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## CIMdata News

### ***3DEXPERIENCE World 2020: The SOLIDWORKS Journey Continues and Expands – A CIMdata Commentary***

26 February 2020

#### *Key takeaways:*

*In what should be reassuring to the historical SOLIDWORKS base, Dassault Systèmes reiterated that SOLIDWORKS on the desktop will continue to be available and will be updated.*

*The 3DEXPERIENCE WORKS solution offering continues to be expanded and provides SOLIDWORKS users with enhanced levels of sharing and collaboration.*

*Dassault Systèmes' 2019 acquisition of IQMS, and subsequent re-branding to DELMIAWORKS, appears to have made significant strides over the last year.*

CIMdata attended the 3DEXPERIENCE World 2020 event in Nashville, TN, in February of 2020. This event superseded the very successful and well attended SOLIDWORKS World events that had been held for many years. The name change represents an emphasis on how SOLIDWORKS fits into and receives benefits from the Dassault Systèmes 3DEXPERIENCE platform. What it does not signify is a diminution of SOLIDWORKS as the brand of an extremely popular and successful mechanical CAD and related technologies that now have over a million licensed users and many millions of users when educational and other licenses are counted. It also signals the continued support for the SOLIDWORKS community—but importantly an expansion of platform-based capabilities they can take advantage of to support their collaborative product development needs. While the platform was emphasized, there was also a clear message that desktop access to SOLIDWORKS is also continuing to be supported by Dassault Systèmes—that it is not going away any time soon.<sup>1</sup>

The event was heavily attended by about 5,000 SOLIDWORKS users plus press, industry analysts, and a large number of solution providers of software and hardware adjacent to the 3DEXPERIENCE space. There were dozens of sessions on topics of interest to SOLIDWORKS users, including educational sessions, contests, success stories, motivational keynotes, and introductions to new technologies.

There is not space here to cover every session, but some highlights follow.

#### ***Day 1***

The conference was kicked off by Mr. Gian Paolo Bassi, CEO of SOLIDWORKS. He stressed to the audience that “To be human is to dream” and that SOLIDWORKS helps people turn dreams into reality. He quickly introduced Mr. Bernard Charlès, Vice Chairman and CEO of Dassault Systèmes, who followed with his typically forward-looking view of where the platform can take SOLIDWORKS users. A main theme was “How do we improve your future to empower.” To quote Mr. Charlès “the relevancy

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<sup>1</sup> Travel and other expenses related to this commentary were provided by Dassault Systèmes.

of what we do today is measured by the human value of its impact on the world” with a heavy emphasis on ideas and capabilities that help support the Green Economy.

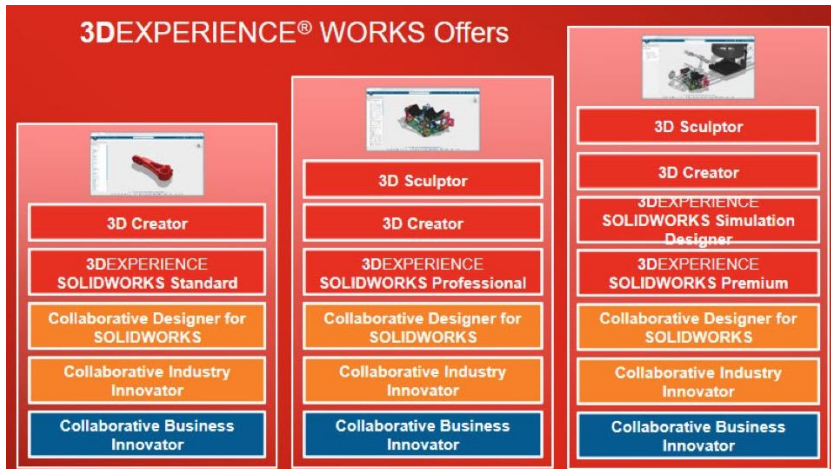
Ms. Christine Getman, Executive Director of non-profit Magic Wheelchair, and others presented their efforts to build custom “costumes” for children who are wheelchair bound and how the 3DEXPERIENCE platform supports that effort. The costumes are 3D to fit over a wheelchair and many are quite complex. SOLIDWORKS is used as the design, visualization, and collaboration tool. Many costumes have been developed and delivered to date, bringing joy and confidence to the recipients, and meaning and a sense of accomplishment to the designers and builders. A Dassault Systèmes team has built two costumes and are beginning on their third. The idea is similar to other “maker” projects. Now the concept is being expanded to develop kits so groups that don’t have all the resources to create a costume from scratch can still provide them.

Mr. Bassi returned to the stage to talk about 3DEXPERIENCE WORKS’ evolution going forward. In keeping with the theme of the event, he described all the new things that can be done when using SOLIDWORKS inside the 3DEXPERIENCE platform. He stated the combination will allow users to “dream larger, explore further.” The stress here was on the platform’s support of all data including SOLIDWORKS files and the many activities such as collaboration and team data sharing that have not been embedded in SOLIDWORKS in the past—that it “seamlessly connects Applications, Information, People.” He then went on to introduce some new capabilities—in particular Selection Helper, Sketch Helper, and Mate Predictor.

Selection Helper and Sketch Helper learn what the user wants to do by direct user suggestions, such as how a user selects features in a design and then modifies that set, for instance by applying a fillet, and continue to refine their capabilities by further suggestions. The Mate Predictor uses geometry information and AI to automate alignment and mating of a group of parts into an assembly based on user guidance that is learned over time and then made available to help solve future problems.

He also introduced 3D Sheet Metal Creator, which allows users to develop sheet metal designs on many types of device (including tablets and smartphones) and to use those designs in their SOLIDWORKS projects. Function Driven Generative Design is a new capability that goes beyond supporting additive manufacturing. It includes multi-physics analysis to inform and support the design process. Interestingly, he showed two results for an example design—one optimized for additive and one optimized for subtractive manufacturing, providing the benefits of advanced generative capabilities for any manufacturer.

Finally, Mr. Bassi, while he did not reveal actual pricing, did state that there would be a special pricing offer from now until 3 March 2020. The 2020 release of 3DEXPERIENCE WORKS offers three levels based on a common platform base in which all data will be stored in the platform. The three levels are shown in Figure 1.



**Figure 1—Levels of 3DEXPERIENCE WORKS Offerings Based on a Common Platform**

Mr. Mike Shultz, founder of BioDapt, presented a fascinating story. Mr. Schultz is a Gold medal motocross racer who lost part of a leg as the result of an accident. He proceeded to design a new prosthetic leg (aided by SOLIDWORKS) that would allow him to ride motor bikes and other equipment and continue his sports career. Indeed, he won a Silver medal only seven months after his accident, using his design. A fascinating and compelling story.

The keynote address for this session was by Mr. Charles Adler, cofounder of kickstarter.com. Mr. Adler is a self-described optimist, which informs what he does as an innovator and entrepreneur. He spoke about platforms and how communities derive greater value when they work in platform-based environments, using platforms as enablers for stability, supporting sharing and collaboration. He also provided some thoughts on emerging technologies that should have a major impact in the near future. His list included AI, additive manufacturing, Block Chain, and crypto currencies (with the potential for changing how finance works). Finally, he gave some sage, cautionary advice that echoes CIMdata's experience with new, evolving innovations: that you can over capitalize a project and stifle innovation. The message, to foster innovation follow a lean and nimble process.

There were also a multitude of more narrowly focused breakout sessions during the day that are too numerous to report here. However, in one of those it was carefully explained that xDesign and xShape still exist but are now platform apps under the roles of 3D Creator and 3D Sculptor respectively (roles are a new packaging concept). The next role to be introduced will be 3D SheetMetal Creator.

Mr. Bassi returned at the end of the day to reiterate that the speakers were all pushing the idea that the technology is an enabler that can be employed in many diverse and valuable ways from developing profitable products to supporting social causes.

He also spent some time explaining some future directions for 3DEXPERIENCE WORKS and SOLIDWORKS. One important concept is that we need to move away from the "file" as a concept as we move to a platform-based environment. Indeed, in CIMdata's view, the file is only an artifact or container for data that becomes readily shareable and valuable information when it is freed from the confines of the file structure. Storing information (as opposed to data) is necessary to support expanded capabilities beyond geometry generation. CIMdata agrees that the difference between information and data is vast—information is connected and expansive while data tends to be limited to a specific area and often not connected across disciplines and domains. However, the assurance was given that for SOLIDWORKS, the file will still exist but will be managed as an object by the platform's database, provided to the user when required for sharing outside the boundaries of the platform.

Dassault Systèmes' stated goal is to support infinite scalability of apps, where each app provides a bite-sized capability. This is very difficult to do outside of a platform because to maximize capability each app has to be built and maintained as a unit and custom-connected to every other app. Flexibility inherently suffers. Mr. Bassi stated that in their platforms apps are not connected in such a way that updates to the apps have to be coordinated, a continuing issue with environments not platform enabled.

They also announced some pricing strategies such as a monthly fee, although not specific price values. They claim that maintenance customers will be able to upgrade for a "very low" fee. They plan to start delivering platform apps in the summer of 2020 and that an SQL Server license will not be required for the new apps. Finally, data management will be delivered with every product.

## ***Day 2***

The opening of the second day was devoted to manufacturing support. Mr. Steve Bieszczat, Chief Marketing Officer of DELMIAWORKS, introduced the session and a host of relevant speakers. DELMIAWORKS is the re-branding of the IQMS manufacturing software acquired in 2019. It provides an essential connection between engineering and manufacturing, including for small- to medium-sized enterprises. As Mr. Trevor Diehl stated "ERP is a giant data aggregation tool" that needs to operate in a synergistic way with the PLM environments that produce and manage the product development processes.

Another important factor is DELMIAWORKS connection to 3DEXPERIENCE Marketplace, giving enterprises access to companies that can help with manufacturing engineering and executing manufacturing services such as contract manufacturing. Dassault Systèmes announced that the Marketplace continues to expand.

Finally, the DELMIAWORKS Customer of the year, Phoenix Closures, was announced. Phoenix is also a sixth-generation family owned business, which is in itself an impressive feat.

Mr. Jack Shaw, an author, speaker, and consultant, who was engaged in the EDI standards and is now pursuing standards around blockchain, presented a keynote on the topics of innovation technology and the future of manufacturing. He made the important point that today's highly automated factories are no longer the factories of the future, but the factories of today. His point is that increased automation leads to increased information that can be leveraged to improve processes and quality. He stated that "sensors and connectivity turn 'dumb' products into smart ones" providing an evolving, expanding capability for the users of products. He also mentioned IOT & AI, and blockchain as being main drivers and enablers of future capabilities.

As on Day 1, there were many breakout sessions.

## ***Day 3***

Mr. Sam Rogers, Additive Design Lead and Jet Suit Pilot at Gravity Industries provided a keynote discussion about Gravity's development of personal jet suits. The Gravity pack is worn by a user who can control personal flight for fairly sustained periods of time and distance. However, getting to this point was a journey of design and experimentation. Mr. Rogers stressed rapid development while "learning from safe failures" when developing a product that can have deleterious effects on humans. He showed a number of movies of both successful and unsuccessful experiments and described some of the ways the organization used the failures as learning and redesign guides. Much of the Gravity Jet Suit was designed to be 3D printed from a combination of materials (metal and polymer). So, their development was dependent on learning how to work with 3D printing materials and processes, which added to the complexity of design but ultimately allowed Gravity to build a workable, light but durable Jet Suit.

