Administration (GSA) contracts, Blanket Purchase Agreements (BPA) contracts, and DLAA and local contracting. Customers who purchase Velo3D Sapphire printers, and their accompanying software, from Hartech Group will enjoy a simplified procurement process, including set up, training, and ongoing support, so customers can focus on building the parts they need, without compromise.

“It's no secret that the federal government can be slow-moving and difficult to navigate for new-comers, but Hartech's background and capabilities will help us grow our presence with these customers so they can leverage the benefits of advanced additive manufacturing,” said Benny Buller, Velo3D CEO and Founder. “In the short time that we've officially partnered together, there has already been extensive interest from Hartech's contacts in the federal government—and we're just getting started.”

Hartech Group decided to work with Velo3D because its technology is uniquely suited for complex DoD requirements, especially in the area of supply chain management. For example, Velo3D's ability to deliver repeatable outcomes across any of its machines supports the creation of AM-enabled distributed supply chains. Furthermore, the core Velo3D technology—the non-contact recoater, controls, and the software components of its end-to-end solution—enables advances in engineering design not possible with other solutions.

Federal government organizations that are interested in exploring advanced additive manufacturing and purchasing a turn-key solution can contact Hartech Group at (267) 788-0978.

VOLTA and modeFRONTIER 2022R2 available now

12 July 2022

VOLTA comes with a new cloud deployment option for any Kubernetes-compliant environment. modeFRONTIER adds a Python bridge for RSMs, enabling you to train and evaluate your Python models as modeFRONTIER native RSMs.

HPC & CLOUD

VOLTA new Microservices architecture: ready to work in a cloud environment

Companies that are currently investing in cloud systems can now benefit from a new way of deploying VOLTA - cloud deployment (Kubernetes-compliant environment), enabling them to centralize application management and reduce costs. The existing standalone option remains available for all those who want to deploy VOLTA as a single application.

We've decided to transition from a monolithic to microservices architecture. While a traditional monolithic architecture guarantees good performance, it isn't suitable for lots of concurrent users and geographically distributed installations. This is because each component of the application can't scale independently.

VOLTA cloud deployment provides you with several advantages:

- Scalability: handle the increase in demand of hardware resource without impacting VOLTA performance or availability
- Elasticity: automatically scale up or down depending on workloads
- Fault tolerance: high availability with no interruptions
- Agnostic: compatible with most cloud providers (Google Cloud, Amazon Web Service, Microsoft Azure) and private clouds

DESIGN OPTIMIZATION

New Python RSM bridge in modeFRONTIER

The new pyRSM module in the modeFRONTIER RSM wizard lets you write your own algorithm in the Python editor. You can train and evaluate your RSM as native RSM in modeFRONTIER. In this way, you can use external Python Machine Learning libraries (such as scikit-learn) within modeFRONTIER to perform RSM analyses.

Reuse design knowledge and save time

Use existing design data generated by previous design space exploration studies in VOLTA Planner. Instead of spending time to recalculate the same designs for the same engineering problem, you can now rely on the new Source Data module to evaluate new configurations of your exploration strategy.

SIMULATION DATA ANALYTICS

Direct access to charts from the Clustering tool in modeFRONTIER

To select the best clustering module it's best practice to use a dendrogram chart for a Hierarchical approach and DB-index chart for the Partitive approach. After training the models, you can now create these charts immediately at the end of the clustering wizard.

3D Model widget now synchronized with Scatter Bubble

VOLTA Advisor now enables you to compare and visualize 3D models from the same dataset using a Scatter Bubble chart.

BUSINESS PROCESS MANAGEMENT

New Auto Layout tool in VOLTA Modeler

When mapping a set of activities related to an engineering design project and translating them into a business process workflow, it is important to create a comprehensible diagram that stakeholders will take you for. The new Auto Layout functionality now available in VOLTA Modeler is designed for that.

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It also enables you to save precious time and the effort of manually moving elements into the proper position.

For all other new features please refer to the release notes included in the software updates.