



Stadler upgrades to PLM 2.0
to boost innovation and lower
costs /p. 26



Avocado toast fans are
doing the right thing
/p. 19

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Märtha Rehnberg, speaker at
TechniaTranscat's Innovation Forum:

Circular economy calls for disruption

Industry leader Leif Östling:

Seize the opportunities /p. 16

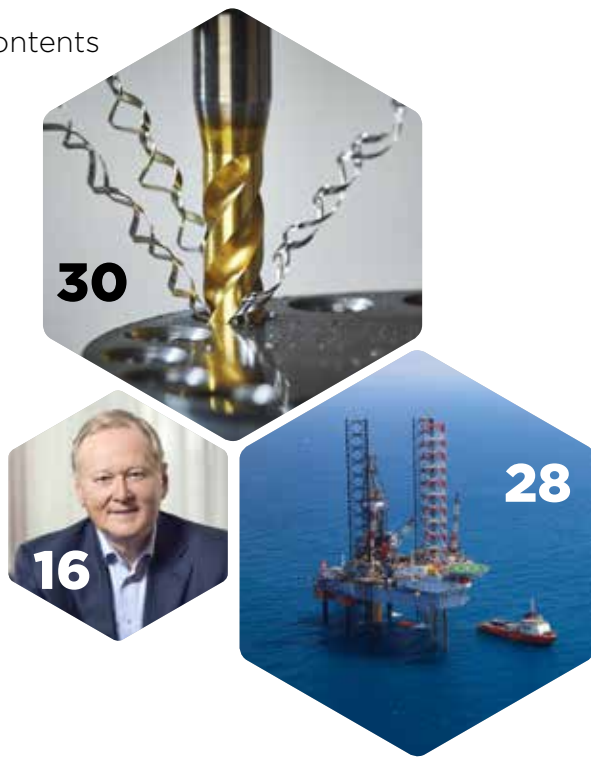
.....

Built to withstand
50 meter-high waves /p. 28

.....

Seco Tools - TIF makes for
smooth system integration /p. 30





Interview: Märtha Rehnberg calls for disruption /p. 4
 PLM: A tool for circular economies /p. 7
 Success story: Cars for the future /p. 8
 CAVA Vision: Reshaping aircraft industry design /p. 9
 Trends: Changing consumer behavior /p. 10
 Trends: Manufacturing is changing fast /p. 12
 The Google generation demands smart UIs /p. 14
 Interview: Leif Östling warns traditional industry against missing opportunities /p. 16
 Boost machine intelligence /p. 17
 Trends: Millennials may be right /p. 19
 Success story: Clamps and new hips /p. 21
 Solutions: TechniaTranscat offers a wide range /p. 22
3DEXPERIENCE: Closer to real life /p. 24
 Honeywell boosts user-friendliness /p. 25
 Success story: Train maker goes for PLM 2.0 /p. 26
 Success story: Built for storms /p. 28
 Regulations can be made an asset /p. 29
 Success story: System integration at Seco Tools /p. 30
 Trends: What if Tesla? /p. 33
 News /p. 34

About TechniaTranscat

TechniaTranscat is a global and leading knowledge company in PLM with more than 360 experts in ENOVIA®, CATIA®, SIMULIA® and DELMIA®. Our goal is to enhance your business and transform your vision into value with solutions shared by a growing range of industries – from aerospace and defence to life science and retail. As our customer you will benefit from:

- World class knowledge of CAD/PLM, Product Data Quality Tools and methodology
- More than 30 years of industry experience from successfully implementing PLM projects with global leaders
- Global delivery capacity for Dassault Systèmes' **3DEXPERIENCE**® platform
- Innovative complementary products, such as Value Components, Integration Framework, Q-Checker, xCompare, CAVA, myPLM and Lite3D.

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Production: EdWork AB **Cover photo:** Abdellah Ihadian

Number one knowledge leader in PLM – our vision

We work hard to secure the above vision. Knowledge is not static in our industry and we are passionate about developing our knowledge in all aspects of PLM. In 2017 we welcomed two new companies as part of our global team making us the clear number one partner to Dassault Systèmes. Our capability is now significantly stronger in the following areas:

- Intelligent Engineering – real life experience from CATIA & SIMULIA enables best advice and methods
- Global delivery capacity – now also in Benelux, UK, Ireland and South Africa
- Stronger ENOVIA capacity and additional AEC & BIM experts

We live in an ever-changing world where ideas that seemed impossible years ago are now part of our lives. Keeping up and staying ahead of the competition has never been more challenging. The fourth industrial revolution and the resulting digital transformation journey will be key in reinventing the way we do business. PLM is a key enabler in most industries and a catalyst to improve the personalization of all types of products, with an offering for Retail, Services, High-Tech, Life Sciences, Finance, Automotive, Industrial Products and A&D.

We remain focused on our four promises:

- **Value** – measurable and sustainable business improvements to your business.
- **People** – an inspiring work environment with outstanding opportunities to attract and retain the best team.
- **Partner** – mutual value creation. When we team up in partnerships we do it for the long term.
- **Planet** – continuously improving society. We are enabling circular thinking and environmental compliance.

I want to thank all our customers for their business and I welcome our new companies to join our commitment to deliver outstanding value!

With warm regards and see you soon.

Jonas Gejer
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In the summer of 2017 Addnode announced that Intrinsys would be joining its PLM division alongside TechniaTranscat, with the aim of creating the world's first truly global systems integrator and number one knowledge company in PLM. The group boasts more than 600 staff in Austria, Finland, Germany, Sweden, Slovakia, Norway, UK, Ireland, India, South Africa and the USA.

The Intrinsys story:

From humble beginnings to number one in the UK

Intrinsys, a spin-off of UK consultancy company Integral Powertrain, wasn't really supposed to happen, but ever since it saw the light 18 years ago everything has fallen into place and Intrinsys is now the biggest PLM player in the UK.

“Integral Powertrain was using Dassault Systèmes products, and basically we became good at using them, so Dassault Systèmes asked us to become a business partner,” Intrinsys CEO Darren Cairns recalls.

The beginning was humble. Starting out with only four people, Intrinsys was the smallest of the UK's five PLM specialists, but that would change, and fast!

Different approach

“We've always had a very different approach from others. I guess it was due to our naivety in the early days. We didn't try to cherry-pick people from competitors like the others were doing, instead we recruited graduates and people from other industry sectors who were driven and really motivated,” he says.

Around 2006, things really started to take off, and Cairns, who had juggled dual roles at both Integral Powertrain and Intrinsys, decided to focus solely on the new business, which



“If you've reached number one, where do you go?” says CEO Darren Cairns.

delivers mission-critical projects in the Automotive, Aerospace, Formula 1, Marine, Oil & Gas and Industrial Equipment sectors.

“Because we were using the software ourselves in our engineering business, customers appreciated that we could understand their needs better and this became our unique value,” he explains.

By 2012 Intrinsys had grown from the smallest of the UK's five PLM players, to the largest.

“The growth just kind of happened,” Cairns says, adding: “I think it really hit

home how successful we had been when we were invited to a Dassault Systèmes award gathering. We won the first award, then the second and by the end of the night we'd won 12 out of 15 awards.”

People want to develop

But in 2016, with 60 staff and a 70 per cent market share, CEO Cairns reflected on Intrinsys' success, which he knew largely relied on the drive, enthusiasm and the ambition of his staff. Their continued development was essential to maintaining business growth.

“In a way we'd created this monster that just had to keep growing so that the employees would feel like they could continue to develop and satisfy their career aspirations. But if you've reached number one, where do you go?”

Then the opportunity to merge with Addnode, owner of TechniaTranscat, appeared. Intrinsys had worked with some of the Addnode Group for nearly eight years on several projects, including for the UK's Marshall Aerospace and Defence Group.

Intrinsys approached Addnode, and the rest, as they say, is history. ■

Earlier this year TechniaTranscat acquired Infostrait, a Dutch PLM and BIM specialist.



Transformation with digital technology can start slow, and accelerate at a very fast pace, says Märtha Rehnberg.

How to let disruption drive the circular economy

The circular economy is all about disruption, and using new technology to change the way we act, produce and consume. But many still see disruptive technologies as a threat rather than an opportunity. The key to embracing disruption is to develop your “technological intuition” and understand possibilities long before they become a reality, says Märtha Rehnberg, co-founder of tech advocacy firm DareDisrupt.

Text: Mattias Karén, EdWork

Märtha Rehnberg, one of the speakers at TechniaTranscat's PLM Innovation Forum, says the digital nature of disruptive technologies means they have a different pace of development compared to traditional models.

“Older technologies penetrate the market in a linear fashion; digital technologies often penetrate markets exponentially,” she says. “When something is exponential it moves really slow in the beginning and then suddenly it takes off, and that's when we get surprised. The most important basic rule when it comes to disruptive technologies is to invest today so we don't get surprised later.”

That's a lesson that Rehnberg herself had to learn the hard way. While working

for Danish shipping giant Maersk, she pioneered a ground-breaking project to introduce 3D printing of certain parts on-board vessels. But when it came time to pitch her investment strategy for the company board, she discovered a problem.

100 times faster

“The technology had moved so fast and I had only linear assumptions in my analysis. I had looked at the past five years and then I projected that linearly into the future, the way I learned in business school. But when I came to the board, there was suddenly new technology that was 100 times faster. There was one open-source project for metal 3D printing that cost 1,500 dollars and I had an estimate of a million dollars. That's when

“I realized that technology is not only for engineers to develop and analyze, it's for all of us to care about.”



What is circular economy?