Mr. Dean Kamen, founder of DEKA and FIRST Robotics, is a well know motivational speaker around both technology and design, but also on how to encourage young people to get involved. FIRST Robotics<sup>2</sup> is a prime example of reaching out to future generations of engineers and entrepreneurs. The FIRST Robotics competitions have been taking place since 1992 and now engage thousands of budding engineers across the full spectrum of K-12 education. In 2019 the number of participants topped 600 thousand in more than 110 countries around the world.

Mr. Kamen talked about his own journey as an engineer, inventor, and entrepreneur from his first success to the present. One of his key messages is to “seize opportunities & connect the dots” across the intersections of industries, technologies, and business. He also reiterated to remember that societies change slowly, which protects bad things, AND good things. But it is our roll to move to the good things that can have a lasting impact on the quality of peoples’ lives.

### ***Concluding Remarks***

As with past Dassault Systèmes events, the inaugural 3DEXPERIENCE WORLD conference was packed with insight, announcements, presentations, and demonstrations related to the future of product design and manufacturing innovation. This event presented the new branding of the extremely popular and successful SOLIDWORKS World event. Like in past years, this event hosted more than 5,000 live attendees, and many more online. For the SOLIDWORKS community, this event proved to be reassuring based on Dassault Systèmes assertion that SOLIDWORKS on the desktop will continue to be available and will be updated in a similar manner that Adobe provides its once desktop only tools, like Photoshop.

The SOLIDWORKS community should take note, Dassault Systèmes continues to invest and expand their 3DEXPERIENCE WORKS solution offering in a manner that provides its customers with enhanced levels of sharing and collaboration, as well as access to additional capabilities and solutions, such as DELMIWORKS. CIMdata continues to be impressed with Dassault Systèmes’ commitment to the SOLIDWORKS community and to the companies that use it by delivering a right sized enterprise innovation platform.

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### ***Getting in Deeper with Jim Roche on Multiple View Bills of Material***

28 February 2020

We recently sat down with CIMdata’s Aerospace and Defense Practice Director, Jim Roche, and asked him to share his thoughts on the topic of *Multiple View Bill of Materials Solution Evaluation Benchmarks*, an area of interest that he will be discussing at CIMdata’s upcoming PLM Market & Industry Forum.

The presentation is the result of work sponsored by the [Aerospace & Defense PLM Action Group](#) which is administered by CIMdata. We spoke for some time about the concept, the content of the presentation, and the expected value for Forum participants.

In this interview Jim gives answers to the following questions:

- Why is CIMdata focused on the A&D Community?
- What is the A&D PLM Action Group and what does it do?

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<sup>2</sup> FIRST is “For Inspiration & Recognition of Science & Technology”

- What can Forum attendees expect to learn?
- Could you expand on the Group's policy of collaboration with solution providers?

To read the full interview visit <https://www.cimdata.com/en/getting-in-deeper-with-jim-roche>.

To learn more about the topic of **Multiple View Bills of Material** plan to join us at one of our upcoming [Market & Industry Forums](#) for PLM solution providers. For more information visit <https://www.cimdata.com/en/education/plm-market-industry-forums>.

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## ***Why is PLM Often so Hard? – A CIMdata Position Paper***

25 February 2020

Our CIMdata colleague in Japan says it best, “Simple is Best.” A rather unassuming statement when you think about it, and at the same time, rather profound. So, why then do we tend to make things more complicated than they need to be? Why do we consistently tend to over-engineer things? Perhaps that's just how we were born or how we have been educated. Or maybe because we feel the need to show how smart we are. Whatever the reason, we need to remember that SIMPLE IS BEST.

In a 1998 interview with *Business Week*, Steve Jobs was quoted as saying, “That's been one of my mantras—focus and simplicity. Simple can be harder than complex: you have to work hard to get your thinking clean to make it simple. But it's worth it in the end because once you get there, you can move mountains.” A quick study of Apple proves his point—their success has often been a result of making the complex, simple (e.g., intuitive and accessible).

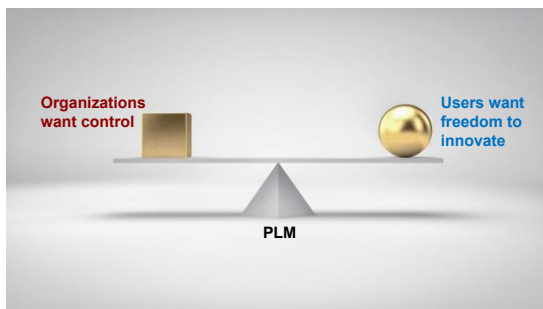
In the sports world, successful coaches stress the fundamentals (i.e., the simple things or the basics). Their thinking is, if you can do the fundamentals well without thinking, then the rest will be built on a solid foundation. But, if you have to think about the fundamentals or can't consistently execute them, then good luck being successful when things become more complex or stressful. In other words, if doing the basics well is second nature, then you can focus on solving complexity when it arises. So, given this, why is making the complex simple often not a priority when it comes to architecting and implementing PLM?

### **The Over-Engineering of PLM**

From all of this one can easily argue that “simple is best” is a truism. So, why then has PLM typically been so hard, and often not as intuitive to implement and use as it could and should be. After more than 30 years of commercially available solutions, which have supported major aspects of the product lifecycle from the beginning, why are they often overly complex to implement and use. Perhaps this is because PLM has its roots in engineering, where everything is a problem that must be solved with a robust, “do it all,” comprehensive solution, often over engineered “just-in-case,” and perhaps even overly optimized on out of date use cases. While it is true that many PLM solutions have their roots in engineering, product lifecycle management is, or at least it should be, an enterprise issue that isn't just for engineers. Unfortunately, at most companies, PLM is still seen and managed as an engineering tool, that manages engineering data. So, here is one reason why PLM solutions are more complex than they need to be. They haven't been architected and implemented for the enterprise, but rather for the perceived complexities associated with engineering and its highly heterogenous user base (e.g., a software engineer has significantly different requirements than those of a mechanical engineer, and an electrical engineer is different from both of these).

A second reason often identified is that many of the PLM solutions have been designed by engineers for engineers. Of course, there is nothing wrong with engineers designing and delivering solutions for their peers, but since PLM really is an enterprise solution, a true PLM solution needs to be designed for a more diverse user base—as complex as necessary and as simple as possible. This requires an enterprise view—one that seeks to understand the entire extended enterprise’s needs and optimized from end-to-end. This isn’t an engineering only issue—it is a C-level issue that needs to be championed by a C-level player and implemented by those responsible for the enterprise, not just one department.

Finally, a third commonly seen issue is when PLM solutions are implemented to manage current processes as they exist, enabling a company to “do it their way” because they believe that they are fundamentally different from other companies and must have a uniquely tailored solution. While companies often start with good intentions, to manage the product development process steps, they often get sidetracked to even narrower or unsustainable solutions. Unfortunately, many companies do not stop to think about what they really need across their entire enterprise from an end-to-end lifecycle perspective. They start their PLM project with good intentions—“let’s make things easier,” but often end with... “let’s automate how we do things today and create a totally new environment where people will work.” In many companies “how we do things today” often is not well understood and it turns out that people frequently work around inherent or perceived faults in processes, so implementing existing processes may be counter-productive. The result is often a highly customized and complex solution that is neither extensible nor sustainable. All of which leads to more complexity, because to get the job done, many people feel that they need to go around the new system instead of allowing the system to serve them. Over the years, IT and engineering have both argued that structure is required and without structure, chaos ensues. While taken to the extreme that is probably true, not having structure isn’t what keeping it simple is about. It is about finding the right balance between organizational control and individual freedom to innovate (see the Figure).



## **PLM Must Satisfy a Delicate Balance Between User and Organizational Needs**

### **Finding the Right Balance**

The reality is that the cost and time associated with doing things in an environment where disconnected product data and lack of workflow management are the primary modes of operation is often greater than doing things in a more disciplined, repeatable, and structured manner. The lack of process and data management discipline leads to duplication of effort and redundancy of data (which introduces even more errors) because of poor visibility and transparency across groups and their team members. This clearly makes synchronization and collaboration across multi-disciplinary activities and organizational boundaries extremely difficult to manage and execute. This then results in process redundancy and inefficiency, longer lead times, more changes, rework, scrap, etc. But to what extent should things be forced to be alike and at what point will a level of forced discipline restrict one’s ability to innovate?

In many circles, people argue that discipline restricts innovation. This is true if discipline is taken too

far. It should be noted that it is discipline (i.e., repeatability) that is required, not the automation of bureaucratic workflows and forcing everyone to use the same tool set. Establishing an appropriate level of discipline (or conformity) allows for and streamlines the sharing of knowledge and best practices, thereby providing individuals with the clear, concise, and valid data foundation and time needed to innovate. When people are only fighting fires and/or hunting for data, there is little time to innovate. CIMdata's experience from reviewing major PLM implementations across industries clearly indicates that a properly defined and implemented enterprise focused PLM solution doesn't restrict the organization or its individuals, but rather enables the innovation engine—allowing the company to work faster and more productively in a more managed and disciplined fashion. The PLM solution supports the user community, not the other way around.

Ultimately, a company's PLM solution must be implemented to enable the enterprise and its entire user community to do their work in the simplest manner possible. So, one might ask, to what extent should things be the same? Some argue for a high degree of common systems and processes, but that has proven not to be the answer. For one thing, business change is inevitable, and for some companies change is forced on them—so they either change or no longer exist. In the end, we have to architect and plan for change in our processes and supporting systems. Additionally, it should be noted that the true PLM user community is made of a diverse set of user types, with many requiring very different capabilities and processes. So, does everyone need to use the same tools to capture and manage product data, or is the data itself the most important element? At the end of the day, it is about the data. It is the data upon which individuals, departments, and organizations communicate and collaborate, *not the tools being used*. It is the data that we create and manage that define our company's products and/or services that we deliver. Therefore, it must be sharable and understandable by all who need it throughout the extended enterprise, as well as the end-to-end lifecycle.

According to leading scholars, the famous Italian polymath, Leonardo da Vinci stated that "Simplicity is the ultimate sophistication." So, if that is what we are after, where do we start?

## **Keeping PLM Simple Starts with Vision**

If your PLM vision is complex, then your implementation will probably be as well. As an example, ask yourself, are you trying to circumnavigate the globe with a bicycle in one week or are you trying to make travel arrangements with a commercial airline to attend the annual international jazz festival held in Pori, Finland in July. Both could be considered visionary, but circumnavigating the globe with a bicycle in one week isn't necessarily feasible. Again, complexity starts with vision. Keep it simple, but do make it a stretch objective. If it is too easy to reach or too narrow (e.g., it only covers engineering), then it will probably not be holistic enough, nor maximize the company's return on investment (ROI). But if it is seen as unreachable, very few will buy in and you'll never find a commercially available solution that can support it.

To keep it simple, a clear vision that inspires and is achievable, needs a straightforward roadmap. Complexity inherent in a vision can easily derail a PLM implementation project. Again, it's not about doing everything at once, but rather taking the right amount of time and steps to transform the organization to new and valuable ways of working. Trying to do too much, too fast is a recipe for disaster. Generally speaking, this means using an iterative and Agile approach that defines and implements an appropriate set of Epics (a logical collection of user stories) in a series of Agile Sprints. These should in turn, deliver necessary functionality and benefits to the user community in six month or shorter blocks. Longer timeframes make organizational acceptance more difficult and generally forces the PLM team to focus on trying to deliver too much at one time, which in turn makes the delivery more complex and costly than it needs to be. Additionally, the longer you spend designing, the greater chance

that the business' requirements have changed—so time is of the essence.

