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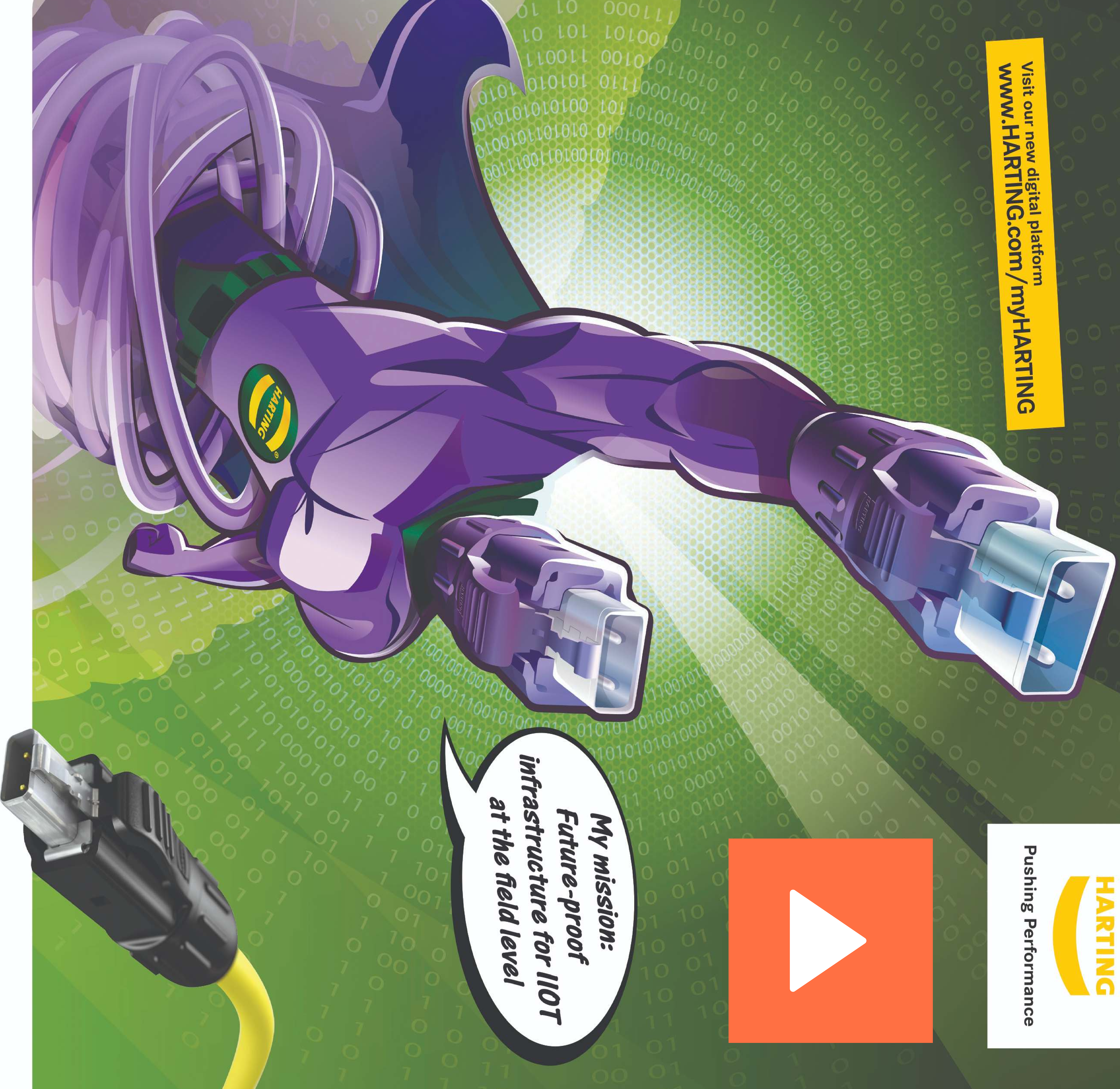
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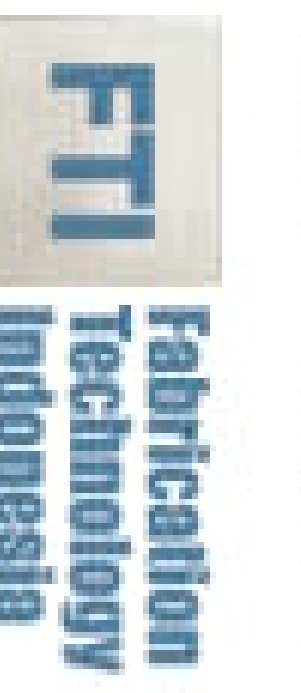


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## Hello! It is August now!

How have everyone been doing? We have seen a massive changes in the manufacturing sector all the way to logistic and warehousing. This issue we cover topics about Plastic, Packaging and Addictive Manufacturing. Manufacturer, Scientist , Researcher are all working very hard to cut down plastics and moving into the direction of green and environmental friendly innovation and for instance, have your food and eat your packaging together (this was done by KFC) Edible packaging is on the rise, None Stick Packaging, Safety-enhancing packaging that will indicates when food is spoiling, Packaging that disappears and Super-compressed packaging for easy and efficient transportation.

In the next October edition we will be touching on Oil , Gas, Marine & Offshore, Shipbuilding and Heavy Equipment and the Christmas edition will be Manufacturing Automotive, Robotics and Vision Systems.

Please do share with us if you have some Success story on any of these topics.

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Till, we meet again in the next issue, do keep your interesting articles coming in to us at [editorial@industrialguideasia.com](mailto:editorial@industrialguideasia.com)

Sending good vibes and good health to all of you!

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## Eat Your Food, And The Package Too

Focusing on the long-lived detritus that typically accompanies take-out meals, the students baked and 3D-printed straws made of sugar and agar—a gelatinous substance derived from seaweed. They hand-shaped bowls from mycelium, the threadlike roots of mushrooms. One team designed sheets of black plastic that folded into take-out containers (seen in image above) and could be returned to a collection point, sanitized, and reused ad infinitum by a consortium of take-out chains. Another duo crafted an ingenious paperboard box with a fold-it-yourself fork/spoon combo that diners tear from a perforated edge (above). When lunch is over, everything gets pitched into a compost bin, which in an ideal world is, of course, never far away.

Of the 78 million metric tons of plastic packaging produced globally each year, a mere 14 percent is recycled. Lightweight and floatable, plastic that escapes collection flows into our oceans—nine million tons annually—most of it from developing nations that lack the infrastructure to manage it. The problem is expected to get worse as those nations grow richer and inevitably start consuming more packaged foods, and as many others in an increasingly convenience-obsessed world continue to purchase meal-kit and grocery services—which generate considerable packaging—and take-out foods.

But plastic is quite good at what it does, which makes replacing it so devilishly difficult. Plastic protects food over long journeys, guarding it against pressure, humidity, light, and the bacteria that accelerate rot. (Shrink-wrap a cucumber in polyethylene and its shelf life stretches from three days to 14. The wrap, however, may last more than a century.) Plastic is strong and clear, enabling consumers to see what they're buying. And the feedstock for plastic is widely available and incredibly cheap. At least for now.

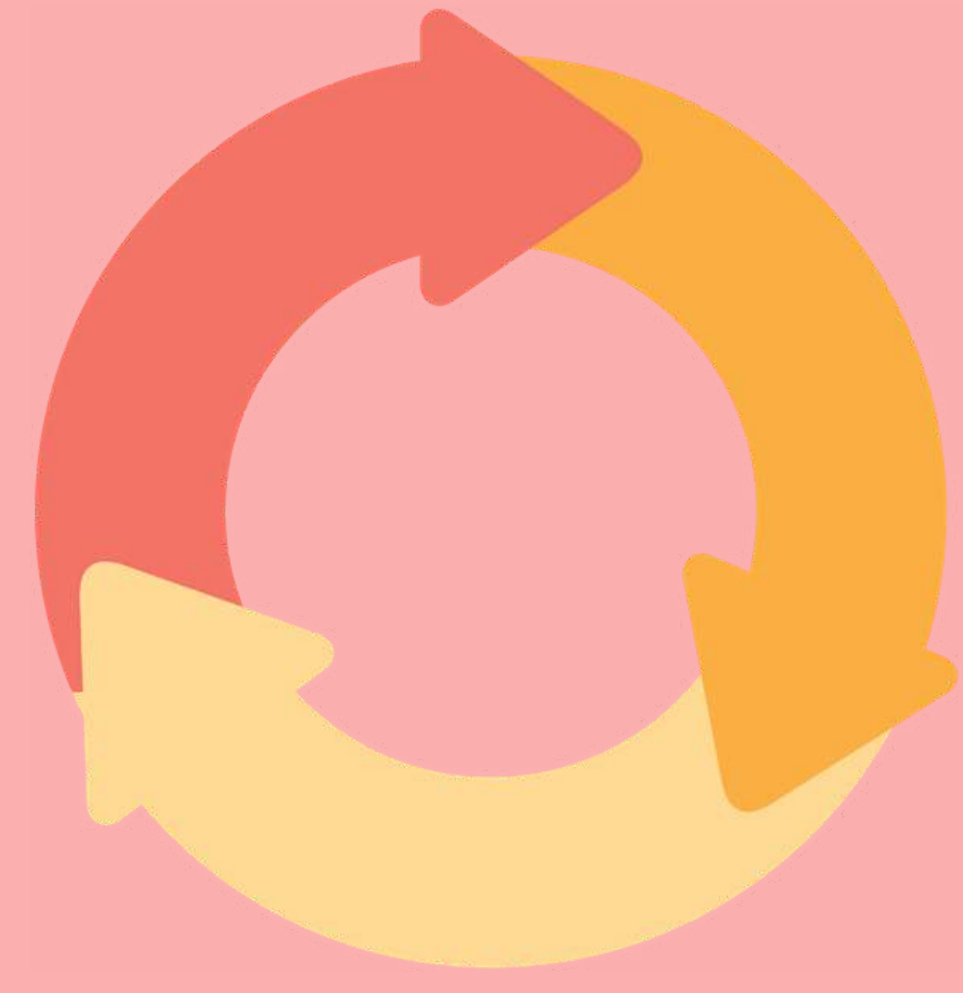
### The Birth of Throwaway Culture

Soon after the turn of the 20th century, food companies began using a flexible wrap called cellophane, made from plants. Chemists later imitated this bio-based polymer with polyvinyl chloride and later less toxic polyethylene, creating Saran Wrap. While cellophane was compostable, the oil-based films—and the rigid plastic containers that followed—were not. The stage was set for a throwaway future.





## A Continuous Cycle



It's a design framework that eschews the linear "take, make, waste" model that leads from oil well to refinery, manufacturing plant to supermarket, consumer to landfill. Instead, it envisions supply chains that continuously cycle old materials back into high-value products—with an emphasis on long-lasting design, remanufacturing, and reuse—and business models that favor sharing and leasing (washing machines, cars), rather than ownership. In the circular economy, material goods cycle in two separate loops. One recovers technical nutrients—like metals, minerals, and polymers—for reuse, and the other returns biological materials—fiber, wood—to nature through composting programs, or it converts them, through anaerobic digestion, to carbon-neutral energy.

## A Better Plastic?



Considering these challenges, some designers prefer to stick with plastics, since recycling systems are, in the developed world at least, already established. More than thirty different plastics are currently used in packaging, but some innovators are on the hunt for a single polymer group, a super-plastic that meets a multitude of performance requirements, is affordable for manufacturers, demands few changes in machinery, is widely accepted by municipal recycling systems, and easily converted into new packaging. But so far this product remains elusive.

## The Waste of Convenience



Ultra-packaged meal-kit delivery services, which ship ingredients and recipes for a single meal, are a \$1.2 billion market that some analysts expect to more than quadruple by 2023. But it's accompanied by mountains of non-recyclable or hard-to-recycle ice packs, bubble film, and Styrofoam packaging.

## Package-free Living



Some retailers are already on it: Ekoplaza, a supermarket in the Netherlands, devotes an aisle to more than 700 "plastic-free" offerings, wrapped or contained in cardboard, metal, glass or certified compostable plastic. And the British retailer Iceland plans to eliminate plastic from all its own-branded products within five years, in favor of returnable glass bottles, paper and pulp trays, and plastics, like cellulose, that are compostable. Some critics say a far better solution would be challenging individuals to adopt a radically different model of consumption: one that doesn't involve any single-use packaging.



# Food Packaging: Have Your Cake and Eat the Wrapper, Too

Food companies, on the other hand, spend a lot of time thinking about packaging as a way to communicate a company's brand and make consumers love their products. More substantively than cosmetic details like labels or logos, a food's container can suggest whimsy, environmental consciousness, or high technology. Packaging provides consumers' first and last impressions of a product. It can enhance, or ruin, an eater's experience.

And now, advances in food packaging technology will make food storage and preparation simpler. With consumers ever more obsessed with sleek technology, curbing food waste, and minimizing health risks to themselves and the environment, food packaging is undergoing a research renaissance. Here are the most interesting developments.