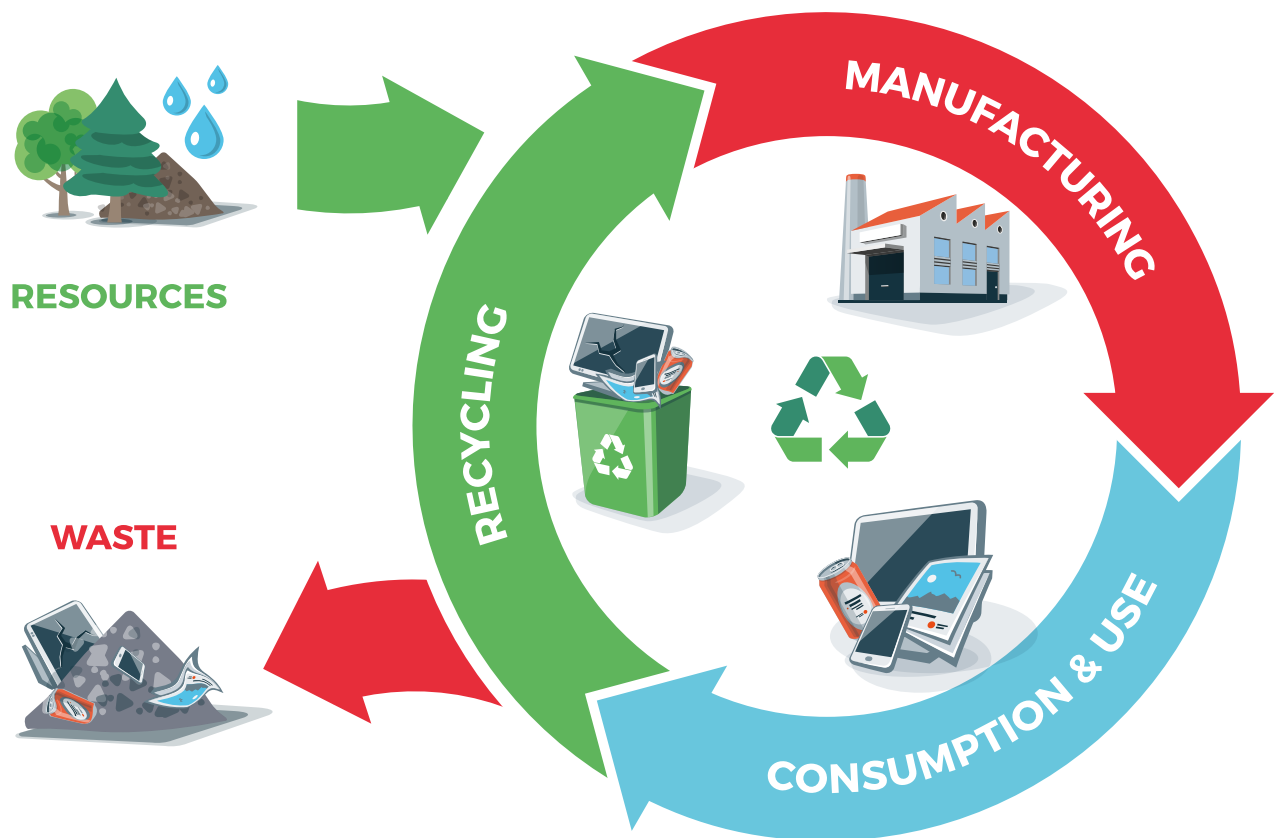


Illustration: Shutterstock

» I realized that technology is not only for engineers to develop and analyze, it's for all of us to care about," Rehnberg says.

New markets

Since then, Rehnberg has been an advocate of strategic disruption and developing technological applications that are environmentally sustainable. Her efforts and public speaking engagements have earned her recognition as a 'Leader of Tomorrow' by the St Gallen Symposium for three consecutive years.

Rehnberg also urges people to look at the "ripple effects" of new technology, and understand what new possibilities they create in different sectors. Digital photography, for instance, may have caused Kodak to go bankrupt – but it also paved the way for self-driving cars and new surveillance methods

that are changing society as we know it.

"Technological intuition is about looking for the ripple effects and looking at how new technology creates new markets that weren't there before, and it can even change who we are as humans," she says.

Rehnberg says there are many examples of new technology that enable a circular economy, including a nationwide 3D printing lab in Denmark that she's been a key driver in setting up.

Because while disruptive technologies will affect all industries, Rehnberg strongly believes they should have one thing in common.

"In light of all the things that will change, one of the most important questions we can ask ourselves today is: 'what's not going to change in 10 years?' And one of the areas that won't have

changed is our focus on the environment and climate change. And that's where the circular economy comes in as a huge opportunity space for disruptive technologies," she says. ♦

"In light of all the things that will change, one of the most important questions we can ask ourselves today is: 'what's not going to change in 10 years?'"

Circular economy and PLM – enabling companies to make the switch

The circular economy concept is becoming increasingly popular among companies looking to boost both their sustainability and profitability. At TechniaTranscat, we are looking into developing the PLM tools that will enable companies to switch to a fully circular approach.

The circular economy is a big break from the old linear model based on constantly using fresh raw materials to make new products and then disposing of them once they're no longer needed. A circular model aims to create a never-ending cycle where materials are either regenerated or reused to minimize a company's impact on the environment. Today, the concept goes well beyond just "going green," as business leaders increasingly view a circular model as the best way to ensure long-term profitability at a time when natural resources get more scarce.

Developing the tool

PLM systems can serve as a major help for companies looking to do the switch. We see so many business incentives for companies to go circular, and we want to enable them to do so, by offering a tool that provides a holistic approach towards this new business model.

We strongly believe a PLM system can be the best solution for managing a product's lifecycle in a circular way, and we are developing solutions that will make that a reality. For instance, by providing a full overview on material footprint and reusability, product modularity and spare parts alternatives, a PLM system could facilitate making sustainable decisions at an early stage of a manufacturing process.

Companies often make the switch gradually, and we want to create IT modules that will help them schedule that work in an efficient way. We have started collaborating with companies, including research and certification institutions, to initiate the first projects.

Identified requirements

To that effect we have supervised a research project with Chalmers University of Technology in Gothenburg, studying

requirements, from throughout Sweden and Europe, to better understand what is needed to make a PLM system that fully supports a circular business model. Linn Lindfred and Isa Nordeld at Chalmers have written a thesis with us examining the different stages of the product lifecycle (e.g. design, manufacturing, distribution, sale and recycling) that are critical in the transition.

IT is key

"IT systems have the potential to help companies make the transition, but no company currently offers the service in a satisfactory manner," says Linn Lindfred.

This is an exciting development in the world of PLM. Circular thinking is gaining ground among legislators and major corporations, and is high on the agenda for many executives. We aim to be the enablers to fully make the switch. 🍌



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"We see so many business incentives for companies to go circular, and we want to enable them to do so."

NIO eP9



When it comes to electric cars, Tesla is known for being a forerunner and a game-changer aiming to revolutionize the way we drive. Now, Chinese company NIO is entering the market, focusing on the concept of a joyful ownership experience. According to Roger Malkusson, the Swedish engineer who is one of the driving forces behind the new car, NIO's rapid success is a result of turning conventional thinking on its head.

Innovative thinking:

Chinese carmaker NIO challenges conventions

“Most companies that are making electric cars are traditional automotive manufacturers who are incorporating internet technologies. We’re an internet company that is incorporating automotive technologies. It’s a completely different way of thinking,” says Roger Malkusson, Vice President of Vehicle Engineering at Shanghai-based NIO.

Malkusson, the former Chief Engineer, Vehicle Integration at

automaker Saab, and one of the speakers at TechniaTranscat’s PLM Innovation Forum, has been a key part of NIO’s journey from a small start-up to a global challenger with more than 2,000 employees around the world.

CAVA for vehicle design

It’s a journey that has gone remarkably quickly. The company was only founded in 2014 by two Chinese internet gurus,

and the development of its first production car started two years ago. But they’re now backed by some of China’s biggest online giants and the NIO ES8, a seven-seater electric SUV, will go on sale

“We are creating an end-user approach where the customer is an active part of the process.”

before the end of 2017. In addition, NIO's EP9 supercar set the lap record for electric cars at the Nürburgring circuit in Germany this year – and the fastest lap by a self-driving vehicle at the Circuit of the Americas in Texas.

The company uses TechniaTranscat's CAVA software in the vehicle design process on top of the 3DEXPERIENCE platform. Many carmakers use CAVA to streamline the design process and to ensure that the design follows global regulations. NIO has announced plans to begin selling fully



Roger Malkusson

electric, autonomous cars in the United States by 2020. It also has a successful team in the all-electric racing series Formula E.

At the heart of NIO's philosophy is the idea of transforming the entire user experience for car owners.

"We are creating an end-user approach where the customer is an active part of the process and where the car will grow and become more customized with time as it gets to know the owner," says Roger Malkusson.

Unpleasant aspects

"With today's cars there are a lot of aspects that aren't very pleasant, such as having to fill it up at the station every few days. We're eliminating all those aspects so that ownership becomes only joyful."

And much like Tesla, NIO counts its status as a newcomer as a major strength rather than a weakness – especially since no one really knows how the technology for self-driving and electric cars will develop in the future.

"The automotive industry is very conservative, where traditional manufacturers have legacies they have to build on when it comes to platforms and the entire production chain. It's like a built-in handbrake. But when you start from a different direction you can think in new, fresh ways," says Roger Malkusson. "Innovative thinking is key since we have to make speculations about the future." ◆



CAVA Vision enters aerospace

Thousands of hours saved

In the automotive industry, the software solution CAVA Vision has established itself as a standard. Now, it has set out to conquer the skies, too. Marshall Aerospace and Defence Group was first.