Last, but not least, the solution itself must be architected in as simple a manner as possible—one that can easily adapt to your changing business reality. Ultimately, this means that one size doesn't necessarily fit all. Like most solutions to a problem, many PLM software solutions can be configured to fix any problem at hand, but that doesn't mean that they should be. To use an analogy, you could buy an old school bus to commute back and forth to work, but it would be more appropriate to purchase a used compact car if you are commuting 40 miles in each direction, are the only passenger, and don't have to transport any other goods. While both solutions will transport you, one solution is much more costly and complex than the other. It would be even better if you had access to the type of vehicle you need based on your current requirements (i.e., more of a short-term leasing model that gave you access to different vehicles depending on your evolving needs). The same applies to software solutions. While more complex solutions can solve many problems, they are often overkill and don't provide any additional benefits than simpler ones. In fact, often the opposite is true, more complex solutions tend to drive the cost of implementation and support up, and therefore result in less benefits to the organization. Ultimately, what you need is a solution that is simple—one that has been architected to be a resilient, flexible, and easily upgradable.

## **What to Look for in a Solution**

First and foremost, a company must look for a solution that maximizes its return on PLM investment (e.g., the true cost/benefit analysis over a five or more-year period). A close and critical second, a company must select a solution that can be implemented in a manner that best satisfies the attributes of a sound Product Innovation Platform. This means it can enable an environment that best satisfies the five defined Strategic Imperatives for platforms (i.e., Connection, Gravity, Flow, Openness, and End-to-End Lifecycle Support), as well as the seven Foundational Characteristics (i.e., Sustainability, Data management & find, Through-life configuration management & traceability, Process & knowledge management, Upgradeability, Enterprise infrastructure utilization, and Availability & stability). So, what does this all really mean? Do we need to rip everything out and replace it with one monolithic system? While this may be the best approach for some companies, it will probably not maximize the PLM-related ROI for most.

What is really needed is to implement, over time, a solution that allows you to tie together the enterprise's various data creation and management systems into a holistic and end-to-end digital environment where manual touch points have been minimized or completely removed. A solution that makes it easier for technical, as well as non-technical groups (e.g., sales and marketing) to access and use product-related data as needed to perform their tasks. This creates an environment that enables users to work within their natural tools as much as possible and avoid data reentry where error often enters the lifecycle digital thread. When approaching PLM in this way, data management and the bigger lifecycle management enablement become a wrapper around the personal and departmental level productivity tools. It isn't about ripping and replacing everything, rather it is about enabling a natural work environment where users focus on what they were hired to do, not one that creates additional data and process management overhead that has to be fought with to get one's job done. What's needed is an environment that leverages or evolves existing solutions to enable the right level of innovation freedom, as well as tying together product-related data, tools, and processes that create and manage the digital thread and associated digital twins for a company's products throughout their lifecycles.

## **Concluding Remarks**

The famous quote from the American polymath, Benjamin Franklin, states that "...in this world nothing can be said to be certain, except death and taxes." While true, it misses one other apparent universal

truth, and that is change is also certain. Without change, things just stop being. Today's global ecosystem is all about change. Companies of all shapes and sizes need to evolve, not just today, but allow for and plan for change well into the future. Most companies' products are evolving to include richer functional capabilities and connectivity, which require more disciplines to work together, and not just engineering disciplines. All of this means that companies and their workers need to have processes and an enabling innovation platform that can be easily changed and adjusted to fit today's and then tomorrow's business requirements.

Albert Einstein, the famous German-born theoretical physicist, said it best, "Everything should be made as **simple** as possible, but not simpler." There should be no doubt, simple is best. There is no simpler way to put it. When the complex is made as simple as possible, ROI is maximized and innovation flourishes. It is that simple. Don't overengineer, but do engineer, because creating the right and achievable vision and implementation roadmap are critical and can't be brushed aside. Above all, ensure that your PLM solution (i.e., the resulting PLM environment) addresses your complete enterprise PLM requirements (i.e., today's as well as what might be tomorrow's) in the simplest manner possible so that it's naturally used by your entire organization, forming an effective and innovative work environment.

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## Acquisitions

### *Hexagon enhances its Smart Factory solutions with the acquisition of Romax Technology*

28 February 2020

Hexagon AB, a global leader in sensor, software and autonomous solutions, announced the signing of an agreement to acquire Romax Technology Limited, a leading provider of Computer Aided Engineering (CAE) software for electromechanical drivetrain design and simulation.

A greater focus on energy efficiency and an accelerating shift towards electrification brings new engineering challenges that require increased use of simulation tools earlier in the design lifecycle. Romax Technology brings more than 30 years of experience in electromechanical simulation and multi-physics design optimisation.

The cloud-enabled MBSE (model-based systems engineering) platform, Romax Nexus, provides a complete workflow for designing, simulating and delivering the next generation of energy efficient drive and power generation systems, enabling engineers to collaborate and optimise electrical and mechanical design simultaneously. By simulating the operation of the entire system - engine, gears, bearings and housings - the efficiency of automobile, aerospace and wind turbine powertrains can be optimised, and the battery range of electric vehicles can be increased.

"One of the greatest challenges of our time is the battle against climate change and the need to reduce GHG emissions. The acquisition of Romax Technology enables us to meet the growing need for electrification, providing our customers with integrated tools that empower engineering teams to develop the next generation of energy-efficient electric vehicles," said Hexagon President and CEO Ola Rollén. "Electrification is a growing trend in automotive and aerospace but also presents new opportunities for Hexagon in the development of renewable energy systems."

Headquartered in Nottingham, UK, Romax Technology has approximately 240 employees globally serving more than 250 customers in the automotive, aerospace, wind power, marine, bearing and rail

industries. The company will operate as part of Hexagon's Manufacturing Intelligence division. Completion of the transaction (closing) is subject to standard regulatory approvals. 2019 sales amounted to 27 MEUR.

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### ***Wipro Digital Acquires Rational Interaction, Enhancing Customer Experience Offerings and Boosting Digital Marketing Capabilities***

24 February 2020

Wipro Digital, the digital business unit of Wipro Limited announced that it has acquired Rational Interaction, a full-service digital customer experience (CX) company.

The acquisition will scale Wipro Digital's offering for Chief Marketing Officers, connecting Rational Interaction's ability to map and orchestrate the customer journey with Wipro Digital's ability to design and build experiences at global scale. Together, the companies will provide bespoke and effective solutions for the marketing suite.

Long-term revenue cannot be generated from a single splashy marketing effort. Rather, it requires an ecosystem of connected touchpoints across the entire customer journey. The combined offerings from Wipro Digital and Rational Interaction will address this and help CMOs scale for the future. Rational Interaction helps brands create sustained CX program success, with core offerings that include strategic advising, customer acquisition, and customer lifecycle management. This expertise in digital marketing and experience management complements Wipro Digital's capabilities across digital engineering, architecture and design. Rational Interaction's deep CX expertise and Wipro's global scale and industry expertise will provide companies and their CMOs with the comprehensive digital programs and journeys needed in today's customer-centric world.

“This acquisition comes at a time when companies increasingly compete solely on CX, and the market for CX spending is growing exponentially,” said **Rajan Kohli, President and Head, Wipro Digital, Wipro Limited**. “Discovering, refining and optimizing the customer experience from first impression through repeat sale requires best-in-class talent, unique marketing technologies and methodologies, and the ability to scale and demonstrate payback quickly. Together, Wipro and Rational Interaction are a perfect combination for CMOs.”

The end-customer in almost every industry, but especially the hi-tech industry, is being constantly redefined. As a result, customer and channel partner journeys need to be re-imagined.

“Capturing customer sentiment in real time and using AI to engage with customers in more meaningful ways will drive higher engagement, purchase and loyalty. Rational Interaction's and Wipro's combined capability provides an end-to-end solution for clients, who know they have to compete on customer experience,” said **Nitin Parab, Sr. Vice-President and Global Head, Technology Business Unit, Wipro Limited**.

Founded in 2009, Rational Interaction is headquartered in Washington with more than 300 employees worldwide and offices in Seattle and Bellevue, WA; Dublin; and Sydney. Founded and led by women, the company has become one of Washington state's 100 largest privately-held companies with a roster of Fortune 50 clients.

“As companies continue their digital transformation journeys, we see CMOs increasingly stepping in as the leaders of these initiatives, tasked with representing the voice of the customer and ensuring that the

digital transformation pays off the brand promise. Wipro's global presence and partnerships with industry leaders provides an opportunity to scale Rational Interaction's CX offerings, building on our success in developing and launching brand-defining campaigns," said **Kahly Berg, CEO, Rational Interaction**.

"The customer journey has never been more complex and partnering with an industry leader such as Rational Interaction boosts our ability to create innovative, effective and scalable campaigns that drive brand loyalty while increasing customer retention and sales conversion. We partner with Rational Interaction to deliver marketing programs from a customer first perspective and create seamless brand experiences that continue to evolve to meet the needs of our constantly changing business landscape," said **Richard Black, Vice President of Marketing for Acer**.

Rational Interaction will continue to grow and service its clients, with no plans to reduce its current staff, as it integrates with Wipro Digital.

Investment Bank CG / Petsky Prunier, part of Canaccord Genuity, served as exclusive financial advisor to Rational Interaction in the transaction.

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## Company News

### *Accenture Opens Innovation Hub in Pune*

26 February 2020

Accenture opened its third Innovation Hub in India, expanding its innovation capabilities for clients. The Accenture Innovation Hub in Pune provides an immersive environment for clients to co-innovate with Accenture experts in a variety of industries and across a range of advanced technologies, including extended reality, artificial intelligence, the internet of things, blockchain and quantum computing, among others.

Part of Accenture's global innovation network, the Innovation Hub in Pune will seamlessly integrate with the Innovation Hub in Bengaluru and the Innovation Hub in Hyderabad, and will bring best of innovations and capabilities from India using state-of-the-art collaboration technologies.

"Rapid technology innovations are increasing the competitive pressure on businesses across the globe. At Accenture, we are focused on helping our clients predict and prepare for these changes by applying advanced technologies to shape their future," said Bhaskar Ghosh, group chief executive, Accenture Technology Services. "Our new Innovation Hub in Pune will bring together the best of Accenture's technology and innovation capabilities from around the world, enable our clients to scale their technology investments and boost their business outcomes across the enterprise, and create new opportunities for local talent."

Located in SP Infocity in Pune, the new innovation hub will have more than 1,200 people working out of it and will feature Accenture's second Nano Lab in the Asia-Pacific region. The Nano Lab will showcase the latest breakthroughs in applied research from Accenture Labs worldwide, featuring uses for advanced technologies such as artificial intelligence, extended reality and quantum computing. It will allow clients to connect with researchers in Accenture Labs globally through immersive sessions and workshops.

Some of the focus areas of the innovation hub include helping clients develop new customer experiences

using digital technologies to address the growing complexity of brand-customer interaction, and using the Industry X.0 framework and resources to help clients accelerate innovation outcomes and recast business models.

Accenture Innovation Hubs are an integral part of the Accenture Innovation Architecture, which brings together capabilities needed to ideate, prototype, build and scale disruptive solutions for clients across geographies and industries. The Innovation Hub in Pune will join others in Bengaluru and Hyderabad, India; Recife and Sao Paulo, Brazil; Toronto, Canada; Shenzhen, China; Helsinki, Finland; Tokyo; Zurich; Perth, Australia; Singapore; and 11 Innovation Hubs in the United States, including Atlanta; Boston; Chicago; Detroit; Houston; New York; San Francisco; Seattle; and Washington, D.C.