## Edible Packaging



Edible packaging has been on designers' minds since Willy Wonka bit into his teacup in the Everything Edible Room. 2015's version is from KFC (yes, the fried-chicken chain). The company is trying an edible coffee-cup experiment in the U.K. Made from a hard cookie lined with heat-resistant white chocolate, the cup is KFC's answer to reducing its landfill waste. It's also a response to customers who are concerned with businesses' environmental sustainability, which is often industry-speak for millennials, known to be loyal to products that support food-system sustainability and innovation.

But it's not just millennials. Packaging Digest reports that 87 percent of all consumers in the developed world had at least "somewhat serious" concerns about global climate change (Earth to the other 13 percent, do you copy?). So edible packaging is marketable to people of all ages. It simply leaves no waste.

## Nonstick Packaging

Nonstick packaging will eliminate the 3-15 percent of wasted food left inside of bottles, those last trails of ketchup and mayonnaise that won't come out no matter how hard you shake or squeeze. Liquiglide, developed in an MIT lab, is a "permanently wet slippery surface" that makes "viscous liquids slide easily." Liquiglide estimates that if the sauces market used its coating, the planet would save 1 million tons of food waste each year. The coating is made from FDA-approved ingredients and, according to the company, does not affect the taste or smell of food. An added bonus: Liquiglide prevents carbonated beverages from going flat.





### Safety-Enhancing Packages

Safety-enhancing packaging indicates when food is spoiling. It might seem this was solved long ago with the advent of the “Sell-By” date stamp. But after Harvard’s seminal report on the arbitrariness of sell-by dates (because of variances in transportation and in grocery store policies) and their contribution to America’s food-waste problem, the stamps are persona non grata in the food industry. Enter nanotechnology, the field dedicated to making electronic sensors tiny and inexpensive. According to a book published this year, scientists are working on food packaging—like plastic wrap—that is “active and intelligent” with tiny embedded sensors to determine when food is spoiling. The next step is to have that same wrap release preservatives to stave off spoilage. Of course, you could also rely on what has prevented humankind from food poisoning for millennia—the senses. If it smells bad, throw it away.



### Packaging That Disappears

Packaging that disappears is an emerging market. MonoSol, LLC creates water-soluble bags made from food-grade ingredients for pre-portioned oatmeal or rice. When cooked, the bag dissolves, leaving only the food, ready to eat. MonoSol, LLC is marketing this to professional kitchens too, as a way to pre-measure ingredients and ensure consistency regardless of who is cooking. A design firm in Sweden imagines three disappearing (or at least, quickly biodegrading) packages. An oil bottle made from caramelized sugar, coated with wax, that cracks open like an egg; a smoothie container made from seaweed that “will wither at the same rate as its content,” and a peelable beeswax package for rice or other dry goods.



### Super-Compressed Packaging



Super-compressed packaging serves the increasing number of city dwellers, who generally have tiny kitchens and no storage space. Additionally, many people living in urban areas walk home from grocery stores, and they need lighter and smaller packages. The days of the enormous Styrofoam serving bowl with tiny bits of dehydrated noodles on the bottom will soon be over. The same Swedish design firm is working on a compressed tiny package that expands into a full-size bowl when hot water is added.





**ELECTRONICS IN THE CONTROL CABINET**



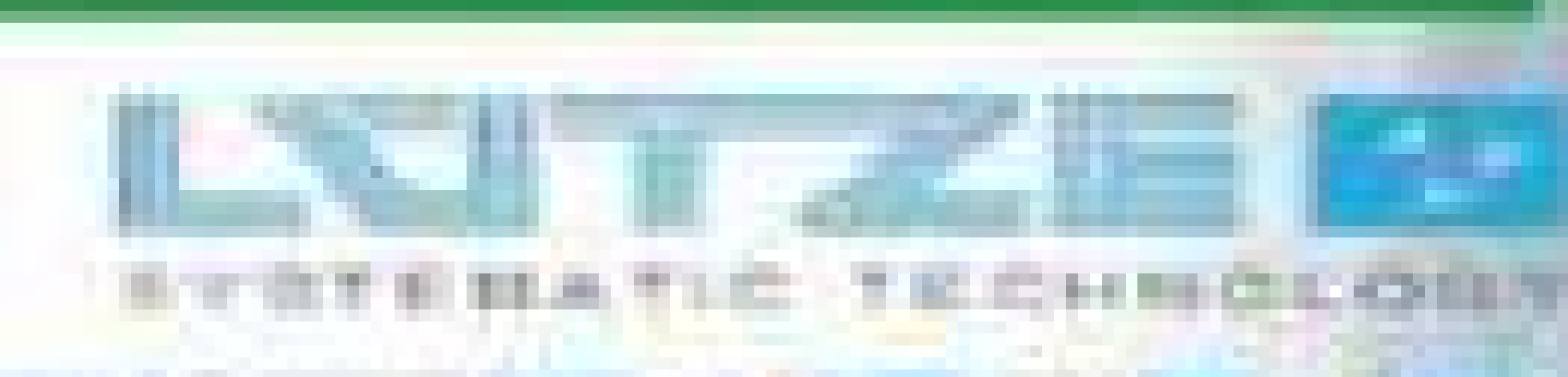
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# Industry Leaders Join Forces To Offer Innovative Robotic Surgery



*Bertin Nahum, President, and Founder of Quantum Surgical.*

Stäubli Robotics and Quantum Surgical, both European leaders in their respective fields, have launched a strategic partnership to create a centre of excellence in oncology robotics. The alliance aims to strengthen the role of robotics in minimally invasive cancer treatments and to use the combined expertise of each company to create a world leader in patient care.

Quantum Surgical, an innovative surgical robotic company, is developing an innovative solution, that combines powerful software and a robotic platform to offer minimally invasive therapies in liver cancer.

"We are extremely grateful and proud that Quantum Surgical confirms their trust in Stäubli as a partner of choice for this new patient care application, at the service of human well-being. We are excited to contributing to Quantum's vision together, with a long-term partner that stimulates us on a daily basis and makes us better." said Gerald Vogt, General Manager Stäubli Robotics.

"We are honored to work with Stäubli, a company recognized for its technological excellence and savoir-faire, in order to share a vision of robotics and automation in healthcare," said Bertin Nahum, President, and Founder of Quantum Surgical.

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# World's First Hydrogen Filling Station For Passenger Trains To Be Built In Bremervoerde

“In Lower Saxony's Bremervoerde, the world's first hydrogen filling station for passenger trains will be built starting in September. Representatives of the state and the companies involved met on site for a symbolic ground-breaking ceremony. An eighteen-month test phase for the first two trains was successfully completed at the end of February. The mobility project, which has attracted worldwide attention, is now entering its next phase.



The gases and engineering company Linde will build and operate the hydrogen filling station near Bremervoerde station on behalf of the Lower Saxony Regional Transport Company (LNVG). Other project partners are the rail vehicle manufacturer Alstom, the state of Lower Saxony and the Elbe-Weser Railways and Transport Company (EVB).

After completion expected in mid-2021, the hydrogen filling station will replace the existing mobile filling solution. With a capacity of around 1,600 kg of hydrogen per day, it is nominally one of the largest hydrogen filling stations in the world. From the beginning of 2022, 14 hydrogen-powered regional trains supplied by Alstom will be refuelled there daily and around the clock if necessary.

Thanks to a range of 1,000 kilometers, the multiple-unit trains will be able to run emission-free all day long on the EVB network with just one tank filling. Expansion areas at the filling station will allow hydrogen to be produced on site later using electrolysis and regenerative electricity.

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# Phoenix Contact, Quectel And Ericsson Jointly Develop The First Industrial 5G Router For Private Networks

Phoenix Contact, Quectel and Ericsson have worked together to develop and deploy the first industrial 5G router for local industrial applications in a private 5G network.

With the help of the newly developed 5G Router, industrial applications, such as machines, controls and other equipment, can now be connected to a private 5G network and thus be orchestrated in their resource usage, priority and behavior. They therefore offer a decisive advantage compared to previous mobile radio solutions, which can only use all - mostly license-free - radio bands with a best effort principle and which have to accept performance losses in equal measure when the radio spectrum is heavily occupied.



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To achieve this, all three companies brought their strengths together: Phoenix Contact as the first choice supplier of WLAN, Bluetooth and mobile radio routers for industrial applications, Quectel as the leading global supplier of cellular and GNSS modules and Ericsson supporting the product development as a network supplier and a leading force of the 5G technology development. By starting to interact at an early stage, the three companies have been able to rapidly develop a solution that provides industrial-grade performance over private 5G networks. The collaboration between Quectel, Phoenix Contact and Ericsson has seen extensive interoperability testing at the Ericsson lab to ensure the reliable commercial performance of the 5G router. The experience made is highly important for Ericsson following the strategic approach offering 5G solutions jointly with mobile network operators towards the industry. In addition, all three companies cooperated closely to enable Industry 4.0 applications with this 5G standalone private network.



# Forward Thinking At Coveris: New Packaging Innovation Centre Opens Its Doors

Coveris' new technical development centre will welcome visitors in a dedicated space of over 400m<sup>2</sup>. The production area is equipped with latest state of the art packaging machinery, including thermoformer, tray-sealer and form-fill-seal machines to offer a wide range of industrial trial possibilities enabling on-site testing and immediate validation. The centre intends to offer a unique customer experience, combining trials with cross-functional training sessions and dedicated workshops, tailor made to the innovation needs of its customers.



The workshop area has been designed as an open space - favouring exchange, discussions, sharing of knowledge and expertise. It is meant to host internal and external events, all contributing to developing the packaging of the future. Coveris internal experts, along with renowned industry specialists will regularly offer insights on the latest packaging and raw material trends.

Adding to the Pack Positive Centre in Leeds, UK, the Coveris Pack Innovation Centre represents the second building block of the Coveris forward thinking initiative centres. The Pack Positive Centre which has specialised in consumer insights now has an ideal partner with the new Pack Innovation Centre that brings technical development, validation and training to the next level.

“The Pack Innovation Centre is a perfect reflection of our commitment to the world of packaging. The centre has been designed to add value through all steps of packaging development, from raw material selection to a circular economy logic. In addition, it brings great value to our customers as they can conduct trials on original, industrial packaging machines without blocking their own production. It gives us an exciting opportunity to join forces with our customers and work with them on designing the packaging of the future”, comments Jakob A. Mosser, CEO Coveris.



## GAIL and Carbon Clean Solutions Sign A MoU for Compressed Biogas Projects



GAIL (India) Limited and Carbon Clean Solutions Limited (CCSL), have signed a Memorandum of Understanding (MoU) for exploring project development opportunities in the Compressed Biogas (CBG) value chain in India.

The MoU furthers the existing strategic partnership between the two companies who will work collaboratively on forthcoming CBG projects. GAIL and CCSL will tackle various issues within the CBG value chain, such as: inter alia feedstock arrangements, suitable technology for the most efficient and high-efficiency CBG production, gas off-take arrangements, exploration of various funding models, transportation, marketing and distribution of CBG. CCSL's patented and proven CBG production technology and waste conversion expertise will aid GAIL in supporting the development of CBG in India.

Through the MoU, CCSL will initially build four CBG plants using its own funding, technology, and expertise. These plants will be based on 10-year CBG off-take agreements with GAIL (or its associated CGD companies) in line with the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative of the Government of India.

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## Siemens Mobility awarded billion-euro order for high-speed trains from Deutsche Bahn

Beginning in 2022, DB will expand its mainline fleet with 30 new high-speed trains. Deutsche Bahn has awarded the billion-euro order to Siemens Mobility. DB called for tenders at the end of 2019 when the federal government announced it would be reducing the value-added tax on mainline rail tickets as of the beginning of 2020.



DB invests one billion euros in new ICE: 30 additional ICE high-speed trains beginning in 2022

Future investment in strong rail system

New ICE trains to initially run between NRW and Munich

DB mainline fleet to grow 20 percent in coming years



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## ABB Breaks Ground On \$30 Million Facility For EV Chargers To Meet Global Demand

ABB has marked the start of construction at its new facility in San Giovanni Valdarno, Italy, which will serve as a global Center of Excellence and production site for electric vehicle charging infrastructure. The 16,000 square meter facility is expected to be operational by the end of 2021.

As a global market leader in e-mobility solutions, the \$30 million investment in this new facility is further evidence of ABB's continued commitment to driving innovation in this fast-growing sector. It follows a \$10 million investment in a new fully sustainable, global e-mobility headquarters and Research and Development (R&D) center built on the TU Delft Campus, Heertjeslaan, Netherlands which is set to officially launch later this year.