TechniaTranscat engaged with the British-based aircraft maintenance, modification and design company through its UK partner Intrinsys. The project involved the positioning of antennas and sensors on an aircraft. The challenge was simplifying the process of creating multiple obscuration plots to ensure that no obstructions existed in fields of view. Marshall wanted to shorten the time-consuming task and reduce the risk for human error.

TechniaTranscat devised a workflow, adapting CAVA Vision to the specific requirements of aircraft modification. Following extensive testing and collaboration, CAVA Vision was implemented

at Marshall in March 2015 – and has been used successfully ever since.

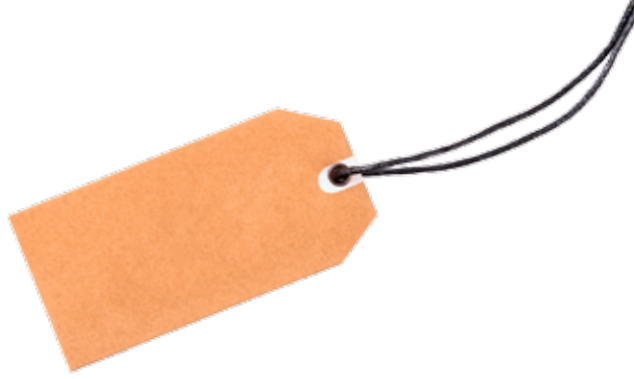
"In a recent project, we saved close to 1,000 design hours versus traditional methodologies in the first year alone thanks to CAVA Vision. Design modifications that previously required us to recreate the whole exercise, now can be undertaken within 10 or 20 minutes," says Wayne Parker, CAE Group Manager at Marshall.

Using the software enables several people to work on the same obscuration plot and the level of accuracy is significantly higher than before.

"Since we have used CAVA, the factor of human error has become insignificant." ◆



TechniaTranscat adapted CAVA Vision to the specific requirements for aircraft modification.



Keeping up with changing customer behavior

In just a few years, the Consumer & Retail industry has undergone nothing short of a paradigm shift. At the same time as e-commerce groups like Amazon continue to eat up the market share of the more traditional retailers – 9,000 stores are expected to close in the US this year alone – shoppers have also changed their customer experience expectations.



Photo: Shutterstock

What is Infuseit?

Infuseit is an independent consultancy department at TechniaTranscat. Infuseit's experts provide companies with the best possible advice on how to embrace technologies and methodologies for information management in a lifecycle perspective.

Infuseit's consultants have spent years working in operational roles in your industry and can therefore help you fuse the right tools with the right strategies to bring about the progress you're looking for.

Read more at www.infuseit.com

Consumers want to be able to search information about the products they're interested in, and they want to be able to try them and buy them wherever and whenever they want, whether it's in the store itself or in the comfort of their own homes. "Basically they expect the customer experience to remain the same regardless of where they are or what they're doing," says Anna Liljedahl, Senior Advisor at TechniaTranscat's independent retail-industry focused consulting arm Infuseit.

"Retailers need to either innovate and adapt to their client's fast-paced and connected lifestyles or face being wiped out altogether."

"It's all about being able to provide them with one single source of information," Liljedahl says, stressing the importance of also being transparent with the ability to provide as detailed information as possible, as fast as possible.

"Or if a regulator wants a list of the components in your products, you need to be able to give it to them with a moment's notice."

No need to own

Mattias Norin, Business Area Director for Consumer and Retail at TechniaTranscat, agrees adding that it's not just the way that people shop physically that has changed, it's their whole philosophy of consuming.

"The throwaway mentality of the 80s and 90s doesn't exist anymore," he says. "We still want quality products both fast and cheap, but not at



Whether online or in a store, consumers expect a similar customer experience.

any cost,” he says, pointing to shoppers’ raised ethical and environmental awareness. This has led to an increasing number of retailers switching to a more circular economy in which products and materials are either recycled, regenerated or reused.

“Customers don’t need to ‘own’ in the same way they used to, they’re just as happy to lease or rent a product. They want to contribute to a more sustainable world and so they look for ways to pass their items on, or recycle

them in other ways. And they increasingly favor retailers who allow them to do that,” he says.

Superdigitalization

Norin underscores the challenge of staying competitive in a world where shoppers have become more conscious and sophisticated than ever, making careful choices not only when it comes to the products themselves, but also when it comes to the vendors they choose and the underlying manufacturing processes

behind their products of choice. This, along with the superdigitalization of society in general, means that retailers need to either innovate and adapt to their client’s fast-paced and connected lifestyles or face being wiped out altogether.

“In addition to all the rules and regulations that already exist and which are continuously being tightened, there’s now a huge amount of information for retailers to process and manage - in real time,” Norin says. “To stay competitive, you need to do this fast and efficiently and this is where PLM and our consulting can help. There’s just no time for mistakes.”

Jonas Gejer, CEO of TechniaTranscat, asks Frédéric Martin, CATIA Sales Director at Dassault Systèmes, about major developments in manufacturing and how software such as CATIA **3DEXPERIENCE** is part of the transition.

What's the latest in design and manufacturing?

Jonas Gejer (JG): What key trends do you see in product development and design?

Frédéric Martin (FM): Increasing complexity to manage, shorter development cycles and the need for customers to deliver the right product at the right time. Clearly, engineers should spend more time on true engineering tasks and less on data checking. This, by the way, is where V6 Architecture and CATIA **3DEXPERIENCE** can bring added value in a way that no other CAD tool can.

We can also see that multidiscipline engineering has replaced sole mechanical engineering. Mechatronics and electrical are new priorities with light weight constraints (composite and additive manufacturing). Don't forget the cloud, which enables newcomers to benefit from best-of-breed cloud solutions at a very low cost of acquisition. The example of Elixir Aircraft shows that start-ups can now build and certify planes. There is momentum for additive manufacturing in the aerospace industry.

JG: I saw examples from the aircraft industry of reducing weight by 60–70 percent. That is quite amazing.

FM: Yes, this is incredible! The weight is one thing, and the savings that can be generated are amazing too.

There is so much pressure on the development of new products that the systems architect role is becoming increasingly important because you have to have someone in the company to manage all the changes, to manage all the complexity, to really decide rapidly on changes and to make quick decisions on functional and system architecture. The system architect role is bringing this dimension in the latest release of 2017x.

JG: Then obviously all products have a greater content of software and a flow that deals with real multidiscipline and concurrent engineering activities.

FM: Exactly. Real concurrent engineering is no longer sequential, but has a multi-discipline engineering and a multi-physics approach to deliver a dynamic functional mock-up – to control the behavior and enter in the **3DEXPERIENCE** world. With CATIA Systems you can design and experiment with smart and connected objects. It opens a new era for CAD.

JG: The **3DEXPERIENCE** and CATIA V6 adoption is really happening now and growing rapidly. Are there any great success cases you can share with us?

FM: Yes, we have gained significant new **3DEXPERIENCE** customers in Europe throughout 2017 with Stadler Rail, Elomatic, Ericsson and Grundfos. But my favorite **3DEXPERIENCE** customer in Sweden is the European Spallation Source (ESS)! It was not an easy choice for them to go for **3DEXPERIENCE** but they had to prepare for the future. Today, they are using CATIA **3DEXPERIENCE** as CAD 3DModel master with 80 CATIA users in production. The ESS “Machine” is 600 meters long – quite a large assembly all designed with CATIA.



Jonas Gejer

Another important recent win is Boeing, the world's largest aerospace company and a leading manufacturer of commercial jetliners and defense systems. They are adopting Dassault Systèmes Operations Manufacturing Management software and have selected the **3DEXPERIENCE** platform to connect virtual and real worlds.

JG: I have read that when it comes to mid-sized companies, many startups, especially within electric vehicles, select the 3DEXPERIENCE platform.

FM: Yes, indeed. Silicon Valley is attracting several new players in electric vehicles, not only Google and Tesla, and they are using the **3DEXPERIENCE** platform and CATIA. They want a tool that is intuitive, cool and easy to use so that you can spend 100 percent of your time focused on creativity and innovation.

JG: What is Dassault's customer experience regarding performance on large assemblies in 3DEXPERIENCE vs V5?

FM: We can manage much larger assemblies in **3DEXPERIENCE** than we are doing with V5. This is the value provided by the V6 architecture. We have not reached the limits yet and we have for instance one customer that is building ships with over 10 million components. Having access to a complete digital mock-up of your ship, and managing 200 kilometers of pipes, 2,000 kilometers of wires, and 30,000 electronic sensors, is really a breakthrough.

JG: And clearly being able to handle large assemblies effectively will also impact the mid-sized ones.