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### ***Applause Partners with Infosys to Launch Digital Testing Services for Clients***

27 February 2020

Applause announced a new partnership with **Infosys**, a global leader in next-generation digital services and consulting, to provide broader end-to-end digital experience testing services to clients.

**The partnership** combines Infosys' behind-the-firewall validation with Applause's white-glove crowdtesting approach to deliver tangible results for clients across three focus areas — getting closer to customers, increasing development velocity and delivering high-quality digital experiences.

Key benefits of the joint solution include:

- Increased speed and scale to test in multiple geographies simultaneously
- Domain and subject matter experts available on demand
- Shorter user experience testing and feedback cycles with actionable results available in real time

Clients are already leveraging the solution, with a leading US-based credit card company using it to launch a new card promotion. The promotion was built and hosted by Infosys, and then tested in eight cities by real client customers who were part of a vetted team managed by Applause. Within 10 days, the team identified misclassifications for 15% of the tested transactions and was able to fix the back-end defects before they appeared on cardholder statements. The joint approach enabled the credit card company to deliver a fast and flawless roll-out of the new bonus promotion, driving high customer satisfaction while limiting customer service costs associated with launching a flawed promotion.

The Applause-Infosys partnership will deliver brands accelerated feedback from a full suite of testing capabilities that fit seamlessly into clients' Agile processes, allowing them to test more frequently, with better device coverage, even faster.

“We invented the crowdtesting category over a decade ago, and we are the place that digital leaders turn to ensure their new customer experiences work flawlessly – on every device, in every language, in any location,” said **Doron Reuveni, founder and CEO of Applause**. “Every new release and digital experience – whether it's an app, chatbot or omnichannel purchasing experience – should be tested by actual users in real-world situations. Together we can ensure a broader set of clients can easily access these essential solutions.”

**Mohit Joshi, President, Infosys**, said, “The relationship with Applause strengthens our ability to offer clients the highest-quality digital testing services. This will ensure that our clients' digital experiences are validated by real customers and highly vetted testers before new features are released into the market

thereby improving our clients' customer satisfaction ratings.”

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## ***AVEVA Announces European Simulation Academic Competition***

28 February 2020

AVEVA, a global leader in engineering and industrial software, is unveiling its 2020 European AVEVA Simulation Academic Competition. The contest, which is entering its second year but marks its inauguration in the European region, provides an exclusive opportunity for one winner to conduct a three-month internship at the AVEVA offices located near Lake Forest, California, and receive a €3,000 prize.

The European part of the AVEVA Academic Program Competition commenced on 1st February 2020 and is open to students from countries in the European Union and the United Kingdom, Ireland, Norway and Switzerland. The closing date for all entries is 31st March 2020 with the winner to be announced on 30th June 2020. Contestants can access more information and enter the competition online on the AVEVA Academic Competition webpage.

The 2020 competition invites students to solve a real-world engineering problem by learning and leveraging AVEVA Simulation, a next-generation simulation platform designed for the development and control of the complete engineering lifecycle. The competition is open to students studying chemical engineering and provides the winning student with the unique opportunity to apply what they have learned in the classroom to a real-life industry software project. Following the same model as the 2019 competition, the 2020 runner-up will win a €1,500 prize.

AVEVA Simulation is easy-to-learn software and students with no prior experience of the platform are encouraged to enter.

**Winner of the first North America AVEVA Simulation Academic Competition, Ryan Muir, encourages all those studying Chemical Engineering to apply:** “When I decided to enter the competition, I had never used AVEVA Simulation and it was my first time using a dynamic simulator,” says Muir. “The best advice I can offer all contenders is to be creative as it’s far easier to write your own models that can then be used throughout the simulation. Also, be sure to consider how you will incorporate what you have learned in your university classes. Custom models are guaranteed to make your simulation stand out from the crowd.”

As winner of the 2019 North America competition, Mr. Muir commenced a permanent position as a Software Models & Applications Engineer at AVEVA’s Lake Forest office in California in January 2020 and is now responsible for developing models and building applications using AVEVA Simulation. **Mr. Muir adds:** “I was so impressed by the wide range of technologies and innovations available for me to work with and I am thrilled AVEVA has given me an opportunity to join the Simulation team. I’m starting my career at a great company with an inspiring group of colleagues who actively support young engineers.”

**Renowned chemical engineer Dr. Richard Turton, author of the industry-hailed book titled Analysis, Synthesis and Design of Chemical Processes and joint host of the competition,** praises the uniqueness of the competition: “Expanding this competition to the European continent enables us to bring an internship opportunity to a wider pool of next-generation talent. As the software engineering industry continues to undergo unparalleled digital transformation, the role played by engineers of the

future will come into greater prominence. I am honored to support AVEVA with this initiative.”

**Amish Sabharwal, Executive Vice-President, Head of Engineering Business at AVEVA, says:** “We are thrilled to launch the AVEVA Simulation Academic Competition into its second year, and honored to introduce it for the first time to students in Europe. This competition demonstrates AVEVA’s continued commitment to developing and supporting the exceptional raw talents that we are seeing evolve out of many global universities. Last year’s North America winner, Ryan Muir, is a success story that represents how we train and nurture our staff, whatever their location, and we are thrilled to see him take on a full-time position at AVEVA.”

All entries will be judged against a framework that considers the quality and technicality of the entrant’s final project report. This is in addition to the procedure followed, the quality of analysis, and completeness and accuracy of the work. The competition seeks a candidate with strong skills that are either directly or indirectly related to process engineering and simulation.

### **Terms and Conditions of Prize:**

- a. The grand prize winner will receive a three-month paid internship with Sponsor in Lake Forest, California (the “Internship”). The Internship includes a flight and housing allowance of 3,000 Euros. The grand prize winner must meet all necessary criteria (e.g., visa requirements) to receive the Internship. Should the grand-prize winner choose not to accept the Internship, the grand prize winner will receive a cash prize of 3,000.00 Euros. The grand prize winner receives either the Internship or the cash prize, but not both. The Internship or receipt of 3,000.00 Euros cash prize is the “Grand Prize.”
- b. The runner-up winner will receive a cash prize of 1,500.00 Euros (“Runner-Up Prize”).

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### ***Dassault Systèmes Launches “The Only Progress is Human” to Inspire Solutions to Major Global Challenges***

26 February 2020

Dassault Systèmes announced the launch of “The Only Progress is Human,” a global initiative to increase awareness of today’s societal and environmental challenges, and to inspire people to use the virtual world to imagine sustainable innovations for a better future.

During a two-year period, Dassault Systèmes will engage with the public through 10 “Acts” that focus on some of the most pressing issues humanity faces in health, cities, energy, water and other areas.

These Acts will illustrate how virtual twin experiences empower people to address challenges ranging from, ‘How can we better control our health in the future?’ to, ‘How can we safeguard our most precious resource?’ and drive progress by reimagining the future, changing the way products are designed and made, and creating human-centric and real-world experiences.

The first Act, focused on emotion and the challenge, ‘How can virtual worlds change the way we experience emotions?’ will take place February 26 at the Jardin des Plantes in Paris to show how the virtual world can engage both the intellect and the emotions, making it a powerful enabler of positive action. The unique musical and visual experience called ‘Virtual Harmony’ will feature the 3Dvarius, the first fully playable 3D-printed violin – designed using Dassault Systèmes’ solutions – and a call to action for students to create the next generation of musical instruments.

“The greatest value of virtual worlds lies in the potential they offer for imagining a better future while understanding the social and environmental impacts of every design decision. Virtual will be the vital

link between the imagination, the useful and the sustainable to create harmony between product, nature and life,” said Bernard Charlès, Vice Chairman and CEO, Dassault Systèmes. “Dassault Systèmes’ vision is to lead a transformative global shift to a new era of truly sustainable innovation with people at the forefront. We decided to bring our vision to life through 10 Acts that will challenge perceptions and inspire action. We want to reveal, celebrate and enable the incredible potential humans have for innovation when they work together.”

Virtual twin experiences created with Dassault Systèmes’ 3DEXPERIENCE platform and applications have already helped industry to pioneer new medical treatments, improve service deliveries in cities, and design a sculpture that absorbs pollution. They open up new possibilities for discovery by enabling people to design, simulate, test, understand and experience solutions in the context of their usage, before physically creating them.

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## ***Digital Technology is Driving Tennis Experience Beyond the ‘Golden Era’***

27 February 2020

*Tennis Radar: The Next Big Era*, a report by the Infosys Knowledge Institute (IKI), the research and thought leadership arm of Infosys, a global leader in next-generation digital services and consulting found that tennis must embrace new inclusive experiences, powered by technology and analytics to engage the next generation of fans. The research surveyed 3,000 tennis fans globally and interviewed with prominent organisers, coaches, professional players, industry influencers and media. Infosys is the digital innovation partner of ATP Tour, Australian Open and Roland-Garros.

### **The drive and need for access and inclusion**

Tennis participation has grown 10 percent globally in the last 5 years. Tennis has successfully expanded to and has reached new players and audiences across the globe. However, despite this new found reach, experts of the game suggest that there’s a large untapped pool who may never watch or play tennis because they think it’s “exclusive” and “difficult to play”.

The report found that tennis is becoming more accessible through experimentation at all levels, from grassroots to grand slams and through fantasy leagues, Esports and technology like virtual reality that bring new fans to tennis. Nearly a quarter of the players globally come from China (23 percent), yet the country has only 10 percent of the world’s tennis courts and only a few clubs, stifling potential growth in a sports market tipped to reach \$470 billion by 2025.

While China averages 393 players per court, at the other end of the scale France averages just 87, Australia 104 and Germany 122. The report also found tennis fans are aging, and the average age of tennis fans—in the West, at least—is higher than the average age of the population.

### **Data analytics and digital technology: creating a level playing field**

At the elite level, the research found equal access to detailed player and match data analytics. The report references Infosys’ StatsLounge, democratising match data for all players and coaches to analyse their performance, examining crucial match stats using sophisticated filters to generate video clips from more than 1,000 data combinations. But it’s not just players and coaches who are hungry for data. The report found fans also seek more detailed match and player insights with the rise of second screen viewing.

### **The age of experiences**

The report found that like all consumer products, tennis is no longer a discrete activity, it’s an experience — consisting of dispersed, shareable micro-moments both on and off the court.

Recent research by Tennis Australia found the ‘fun’ aspect of the Australian Open atmosphere as the

second-most important factor for attendance for people under 50. “At the Australian Open we are crystal clear what has led to us trebling our business in 5 years. Taking a Grand Slam tennis tournament and adding to it has expanded our audience into new segments and geographies. But you have to commit. We take our ‘families’ business, our music festival and our food vertical as seriously as we do our tennis. If you don’t, it doesn’t succeed,” said **Richard Heaselgrave, Chief Revenue and Experiential Officer**.

## **Technology driving growth of Tennis**

While tennis in recent years has seen multiple formats and innovations trialed at different levels of the sport, fans across all age groups, including GenZ (84 percent) and millennials (85 percent), said match length is not a primary barrier to engagement with the sport. The report identified opportunities to introduce new fans to the sport globally with analytics-based and virtual and augmented reality technologies.