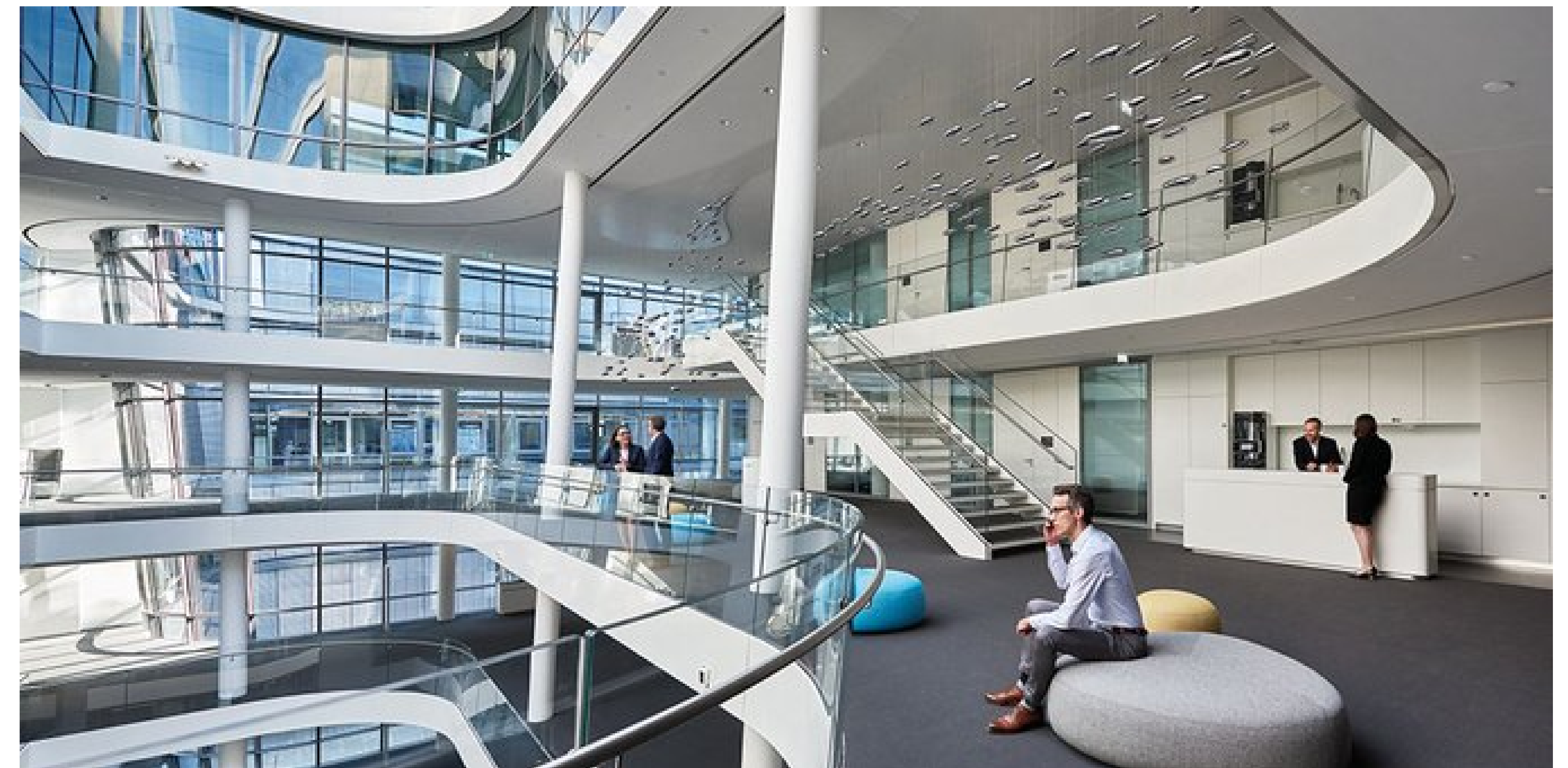
The new plant will produce ABB's entire portfolio of direct current (DC) electric vehicle battery chargers, from domestic systems to systems for installation in public areas and those dedicated to urban public transport.

The new facility will be characterized by the integration of ABB Ability™ digital solutions. They will allow complete visibility and optimization of the production of every individual product and interconnect automated warehouse management systems with factory departments. Automated equipment for the assembly of printed circuit boards and monitoring and testing systems will be connected to the factory information system.



# Siemens To Establish Mobile Working As Core Component Of The “New Normal”

Siemens will establish mobile working as a core component of its “new normal” and will make it a permanent standard, both during the global pandemic and beyond. The company’s Managing Board has now approved implementation of a corresponding model. The aim is to enable employees worldwide to work on a mobile basis for an average of two or three days a week, whenever reasonable and feasible. The coronavirus crisis and social distancing measures have shown that working independently of a fixed location offers many advantages and is possible on a much wider scale than originally thought. Worldwide surveys of Siemens’ employees confirmed their desire for greater flexibility and for personalized solutions when it comes to deciding where they work.



- Mobile working two to three days a week as worldwide standard
- Managing Board approves new model for working independently of fixed locations
- Model based on transformation of leadership and corporate culture
- Siemens among first large companies to adjust working models permanently

Here, mobile working explicitly means more than just working from home. Instead, employees – in consultation with their supervisors – are to choose the work locations where they’re most productive. As a result, the hybrid working model specifically includes working environments such as coworking spaces. Work in person at the office is to supplement mobile working as appropriate.



# Schneider Electric To Build Four Control Centers For Egypt's National Energy Grid

Egyptian Electricity Holding Company, Egypt's national utility provider, has selected Schneider Electric to convert the country's national electric distribution network into a future-ready smart grid. The agreement, which was signed July 12th, includes the establishment of 4 control centers that will monitor and optimize the electricity network, as well as over 12,000 smart ring main units that will be installed throughout the national network. The project worth 4.6 Billion Egyptian Pounds, has a timeline of 18 months and will result in the creation of the Middle East's first-ever country-wide smart grid that will be able to meet the needs of the country's growing population as well as its industrial development.

Schneider Electric will leverage its EcoStruxure Grid technology to build a future-proof smart grid that will use the power of digital to both automate and optimize the grid's operations. The four control centers will use Schneider Electric's Advanced Distribution Management System (ADMS) to monitor, control, and reconfigure the network, through the use of big data and artificial intelligence.



From left to right: Walid Sheta, Cluster President, Schneider Electric North-east Africa and Levant (NEAL); Reem Zaki, Marketing Communication Director, Schneider Electric NEAL; Mohamed Shaker El-Markabi, Egypt's Minister of Electricity and Renewable Energy; Sherif Abdel Fattah, Vice Chairman, Schneider Electric NEAL; Mohamed El Hefnawy, Power Systems Marketing Director, Schneider Electric NEAL.

Agreement will lead to the creation of a world-class smart grid network that will support the country's long-term energy needs; Schneider Electric's technology will ensure an efficient, reliable and safe electricity supply for both consumers and industry.



# WEG transformers play an important role in the modernization process of Ilha Solteira Hydropower Plant



**Company is responsible for delivering 21 power transformers to generate 100% clean energy**

WEG was the company hired by CTG Brasil, one of the leaders in clean energy generation in Brazil, to supply twenty-one 205 MVA - 440 kV transformers that will be installed at Ilha Solteira Hydropower Plant, located on the Paraná River, between the cities of Ilha Solteira (SP) and Selvíria (MS).

The supply is part of the plant modernization project that has been carried out by CTG Brasil since 2017. Initially, the replacement of the machines was expected to occur in stages over the ten years of the project – until 2027 – but it was brought forward thanks to the partnership with WEG, which was fast in the deliveries.

"By performing preventive tests, we realized that bringing forward the modernization of the transformers would be important to increase the generation availability at Ilha Solteira, in addition to increasing the plant safety", Evandro Vasconcelos, Vice President of Generation and Sales at CTG Brasil said. For the executive, "being able to count on a high quality partner like WEG was essential for this decision".

The new transformers have a service life expectancy of at least 35 years, with high energy efficiency, power 20.6% higher than the previous model and a digital monitoring system. "These transformers will not only replace the old equipment but also avoid interruptions in power generation and ensure the plant operation during the concession, minimizing operating risks and machinery shutdown", Carlos Diether Prinz, Managing Director of WEG T&D explains.



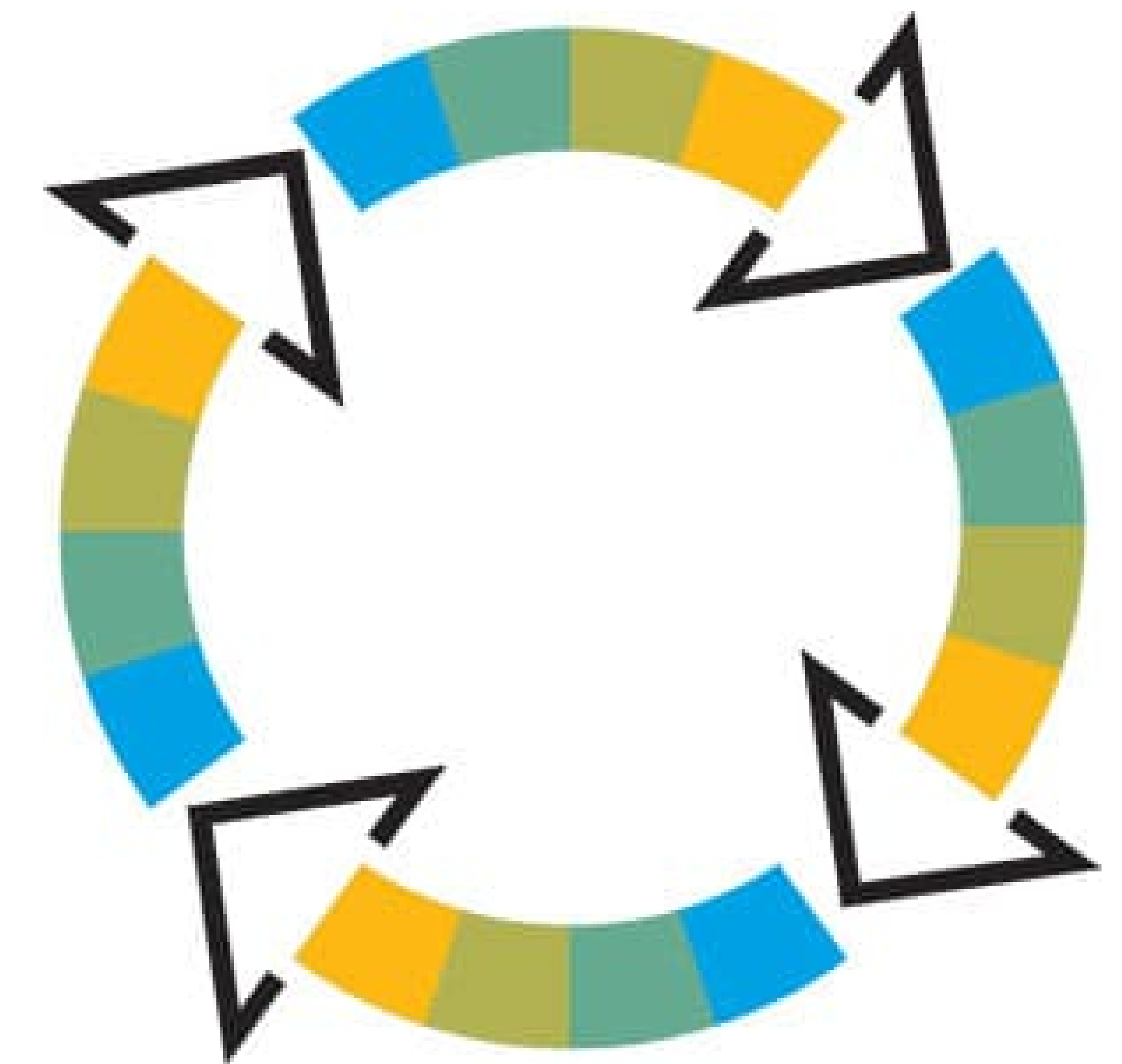
## Siemens and SAP Join Forces to Accelerate Industrial Transformation



Siemens and SAP SE announced a new partnership that will leverage their industry expertise and bring together their complementary software solutions for product lifecycle, supply chain and asset management so their customers can deliver new innovation and collaborative business models that will accelerate industry transformation globally.

Through this agreement, both SAP and Siemens will be able to complement and integrate their respective offerings in order to offer customers the first truly integrated and enhanced solutions for product lifecycle management (PLM), supply chain, service and asset management. This will enable customers to form a true digital thread integrating all virtual models and simulations of a product or asset with real-time business information, feedback and performance data over the entire lifecycle.

- Together, industry leaders Siemens and SAP will deliver integrated end-to-end software solutions across product lifecycle, supply chain and asset management.
- Partnership leverages expertise and technology of both companies to provide a true digital thread that helps enterprises eliminate process and information siloes, drives digitalization and delivers a comprehensive solution for the 4th industrial revolution (Industry 4.0).
- SAP will offer Siemens' Teamcenter software as the core foundation for product data management. Siemens will offer SAP Intelligent Asset Management solutions and SAP Portfolio and Project Management applications to maximize business value for customers over the entire product and service lifecycle and enable new collaborative processes between manufacturers and operators.





# Bosch Pools Its Software and Electronics Expertise in One Division with 17,000 Associates

Today's cars are changing, above all as a result of software and electronics. The market for software-intensive electronic systems is expected to grow by some 15 percent annually between now and 2030. Since Bosch wants to extend its leading position in this market, it is establishing a new division, Cross-Domain Computing Solutions. From the start of 2021, existing and new customers will receive electronics systems and the requisite software from a single source: a division with roughly 17,000 associates. "Even now, a vehicle contains some 100 million lines of software code. Only a company with wide-ranging electronics and software expertise will be in a position to shape the future of mobility," says Dr. Stefan Hartung, member of the board of management of Robert Bosch GmbH and chairman of its Mobility Solutions business sector.