FM: Yes, exactly. Until a few years ago, we were not seeing much attention for Product Lifecycle Management (PLM) from industries such as energy, process and utilities or construction. But now, with the increasing complexity generated by connected objects, sustainable

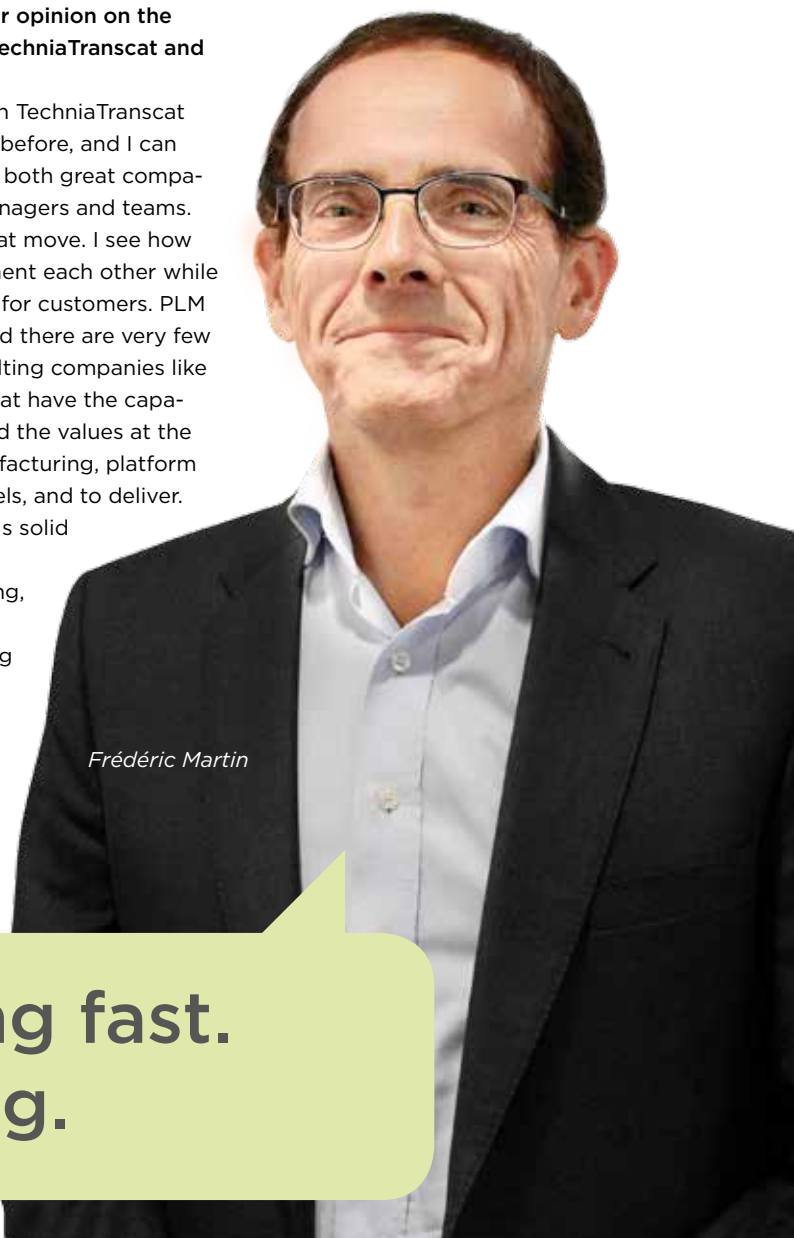
development, eco-responsibility and traceability, we see a strong interest from many newcomers driven by innovation and a willingness to benefit from solutions used in other industries.

JG: Simulation is a major topic – what are the key benefits of using an embedded solution within CATIA?

FM: Since CATIA V5, one of the key benefits of CATIA is the tight integration with SIMULIA and other analysis tools. We recently have extended the CATIA modeler capabilities to increase design / simulation interoperability at a new level thanks to the **3DEXPERIENCE** platform. Cloud solutions bring this capability to a new level for small and medium-sized businesses.

JG: What's your opinion on the merger between TechniaTranscat and Intrinsys?

FM: I knew both TechniaTranscat and Intrinsys from before, and I can say that they were both great companies with great managers and teams. I think it was a great move. I see how well they complement each other while providing benefits for customers. PLM is very complex and there are very few engineering consulting companies like TechniaTranscat that have the capability to understand the values at the engineering, manufacturing, platform and simulation levels, and to deliver. Intrinsys also brings solid skills for Electrical Vehicle engineering, and Light Weight Vehicle Engineering with Composite and 3D printing that will add a lot of value to customers of **3DEXPERIENCE** and CATIA. 🟩



Frédéric Martin

Things are moving fast.
A lot is happening.



A good, modern user interface performs well on any device, including smartphones with poor bandwidth. Benchmark Google: Why should we settle for anything less with PLM? We shouldn't!

The Google generation expects smart UI in enterprise systems too



Photo: Shutterstock

According to a study cited by the Google Research Blog, slowing down the search result page by as little as 100 milliseconds has a measurable impact on the number of searches a user performs. Furthermore, users execute fewer searches the longer they are exposed to slow page loading times, and interest in a page is directly proportional to the user abandonment rate. Other studies show that 47 percent of consumers expect a web page to load in two seconds or less and 40 percent

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“The message is clear for PLM user interfaces: Investments in processes and functionality risk losing out, simply because usability expectations are not met.”

of people abandon a website that takes more than three seconds to load.

Nowadays, more searches take place on mobile devices. The message is clear for PLM user interfaces: Investments in processes and functionality risk losing out, simply because usability expectations are not met.

What are the most common mistakes when designing a PLM user interface?

1. Poor performance. Regardless of whether or not the UI looks good, if it doesn't perform, users leave.
2. Obstructing the user from using their favorite device or browser. It lowers usage to a minimum. It's not uncommon that companies use "PLM secretaries" just for entering input data from engineers that have lost patience with the interface.
3. Making the interface too complex with crammed information, many buttons and choices. It prevents users from finding the information and tools they are looking

for. Companies often resort to extensive training programs on how to use the system, and that normally comes with a large cost from lost productivity and expensive training preparations.

What's a good UI?

A good modern user interface performs well on any device anywhere and on any browser. And a good interface does not require training.

And ENOVIA UIs?

TechniaTranscat's "Value Components" in "Helium Mode" provides all the characteristics of a good user interface, as described above. They are perfect additions to the standard ENOVIA user interface, adding value by enabling smooth work with mobile applications, simplified user interfaces for casual users and/or enhanced connectivity even when the network latency is high due to long geographic distances between the users and the application servers. Helium Mode is quick to install and configure and does not affect upgradeability of the system. ●

As digitalization paves the way for completely new business models and innovations, many traditional companies are struggling to keep up with the pace of change. Leif Östling, Chairman of the Confederation of Swedish Enterprise and former CEO of Scania, discussed the challenge in an interview with PLM Magazine.

Photo: Ernst Henry Photography

Leif Östling:

Many don't see the opportunities

How is digitalization changing current business models?

"I come from a very traditional B2B industry, where there are huge opportunities to expand existing business models by using digital technology and innovation. The concept of having just a physical product is outdated. You must have a combination of a physical and virtual product, like using sensors and predictive algorithms to predict when certain machine parts need to be replaced. There are massive opportunities today to create new services built around an already existing product, but unfortunately many companies are struggling to understand those opportunities."

How can companies find the right balance between innovation and nurturing a traditional business model?

"The key is that you can't have a static business model. Even IKEA, for example, recently opened up a small showroom just for kitchens in central Stockholm, where customers can try out

products and then order for home delivery. And Amazon bought Whole Foods in the US to use as its visual shop window."

Is there a danger that the human element is forgotten if companies focus too much on technology?

"Yes, it's incredibly important to keep focusing on people. Technology is an instrument, but the key is to find the people with knowledge of how to use that instrument. That's the only way to incorporate new ideas and the power of innovation into your business model."

Looking ahead 5-10 years, what's the key to developing business models that will maintain a competitive edge?

"One crucial aspect is to not look too far ahead. You must focus on improving what already exists today, maybe changing it by 5-10 percent each year. Don't try to change 100 percent. A business model can never be anything but a reflection of what your customer base wants. If you move too far ahead of your customer base, those ideas will fall flat. Don't try to

anticipate what's coming 10 years from now, because it's irrelevant."

With that in mind, how should companies develop long-term strategies for taking advantage of digitalization?

"You must view all digital tools as an asset, and then select the right tools to develop your business model in a way that's relevant for your customer base. In the end it's the customer who will decide what's successful, not the company. Traditional companies are still working with an inside-out mindset instead of outside-in. In other words, they should start from the outside, with the customer, and work inward toward the company."

What effect will these new business models have on the job market?

"The percentage of staff involved in the production side of things will continue to decrease. Take Scania, for instance. Today only about one third of our employees are involved in production. Twenty years ago, it was two thirds." 🟡

Give machines more IQ

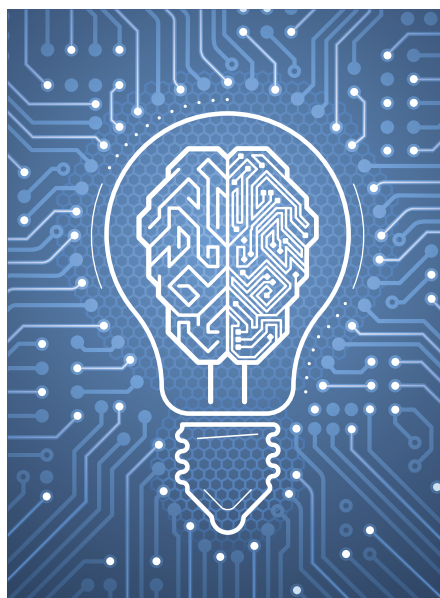
Augment your machines with artificial intelligence and sell a production performance improvement community to your customers.

New business models are enabled by industrial IoT, making machines smarter and augmenting the knowledge of operators. The reconfigured value chain enables new collaboration possibilities between machines and humans to increase production uptime, adapt to demand versatility, comply with regulations and mitigate intermediation risks.

It is a huge opportunity for industrial companies who have not yet started to harvest the potential of the new technologies. OptimData is TechniaTranscat's joint venture that focuses on ways to help customers move to industry 4.0. It develops applications based on connected devices, data science and machine learning.

What if machines could talk?