Analytics-based experiences improve enjoyment for 83 percent of fans surveyed according to the Tennis Radar research. For example, fans at the Australian Open can play against the greatest tennis players in the world using VR and AR technology — in a simulated Rod Laver arena, the Australian Open’s centre court. More than 125,000 fans have engaged with Infosys VR at the Australian Open, Roland-Garros, and Nitto ATP Finals and other ATP events. Similarly, Roland-Garros plans to involve pros from the Esports area within the Roland-Garros eSeries, to tighten the link between real-world and virtual-world tennis fans.

## **Experience Index**

To understand how data and analytics impact fan enjoyment of the game, the Infosys Knowledge Institute created the Analytics Experience Index, synthesizing fan response to multidimensional questions about match technologies, player statistics and game data.

The Index found that analytics improves fan enjoyment, particularly among younger and more tech savvy audiences. Over a third (38 percent) of 18-22 year olds were identified as the highest category of tennis technology and analytics ‘Enthusiasts’, compared to just 13 percent of those 55 and older.

“At Roland-Garros, we believe innovation, social technology and analytics-based experiences have a key role to play to make tennis more accessible and more engaging to the existing and new generations of tennis fans and our partnership with Infosys will ensure the Roland-Garros DNA remains true to our roots but can also evolve and be future ready,” said **Michael Tonge, Director of Sponsorship, hospitality and ticketing, FFT**.

Social technologies are also helping tennis grow, including at the club level, with apps like Tennis Connect, where users can schedule courts and invite others to play. Similarly, Tennis Australia’s Book a Court platform enables people to book a court anywhere, anytime, and pay via mobile phone. France’s FFT launched Ten’ Up in April 2019 and has over 200,000 downloads. **U.B. Pravin Rao, Chief Operating Officer, Infosys**, said “Tennis doesn’t resonate with people if access to playing and watching the game isn’t made easy. Infosys is proud to be a digital innovation partner of the ATP Tour, Australian Open and Roland-Garros. This research reinforces that tennis can become even more successful if it can increase access to playing, watching, and understanding the game, and to do that, technology —especially social technology and analytics-based experiences—will play a vital role.”

**Notes to Editors** \**Wimbledon.com, USOpen.org, RollandGarros.com, Ausopen.com*

## **Survey Methodology**

In October 2019, the Infosys Knowledge Institute used an anonymous format to conduct an online survey of 3,085 tennis fans from eight countries -- Australia, China, France, Germany, India, Spain, the United Kingdom, and the United States.

To enrich insights, we also conducted phone interviews with more than 30 stakeholders representing

player, coach, event organizer, club owner, equipment manufacturer, media, and broadcaster perspectives.

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## ***DXC Technology Advances Deployments of Augmented, Virtual and Mixed Reality Technologies for Enterprises in the Connected, Digital Workplace***

25 February 2020

**DXC Technology** highlighted how it is helping enterprises accelerate the adoption of augmented reality (AR), virtual reality (VR) and mixed reality (MR) technologies to support immersive experiences in ways that can significantly improve productivity, quality and efficiency.

DXC is using AR, VR and MR technologies today to transform the future of work, and the company is seeing widespread implementation to improve safety, connect remote workers, assist with complex tasks and enhance training and collaboration – all in ways that drive business results and profitability.

“Digital transformation in the workplace is edging towards an inflection point as enterprises are incorporating immersive solutions that connect the real world with the virtual world,” said **Maria Pardee**, DXC’s senior vice president and general manager, Workplace and Mobility. “DXC is using the power of AR, VR and MR to align the next-generation digital capabilities employees want so they can be more mobile and independent, with the critical security, production prowess and agility that today’s businesses demand.”

### **DXC Deploys Mixed Reality Employee Training at Water Treatment Leader Ixom**

A market leader in water treatment and chemical distribution in Australia and New Zealand, Ixom turned to DXC to develop a custom training and assessment application using mixed reality on Microsoft HoloLens.

In the past, Ixom training and learning assessments were conducted at customer sites, requiring travel, scheduling and employee resources to mitigate safety risks. Now, using DXC’s mixed reality application for Microsoft HoloLens — custom built for Ixom — employees can participate in the required training and learning assessment at any Ixom office or remote location. The resulting increase in flexibility, autonomy and mobility has reduced Ixom travel costs, minimized employee safety risks and essentially eliminated the potential for exposure to hazardous materials during training at treatment facilities.

DXC is named a Leader in Advanced Digital Workplace Services Overall in the **NelsonHall Evaluation & Assessment Tool (NEAT) Report 2019**. DXC is also an official partner in the Microsoft HoloLens Mixed Reality Partner Program, a status that reflects the company’s commitment to designing, developing and deploying solutions that help customers accelerate their digital transformations using mixed reality technologies.

The following DXC offerings enable immersive solutions using AR/VR technologies:

- **DXC AR/VR services** consist of AR/VR consulting, custom application development and system integration for a range of AR/VR devices including Microsoft HoloLens. DXC is also a Distributor Managed Partner for HoloLens 2 and provides services for MR business applications such as Microsoft Dynamics 365 Guides.
- **DXC Remote Expert** is an innovative AR solution that enables field workers in various industries (automotive, energy and utilities, manufacturing, travel and transportation, and healthcare) to display work instructions via a hands-free interface on their wearable or mobile

devices and connect to experts at other locations when they need guidance.

- **DXC Unified Endpoint Management** enables enterprises to manage and secure mobile, PC, internet-of-things (IoT) and wearable devices in a single pane of glass. DXC's collaboration with industry-leading technology partners, combined with DXC transformation, delivery and support services, provides users with secure and seamless access to enterprise applications, data and services independent of operating system, device type or location.
- **DXC Workplace IoT** enables enterprises to securely deploy and manage smart connected devices by combining IoT solutions, best practices, and market-leading platforms and technology partners to improve production, operational and human outcomes; automate processes with analytics; and gain situational awareness.
- **DXC Open Health Connect** creates a connected ecosystem that optimizes services for patients, healthcare providers and payers, using AR to provide better patient outcomes.

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### ***ESD Alliance Welcomes Avery Design Systems to Member Community***

26 February 2020

The Electronic System Design Alliance, a SEMI Strategic Technology Community representing members in the electronic system and semiconductor design ecosystem, today welcomed Avery Design Systems as a member after its 10-member Governing Council approved Avery's membership application.

Already a member of SEMI, the global industry association representing the worldwide electronics product design and manufacturing chain, Avery wanted more involvement in the ESD Alliance because of its focus on the design community.

"Being part of SEMI's broader mission and global reach is part of the ESD Alliance's attraction to the design community," states Chilai Huang, Avery's president and chief executive officer. "For an emerging company such as Avery, the Export and License Management and Anti-Piracy Committees offer a central resource for informed information to address a variety of vexing issues." Huang also noted the ability to receive the detailed Market Statistics Service (MSS) data as another resource to help Avery make engineering and business decisions.

"We welcome Avery into the ESD Alliance," remarks Bob Smith, its executive director. "We expect to draw on Avery's expertise and insights about the verification space to assist us with planning, educational networking events and other timely initiatives of interest and support to that growing community."

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### ***Infor and Snowflake Partner to Build Automated Data Warehouses with Birst Full-Stack Analytics & BI Platform***

25 February 2020

Infor, a global leader in business cloud software specialized by industry, announced it is partnering with Snowflake, the cloud data platform, to help enterprises build automated data warehouses using the

Birst full-stack analytics and BI platform.

Birst is a single, integrated, end-to-end platform for building automated data warehouses natively on Snowflake, eliminating the need for separate ELT/ETL (extract, load & transform, and extract, transform & load), data modeling, data preparation and analytics tools. In addition, the Birst platform will provide enterprise data governance and fine-grained control/security, at the row and column level, within Snowflake, along with auditing and built-in usage tracking.

Joint customers can use Birst's self-service data preparation capabilities to blend end-user-created data with enterprise data in Snowflake, providing true self-service for business users and analysts.

Birst and Snowflake both run natively in AWS (Amazon Web Services), which speeds data processing and querying, while obviating the need to export data out of Snowflake.

"We are excited about our partnership with Infor," said Kevin Miller, Snowflake vice president of systems integrators. "With this integration, customers can now take advantage of Birst's Networked BI automation and intelligence within Snowflake. This will allow customers an optimized experience while eliminating unnecessary data movement."

Kim Davis, Infor vice president of BI & analytics partnerships, said, "Our joint customers will benefit from the speed, scalability, and cost-effectiveness of Snowflake's zero-management, cloud-built data warehouse. Through this partnership, users can perform all ELT transformations and data warehouse automation within the Snowflake database."

The Birst cloud BI and analytics platform helps organizations understand and optimize processes in less time than traditional solutions. Built with patented automation and machine learning technologies, Birst connects teams and applications across the organization via a trusted network of analytics, delivering insights that help organizations make smarter decisions. This unique approach has helped organizations transform the way they operate, often in 90 days or less.

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## ***TCS UK Named in The Sunday Times List of Best Big Companies to Work For 2020***

24 February 2020

Tata Consultancy Services (TCS), a leading global IT services, consulting and business solutions organization, has been featured as one of the 25 Best Big Companies to Work For in the UK by The Sunday Times, for its outstanding commitment to workplace engagement. The ranking was announced as part of The Sunday Times' annual list of the 100 Best Companies to Work For.

The Best Big Companies list honours 25 large corporations, having at least 2,000 full-time employees, with the highest Best Companies Index scores. TCS was recognized for its employee-friendly workplace practices and continued investments in building up local talent in the UK through professional development initiatives and digital skills programs. More than 90% of the company's 19,000 employees in the UK and Ireland, have been upskilled in the last two years, and further investments are planned in ongoing learning programmes around digital technologies, artificial intelligence and DevOps.

By partnering with some of the UK's largest corporations in their growth and transformation initiatives, TCS grew organically by over 20% in FY2019, making it one of the top three providers of IT and IT-enabled services in the UK. It is also one of the largest recruiters of IT talent in the country. TCS' UK workforce is a young and diverse one, with 54 nationalities represented. Women make up 28% of the workforce, much higher than the 17% average in the UK IT sector.

A variety of initiatives such as Rising Stars, Emerging Leaders and the Leadership Exchange, facilitate personal and professional development at every level in the organisation. These investments, initiatives and TCS' progressive workplace policies have led to a best in class retention rates. TCS has also been ranked the number 1 Top Employer in the UK by the Top Employer Institute for four years in a row.

*"We are delighted to receive this recognition of our people practices," said **Amit Kapur, Country Head, TCS UK and Ireland.** "With our progressive policies and investments in our people, we have created a vibrant and engaging workplace that provides opportunities to our employees to learn and grow with the organization and realise their potential. Moreover, our purpose-driven world-view resonates very well with employees who want to work on social causes in the community."*

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### ***Trimble Partners with Engineers Without Borders USA to Support Global Disaster Relief and Recovery***

27 February 2020

Trimble announced that it is partnering with Engineers Without Borders USA (EWB-USA) to expand the organization's efforts to provide engineering assistance in response to natural disasters worldwide. As part of this support, on the recommendation of Trimble Foundation—a donor-advised fund—a grant was made to EWB-USA. This grant will significantly grow EWB-USA's capacity to train and develop more qualified engineers in vulnerable regions and to scale EWB's disaster response, recovery and resilience engineering work worldwide.