“ Even now, a vehicle contains some 100 million lines of software code. Only a company with wide-ranging electronics and software expertise will be in a position to shape the future of mobility.

**- Dr. Stefan Hartung, member of the board of management of Robert Bosch GmbH and chairman of its Mobility Solutions business sector**



The move toward ever more sophisticated electronics and ever more software is quickly picking up pace. The result is a considerable increase in the complexity of automotive engineering. For the new division, the goal will be to reduce this complexity through cross-domain software and electronics solutions. In addition, it will aim to get new vehicle functions on the road significantly faster. To achieve this, Bosch has assigned software, electrical, and electronics engineers from the areas of driver assistance, automated driving, car multimedia, powertrain, and body electronics to the new unit. "Bosch is an automotive electronics pioneer. Moreover, for quite some time now, it has also been a software company. And in the future as well, our new division is predestined to make further progress in the digitalization of vehicles," Hartung says.

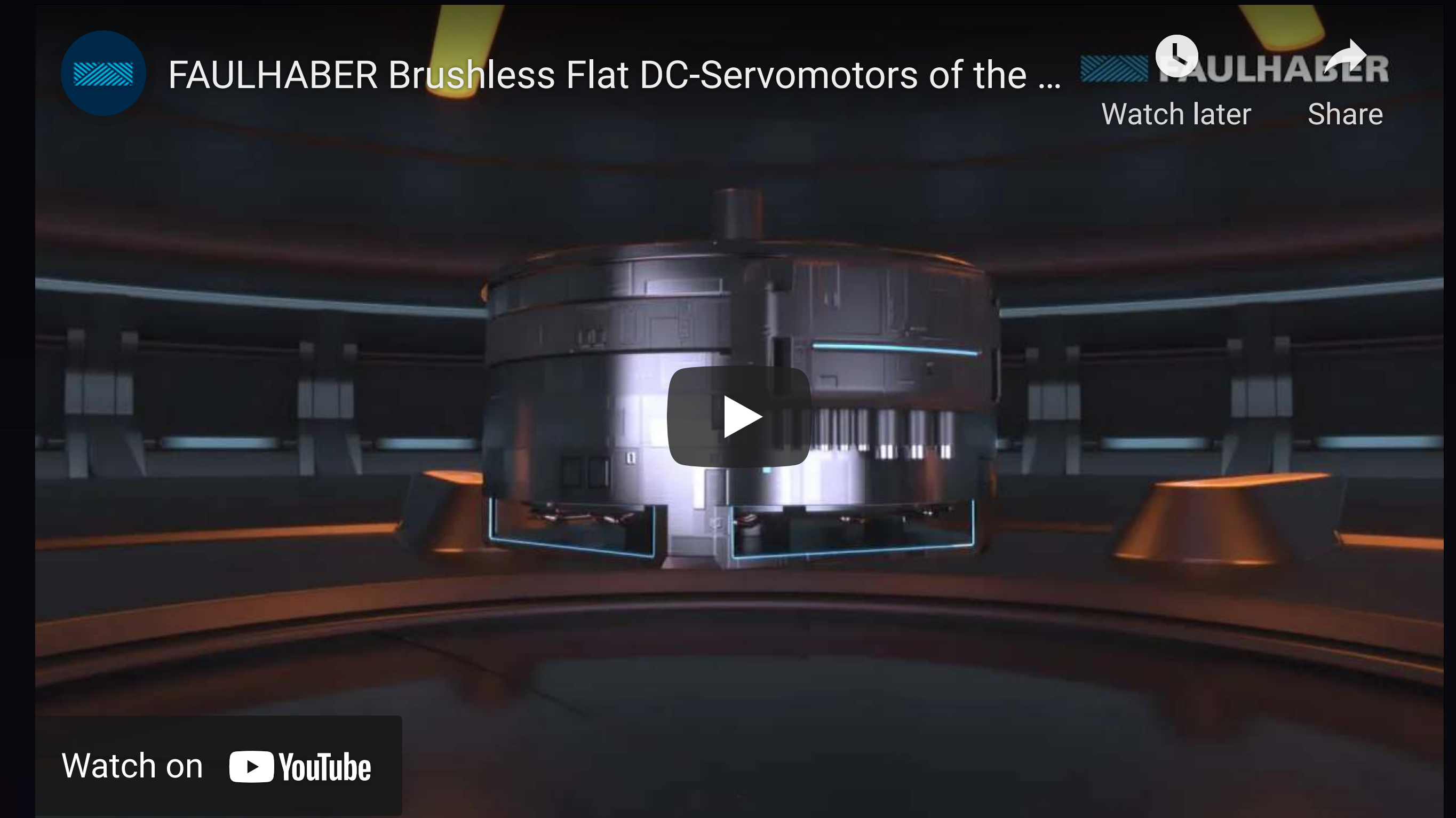


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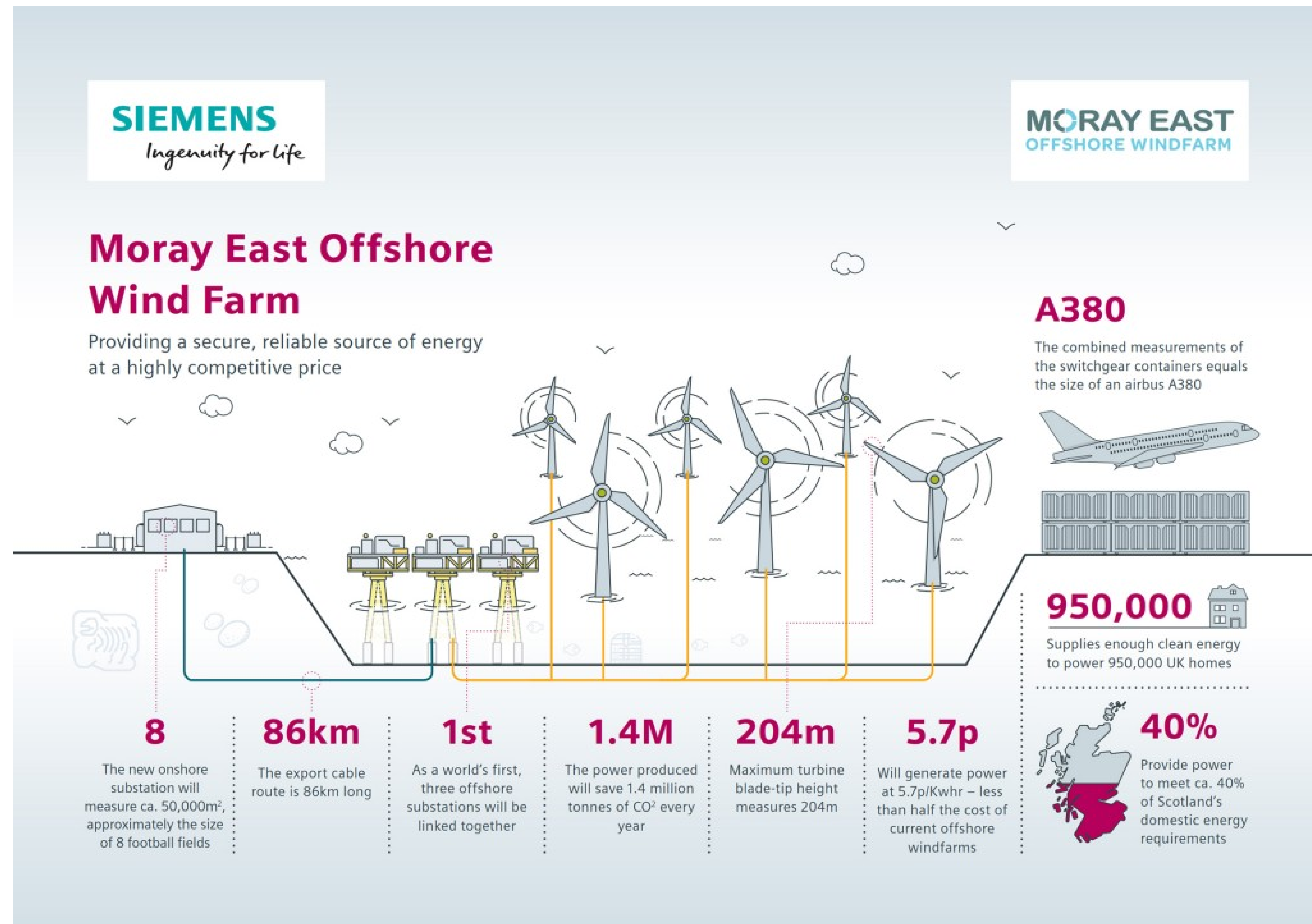


**WE CREATE MOTION**

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# A First Of Its Kind: Grid Connection For The Moray East Offshore Windfarm Project



- Clean electricity for up to one million Scottish households
- Siemens is leading the market for the grid connection of offshore wind power .

On June 30, 2020, the first OTM began its journey from the fabricator to be installed at the offshore windfarm. The remaining two will sail out in the following months when commissioning will take place. The OTM, which are significantly smaller in size and weight compared to conventional alternating current platforms, will transform the output of the wind turbines from 66 kilovolts (kV) to the transmission voltage of 220kV.

In 2018 Siemens Energy secured the contract to connect the wind farm to the grid and until today Moray East Offshore Windfarm represents the company's largest UK grid access project. The scope of supply includes the complete onshore substation including three SVC PLUS (STATCOM) as well as the three offshore substation platform topsides.

In addition, Siemens Energy will install a 35km underground export cable to the onshore substation at New Deer in Aberdeenshire for the power generated. The windfarm will be capable of providing low cost, low carbon power to approximately one million Scottish homes, making a significant contribution to meeting net zero ambitions.



# Packaging Equipment Manufacturer Cuts R&D Cycle Time By 17 Percent

## CHALLENGES

- Facilitate collaboration for development of single-floor and low-volume model
- Provide sound project management tools to enhance R&D process

## KEYS TO SUCCESS

- Seamless integration between Teamcenter and Solid Edge
- Extensive, scalable functionality provided by Teamcenter and Solid Edge
- Industrial experience and world-class software technologies reflected in capabilities of Teamcenter
- Localized services and excellent implementation teams of GOHOPE



## RESULTS

- Reduced the R&D design cycle by 17 percent
- Shortened the production preparation time by 20 percent
- Cut unnecessary drawings by 30 to 40 percent
- Realized timely updated changes
- Enabled electronic review and approval
- Automatically produced BOM list





## How An Automotive Manufacturer Successfully Deployed New IIoT Technologies For Product Process Data And Traceability

### The Challenge

A large-scale manufacturer of automotive components recently needed to implement new Industrial Internet of Things initiatives into its process due to customer requirements. Many large automobile companies are starting to require deeper levels of traceability, genealogy, and process data delivered with the products they integrate into today's vehicles.

Because customers were requiring these IoT features for more visibility, it helped create a strong sense of commitment in the organization to implement changes. The strong customer requirement helped open the door and greenlight the ability to bring in new Industry 4.0 technology approaches to the plant floor instead of keeping with the automation world status quo.

To achieve the goals of an IIoT upgrade, the manufacturer required status information from all production equipment throughout each manufacturing site. Some equipment was modern or PLC controlled, and some equipment dated back to the 1970s with no integrated data connectivity.

### The Solution

To start the process of implementing and deploying IoT technologies into its processes, the manufacturer brought insome help. They created a proof of concept in one plant, utilizing Inductive Automation as a solution partner.

Inductive Automation provides Ignition, a software platform that allows users to seamlessly collect data and help to design industrial applications with ease. Advantech's intelligent hardware is compatible with numerous software solutions, including Ignition. Working with eco-partners, systems integrators and additional software providers, Advantech devices are ideal to work with Ignition Edge and Ignition Enterprise.



# LoRaWAN Automated Waste Disposal Solution for Semiconductor Water Plant

## Project Introduction

Many hazardous chemicals are used in high-tech product manufacturing. Not only are these chemicals dangerous and polluting, their waste disposal is difficult and challenging to manage. Factories must install waste disposal systems to ensure the safety of their employees and the environment. Factories must also constantly check their waste disposal systems by routine inspections. However, for plants with a high number of inspection check points, a lot of human resources are needed to complete tasks, which can be very time consuming. What's more, industrial waste output points are often high up in chimneys used to disperse fumes, so inspections themselves present dangerous challenges for inspectors.

Advantech's WISE series products power LoRaWAN-based automated monitoring solutions for factories. Automated data collection and remote wireless technologies replace conventional inspection to improve daily waste disposal checks, so administrators stay informed of operations, are made aware of system failures, and can improve production line efficiency.

## Conclusion

Industrial waste disposal systems are essential for high tech plants. Manual labor inspection methods are limited by human resources and present serious health and safety issues. Now, with an automated monitoring solution, waste disposal monitoring can be properly carried out and supervised without people being on site.