ProductInUse is a Software-as-a-service that can connect to many data sources and combine data from enterprise data silos (CRM, ERP) with IoT data in one application. It consists of two innovative pillars. On one hand, it is a design automation application for artificial intelligence (AI) of connected equipment. Based on machine data and data science tools, system expert engineers



Illustrations: Shutterstock

can diagnose, design, simulate and publish the AI of the equipment. The user is assisted to manipulate data and to create advanced algorithms. As a result, the AI teaches a language to the equipment for it to interact with production stakeholders. On the other hand, a community of connected performance joins people and equipment for a single objective of production performance. The equipment behaves as a friend of the operators, talking, predicting maintenance, suggesting the next best actions, anticipating failures and shortening the time to repair.

Shorten time to repair

By internalizing the collective intelligence into the AI, the equipment can identify, in its own context of production, the best

Tools for Industry 4.0

OptimData, a TechniaTranscat joint venture, helps customers move to industry 4.0. Its research center is based in Paris, France, with Laurent Couillard, former CEO of EXALEAD, a brand of Dassault Systèmes, leading the strategy and daily operations.

OptimData is already deploying the SaaS ProductInUse at companies Sidel, Engie/Shem, Schunk, Schmalz and Manitou.

next action to repair and restart. About 50 percent of the MTTR "Mean Time to Restart" can be saved enabling up to 3 percent increased OEE (Operating Equipment Efficiency) and a significant topline revenue increase.

Anticipating failure

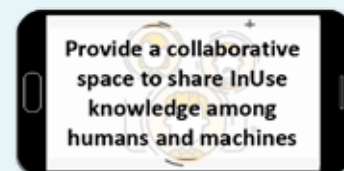
Predictive analysis can be built on critical components of the equipment. The AI is created via an algorithm that characterizes the physical issue. When triggered, it makes the equipment communicate before the failure. This digital service realizes huge savings at production sites. It produces a redefinition of the service engagement between equipment manufacturer and user, with direct topline effects for both parties. ■



Example: "Valve 32 is deviating. Can you change it at the next stop please?"



Example: Shortening the repair time.



Example: Post, annotate pictures or comments and share every production situation.



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For more information www.Intrinsys.com & www.techniatranscat.com



Millennials = avocado toast, yes - but ...

Photo: Shutterstock

Why it's all about avocado toast

Millennials have been getting a lot of bad rap for their love of avocado toast, their disdain for signing full-time contracts and for spending hours on end perfecting their Instagram posts. But research is showing that in contrast to what most of us have been thinking, they are pretty much doing the right thing.

Text: Louise Nordström, EdWork

“Avocado toast” became one of 2017’s favorite memes after Australian millionaire Tim Gurner suggested that millennials’ obsession with the over-priced mushy green staple is the reason why they can’t afford to buy their own homes. Gurner’s comment echoed other criticisms of millennials – our youngest workforce and typically aged between 18 and 35 years which has repeatedly been accused of being both lazy and self-entitled, with a general disrespect for workplace rules.

Robin Teigland, Professor in Business Administration at the Center for Strategy and Competitiveness at the Stockholm School of Economics (SSE), however, argues that we’re in the midst of a huge shift

when it comes to the way the world operates. And millennials belong to one of the few groups that is not only accepting but leading this change, successfully applying it to both their careers and lifestyles.

“We’re going from a linear world to a very non-linear, ping-pong kind of a world that’s based on different kinds of networks. It all comes down to the people you know offline and online and the different skills and resources you can access within these networks,” Teigland explains.

“In the linear world you think you have to solve the problem yourself, but



» with the non-linear mindset it's more about: Hey, who do I know who could help me out with this?" she says.

Macbook Pros and cafés

So how does the avocado toast fit into all of this? Well, when millennials take their Macbook Pros and hit their favorite cafés, most of them are actually networking and working – outside of the four walls and work hours enclosing the traditionally structured firm. It's become part of their DNA to network both online and IRL (In Real Life), transgressing social structures, professional boundaries, geographical borders and age groups in a whole new, more inclusive way. And they do so regardless of whether they are working or not. It's become a lifestyle and it's about so much more than just the expensive avocado toast they order while doing so.

In the workplace, Teigland says that getting stuck in a rut and insisting that the old-fashioned top-to-bottom, unapproachable-CEO-in-the-corner-office type of company structure is the only way to go, "is probably the worst mistake you can make." She explains why: "You close yourself off and isolate yourself with people who only think like you."

Finnish telecoms group Nokia, American photo equipment maker Kodak and energy company Enron are just some examples of former enterprise greats who learned the lesson the hard way.

Teigland says she often encourages companies to enlist "reverse mentors" – or young people – to teach babyboomers and generation Xers about the power of



Millennials are not lazy, as some claim. They have a non-linear mindset, says Robin Teigland.

using and integrating social media and crowdsourcing into their businesses and everyday ways of working.

Flipping your strategy

One of the main criticisms targeting millennials is their perceived reluctance to strive for full-time job contracts. But Teigland, who is backed up by an increasing number of researchers, argues that it is actually less about being lazy than playing it smart in a labor market where more than 50 percent of the firms

listed on the Fortune 500 in the year 2000 have already disappeared due to digitalization.

"A full-time job doesn't give you the securities it used to. So it's about thinking 'what if' and about continuously developing yourself, refining your skills and building your networks on your own," Teigland says, adding this is one of the reasons why we are moving into a project-based freelance economy.

Studies carried out by recruitment consulting group Challenger, Gray and

Christmas back this up, showing how millennials have understood this, making them hungrier and better educated than any generation before them. But the biggest difference is, they understand technology, and they use it to build their careers and businesses.

"We're seeing how some firms are flipping operations for example. Instead of having their R&D in-house and the production in a low-cost country, they use online communities to outsource the R&D to experts in places like Buenos Aires or New York. And 3D printing makes it possible to produce locally," she says, pointing to the 3D-printed autonomous vehicle OLLI by Local Motors.

Digital nomads

Gurner's now infamous statement also underscores another outdated idea about our youngest workforce: That they strive for the same goals in life – a full-time job, a car, a house – that their parents did. The truth is, most of them don't.

"If I'm an entrepreneur, I can be a digital nomad and work wherever I want and need to be. And I don't want to have to deal with having to buy a lot of things," she says, explaining how this is driving the shared economy, including car-pools, Airbnb-style offices and co-living spaces across the globe.

According to Teigland, we're already at the beginning of the end of this change of perception of how we do things. And we should accept it, even if it comes from avocado toast-loving millennials.

"It's all about breaking assumptions. The change is already here and it's what's driving innovation and new strategies." ◆

"If I'm an entrepreneur, I can be a digital nomad and work wherever I want and need to be."



The avocado can be seen as a symbol for new ways of thinking.

Keeping track of clamps, scissors, entire knee and hip systems ...

For a leading medical technology company like Aesculap, the surgical division of healthcare provider B. Braun Melsungen AG, maintaining the same level of high quality across a huge range of devices is a monumental task. That's why Aesculap is using TechniaTranscat software. "It makes our work much easier," says Fabian Hoefer, responsible for CAD Coordination at Aesculap.

Aesculap focuses on products and services for core processes in surgery. The product range includes hundreds of different surgical products, from simple devices such as clamps and scissors to entire knee and hip systems.

Operating a business with such a wide product range requires a global set of standards and methods that can be followed by engineers worldwide. To maintain those standards, Aesculap has implemented a software environment supported by CATIA, Product Data Quality management system Q-Checker and myPLM.

"Q-Checker helps us achieve a common data quality, while myPLM helps us achieve a common hardware system throughout all international locations and make a global configuration," says Fabian Hoefer, responsible for CAD Coordination at Aesculap.

Sharing expertise

Aesculap started working with Transcat in 2013 and the partnership became even stronger after the merger with Technia.

"Currently we're working together on a new PLM strategy and we get great help from the Swedish TechniaTranscat team with its PLM knowledge," says Hoefer. "We get a lot of added value from the fact that TechniaTranscat services many



There are hundreds of different surgical products to keep track of.
© Aesculap AG



The names of every single item need to be standardized to avoid misunderstandings.

different industries and different customers, and can therefore give us a broad range of advice. At Aesculap, we live the philosophy of Sharing Expertise. We develop the best solutions in close partnership with our customers as well as our suppliers and partners. TechniaTranscat is a very strong partner to practice the sharing of expertise in both directions." ◆

Be the change before it changes you

The ability to swiftly process information and embrace change is considered to be the greatest make-or-break in today's cut-throat business climate. This is why TechniaTranscat has made these processes the heart of its business, ensuring companies in any industry a safe and innovative leap into the future.



Digitalization is in all its glory, but there are drawbacks to it too. Unless you're able to expertly handle the deluge of information that's literally flooding us from all corners, it's easy to drown in it all. And that costs you time. Precious time you probably don't have.

But it's not just about being able to keep tabs on the ins-and-outs of your business. You also need keep one step ahead of your peers, predicting the trends before they've become real and actually capitalize on the changes about to hit your industry.

Enabling innovation

Innovation and Product Lifecycle Management (PLM) prepare the ground for that. PLM helps you manage any virtual information you might have – from the provenance of the tiniest screw to the application of a new law or regulation – fully supporting the making of your physical products or services. It also allows you to interact with any parties that might be involved throughout the product's lifecycle, including your staff, suppliers, partners, regulators and ultimately, your customers. This information then becomes worth its weight in gold.

TechniaTranscat has specialized in PLM for over 20 years and has grown into a global knowledge expert serving more than 4,000 customers in industries ranging from life sciences, automotive

and travel to telecom, retail and construction.

"To put it simply, we make product creation easier. We help our customers create new products as well as improve those they already have. It can be anything from a mobile phone to an actual service," Magnus Falkman, Director of Process Software at TechniaTranscat, explains, adding that customers include Ford, Kongsberg Defence & Aerospace, H&M and Orion Pharma.