EWB-USA's engineering expertise is highly valued and utilized by major international aid organizations, such as the United Nations Development Programme (UNDP), in the aftermath of major natural disasters. EWB-USA provides crucial engineering aid in assessing damage, improving building standards and practices, and coordinating construction efforts to "Build Back Better." The Trimble Foundation funding will enable EWB-USA to significantly expand its disaster aid work by training and certifying more engineers and building local engineering capacity that can assist when natural disasters strike. This will aid EWB-USA in mobilizing capacity and increasing the organization's ability to deploy professionals for extended periods worldwide.

Trimble has long supported EWB-USA in its efforts to equip communities with the tools and knowledge for building and sustaining basic community infrastructure. With this recent donation from the Trimble Foundation, EWB-USA now has the ability to significantly scale the number of qualified EWB-USA engineers available for natural disaster relief and create the necessary engineering capacity to respond to more needs more effectively.

"Our vision is a world in which every community can sustainably provide for itself," said Cathy Leslie, chief executive officer of EWB-USA. "However, it takes more than a vision to provide these services. We are so thankful for companies like Trimble whose support enables us to access resources that move us faster and more efficiently from a vision to reality.

"By building on our relationship with Trimble and our existing collaboration with UNDP, we can bring the power of engineering to even more communities in need," Leslie added. "EWB-USA's work takes us to some of the world's toughest places, but each project, no matter how challenging, lays the foundation for a community to have a better future."

"We are excited to partner with EWB-USA in its vision to grow local engineering capacity and help

'Build Back Better' when natural disasters strike," said Rob Painter, president and CEO of Trimble and chair of the Trimble Foundation Fund Advisors. "While humanitarian agencies mobilize emergency aid, they often lack sorely needed engineering skills. Our goal is to support EWB in being a viable, reliable partner in international disaster work and to increase their ability to quickly respond to disasters."

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## ***Variantum and Seligent Consulting have signed a partnership agreement to provide PLM consulting services***

27 February 2020

Variantum are pleased to announce that we have signed a partnership agreement with Seligent Consulting. Variantum and Seligent Consulting will work in cooperation to provide PLM (Product Lifecycle Management) consultation. The partnership will enable both parties to improve the efficiency of client rollouts and integrations while creating the environment for further systems development.

Variantum believes that any company should be able to easily sell the products that their customers want, regardless of the complexity. To do this, they have developed a modular system that complements existing systems and simplifies the product offerings across the whole product lifecycle. Doing so, allows greater visibility across the whole organisation allowing for more accurate pricing, improved product processes and a clear digital product offering.

Seligent Consulting is an international company with offices in Pune, India, Stockholm, Sweden and Washington DC in the USA. They have spent many years assisting customers from different Industries in implementing data management solutions. They offer a wide range of product, productivity and consultancy tools that make it easier to realize the value from Enterprise Data Management solutions. "We bring deep expertise in the enabling technologies of these tools and consulting experience to this partnership with Variantum. Our collaboration will enhance our agility in serving our customers in Europe and beyond" says Seligent's CEO, Prashant Ganu.

"Variantum is one of the few companies in the world which can handle product data management, sales and product configuration, all in one system, so the agreement with Seligent is an excellent opportunity to expand our influence around the world" says Variantum's CEO, Kimmo Karhu.

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## Financial News

### ***Altair Announces Fourth Quarter 2019 Financial Results***

28 February 2020

Altair, a global technology company providing solutions in product development, high-performance computing and data analytics, released its financial results for the fourth quarter ended December 31, 2019.

"We continue to execute on our vision of transforming product design and customer decision making by leveraging simulation, data analytics and high-performance computing," said James Scapa, Founder, Chairman and Chief Executive Officer of Altair. "Our core simulation and optimization technologies performed well during the quarter and we remain highly encouraged by strong demand for our SimSolid

product, which continues to have one of the fastest new product ramps in our history. As we enter 2020, we continue to see macro headwinds in our automotive end market and given the potential impact of the Coronavirus on our customers we anticipate a more modest start to the year. However, we remain confident that our diversification across multiple verticals and products positions the company well to achieve above market growth over the long-term.”

“Software product revenue exceeded our expectations in the fourth quarter and our year over year growth rate accelerated sequentially to 27%,” said Howard Morof, Chief Financial Officer of Altair.

## **Fourth Quarter 2019 Financial Highlights**

- Software product revenue was \$101.2 million, an increase of 27% from \$79.9 million for the fourth quarter of 2018.
- Non-GAAP software product revenue was \$103.4 million, an increase of 29% from \$79.9 million for the fourth quarter of 2018.
- Total revenue was \$123.9 million, an increase of 20% from \$103.0 million for the fourth quarter of 2018.
- Non-GAAP total revenue was \$126.1 million, an increase of 22% from \$103.0 million for the fourth quarter of 2018.
- Net loss was \$(1.5) million, compared to net loss of \$(9.0) million for the fourth quarter of 2018. Diluted net loss per share was \$(0.02) based on 72.2 million diluted weighted average common shares outstanding, compared to diluted net loss per share of \$(0.13) for the fourth quarter of 2018, based on 70.5 million diluted weighted average common shares outstanding.
- Adjusted EBITDA was \$12.7 million, compared to \$12.9 million for the fourth quarter of 2018.
- Modified Adjusted EBITDA was \$15.0 million, compared to \$12.9 million for the fourth quarter of 2018.
- Non-GAAP net income was \$6.9 million, compared to non-GAAP net income of \$5.6 million for the fourth quarter of 2018. Non-GAAP diluted net income per share was \$0.09 based on 78.0 million non-GAAP diluted common shares outstanding, compared to non-GAAP diluted net income per share of \$0.07 for the fourth quarter of 2018, based on 77.7 million non-GAAP diluted common shares outstanding.
- Free cash flow was \$(0.2) million, compared to \$(5.5) million for the fourth quarter of 2018.

## **Full Year 2019 Financial Highlights**

- Software product revenue was \$366.7 million, an increase of 20% from \$304.4 million for the full year 2018.
- Non-GAAP software product revenue was \$375.7 million, an increase of 23% from \$304.4 million for the full year 2018.
- Total revenue was \$458.9 million, an increase of 16% from \$396.4 million for the full year 2018.
- Non-GAAP total revenue was \$467.9 million, an increase of 18% from \$396.4 million for the full year 2018.
- Net loss was \$(7.5) million, compared to net income of \$15.5 million for the full year 2018. Diluted net loss per share was \$(0.11) based on 71.5 million diluted weighted average common shares outstanding, compared to diluted net income per share of \$0.21 for the full year 2018, based on 74.9 million diluted weighted average common shares outstanding.

# CIMdata PLM Late-Breaking News

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- Adjusted EBITDA was \$39.5 million, compared to \$50.2 million for the full year 2018.
- Modified Adjusted EBITDA was \$48.5 million, compared to \$50.2 million for the full year 2018.
- Non-GAAP net income was \$24.8 million, compared to non-GAAP net income of \$32.8 million for the full year 2018. Non-GAAP diluted net income per share was \$0.32 based on 78.0 million non-GAAP diluted common shares outstanding, compared to non-GAAP diluted net income per share of \$0.42 for the full year 2018, based on 77.7 million non-GAAP diluted common shares outstanding.
- Free cash flow was \$21.7 million, compared to \$29.6 million for the full year 2018.

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## ***Autodesk, Inc. Announces Fiscal 2020 Fourth Quarter And Full-Year Results***

28 February 2020

Autodesk, Inc. reported financial results for the fourth quarter of fiscal 2020.

*All growth rates are compared to the fourth quarter of fiscal 2019 unless otherwise noted. A reconciliation of GAAP to non-GAAP results is provided in the accompanying tables. For definitions, please view the Glossary of Terms later in this document.*

- Total ARR increased 25 percent to \$3.43 billion;
- Billings increased 43 percent to \$1.49 billion;
- Total revenue increased 22 percent to \$899 million; recurring revenue represents 95 percent of total;
- GAAP operating margin was 15 percent, up 9 percentage points;
- Non-GAAP operating margin was 29 percent, up 10 percentage points;
- GAAP diluted EPS was \$0.59; Non-GAAP diluted EPS was \$0.92;
- Cash flow from operating activities was \$698 million; free cash flow was \$684 million.

"We ended fiscal 2020 on a very strong note with revenue, earnings, and free cash flow coming in above expectations. We are entering the sustainable growth phase of our subscription journey with great momentum," said Andrew Anagnost, Autodesk president and CEO. "Our construction business had a landmark year, we continue to gain share in manufacturing, and are making steady progress in monetizing non-compliant users. We are highly confident in our long-term growth drivers and fiscal 2023 targets."

"We delivered strong results across the board in fiscal 2020 and are reiterating our fiscal 2021 and 2023 targets," said Scott Herren, Autodesk CFO. "In fiscal 2020, we delivered ARR growth of 25 percent while expanding non-GAAP operating margin by 12 percentage points. Our resilient business model combined with multiple growth drivers, positions us well to deliver on our goals."

### **Fourth Quarter Fiscal 2020 Financial Highlights**

- Total ARR was \$3.43 billion, an increase of 25 percent as reported, and 26 percent on a constant currency basis. Acquisitions from the fourth quarter of last year contributed \$126 million or 3 percentage points of the growth. On a sequential basis, total ARR increased 6 percent as reported, and 7 percent on a constant currency basis.
- Subscription plan ARR was \$3.11 billion, an increase of 41 percent as reported, and 43 percent on a constant currency basis. Acquisitions from the fourth quarter of last year contributed \$126 million or 4 percentage points of the growth. On a sequential basis, subscription plan ARR increased 9 percent as reported, and on a constant currency basis. Subscription plan ARR

includes \$639 million related to the maintenance-to-subscription (M2S) program.

- Maintenance plan ARR was \$320 million, a decrease of 42 percent as reported, and on a constant currency basis. On a sequential basis, maintenance plan ARR decreased 12 percent as reported, and on a constant currency basis.
- Core ARR increased 21 percent to \$3.17 billion. On a sequential basis, core ARR increased 6 percent.
- Cloud ARR increased 102 percent to \$255 million. Acquisitions from the fourth quarter of last year contributed \$126 million or 72 percentage points of the growth. On a sequential basis, total cloud ARR increased 10 percent.
- Billings increased 43 percent to \$1.49 billion.
- Total revenue was \$899 million, an increase of 22 percent as reported, and 23 percent on a constant currency basis. Acquisitions from the fourth quarter of last year contributed \$32 million or 3 percentage points of the growth.
- Net revenue retention rate was within the range of 110 to 120 percent.
- Total recurring revenue in the fourth quarter was 95 percent of total revenue, up 2 percentage points from the fourth quarter last year.
- GAAP operating income was \$134 million compared to \$40 million in the fourth quarter last year. GAAP operating margin was 15 percent, up 9 percentage points.
- Total non-GAAP operating income was \$259 million compared to \$139 million in the fourth quarter last year. Non-GAAP operating margin was 29 percent, up 10 percentage points.
- GAAP diluted net income per share was \$0.59, compared to GAAP diluted net income per share of \$0.29 in the fourth quarter last year.
- Non-GAAP diluted net income per share was \$0.92, compared to non-GAAP diluted net income per share of \$0.46 in the fourth quarter last year.
- Deferred revenue increased 44 percent to \$3.01 billion. Unbilled deferred revenue was \$550 million, a decrease of \$41 million compared to the fourth quarter of last year. Remaining performance obligations (RPO), or the sum of total billed and unbilled deferred revenue, totaled \$3.56 billion, an increase of 33 percent. Current RPO totaled \$2.37 billion, up 23 percent.
- Cash flow from operating activities was \$698 million, an increase of \$387 million compared to the fourth quarter last year. Free cash flow was \$684 million, an increase of \$390 million compared to the fourth quarter last year.