Advantech's ISO 10816-compliant LoRaWAN automated monitoring solution delivers results that are completely consistent with human inspections. Its simple installation aids fast deployment and subjects can be added any time as plant needs change. Transmission quality rates beat Wi-Fi and Bluetooth with better coverage, penetration, and interference resistance. The Advantech solution generated excellent results, so in addition to the waste disposal system, the wafer manufacturer plans to apply it on other plant facilities (such as their air-conditioning system) monitoring. These features clearly demonstrate that Advantech's WISE-2410 plus WISE-6610 really are a time-conserving, effort-saving, and effective solution.



# System Structure Diagram







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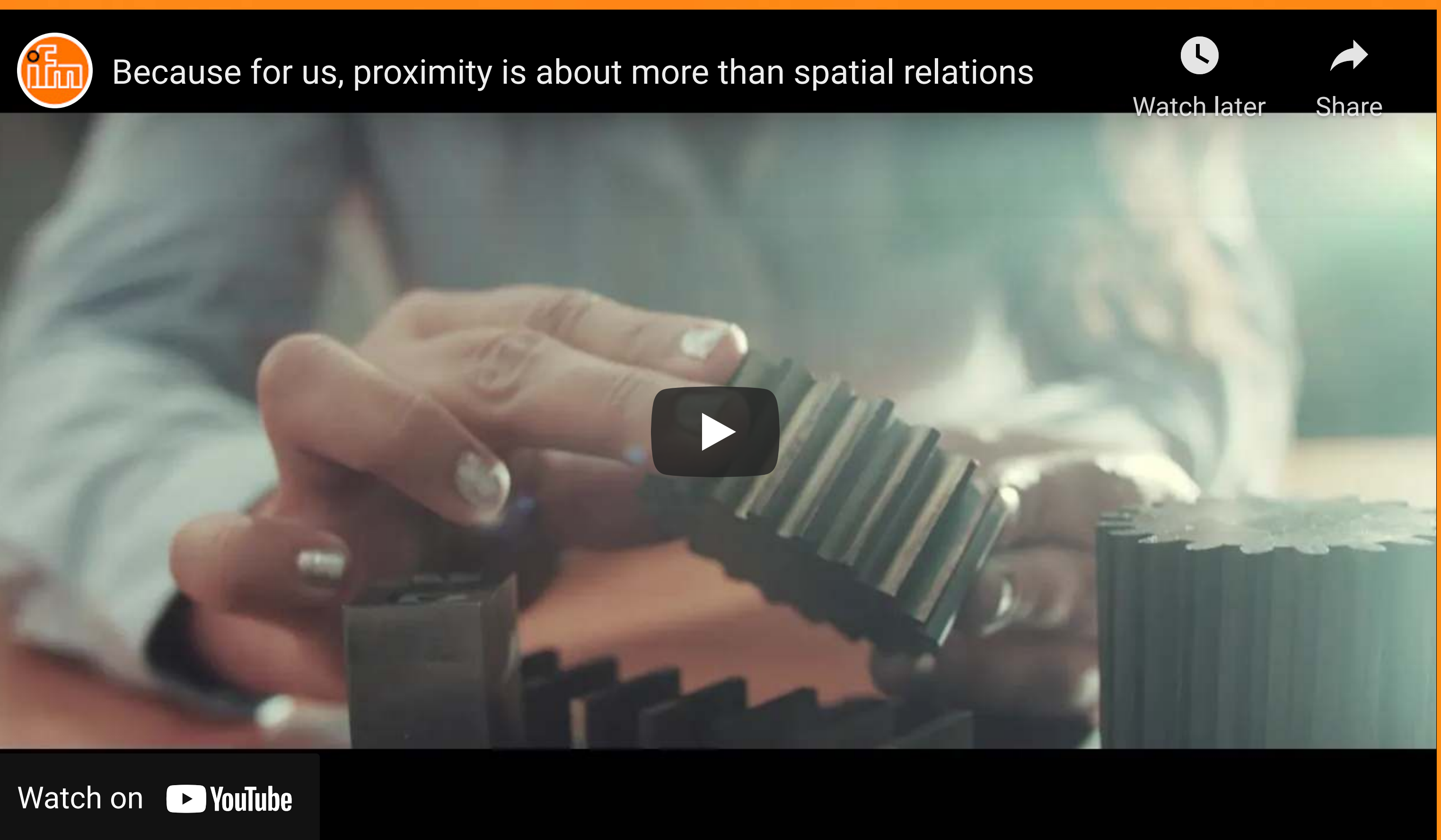


ifm electronic stands for an incredibly wide range of industrial quality sensors & systems, for factory automation & process control applications. Launched in 1969, as man set foot on the moon, the company has continued to research, develop & manufacture innovative products to optimise advanced technical processes. With incredible industry & application know-how, ifm provide successful solutions that are innovative, yet economical. We have the product range & flexibility required to meet our customer's expectations. From an individual sensor, through to a complete system. Present in more than 70 countries, 5,000 direct employees service & support installations with over 100,000 customers, in every industry. Your satisfaction is our goal!

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# Albéa Produces The Innovative And Eco-designed Sun Care Packaging Of La Roche-Posay

La Roche-Posay, the dermatological skin care brand from L'Oréal group, innovates with a new generation of eco-friendly packaging: a partially cardboard-based tube.

The new moisturizing sunscreen body lotion of the Anthelios range protects the skin from the harmful effects of the sun, marine life and the environment.

As a result of an ambitious co-development between L'Oréal and Albéa, the tube packaging, integrating cardboard, is designed as an alternative to the various packaging solutions currently used for cosmetic products.

The use of plastic is reduced by 45% compared to existing solutions.

The plastic is replaced here by FSC-certified cardboard.

The development of this cosmetic tube is the first step, achieved in record time, of future cardboard tube launches between L'Oréal group and Albéa.



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MakerBot moves into the next level of 3D printing with the launch of the METHOD Carbon Fiber Editions. The new METHOD Carbon Fiber Editions are designed to enable engineers to print stronger and more accurate parts for manufacturing tools, jigs and fixtures, and end-use production, and can be used to print metal replacement parts in some applications.

The latest additions to the METHOD platform, the METHOD Carbon Fiber Editions print carbon fiber reinforced nylon that is optimized for high strength and heat resistance. The new METHOD and METHOD X Carbon Fiber Editions come pre-configured with a new composite extruder that is optimized to handle abrasive materials. The new extruder, which is also available as an upgrade for the METHOD and METHOD X 3D printers, has hardened metal drive gears, a metal filament switch, and an interchangeable hardened steel nozzle. It can print MakerBot Nylon Carbon Fiber material and all other model materials supported on the METHOD platform.

## Makerbot Launches Method Carbon Fiber

New METHOD Carbon Fiber Editions Print Metal Replacement Parts with High Strength, Accuracy;

The METHOD Platform Further Expands to Support More Materials, Applications, and Markets



The new MakerBot Nylon Carbon Fiber material is an ideal lightweight alternative to metal for structural applications such as vehicular brackets and inspection gauges, manufacturing tools such as robotic end effectors, and under-hood applications. Due to its strong thermal and mechanical properties, carbon fiber is frequently used in manufacturing, automotive, and aerospace industries. Used as an alternative to metal parts, carbon fiber can help reduce costs and increase overall efficiencies for companies.



# New Stratasys J55 3D Printer Gives Designers Affordable, Office-friendly, Full-Color 3D Printing to Validate New Product Designs Quickly



Making fast, full-color design realism accessible to designers and teams everywhere, Stratasys Ltd. (NASDAQ: SSYS) today unveiled the new J55™ 3D Printer. At about a third the price of enterprise-class PolyJet™ printers, the J55 combines realism and productivity, including high fidelity and five simultaneously printed materials that enable nearly 500,000 colors, PANTONE™ Validation, realistic textures and transparency in one printed part. Set-up is easy, and remote monitoring means print jobs can be managed from home.

## Enterprise-Quality Design Realism

The J55 3D printer gives designers full CMF (color, material, finish) capabilities. It leverages high-performance PolyJet materials, including a full range of textures, transparency with VeroClear (VeroUltraClear availability later in 2020), X-Rite-based color profiles and PANTONE Validated™ color - offering a universal language of color that ensures reliable, realistic decision-making across every stage of the design process.

The J55 3D Printer features a maximum build volume size of 1,340 cubic inches (22 liters) and takes up a mere 4.6 sq. ft. (.43 m<sup>2</sup>) of floor space. The five-material capacity (plus support material) means operators can load their most frequently used resins and avoid downtime associated with material changeovers.





# Fast and Lubrication-Free: New Xiros Film Guide Roller for Labelling Technology

Black guide roller with smooth-running polymer ball bearings saves up to 48 per cent weight and 42 per cent mass inertia

xiros polymer ball bearings are lubrication-free, maintenance-free, hygienic and have a very low breakaway torque. Due to these specifications, they are mainly used in the field of packaging and food technology. As fully assembled systems with a tube made of aluminium, carbon or PVC, the ball bearings prove their worth as guide rollers for deflecting films and labels or for conveying goods. By using wear-resistant high-performance polymers and thin-walled tubes, they provide a weight saving of up to 48 per cent compared to metallic solutions. Their mass inertia is 42 per cent lower, and therefore the energy required for acceleration is considerably lower and the rollers reach the conveying speed faster. The igus range has now been expanded with a new black aluminium roller. "The idea for the black design arose from a customer enquiry. The technical specifications of our classic aluminium rollers were already very convincing, but black visible parts were desired for one labelling series", explains Marcus Semsroth, Head of the xiros polymer ball bearing division at igus GmbH. The solution: black anodised aluminium for the roller and black xirodur S180 fixed flange ball bearings made of polymer. "This soon resulted in a product that met the customer's requirements in terms of technology, price and appearance", says Semsroth. In addition to this, the new black roller also offers further areas of application. This allows the roller to work easily together with camera systems, as it doesn't reflect light.

## Custom guide roller configured in two steps

igus has developed the guide rollers expert for the quick selection of a suitable guide roller. In the online tool, the user only has to specify the outer and inner diameter as well as the length of the roller, the load, the load case and the ambient temperature. By entering the acting force and the degree of wrap around, the online expert calculates the resulting force on the roller and recommends the appropriate tube materials. In the second step, the user can select their guide roller based on the deflection, weight and price data, download the configuration CAD data and order the roller directly online.





## Stäubli Electrical Connectors Introduces The Most Assembly- And Maintenance- Friendly Generation Of Modular Connectors With A Brand New Product Line: CombiTac direqt.

With CombiTac direqt, Stäubli launches the newest generation of modular connectors that enables the combination of various types of power, signal and pneumatic connections in manual and automatic mating applications with up to 10,000 mating cycles. It features a light modern design with the highest possible safety features, and can be assembled 100% manually without the use of any tools.

CombiTac direqt is born out of today's modular connector market needs and trends to achieve the fastest possible connector assembly in order to reduce assembly and maintenance costs to the absolute minimum. The new connector series features a click-and-connect system enabling you to manually insert each individual contact in the carriers, and carrier inside the corresponding frames, without the use of any tools.



All type of configurations, whether for panel mount or housing applications, guarantee a constant and reliable connection for signals, power, and pneumatic couplings up to 10,000 mating cycles for numerous industries and applications

“Today, by introducing a new generation of modular connectors to the CombiTac family, we offer our customers even more flexibility in selecting the right modular connector system. Therefore, the CombiTac family is from today split into two lines, CombiTac uniq, and the new CombiTac direqt.”

Martin Yiapanas, Product Manager CombiTac



# Advantech Launches Compact EPC-T4286 Embedded PC for Self-Service Terminals

Advantech, a leading provider of industrial system solutions, is proud to release EPC-T4286, an embedded computer designed for self-service applications. As the newest member of Advantech's EPC-T series, this embedded computer features a highly-functional small form-factor design. Powered by a 9th Gen. Intel® CPU platform, EPC-T4286 combines high computing performance with diverse I/O ports, yielding a stylish solution for applications in self-service kiosk terminals.



## Slim 1U Height Mechanical Housing for Kiosks and Terminals

Advantech's EPC-T4286 is positioned as a competitive product in the self-service kiosk market. Indeed, with dimensions of only 188 x 188 x 44 mm (7.4 x 7.4 x 1.73 in), this PC is 33% smaller than previous EPC-T series products, providing more cargo capacity in a single shipment without sacrificing functionality. Likewise, its 1U height small footprint housing facilitates easy integration within slim kiosk terminals.