TechniaTranscat is a supplier of Dassault Systèmes' product portfolio, which includes the French group's PLM software, 3D design and 3D digital simulation products. These are:

- **ENOVIA**, a collaborative PLM system in a flexible environment.
- **CATIA**, a virtual product design and engineering solution.
- **DELMIA**, a virtual production site tool that helps you plan, apply and continuously optimize your project.
- **SIMULIA**, a simulation tool that allows you to optimize your products before they actually exist.
- **3DEXPERIENCE**, a business experience platform that combines all of Dassault Systèmes' brands.

But TechniaTranscat also has its very own software portfolio, consisting of a wide array of approximately 40 products that complement these solutions and take them to a whole new level.

"They're basically add-ons and optimizers that give you both faster and higher investment returns," Falkman says.

TechniaTranscat's Integration Framework (TIF) solution, for example, has quickly soared to a customer favorite since its release in 2013. TIF is based on best practices from more than 30 ENOVIA integration projects and makes configuration easy, allowing you to

"It vastly speeds up the overall implementation time, reduces the complexity of your business' ecosystem and reduces costs."



Aside from Dassault Systèmes' (DS) product portfolio, TechniaTranscat offers about 40 of its own products that complement the DS solutions.

smoothly integrate your PLM with virtually any other standardized enterprise application or system, such as Enterprise Resource Planning (ERP).

"It vastly speeds up the overall implementation time, reduces the complexity of your business' ecosystem and reduces costs," Falkman says.

Developing the offering

Just like it mentors its customers to keep a constant eye on the horizon, TechniaTranscat sees innovation as key in its own operations too.

"We're investing quite a lot in IoT (Internet of Things) and IT technology that are open standards for 3D, as well as considering aspects of Machine Learning. These things are coming our way, and so we're looking at how to develop offerings that include them in an innovative, new way," says Falkman.

Today, TechniaTranscat has more than 500 staff in Austria, Finland, Germany, India, Netherlands, Norway, Slovakia, Sweden and the US. And TechniaTranscat's people are one of the main drivers behind the company's growth and success. ■

Also popular in TechniaTranscat's portfolio

TechniaTranscat's Tools portfolio includes bestsellers that have been developed to simplify the task of implementing, optimizing and monitoring ENOVIA/3DEXPERIENCE production systems. The Schema Tool makes it easy to manage, handle and install ENOVIA Schemas. The Server Monitor with Hyperic offers complete surveillance of an ENOVIA system which in turn helps you drastically reduce the number of system stops and crashes. The Profiler tool is essentially for developers and can, for example, be used to track all calls being made to the ENOVIA kernel, analyzing the information to improve the quality and performance of your code.

TechniaTranscat's Value Components (TVC) portfolio enhances user productivity, system performance and improves user adoption rates of an ENOVIA/3DEXPERIENCE system.

The CAVA product suite, or CATIA Automotive Extensions Vehicle Architecture, is another popular TechniaTranscat innovation which has been developed specifically for the car industry. The solution ensures that the entire vehicle architecture design is in full compliance with international rules, norms and standards, from the concept phase to marketed product. This helps you dodge any unpleasant regulatory surprises along the way.

Q-Checker is the world's leading management system for Product Data Quality during virtual development, supporting and enhancing cross-engineering and model reuse. The system allows statistical assessments to establish a continuous improvement process for PDQ. In CATIA, methodology checks cover the new important area of model integrity, besides geometry and standard criteria.

3D Enterprise and the Lite3D platform gives all users in your company easy access to complete 3D data - beyond just your engineering department.

Minimizing the distance to reality

The 2017x release of the **3DEXPERIENCE** platform brings virtual products very close to real life. It is also an excellent platform for collaboration across an entire enterprise.

Virtual Reality (VR) on every desktop:

We now have a range of affordable VR devices on the consumer market. To allow engineers and designers to benefit from this development, Dassault Systèmes has teamed up with HTC to support the latest generation of VR-goggles: The HTC Vive. It offers a full HD head-mounted display with precise motion tracking. And it is natively supported in CATIA **3DEXPERIENCE**, which eliminates the need for time-consuming conversions. Designers can now instantly view their work in VR.



The 3DDrive allows you to share files in a similar fashion to Dropbox. 3DComments makes it easy to share ideas and thoughts. The 3DNotifications panel helps keep you up to date.

Real-time rendering: A new rendering engine, borrowed from the high-end visualization solution 3DEXCITE, allows designers to view their work in real-time with a photo realistic rendering quality which previously was only possible through time-consuming batch rendering. Combined with the VR capabilities mentioned above, the virtual product comes to life right on your desktop.

Leaving the design to the computer:

"Function-Driven Generative Designer" is a set of powerful modelling, simulation and optimization capabilities that help automate the design process. Starting with a functional definition (loads, movements, etc.), an optimal geometrical shape is calculated. This approach dramatically reduces the engineering time.

New 3DDashboard apps: With 2017x, the first real authoring apps have arrived on the dashboard, providing a more interactive and "application like" user experience. In, for instance, the Requirements Management Editor, a specification can be created and edited showing a side-by-side view of the requirements structure and a document view which present the requirements in rich text. Another strong point is the new administration widget, which moves basic system administration and business modelling from the Business Modeler to the 3DDashboard.

New collaboration features: We have already witnessed the arrival of social tools like 3DSwYm and Netvibes on the platform, now comes the 3DDrive, a service for easily sharing files in a similar fashion to Dropbox. Furthermore, to facilitate the communication between all categories of users on the platform, a new feature called 3DComments allows anyone to share their thoughts and perspectives on a product, document or 3D-model. Finally, the new 3DNotifications panel keeps you up to date on all events of importance. ◆



Writer: Johannes Storvik

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Better user-friendliness at Honeywell with TechniaTranscat

When Honeywell Transportation Systems, the US-based world-leading supplier of transportation systems, needed to upgrade its product data system, they turned to TechniaTranscat. For Honeywell, TechniaTranscat's focus on user-friendliness and productivity was a decisive factor.

The agreement was reached in May 2016, and the implementation work is expected to continue for one year.

"TechniaTranscat's technical expertise, their cost effectiveness and their understanding of our focus on user friendliness were decisive factors when we chose to work with them," says Chris Meade, Engineering Director at Honeywell Transportation Systems. "They have proved to be a strong partner in our important projects."

Once the upgrade of the PLM system has been completed it will have more than 2,400 users around the world,

including some 200 CAD designers and more than 600 engineers. The PLM system is based on the **3DEXPERIENCE** platform from Dassault Systèmes and on TechniaTranscat's proprietary software.

Honeywell's employees will be able to access business-critical documents, including all CAD activities, specifications and product releases, in a single system. One new feature is that users will have direct access to 3D models.

"With the new system we will cut the time and number of clicks required to perform ordinary tasks by more than 60 percent," says Chris Meade. "This will

give our employees more time for technology development and to seek out new business opportunities."

TechniaTranscat's American colleagues and their partner networks are key links in the delivery, which is being conducted in close collaboration with Honeywell.

"TechniaTranscat's model of engagement and accessibility makes it easy to solve potential challenges," says Chris Meade. "They use their global know-how to recommend robust solutions." ●

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The overall goal of the PLM 2.0 strategy is to improve efficiency by 10 percent company-wide.

Train maker Stadler accelerates innovation

Swiss train maker Stadler is constantly moving forward. Over the last 20 years, the company has grown from 70 employees to more than 7,000 and its trains now run in 20 locations around the world. To keep the journey rolling, Stadler is implementing a new PLM strategy aimed at improving efficiency and speed across all departments.

“Our trains have become more and more complex. We were looking for a tool that supports our work process in a smarter way and fulfils our increased requirements without increased effort,” says Roland Reichlin, project leader at Stadler and a speaker at TechniaTranscat’s PLM Innovation Forum.

After an exhaustive evaluation process that took up more than 4,600 work hours, Stadler chose to partner with TechniaTranscat to implement a PLM approach based around the 3DEXPERIENCE platform from Dassault Systemes.

The new system provides a unified platform for engineers from different departments involved in the creation process, including mechanical, electrical, hydraulics and software. This allows them to communicate in a more streamlined manner, as opposed to the previous system where mechanical and electrical equipment were produced on different platforms and then had to be merged in a time-consuming process.

Immediate access

The overall goal of the PLM 2.0 strategy is to improve efficiency by 10 percent company-wide – although the time reduction for some processes is up to 80 percent.

“A modern train car has more than 50,000 parts and can be a bit of

a jigsaw puzzle. We wanted a united database where the data for all parts is accessible from anywhere at any time and provides information where these parts are used. This simplifies changes and all involved projects get notified and can react accordingly without manual processes,” says Reichlin.

Stadler had worked with TechniaTranscat for several years previously as a PDM and CAD supporter, and decided to expand the partnership after inviting several bidders for final presentations in 2016.

“TechniaTranscat had by far the best sales team in terms of being able to answer our questions and understanding our needs. Their system also had a technological advantage compared to the other competitors,” says Reichlin.

Stadler, which recently rolled out its

new SMILE high-speed train that will run through the Gotthard Tunnel in the Swiss Alps and connect Frankfurt to Milan, will also use the 3DEXPERIENCE platform to help integrate new staff members in cross-location project teams as it continues to grow both organically and through acquisitions.

Sharing know-how

“When we reuse components and concepts in projects across the various locations it’s a matter of transferring know-how, and that is one area where we want to benefit from a united platform that makes sure we are not doing things

in individual ways in different locations,” says Reichlin.