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### ***ESI Group: FY 2019: Solid Growth Proforma 12-Month Sales***

25 February 2020

ESI Group, releases its sales for the financial year starting on February 1, 2019 and ending on December 31, 2019 (11 months), as well as for its last two months, approved by the Board of Directors on February 12th, 2020. As decided at the Annual General Meeting of July 18th, 2019, the Group now closes the fiscal year on December 31 of each year.

As a pioneer in virtual prototyping solutions and a key player in industrial transformation, ESI Group empowers manufacturers to navigate increasing complexity by replacing real tests and prototypes with highly accurate, predictive and representational virtual prototypes. ESI Group's software solutions are built from decades of global expertise in physics of materials, essential to the creation of authentic virtual prototypes. ESI's customers are an enviable list of industry leaders who benefit from enhanced

innovation, competitiveness, performance and productivity thanks to ESI Group's solutions.

**Cristel de Rouvray, Chief Executive Officer of ESI Group, comments:**

*“ FY19 performance was solid: we grew overall revenue and increased recurring revenue. In conjunction we implemented our plan for sales focus and operational excellence, aiming for growth and increased profitability. Throughout the year, global industry leaders solicited us to equip them with outcome solutions to anticipate and manage virtually the performance of products or assets as used in-service, much beyond the traditional PLM certification target of the brand-new product. ESI has the credibility to act at this transformational level, as evidenced by the growing scientific and industrial accolades and customer testimonials welcoming our new Hybrid-Twin™ solutions. We are actively leveraging their influence to grow and attract the next wave of top accounts, and we expect our performance to keep increasing steadily. ”*

**Last 2 months and FY 2019 (11 months)**

At the end of the fiscal year 2019, which has been impacted by the change of its closing date, the last 2 months saw the company close €18.8m in business.

After taking into account these last 2 months, sales over 11 months (February 1, 2019 - December 31, 2019) amounted to €102.2m, driven by the Licenses business (€75.3m). Over the same period, Services (Consulting) were €26.9m.

**Solid growth of 12-month proforma (January 1, 2019 - December 31, 2019)**

ESI generated proforma sales of €146.2m over 12 months (January 1, 2019 - December 31, 2019), up 7.8% (5.6% cer). Proforma full-year growth was driven by the Licenses business (€115.9m, +8.4%, +6.0% cer), which is the main pillar of the Group's business model (79% of total revenues):

- 84% of sales were driven by Repeat business (renewal and additional volume), +7.9% (€97.8m), which, by nature, generates strong commercial recurrence (91.4%);
- 16% of sales were from New business (new customers or new solutions for existing customers), up 10.6% (€18.1m).

Services grew year on year (€30.3m, +5.4%, +3.8% cer) to represent 21% of total revenues.

The Group's global value proposition enables it to operate on all world markets. This is a substantial asset to customers who are global and can use virtual prototyping to generate considerable innovation and synergies. Excluding exchange rate impacts, growth over the period was mainly driven by the EMEA region (€71.0m, +8.7%, +8.6% cer) followed by Asia (€53.0m, +7.4%, +3.5% cer) whose strong performance (above 6.2% cer) would be more visible if we include the perimeter effect\*. The Group also maintained positive momentum in Americas (€22.3m, +5.8%, +0.9% cer) which will be amplified in 2020.

Over this 12-month booking proforma, the four focus industries— ground transportation, aerospace, heavy industry, energy, accounted for 88% of total booking and grew respectively at 5.6%, 17.0%, 3.2% and 1.2%. The lower growth rate in Energy is explained by an industry wide shift to renewable energy where our efforts have shifted to service projects, laying the ground for future license sales.

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## Implementation Investments

### ***Aerion selects Siemens' Xcelerator portfolio to enable the next generation of global transportation networks***

27 February 2020

Aerion Supersonic, a leader in civil supersonic aircraft, has selected the Xcelerator portfolio from Siemens Digital Industries Software. Aerion's AS2 is the first-ever privately built supersonic commercial aircraft. Designed to be inherently environmentally responsible, the AS2 is the first supersonic aircraft with the ability to accept 100 percent synthetic fuel. It is also the first to be designed without an afterburner. Using Siemens' Xcelerator portfolio, Aerion can use advanced design and simulation software to speed aircraft development, as well as achieve superior levels of performance in flight and excellence in operations. Aerion joins innovative start-ups, aerospace industry leaders and governments around the world that trust Siemens as the partner that provides flexible and adaptable software to meet the rapidly changing industry challenges of today, by leveraging insights and data to adapt products to meet the needs of tomorrow.

"We see Siemens as a critical partner with a fully-aligned solution to our business needs," said Tom Vice, CEO at Aerion. "Siemens' solution portfolio and the strong digital thread connecting each part of our process can help Aerion quickly analyze and optimize innovative designs. We can even model design change impacts on the future carbon footprint of our aircraft, which is critical to our mission of sustainable design."

Siemens provides the aerospace and defense industry with a flexible ecosystem that combines both an open software platform and rapid application development to easily build, integrate and extend data and existing systems. Through the Xcelerator portfolio, combined with access to technology and solutions partners across the globe, Siemens has created a series of adaptable digital threads that enable aerospace and defense companies to optimize their operations and win new business, while rapidly adapting to changes in the industry.

"Siemens, and our partner Applied CAx, are proud to have been selected to support Aerion's drive to revolutionize the commercial aerospace industry and defense market," said Barry Chapman, vice president of Aerospace & Defense and Federal Government, Siemens Digital Industries Software. "Leveraging the proven Xcelerator portfolio can help Aerion operate as an agile, digital organization and dramatically reduce the time and cost of new aircraft systems development. Siemens is partnering with a range of companies like Aerion, across the aerospace industry, to help create an open and adaptable digital thread across the entire lifecycle, which will be key in meeting defense requirements."

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### ***BENTELER to Intensify Collaboration with Altair, Optimizing CAE Processes and Driving Innovation with Specific Solutions***

27 February 2020

Altair, a global technology company providing solutions in product development, high-performance computing and data analytics, announced that BENTELER Automobiltechnik GmbH, a division of BENTELER Group based in Paderborn, Germany, has renewed and expanded its relationship with

Altair.

BENTELER has been using Altair solutions throughout its departments worldwide to accelerate development cycles and drive innovation for 15 years. Altair HyperWorks pre- and post-processing tools have become the preferred solutions in the development of BENTELER products, while Altair OptiStruct™ and Altair Radioss™ are frequently used for customer projects. In addition, BENTELER also relies on Altair PBS Professional™ as its preferred high-performance computing (HPC) workload management platform to improve efficiency throughout the company's computational infrastructure. As new topics and new technologies arise, BENTELER will evaluate OptiStruct for nonlinear analysis and Altair SimSolid™ for computer aided design (CAD) assembly simulation.

“We look forward to intensifying our successful cooperation with Altair,” said Hinderk van Lengen, department head, Chassis CAE at BENTELER Automotive. “Altair's modeling and visualization solutions are standard in the automotive industry and provide us with an important asset to accelerate our innovation path. Altair has become a longstanding strategic partner that enables us to increase our efficiency. With the help of virtual methods, we are able to meet the various component requirements at an early stage of the development process, while taking into account costs and weight targets. Altair's solutions help us to develop safe and eco-friendly mobility solutions for the future. One example is the BENTELER Electric Drive System – a scalable platform solution for electric vehicles.”

“We are very happy that BENTELER continues to rely on Altair solutions to optimize its CAE processes,” said Dr. Pietro Cervellera, senior vice president of EMEA, Altair. “With new requirements and fast-changing needs to make eco-friendly mobility happen, the technology roadmap of the automotive industry has to reflect complex market challenges. Altair delivers powerful simulation solutions to meet these challenges and enables our customers to innovate faster. We are looking forward to further intensifying our cooperation helping BENTELER to accelerate its development processes and further drive innovation throughout its organization.”

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## ***Fashion Enter closes UK's skills gap with EFI Optitex 3D***

28 February 2020

EFI™ Optitex®, Electronics For Imaging's global provider of integrated end-to-end 2D & 3D CAD/CAM software solutions for the fashion and apparel industry, today announced its partnership with Fashion Enter Ltd., a UK training and technical skills development center for the fashion and textile industry, who implemented EFI Optitex 3D solutions into their course curriculum.

Established in 2006, London-based Fashion Enter Ltd. (FEL), is a veritable “all-in-one” technology hub for the fashion and textile industry, offering multiple training and technical skills development services, encompassing the entire design to production cycle. A not for profit, social enterprise, FEL also provides apprenticeships and adult learning at the ESFA and SEG approved technical centre supported by Haringey Council, Mayor's Good Growth Fund and Asos.

To help lay the foundation for the UK's fashion and textile industry on its imminent journey towards digital transformation, FEL was determined to close the mounting skills gap in both industry and academia and offer UK professionals hands-on experience and exposure to 3D digital design tools. With a keen understanding of the market's growing need for speed, flexibility and shifting demands, in September 2019, FEL selected EFI Optitex as their 3D technology partner. FEL sought after advanced 3D solutions that would enable them to implement innovative digital design courses, apprenticeships

and bespoke training, including collaboration with leading fashion retailers, such as Marks & Spencer, ASOS, Next, and many others.

After a short but highly intensive training period FEL implemented EFI Optitex 3D into their design and production processes, including pattern design and 3D tools for design and fitting. Since its implementation only six months ago, FEL have already reaped the benefits of EFI Optitex 3D fully-digital design, from sampling and grading, through to production. During its preliminary implementation phase, EFI Optitex 3D will enable FEL to deliver a wide range of accredited 3D design courses and forge collaborations with new customers, a result of EFI Optitex 3D's intuitive design tools, ease of use, and time and resource savings.

“Fashion Enter strives to be a center of excellence in both quality garment manufacturing and skills training,” said FEL Founder and 35-year UK fashion industry expert, Jenny Holloway. “EFI Optitex has given us a strong and reliable 3D toolset, not only to maintain, but to strengthen our position as a leading UK training and technical skills provider.” Holloway added, “We welcome a long and mutually beneficial relationship with EFI Optitex, as we forge ahead to help bridge the digital divide in the UK's fashion and textile industry.”

Amir Lehr, EFI Optitex General Manager, commented, “We are proud to support Fashion Enter's objective to diminish the skills gap in our industry, and to help them consistently inspire the future of UK fashion. As an end-to-end 2D-3D technology partner, we strive to deliver quality solutions that enable our customers to embrace digital transformation. Today, with EFI Optitex, digitization is fast becoming the focal point of FEL's training and technical skills development offering.”

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### ***Fashion<sup>3</sup> Adopts CSR-focused Strategy in line with their values, leveraging Centric Software® for their production cycle***

24 February 2020

Fashion<sup>3</sup>, the ecosystem comprised of boutique-oriented textile brands under the Mulliez group – Jules, Brice, Bizzbee, Pimkie, RougeGorge, Grain de Malice/Orsay – has selected Centric Software® Product Lifecycle Management (PLM) in order to significantly optimize its production cycles, boost product quality and reduce time to market. Fashion<sup>3</sup> also aims to streamline manufacturers' processes and communication with partner brands and distributors through Centric PLM™. Centric Software provides the most innovative enterprise solutions to fashion, retail, footwear, outdoor, luxury, consumer goods and home décor companies to achieve strategic and operational digital transformation goals.