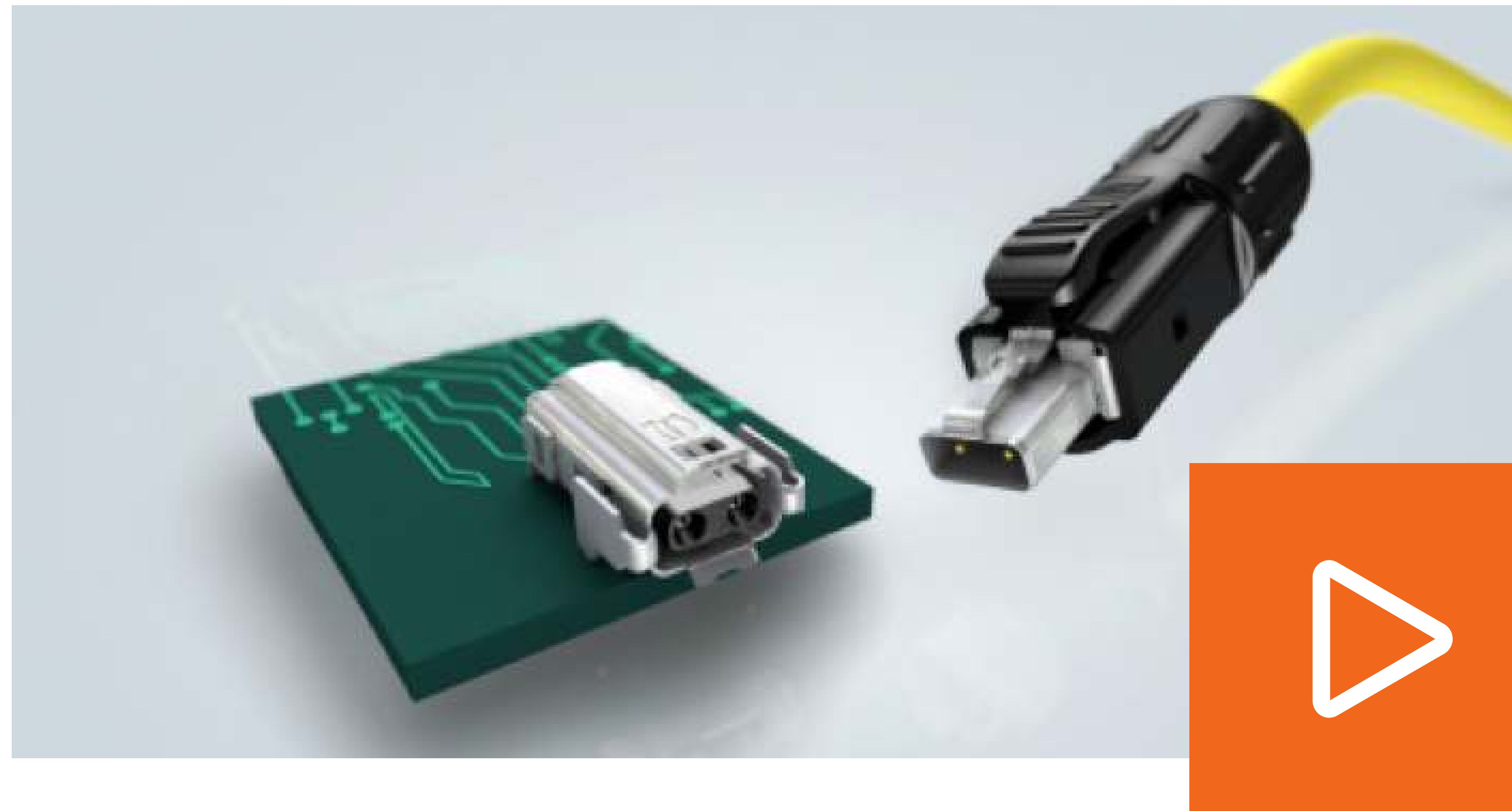
## 9th/8th Gen Intel® Core™ i Platform with Diverse I/O

Advantech's EPC-T4286 accommodates a 65W Intel® i7 CPU capable of performing AI algorithm, machine learning, and other high computing tasks. With 6 x COM ports, 6 x USB ports, and 3 x LAN ports, EPC-T4286 supports most peripheral modules used in kiosks. Additionally, EPC-T4286's heat dissipation system enables system operation in environments up to 50 °C (122 °F) with specific Intel® Core™ i CPU.

## Value-Added Software Reduces Total Cost of Ownership

Advantech DeviceOn software solution designed to remotely manage edge computers and avoid system failures by monitoring hardware and software operations instantaneously. Likewise, over-the-air software installation saves on maintenance and labor costs. BIOS can be remotely updated through DeviceOn, and the BIOS recovery mechanism guards the system against unexpected interruptions during BIOS updates. DeviceOn enhances the reliability of EPC-T4286 series products while reducing total cost of ownership.





## HARTING Americas Announces Launch Of Breakthrough Single Pair Ethernet technology (SPE)

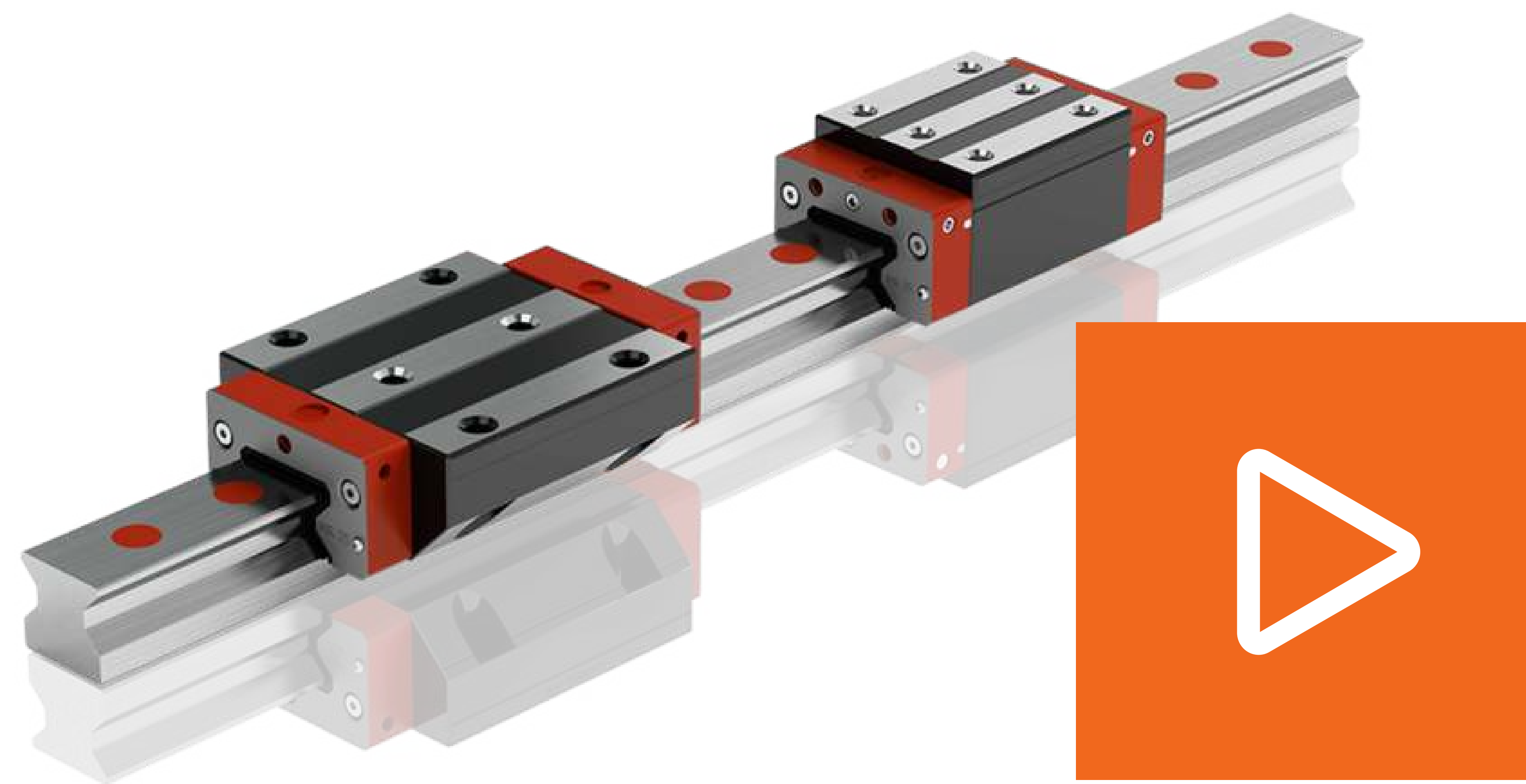
IEC 63171-6 specifies the Single Pair Ethernet (SPE) interface "Industrial Style" as proposed by the HARTING Technology Group and is the future standard interface for industrial SPE applications

HARTING Americas announced their North American launch of their Single Pair Ethernet (SPE) technologies. The company has been driving the creation of a Single Pair Ethernet standard for the Industrial marketplace since 2015 along with other industrial companies and global standards bodies, such as IEC and IEEE. Single Pair Ethernet communicates across the common industrial Ethernet protocols available today (Ethernet/IP, Profinet, EtherCAT, etc.) but instead of using 4 or 8 total wires, it accomplishes communication across just two wires, a single twisted pair. Also, it is utilizing Power over Data Line (PoDL) technology to not only bring communication to the device, but also the voltage and amperage needed to power the device itself. This is hugely beneficial for three reasons.

First, space and number of connections are reduced on the device. Second, the need for an external power supply is eliminated. Finally, devices on the plant floor that have traditionally communicated over Fieldbus protocols can now join the same IP-based network that the rest of the devices on the network are using. This enables peer-to-peer communication, open-loop feedback of all devices, and smart functionality all the way from the main control room down to the individual device. HARTING will contribute several components to the Single Pair Ethernet Ecosystem, with the core product being the T1 connector system. The T1 was selected as the standard mating face for Industrial Single Pair Ethernet.



## MONORAIL MR - Stable Processes Always Assured



With experience gained from installing thousands of guideways in the field, we have given MONORAIL MR 4S carriages a comprehensive design upgrade and further improved the following four product features.

- Serviceability (compatibility, cross wiper replacements)
- Supply of lubricant (pressure-tight lubrication channels)
- Shock resistance (body optimized for rigidity)
- Sturdiness (durable front plate, stable attachment of front plates)

MONORAIL MR 4x roller-guided profiled linear guideways are synonymous with maximum quality and guaranteed functionality. Outstanding degrees of rail straightness, accurate machining and high mechanical load capacity distinguish MONORAIL MR profiled guideways as an efficient, extremely robust quality solution for demanding applications requiring the most stringent demands for accuracy, such as for tooling machines. The product portfolio is comprised of 23 different combinations of rail size and shape as well as 33 different carriage configurations, offering the greatest possible design flexibility. MONORAIL MR can optionally be equipped with a tried-and-tested, integrated distance measuring system, thus contributing significantly to the total cost of ownership (TCO). MONORAIL MR profiled guideways are designed for speeds of up to 3 m/s and can be accelerated by up to 50 m/s<sup>2</sup>. The carriage and rail bodies are made from high-grade hardened steel. Specially shaped rollers are used as rolling elements. The end result is a system with high static and dynamic load carrying capacity together with long service life.



# ABB's New 3D Inspection Robot Cell Makes Quality Control Testing Ten Times Faster



Scalable quality inspection cell accelerates production for the automotive, aerospace, heavy machinery and construction sectors, enhancing quality, productivity and reducing waste

Capable of detecting defects of less than half the width of a human hair and imperceptible to the naked eye, ABB's new 3D quality inspection (3DQI) robot cell will dramatically accelerate production by providing fast, accurate testing to make metrology easier and less time consuming. The 3D Quality Inspection cell eliminates the need for time consuming manual inspection, while substantially reducing the likelihood of faults and errors. As well as increasing productivity, the solution also reduces costs by minimizing the risk of product defects that could lead to potential recalls.

Key benefits of the 3DQI cell include its combined speed, accuracy to below 100 (micrometer)  $\mu\text{m}$  and flexibility provided by its modular design, with customers able to create a solution tailored to their exact requirements.



# Quickly Print Wear-Resistant Parts for Food Contact with New igus Filament

3D printing material, iglidur A350, ensures lubrication-free, FDA-compliant and temperature-resistant special parts in the packaging industry.

Special hygienic solutions are the be-all and end-all in the packaging and food industry. For this reason, many users are already using the FDA-compliant iglidur plain bearings and bar stock made of high-performance polymers from igus. To enable the users to have even more design freedom in the construction of their machine, igus has now developed its temperature-resistant, long-lasting and proven material iglidur A350 as a 3D printing tribo-filament.

In times of competitive pressure and short-term deliverability, machines in the packaging and food industry must function faster and more flexibly for different formats. Accordingly, the requirements for functional components in special dimensions and small quantities are high. "As the machines in the packaging and food industry are becoming more and more customised, solutions for plain bearings and wear-resistant parts in special shapes are required", explains Niklas Eutebach, Additive Manufacturing Development Engineer at igus GmbH. "In order to give the user even more design freedom in the construction of their system, we have now developed iglidur A350 as a tribo-filament." The lubrication-free and maintenance-free material is specifically designed for use in food and packaging technology and has been proven in countless applications, because iglidur A350 is already available as a plain

bearing in standard dimensions and as bar stock directly from stock. The high-performance polymer is very impressive with its high long-term temperature resistance up to 180 degrees Celsius, it can also be easily cleaned with chemicals.