Stadler’s PLM project is now in the second phase of a rollout that will be completed in 2018 and also

includes replacing some legacy systems like SMT and others.

“This project is a good example of how superior technology can be used by a superior company that needs to be on the cutting edge, and the benefits of working with a trusted partner that delivers world-class PLM competence and expertise,” says Rolf Wiedmann, Director of Sales at TechniaTranscat. ■


“This project is a good example of how superior technology can be used by a superior company that needs to be on the cutting edge.”



They design for 50 meter-high waves

The German-based Maritime Offshore Group, MOG, has invented an offshore foundation structure that can support wind turbines that weigh more than 500 tonnes and withstand 50 meter-high waves.

Designing such a base is complex. It is a lattice structure consisting of corner piles linked to bracing with a span of less than one meter and at 62 degree angles. In order to facilitate and speed up the process, the company chose the cloud-based 3DEXPERIENCE and CATIA for design and PLM ENOVIA for data management.

With the cloud setup, “we don’t have to make additional IT investments. Moreover, we can rapidly apply changes to our designs to assess their cost impact. This is very important,” says Managing Director Emilio Reales who founded the company in 2011 and now has 15 employees. 
www.maritime-offshore-group.com



All data is in the cloud, rather than in individual folders and computers, making it easy to find.



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How to make UDI a competitive advantage

The new Medical Device regulation in Europe, along with the EU UDI (Unique Device Identification), are high on the agenda for most medical device companies. Managing the maintenance on US UDI while ramping up for these new requirements are challenges.

The key to success is to view the new medical regulations as an opportunity for business development. By embracing the regulatory change and connecting it to an already available product definition in PLM, medical device manufacturers can meet the new requirements while building up a core cross-functional submission and device change process – shortening both submission lead time as well as reducing change cycles.

The UDI is a unique ID of the product throughout its lifecycle, which means all information on products will be available in one place, making it much easier to track. If something goes wrong and a product must be recalled, UDI facilitates the process of speaking to suppliers, compensating customers, and getting the product back from the market.

Commercially there is a massive benefit in speeding up the turnaround on warranty claims and taking care of customers in a way that leaves them satisfied.

Automation speeds up


Once all the required data has been gathered and approved it must be registered with the FDA (US) and EUDAMED (EU). Handling that process manually is not only slow, but increases the risk for errors. By using a PLM-driven approach

companies can handle up to 10–200 times as many registrations or changes per day while improving the quality control and eliminating mistakes. With some companies having thousands of devices and parts to register, the cost benefits of automating the process can be massive – in initial submissions, but foremost in post-submission maintenance.

Companies may have to repeat this process in years to come. While the US market was the first to implement these rules, the EU and Asian markets are following, meaning the same information would have to be registered again with those regulatory agencies. By doing it right the first time you can save both time and money in the future as well.

PLM has the tools

The tools for compliance already exist within PLM, including the processes necessary to register and approve the required information about a product during the engineering and product development stages. In addition, TechniaTranscat offers a module within the **3DEXPERIENCE** software, The Regulatory Affairs Manager, that



Each product will have a unique ID and serial number throughout its lifecycle.

makes sure the correct data is created about a product and that the information goes through the required approval stages and is automatically submitted to Global Unique Device Identification Database (GUDID).

In this way manufacturers improve the quality of data, make the process easier and faster. They also benefit from reusing the information from the field and point-of-care, which the registration enables. ●

Integration Framework unlocks Seco's product data

Like many companies with a vast array of products, Swedish tooling giant Seco Tools wanted to find a smarter way to share product data across different systems and platforms. To meet the challenge, Seco was one of several TechniaTranscat customers who helped develop the Integration Framework (TIF) – a software that helps PLM communicate more efficiently with both internal and external systems.

“We wanted to build a platform that could grow with us and handle our system integration in a simple and efficient manner,” says Robert Stedt, Senior R&D Manager at Seco Tools. “TIF gives us a stable foundation to build on that is secure and eliminates the need for point-to-point integration. The number of surrounding systems that ENOVIA needs to communicate with is always increasing, and that’s why we need a good communication platform.”

A living product

TIF was launched in 2013 to reduce the cost and complexity of PLM integrations for enterprise systems. As a collaborative product that is constantly updated, TIF also allows users to draw on the

“We find that a lot of the problems that we could run into have already been solved by other companies.”



experience of other companies while eliminating the need for specialised in-house solutions.

“Before using TIF we tried building our own frameworks, but it wasn’t always successful. By sharing this solution with other TechniaTranscat customers, we find that a lot of the problems that we could run into have already been solved by other companies,” says Niklas Rutqvist,

who manages Seco's PLM and PDM systems for parent company Sandvik. “It also means that TIF is constantly being developed to add new functionalities. For us, that’s a massive benefit because we know it’s a living product.”

Seco develops tools for machining applications for customers around the world, with a product portfolio that includes solutions for milling, turning, hole making and holding tools. With such a broad product range, Seco also needed a system with the capacity to handle the sheer volume of data that gets produced.

“When we update our product information, it creates large amounts of data that has to be sent across systems. And we can see that TIF has helped us become more efficient in that process by only doing maintenance on the data that needs to be changed. So it’s a better process,” says Stedt.

Increased sharing of data

The need for integration platforms has grown rapidly in recent years because digital product data is used in more ways



At Seco, ENOVIA communicates both with ERP and production systems.

than ever before. At Seco, ENOVIA communicates both with ERP and production systems, product data is also used for external web portals.

“We’re constantly finding new uses for product data. We also manufacture products that may need advanced calculations depending on how the customer wants to use them. So we export data from ENOVIA to other systems to process it, with new functionalities being added all the time. And that

“We can see that it’s much quicker to develop new services now, and those services are much more stable.”

need will only continue to grow,” says Rutqvist.

For Seco, the benefits of TIF have been clear: added stability and significant time savings.

“We can see that it’s much quicker to develop new services now, and those services are much more stable. Because the basic framework already exists, we get a common interface and we don’t have to re-invent the wheel every time,” says Rutqvist. ●



Get the facts, fast and up to date

Integrating your PLM system with your ERP can be challenging. Here are three tips for a successful integration.

While customers are growing smarter, industry watchdogs are becoming stricter and competition is getting stiffer. To successfully answer to those demands, businesses must quickly and transparently be able to access and produce every little piece of data on the products they manufacture as well as the business processes they apply.

A key step on this journey is to connect your Product Lifecycle Management (PLM) system with your Enterprise Resource Planning (ERP). Mind you, without the right tools this can be tricky – not to mention lengthy. A mishap can disrupt your operations and have a lasting and negative impact on your bottom line.

Three steps for a successful integration:

1. Seamless

A business should be able to seamlessly and competitively carry on with its operations throughout the integration process, while meeting day-to-day customer and legislative demands on both the PLM and ERP side.

2. Minimal intervention

A major challenge is to ensure the integration requires minimal system intervention, with as little disruption as possible to the continued operation of the two systems on either side of the integration process.

3. Speed

A prompt and efficient integration is important because in such a core procedure, time is money, but without sacrificing stability or introducing bulky solutions that cannot be scaled for future needs. Otherwise the Total Cost of Ownership (TCO) can turn into a future headache.

What is the solution?

A stable, non-disruptive solution that is fast to implement, easy to use and adapted to the world's most commonly used ERP systems. Ultimately, it should integrate the PLM and ERP systems on the same platform, adding transparency and efficiency to the business it serves. The solution should also help keep costs low by relying on configurations rather than custom code, providing easy administration and maintenance. ■

Tool for spot-on integration

The Integration Framework (TIF) tool, is built to configure 80 percent of outgoing and incoming integrations, slashing the time and money that would have otherwise been spent on programming. It can be easily tailored to integrate ENOVIA and 3DEXPERIENCE to ERP systems such as SAP, based on ready-made templates that ensure fast and efficient implementation.

The administration user interface is simple and straightforward, providing a clear overview and vital statistics on, for example, usage statistics per integration, the number of integration jobs currently in the pipeline and success and error rates. The interface also allows users to quickly and easily stop integrations, track errors, and resend or process integration jobs that might have failed. The solution is scalable, allowing for future additions, and is easy to upgrade, which means the total cost of ownership is kept low.



Writer: Stefan Tärnblom

Stefan Tärnblom has more than 20 years of experience in PLM. He has been working at TechniaTranscat since 2002 as project manager and team manager for ENOVIA PLM. Presently he is coordinator and manager for TechniaTranscat business development.

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“The Integration Framework (TIF) tool will make the work much easier and faster.”



What if Tesla started to build houses?

Imagine if companies such as Tesla went into the construction industry. How would they change the way you build houses and infrastructure?

“Like they did with cars, they would start by hiring process engineers, aviation experts and other professionals without knowledge from the industry and totally rethink how houses are built,” predicted Javier Glatt, CEO of Canada-based CadMakers Virtual Construction.

Patrick Mays, Vice President Strategy at Dassault Systèmes, said business models would be changed, and constructions may be provided, for instance, as a service.

The hypothetical question was raised at a seminar on digitalization and lean construction hosted by TechniaTranscat, in an initiative aimed at helping accelerate digital disruption and smarter production in a sector criticized for being conservative.

McKinsey said in a report that large construction projects typically take

20 percent longer to finish than scheduled and are up to 80 percent over budget.

Helena Dahlberg of Sweden's Building Center (Svensk Byggtjänst) said poor communication – including misunderstandings, unclear instructions and non-existent specifications – was increasing costs of larger construction projects in the country by about 13 percent.

Growing interest

Speakers at the seminar were anxious to show how digitalization and new inventions can help.