Created in 2017, the Fashion<sup>3</sup> (Fashion Cube) brand ecosystem aims to invent a new zero-waste development model across seven textile brands by identifying innovations, imagining new solutions, and initiating synergies such as alignment of design, production and distribution processes meeting the goals and commitments of corporate social and environmental responsibility (CSR).

“From the outset, we identified two strategic axes common to our brands,” says Franck Dumery, CIO of the Fashion<sup>3</sup> ecosystem. “The ‘zero waste’ Product Life Excellence (PLE), and data analysis for understanding our customer needs. Since their creation, our brands have used a global and standardized approach to production, which today is synonymous with inefficiency and waste. We wanted to deploy a new ecosystem to precisely analyze purchasing behavior and better target the needs of our customers.”

After a call for tenders led by Orsay, a brand in the Fashion<sup>3</sup> ecosystem, Centric PLM was chosen.

Centric Software's leading position in the market, the positive feedback from other Centric customers, the size of its user base, and the robust and durable structure of the solution appealed to the management team.

"Personally, I had already participated in the deployment of Centric PLM while in the IT department of Tape-à-l'œil. I knew where we were headed and I knew the quality of the support offered by the Centric teams. From a technical point of view, I was perfectly confident" says Franck Dumery.

The process redesign will be done in a swift manner and will adapt to the specific needs of each brand. The first phase of deployment involves the installation of a centralized system for production teams, under the supervision of purchasing groups of each brand. The second phase will consist of integrating new purchasing processes for each entity. Orsay will lead the project, and will be the first to switch to the PLM solution from Centric.

"Ultimately, our ambition is to streamline our processes, build strong partnerships with our suppliers and apply this model for each of our brands. We aim for better quality, for better compliance with our CSR principles and, by extension, for savings" adds Dumery.

"We are proud to welcome the brands from the Fashion<sup>3</sup> ecosystem into the Centric family" says Chris Groves, President and CEO of Centric Software. "The data analysis and the CSR goals are decisive for product design and development, as well as the image of the brands. This is why we are thrilled to support Fashion<sup>3</sup>'s strategic and operational objectives, especially in terms of growth and reduction of environmental impact."



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### ***Sonepar Digitizes Sourcing, Supply Chain And New Product Development With CBX Software***

27 February 2020

**Sonepar**, a world leading distributor of electrical products, solutions and related services, has selected CBX Software's Retail Product Lifecycle Management (Retail PLM), a cloud solution to enable and strengthen its own direct sourcing throughout Asia Pacific. CBX Software provides the most innovative enterprise solutions to private label general merchandise, furniture, pet, fashion, hardware, home décor and value brand retailers. Retailers and Brands with large private label operations use CBX to achieve their strategic product development, sourcing, and digital transformation goals.

Sonepar, founded in 1969, is a family-run French company which has 48,000 associates and annual sales totaling €24 billion. Through its 170 operational subsidiaries and 3,000 branches, the Group has a presence in 48 countries, supporting more than a million professional clients across the construction, manufacturing and energy sectors.

In order to scale their direct sourcing operations supply chain automation, Sonepar needed to replace its internal costing/quotation system for its global sourcing office with an automated, end-to-end, product request to delivery, centralized database.

*"With a growing new office and an emphasis on sourcing direct we quickly realized our product development and sourcing teams needed to better manage version control", explains Vincent Bossel, Vice President of Global Sourcing at Sonepar. "We spent too much time on manual processes and we wanted to digitize all of our sourcing, supply chain, product development and shipments into one real-time, centralized database to communicate with vendors efficiently, so we began our PLM selection process."*

Based on the criteria of functionality, long-term cost and user-friendliness, Sonepar selected CBX Cloud, CBX Software's end-to-end, retail PLM solution for large scale retailers and brands.

*"We are thrilled that Sonepar has selected CBX Software as our latest partner in Europe", says Tim Chiu, Senior Vice President of CBX Software. "Sonepar's sourcing and supply chain digital strategy begins with harnessing the power of a truly end-to-end automated solution. CBX Software's Retail PLM will provide an ideal foundation to enable their direct sourcing and strengthen their supply chain visibility which will ultimately improve Sonepar's overall, quality and compliance."*

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### **Stagecoach Digitalises Asset Management with Infor EAM**

25 February 2020

Infor, a global leader in business cloud software specialised by industry, announced that Stagecoach, the largest bus and coach operator in the UK, has selected Infor CloudSuite EAM (enterprise asset management) in the cloud. Deployed and supported by Infor partner Sapphire Systems, the solution will help digitalise asset management at the bus company, and drive greater fleet availability to enhance service provision.

With express and local bus services across the UK, as well as a network of intercity operations under the megabus brand, Stagecoach has a large and widespread asset portfolio. Faced with a need to modernise and fully digitalise its asset management practices, Stagecoach selected Infor CloudSuite EAM to support fleet availability, facilitate comprehensive warranty management and expedite vehicle recovery.

Infor was selected based on its technology platform, scalability and fit with Stagecoach's wider digital transformation goals. The software's user friendliness and speed of performance were also key to the decision. Infor CloudSuite EAM is a SaaS solution developed and deployed on the AWS cloud, delivering high performance, scalability, and security.

"With 8,300 buses, 100 depots and 2.5 million passenger journeys to support every day, ensuring fleet availability is crucial," comments Sam Greer, Stagecoach technical & engineering services director. "Infor CloudSuite EAM will enable our team to spend more time on the shop floor and less time manually inputting data. This not only ensures information is accurate, supporting warranty and service management, but more importantly is providing additional capability to help drive operational excellence with a key focus on vehicle availability and reliability, improving service delivery to our passengers. In addition, more accurate, live insight into our asset management will allow us greater control over inventory, so it's a great all-round solution for us."

"We're seeing significant demand for digital asset management capabilities in the transportation industry as operators and local authorities recognise that solutions such as Infor CloudSuite EAM can not only boost fleet availability and customer satisfaction, but reduce costs too," comments Kevin Price, Infor technical product evangelist & product strategist. "Stagecoach is a great example of a company that is investing in innovation and digital capabilities to secure its position as a leading operator not just now, but in the future."

"Our partnership with Infor in this field continues to deliver best-in-class expertise and capabilities, allowing transport organisations to optimise their assets," comments Ian Caswell, Sapphire Systems CEO. "Through offering deep industry expertise and experience, and modern, scalable technology

tailored for the needs of the sector, we look forward to extending our joint proposition and expanding our customer base even further.”

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### ***TCS Digitally Transforms QIAGEN’s Global Research Platform to Improve User Experience with New Digital Capabilities***

26 February 2020

Tata Consultancy Services (TCS), a leading global IT services, consulting and business solutions organization, has transformed QIAGEN’s GeneGlobe, a genomics-based research platform for biology and biomedical researchers, to improve customer experience.

QIAGEN is a leading provider of sample to insight solutions for customers in life sciences and molecular diagnostics. To cater to the expectations of a large proportion of researchers who are digital natives, it was looking to transform its GeneGlobe research platform. The company partnered with TCS given its deep contextual knowledge, strong digital capabilities in cloud and microservices, as well as expertise in designing intuitive, customer-centric platforms.

TCS adopted a cloud-based microservices architecture and revamped the GeneGlobe platform by leveraging industry-best DevOps practices and design thinking approaches. The new platform, GeneGlobe – Design & Analysis Hub, offers an intuitive interface, helping researchers to find the right product in just three steps.

Powerful algorithms link products to biological targets, so researchers can explore and expedite decisions on products within the relevant context. Personalized dashboards and product builders are now easier to use and enable the creation of virtually any custom product for a specific research question. This transformation has helped QIAGEN to boost overall digital revenue.

*“We are excited that the new GeneGlobe Design & Analysis Hub is now available and ready to provide customers with next-level experiment planning, execution and follow-up. With GeneGlobe we are offering researchers one place to navigate knowledge, tools and analyses for their specific target, saving researchers time and budget,”* said **Peter Rene Hesse, Head of Digitalization, QIAGEN Life Sciences Business**. *“The partnership with TCS helps us to drive growth and transformation aligned with our company vision of making improvements in life possible.”*

*“Our long-term strategic partnership with TCS has allowed us to tap into their deep contextual knowledge of the life sciences industry. This has continuously paid dividends both to the overall success of our business and, more importantly, to the experience we’re able to provide to our customers,”* said **Dr Thomas Schweins, Senior Vice President and Head, Life Sciences Business, QIAGEN**.

*“With the new intuitive, customer-centric design and scalable cloud-native architecture, QIAGEN’s platform delivers a superior user experience that will attract a new class of researchers, and accelerate and spur new research that improves lives,”* said **Vikas Jain, Business Head, Life Sciences, TCS**. *“Our ability to harness the power of digital technologies to reimagine business models and enhance customer experiences has made us the preferred transformation partner to our life sciences customers in their Business 4.0™ journeys.”*

TCS partners with leading life sciences companies to enable their digital transformation journey by leveraging its Business 4.0 framework. TCS offers a full set of digital transformation services and solutions including advisory services, predictive and prescriptive analytics, genomics research, advanced

platform solutions, digital content factory, digital marketing and cognitive business operations.

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## Product News

### ***Jovian Technologies announces the release of its SaaS AI platform for Food and Beverage companies in North America***

25 February 2020

With over 1000 new food products being released each month, you need the right products to grow or stay ahead in your brands. With over 250,000 of them, from established favorites to the latest trends, the possibilities are endless. An ever-expanding selection of new products every month from national brands to local entrepreneurs, how can you ensure the competitiveness of your products?

100% cloud deployed and offered as a SaaS pay as you go model with easy pricing options. Embark on your PLM journey with incremental steps based on the value you have realized. Our mission is to help build tomorrow's best brands. Our PLM solutions help your engineers, marketing, partners, customers, and everyone else collaborate on all the product information needed to get your products from concept to customer

#### **About Jovian Technologies**

Jovian Technologies is a technology startup, provider of AI driven product innovation and product lifecycle management solutions, based in Chicago IL, USA. Jovian is an alumnus of Sunnyvale California based Plug and Play accelerator program which is recognized by Forbes magazine to be among the top 5 accelerator programs in United States for emerging new technologies.

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### ***Release Announcement of CADdoctor EX8.2***

28 February 2020

Elysium has released CADdoctor EX8.2.

#### **New Product**

- 3DEXPERIENCE (Plug-in) Option [Supported Version: R2017x – R2020x]
- 3DXML Add-on Option [Supported Version: R2010x – R2019x]

#### **Key Enhancement**

##### **Standard Function**

- Enhanced part searching function
  - Enabled to delete parts from the search dialog
- Added a new View function “Snap to Axis”
  - Added a function to change the view direction to one of X, Y, Z axes closest to the current view direction

#### **Reverse Engineering Function**

# CIMdata PLM Late-Breaking News

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- Improved function to generate B-rep
  - Improved the quality of face segmentation and decreased the number of PDQ errors (Large face gap)

## Data Translation

- Changed support of CAD versions

Import & Export Options	Versions added in EX8.2	Supported Versions
NX Plug-in	NX 1872 Series	NX9 – NX 1872 Series
NX Add-on	NX 1872 Series	UG10 – NX 1872 Series
Creo Parametric Add-on	6.0	2000i – Creo Parametric 6.0
NX I-deas Plug-in	6.7	6.3 – 6.7
CADmeister Add-on	V14.0	V4.0 – V14.0
Parasolid Add-on	V32.0	V7 – V32.0
JT Add-on	v10.5	Import: v6.4 – v10.5 Export: v8.0 – v10.5

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