## Approved for the food sector

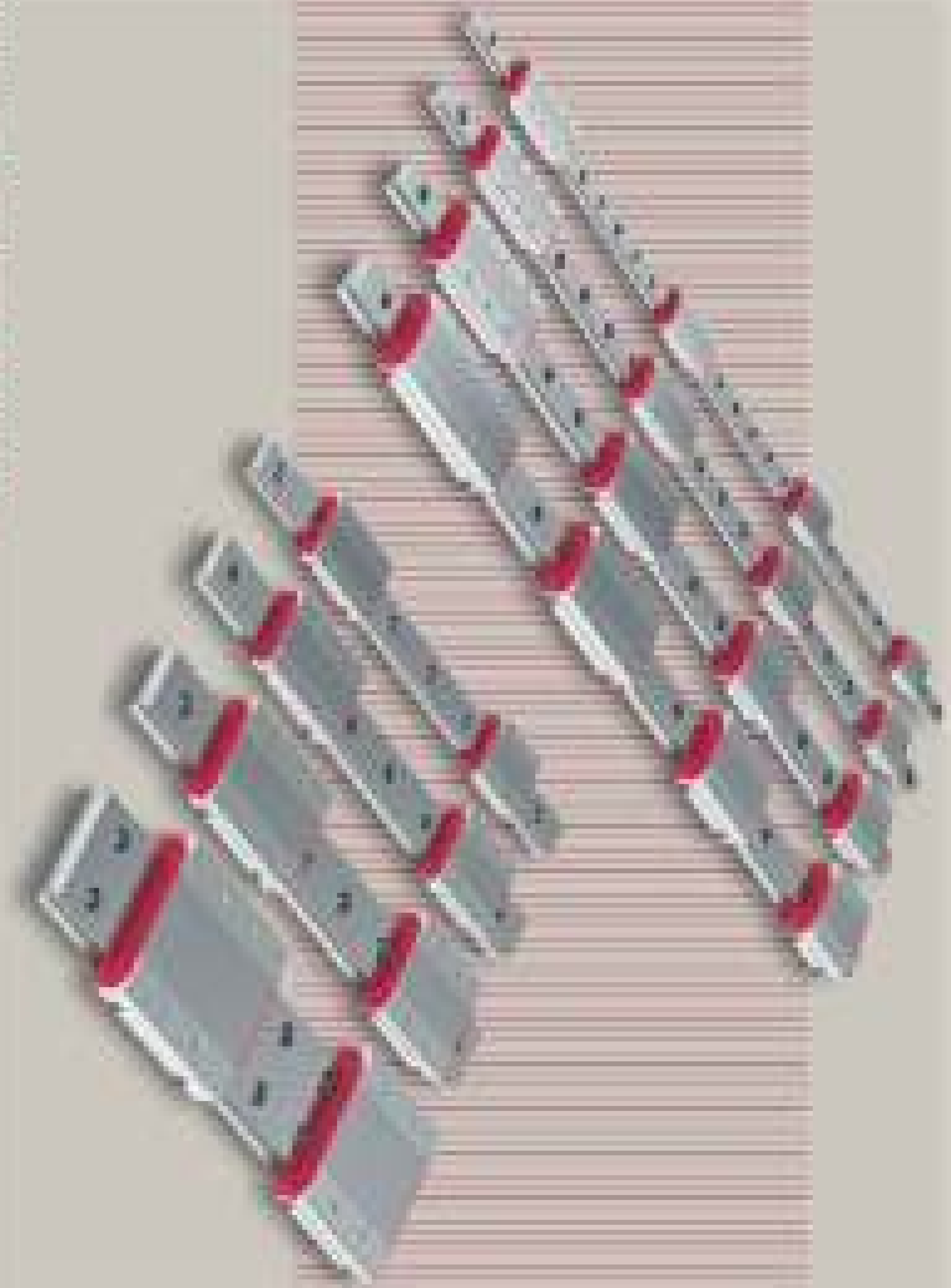
The iglidur A350 material complies with EU Regulation 10/2011 and the FDA and is therefore officially approved for contact with food. At the same time, it also meets the fire protection requirements of the United States Federal Aviation Authority (FAA) for aircraft interiors. Due to its blue colour, iglidur A350 is easier to detect and increases safety in production. The durability of the material is particularly evident in pivoting and rotary applications and with high and medium loads on stainless steel shafts. The filament is available for self-printing on a high-temperature 3D printer, as well as in the 3D printing service from igus.





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- Laboratory Automation
- Optical Industry
- Robotics, Pick & Place



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## SBID Product Design Awards



For more information:

<https://www.sbidproductdesignawards.com>

SBID is a professional body registered in the UK to regulate and promote the interior design profession. The SBID Product Design Awards celebrate the finest design, innovation and functionality for products within the interior design sector. The SBID International Design Awards showcase the world's best interior designers and projects.

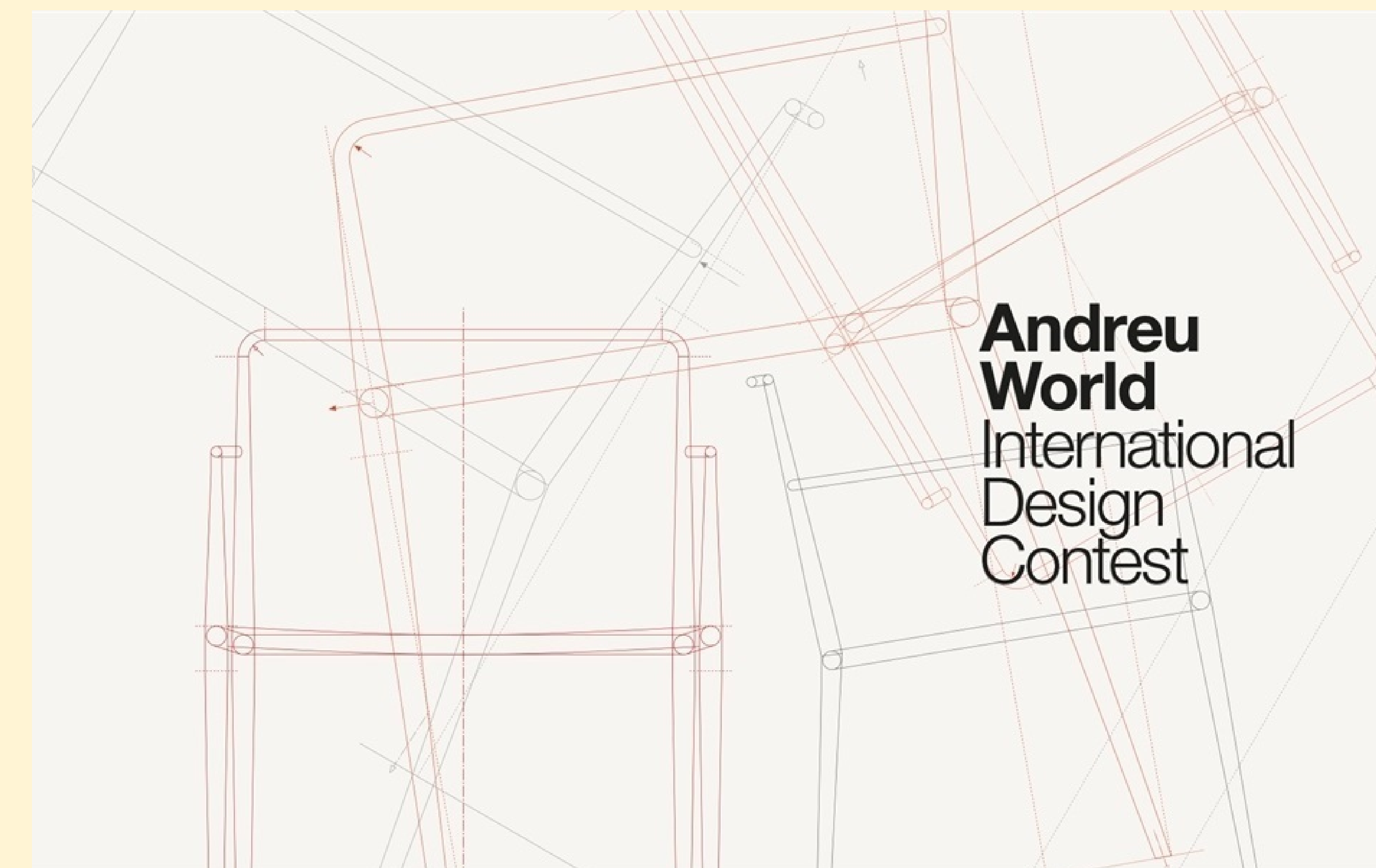
The SBID Product Design Awards recognise and reward product design excellence across a broad range of categories. Products are evaluated by a leading internationally admired judging panel consisting of interior designers, developers, architects and branding professionals. Products are scored for their design excellence in both residential and contract interior spaces, while the design-conscious public also has a say in choosing the most inspiring products.

## Andreu World Product Series Contest 20

The 2020 edition of the Andreu World International Design Competition is now open for submissions. Entrants are asked to design a chair and/or table under a single premise: sustainable design.

This 20th edition, open to all students and design professionals, without age limit, offers a first prize of 5,000 Euros, and second prize of 2,500 Euros.

The deadline for submissions is November 27, 2020.



For more information:

<https://www.andreuworl.com/contest-20/legal-rules>



# Nature Contest 2020: World's Most Comprehensive Contest of Ideas Inspired by Nature



A total cash award of USD \$1200 has been sponsored by Takmeel Design Consultants. The cash award will be distributed equally among the top four winners from each of the three categories. The top ten entries from each category will be published in the upcoming Nature Tutor magazine. The top ten entries will also be published permanently on their respective websites.

- Submission Deadline (All three categories): 15 SEPTEMBER, 2020
- Results (All three categories): 10 NOVEMBER, 2020
- Publication of Book: MID-DECEMBER, 2020

For more information: <https://naturecontest.com>





# Engineering And Technical Design Award

The A' Engineering and Technical Design Competition is a freestyle design competition open to both concept stage and realized works designed by professional and young designers, design companies, engineering agencies and other business in this industry worldwide.

The A' Design Award for Engineering and Technical Design Award is not just an award, it is the indicator of quality and perfection in design, the award is recognized worldwide and takes the attention of design oriented companies, professionals and interest groups. Winning the A' Award is a certificate of excellence for designers, an important milestone in your career. Having the A' Award attracts the eyes of design oriented companies worldwide, winners will be able to find better and higher profile jobs, get a step ahead in their life.

For more information:

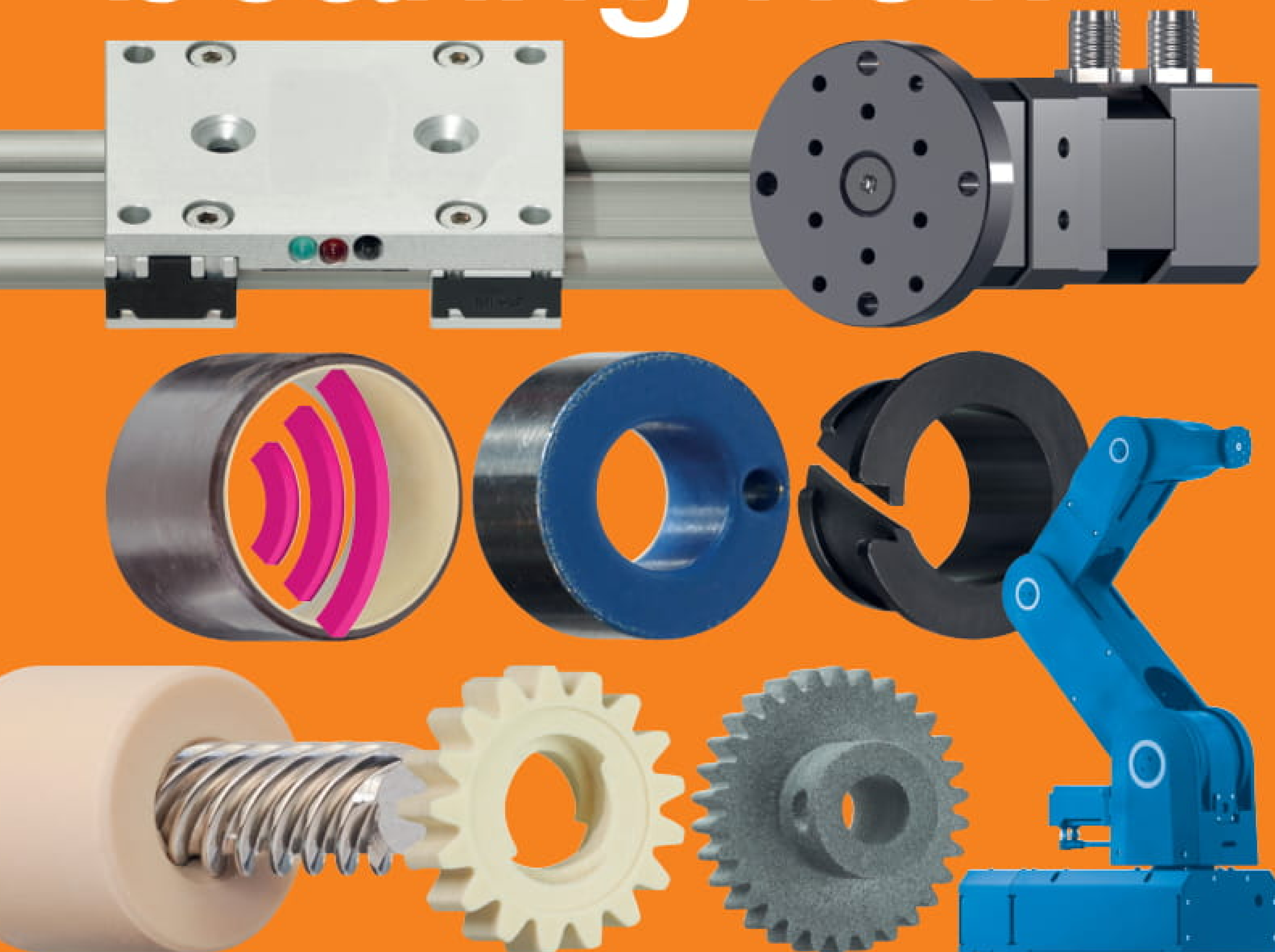
<https://competition.adesignaward.com/competitions/engineering.html#2020>

The winners of the A' Engineering and Technical Design Award are provided extensive and exclusive marketing and communication services to promote the success of winning the A' Award. Furthermore, the winning designs appear on the A' best designs book which is available worldwide, this book is furthermore distributed to the high-profile magazine editors, design oriented companies and relevant parties. The winning designs are also exhibited at our museum, and the best designs will be picked for the permanent exhibition. The winners appear on magazines, newspapers, webzines and many other publishing mediums.