Tiina Koppinen, Senior Vice President Business Development at construction company Skanska in Finland, said they were using ENOVIA as a tool for project management and project information including, for example, cost estimates and cash flow.

Focus on design process

Kajsa Simu, Lean Manager and researcher at Luleå University, Sweden, said stakeholders in the highly fragmented construction sector need to find ways to focus on

end consumer satisfaction, “rather than working in silos and sub optimizing.”

Lars Albinsson, CEO at Maestro Management, who has helped companies like Volvo and IKEA with digital innovation, said digitalization can do wonders in the construction industry.

“If we spend more time on the production design process and look at the lean production process, we can do wonderful things at lower costs.”



SEK 6 million for a Volvo (630,000 euro)

Lars Albinsson, CEO at Maestro Management and a specialist in digital innovation, cited a study made by a construction company calculating what a car priced at SEK 300,000–500,000 would cost if current construction industry processes were used to make it. “It would cost about SEK 6 million.”

Finland makes switch to CATIA V6

A growing number of Finland's industrial companies are making the switch to CATIA V6, including industrial equipment expert Etteplan and leading consulting and engineering company Elomatic.

"It enables us to work even smarter and closer with our customers, and boosts the efficiency of our customers' engineering and product development environments," says Marko Mälkiä, Director Corporate IT at Etteplan.



CATIA V6, part of the **3DEXPERIENCE** platform from Dassault Systèmes, is faster than its predecessor V5 and speeds up the design process and change cycle by producing a collaboration environment where engineers can easily share content and see each other's changes at all times.

"We can see a clear trend toward V6 over the last two years, in part because several of Finland's biggest industrial companies are using it. That means it's easier for their subcontractors to work on the same platform," says Antti Leppänen, Sales Executive for TechniaTranscat in Finland.

ÖoB drives expansion with PLM

Runsvengruppen, which operates over 100 ÖoB department stores throughout Sweden, chose the **3DEXPERIENCE** Platform and TechniaTranscat as their strategic partner for the complete delivery of all software, consulting and support services. The investment aims at facilitating expansion. "We selected TechniaTranscat based on their strong skills in PLM for retailers and local presence," says

Peter Adell, IT Manager at Runsvengruppen.



Jaap Holweg and
TechniaTranscat
CEO Jonas Gejer.

TechniaTranscat expands with Infostrait

TechniaTranscat has acquired Infostrait, a Dutch PLM and BIM specialist. The move is in line with TechniaTranscat's strategy to grow by acquiring highly skilled value-added resellers of Dassault Systèmes software in selected geographies. Infostrait had been a partner for years and is well established in Belgium, the Netherlands and Luxemburg and represents a growth opportunity.

"We are very excited to become part of the European leader in PLM. This gives us the possibility to bring the full capabilities of TechniaTranscat to our customers," says Jaap Holweg, founder of Infostrait and new Director for the Business Area Benelux within TechniaTranscat.

Infostrait, with 18 employees and a revenue of SEK 25 million, will be a part of TechniaTranscat's business area Product Lifecycle Management. In another strategic acquisition in 2017, TechniaTranscat acquired Intrinsic, the number one PLM specialist in the UK.

Moving up on IoT

TechniaTranscat has increased its focus on the Internet of Things even further with the hiring of Magnus Carlmeister as its new Business Development Executive for IoT. Carlmeister, the former CEO of IT firm Contribit, will spearhead TechniaTranscat's efforts to help Nordic customers make full use of IoT technology with the ground-breaking application ProductInUse.

"With IoT and ProductInUse, we give machines a language and make them talk. That means manufacturers get a better understanding of how their products are used and perform," says Magnus Carlmeister. For more information about ProductInUse, visit: <http://productinuse.com/>



Tools help Gucci

Luxury brand Gucci always demands top-quality performance in every aspect of its product development. That's why Gucci is using TechniaTranscat's services to optimize its ENOVIA system and ensure that operations are running smoothly.

Gucci has been working with TechniaTranscat since 2014, using the tool Server Monitor, a TechniaTranscat Value Component (TVC), to improve the speed and efficiency of the PLM platform. The tool is designed to run in the background and monitor all tasks and functions, producing a log that can easily be used for troubleshooting and maximizing performance.

"Server Monitor is a way of reading the system and seeing if anything needs addressing. It helps Gucci understand where to look if they have any issues. If a user detects a problem, they can just go into the log and find out where it is," says Alessandro Passaro, Business Consultant at TechniaTranscat.

Gucci uses PLM for the design and production of a number of products, including bags and leather goods. The company is also exploring ways of using other TVCs to improve the user interface.



Photo: Shutterstock

How to fuse tools with strategies

Change is a process that requires more than just new technology. Fusing the right tools with the right strategies is crucial for any company going through a development phase.

Stockholm-based Infuseit, an independent consultancy department at TechniaTranscat, specializes in making that process as simple as possible.

"Our consultants can show you how a Product Lifecycle Management (PLM) system can benefit your business by streamlining operations and improving efficiency. But a successful PLM strategy goes well beyond the software tools involved. It's about finding ways to work smarter, faster and better," says Anna Liljedahl, Senior Advisor at Infuseit.

Infuseit offerings also include business consulting, change management, process mapping and workshops to help clients get started with the change process. To find out more, visit www.infuseit.com



Photo: Shutterstock

Come grow with us!

Are you passionate about Product Lifecycle Management (PLM) and want to help world-leading innovative companies deliver better results? Then TechniaTranscat is the right place to be.

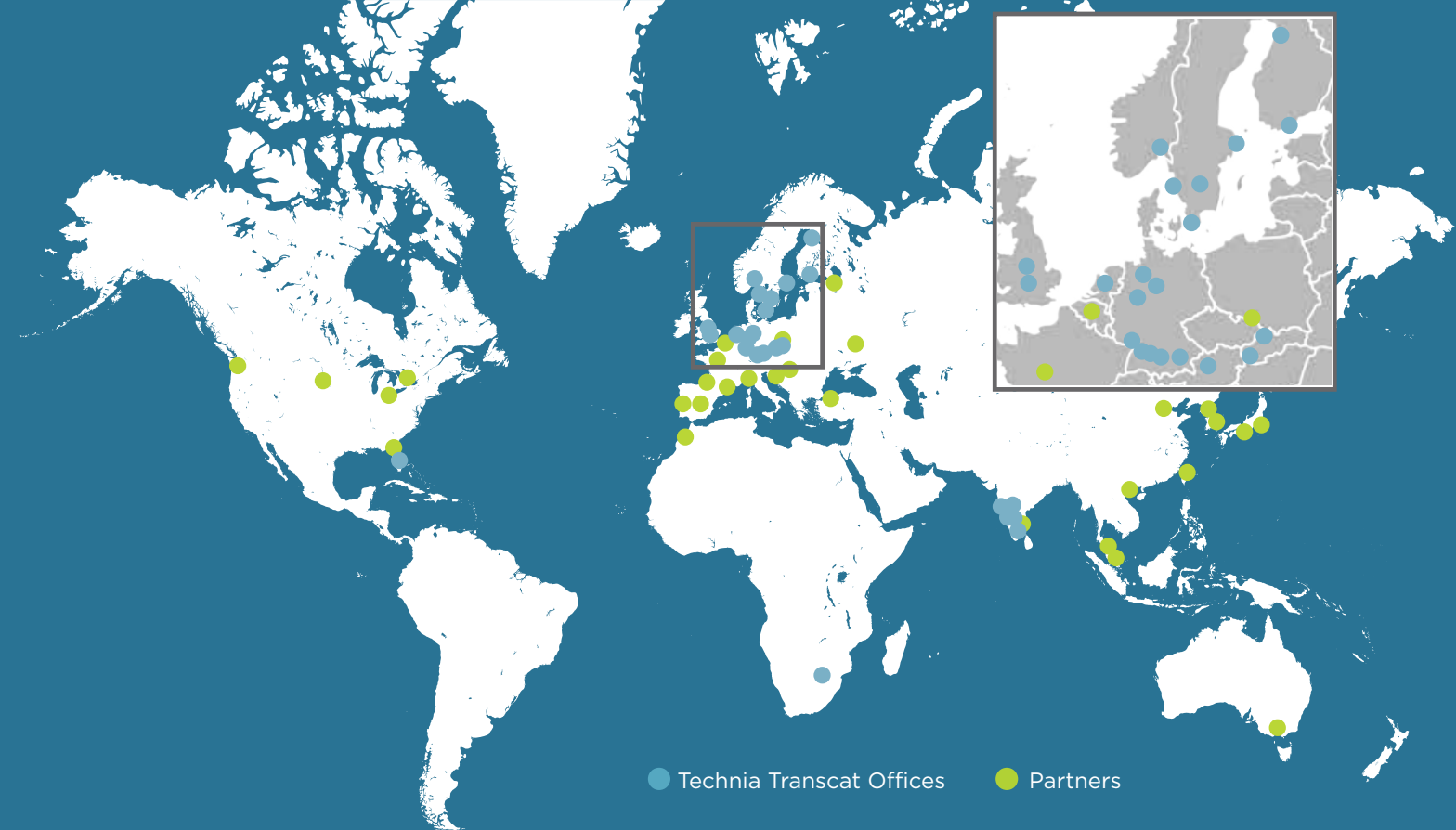
Our vision is to be the number one knowledge leader for PLM globally. Our strength is our people, so our team members get continuous access to training and development to make sure they're constantly growing with us. Our culture is based on knowledge sharing and teamwork, which ensures a stimulating atmosphere in all our 25 offices across 14 countries.

With TechniaTranscat, you can get involved in some of the most interesting PLM projects on the market – doing work that really matters. **Apply today – and come grow with us!**

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