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## ABB To Supply Charging Technology To Gen 3 Cars Racing In ABB FIA Formula E World Championship

ABB is proud to announce that it will provide the charging technology for the Gen3 cars in the ABB FIA Formula E World Championship – the first all-electric global race series.

ABB has been title partner of the championship since Season 4. Gen3 cars will be racing as of Season 9 (2022-2023), with the vehicles designed to be lighter, faster and more energy-efficient.

Together with engineers from motorsport governing body the FIA and Formula E, ABB's Electrification teams are currently working on the specifications and requirements to develop an innovative and safe solution for charging the Gen3 cars through portable charging units that can charge two cars simultaneously.

With more than 14,000 DC fast chargers installed across more than 80 countries worldwide, ABB has a wealth of proven technology and experience which will be incorporated into these chargers for Gen3 and adapted in a bespoke way to meet the particular needs of the racing environment.



# Industrial 5G. For The Industry Of Tomorrow.

**Industrial 5G will change the way we make decisions, manufacture products, and maintain factories.**

Industrie 4.0, the smart factory, the Industrial Internet of Things (IIoT) – these are the future of industrial manufacturing. Designing production plants and intralogistics to be more flexible, autonomous, and efficient requires the right communication framework and comprehensive connectivity. The new 5G communication standard opens up important new prospects.



"Industrial 5G opens the door to the comprehensive, wireless networking of production, maintenance, and logistics. High data rates, reliable and powerful broadband transmission, and ultra-short latencies will enable a significant boost in efficiency and flexibility in industrial value creation. That's why Siemens is embracing this new communication standard right from the start, and is supporting its standardization and industrial implementation by developing a corresponding portfolio."

Klaus Helmrich, member of the Managing Board of Siemens AG



# ExxonMobil Collaborates On Discovery Of New material To Enhance Carbon Capture Technology



Scientists from ExxonMobil, University of California, Berkeley and Lawrence Berkeley National Laboratory have discovered a new material that could capture more than 90 percent of CO<sub>2</sub> emitted from industrial sources, such as natural gas-fired power plants, using low-temperature steam, requiring less energy for the overall carbon capture process.

Laboratory tests indicate the patent-pending materials, known as tetraamine-functionalized metal organic frameworks, capture carbon dioxide emissions up to six times more effectively than conventional amine-based carbon capture technology. Using less energy to capture and remove carbon, the material has the potential to reduce the cost of the technology and eventually support commercial applications.

By manipulating the structure of the metal organic framework material, the team of scientists and students demonstrated the ability to condense a surface area the size of a football field, into just one gram of mass – about the same as a paperclip – that acts as a sponge for CO<sub>2</sub>. Results of the research were published today in the international peer-reviewed journal, Science.

ExxonMobil's team, led by senior research associate Simon Weston, along with UC Berkeley's professor Jeffrey Long and his team of faculty and students have been working collaboratively for eight years to develop this potential carbon capture solution that demonstrates stability in the presence of water vapor, without oxidation, allowing carbon dioxide to be captured from various sources, under a number of conditions.

Additional research and development will be needed to progress this technology to a larger scale pilot and ultimately to industrial scale.

The research successfully demonstrated that these hybrid porous metal-organic materials are highly selective and could capture more than 90 percent of the CO<sub>2</sub> emitted from industrial sources. The materials have much greater capacity for capturing carbon dioxide and can be regenerated for repeated use by using low-temperature steam, requiring less energy for the overall carbon capture process.



# WEG Motor Scan® Brings New Features for Monitoring


The sensor automatically sends the information to the cloud, allowing immediate monitoring of the performance of various equipment from a distance.

## How does the WEG Motor Scan® work?

The WEG Motor Scan® sensor captures equipment data, sends it to the cloud via smartphone or Bluetooth® or automatically from the Gateway. All collected information is stored in the cloud, which allows remote access, in order to guarantee the efficiency of the processes. Initially developed for the electric motor, the solution currently includes other equipment with the measurement of vibration and temperature. Another evolution of WEG Motor Scan® for an industry 4.0 that is now even more efficient.

## Efficient as always. Complete like never before.

Among the main benefits of WEG Motor Scan® is the optimization of predictive maintenance, since it allows the exact identification of equipment that may present future failures, making the maintenance process faster and more efficient, with little or no production stoppage. Based on the data captured and sent to the cloud, it is possible to make faster and more assertive decisions, ensuring greater efficiency and useful life, and therefore, guarantees the integrity of the equipment installed at the factory.



The image shows a white WEG Motor Scan sensor with a blue antenna, set against a dark background with a hexagonal pattern. The sensor is connected to a smartphone icon via a blue signal line. The text "WEG Motor Scan. Efficient as always. Complete like never before." is displayed in yellow and white. A large orange play button icon is overlaid on the left side of the image. The WEG logo is in the bottom right corner, and the text "WEG Digital Solution." is visible at the bottom left of the image area.

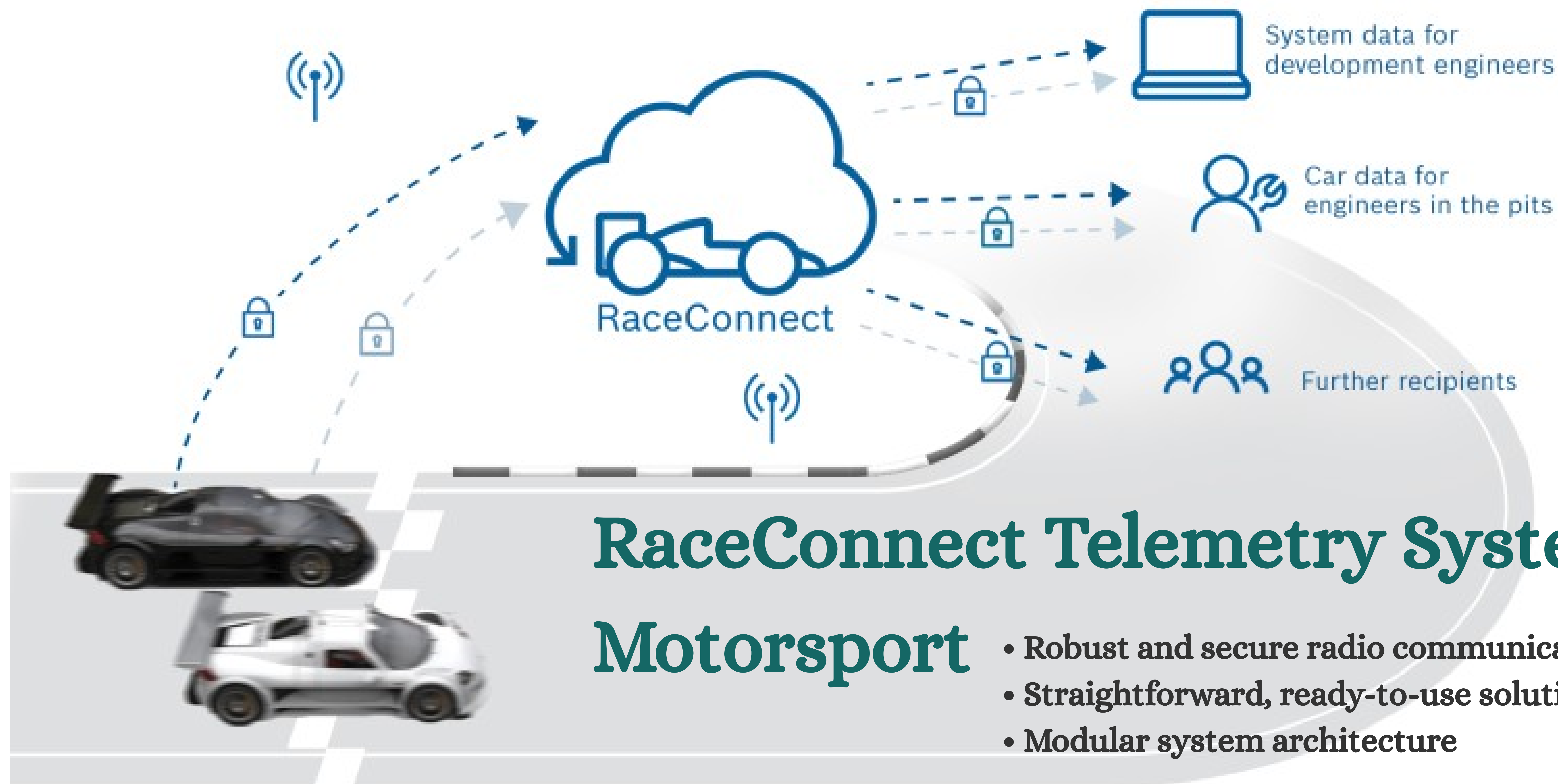
WEG Motor Scan.  
Efficient as always. Complete like never before.

WEG Digital Solution.

WEG

Always ahead in innovation and technology, WEG brings to its portfolio of solutions for industry 4.0 the new WEG Motor Scan®, which expands the performance of the electric motor monitoring sensor for various equipment. In addition, it also monitors gearboxes, pumps, compressors and other equipment powered by electric motors.





## RaceConnect Telemetry System from Bosch Motorsport

- Robust and secure radio communications link between the vehicle and pit
- Straightforward, ready-to-use solution
- Modular system architecture

Often in motorsport, one hundredth or even just a few thousandths of a second can be the difference between winning and losing. When developing and setting up their racing cars, the teams' engineers are therefore always working at the extreme physical and technical limits of what is possible. Among the most important tools they use are telemetry systems, which send data and measured values from the vehicle to the racing team's back-end computers. These computers may be located directly in the pit or in the team's engineering department and are used to make extremely fine adjustments to the vehicle's setup during training, qualifying, and throughout the race. "With RaceConnect Bosch Motorsport has now developed an end-to-end telemetry system that provides racing teams with a live transmission, storage and processing solution that is not tied to a particular location", says Timo Blon, Director Portfolio Strategy and Systems Engineering at Bosch Motorsport. It enables all measurement data and parameters from the vehicle, chassis, and powertrain that are critical for successful racing to be analyzed and optimized quickly and efficiently. Many racing teams are already successfully deploying the RaceConnect solution.





## Alstom Offers Artificial Intelligence Solution to Ensure Passenger Distancing and Safety in Trains and Stations

Alstom has launched a new version of MASTRIA, the world's first multimodal supervision and mobility orchestration solution, that uses AI to provide operators and transport authorities with enhanced passenger flow management tools. The solution allows operators to adapt, easily and in real time, their offer to the various social distancing and public gathering requirements that have arisen due to the Covid-19 pandemic.

Thanks to big data and machine learning, MASTRIA gives operators higher visibility on passenger distribution and flow in trains and stations, as well as enhanced predictive capabilities. This equates to the ability to anticipate and control passenger density and operations in real time, adapting train frequency, capacity and the required number of trains, as well as passenger flows into stations, among other things. Matching the supply of trains with the demand optimises operating conditions, including costs, and is especially useful for managing fluctuating demand peaks, such as during rush hours or special events, or special mobility restrictions, as in the case of Covid-19.

The new implementation of MASTRIA aggregates information on passenger demand from train weight sensors, ticketing machines, traffic signalling, management systems, surveillance cameras and mobile networks in order to offer a real-time picture of passenger flows. From this point, MASTRIA processes the information and provides operators with the information and recommendations necessary to ensure and anticipate specified levels of occupation, as a percentage of maximum capacity, at all times. It can suggest increasing trains frequency, redistributing the flow of people to particular stations, readjustments to other transport systems that impact the subway, restricting entry to stations or even managing the distribution of passengers on the platform to align them with cars with more space on a given train. MASTRIA's powerful prediction algorithms anticipate these situations, allowing proper planning of the entire system.



SmartScope® Flash CNC 300



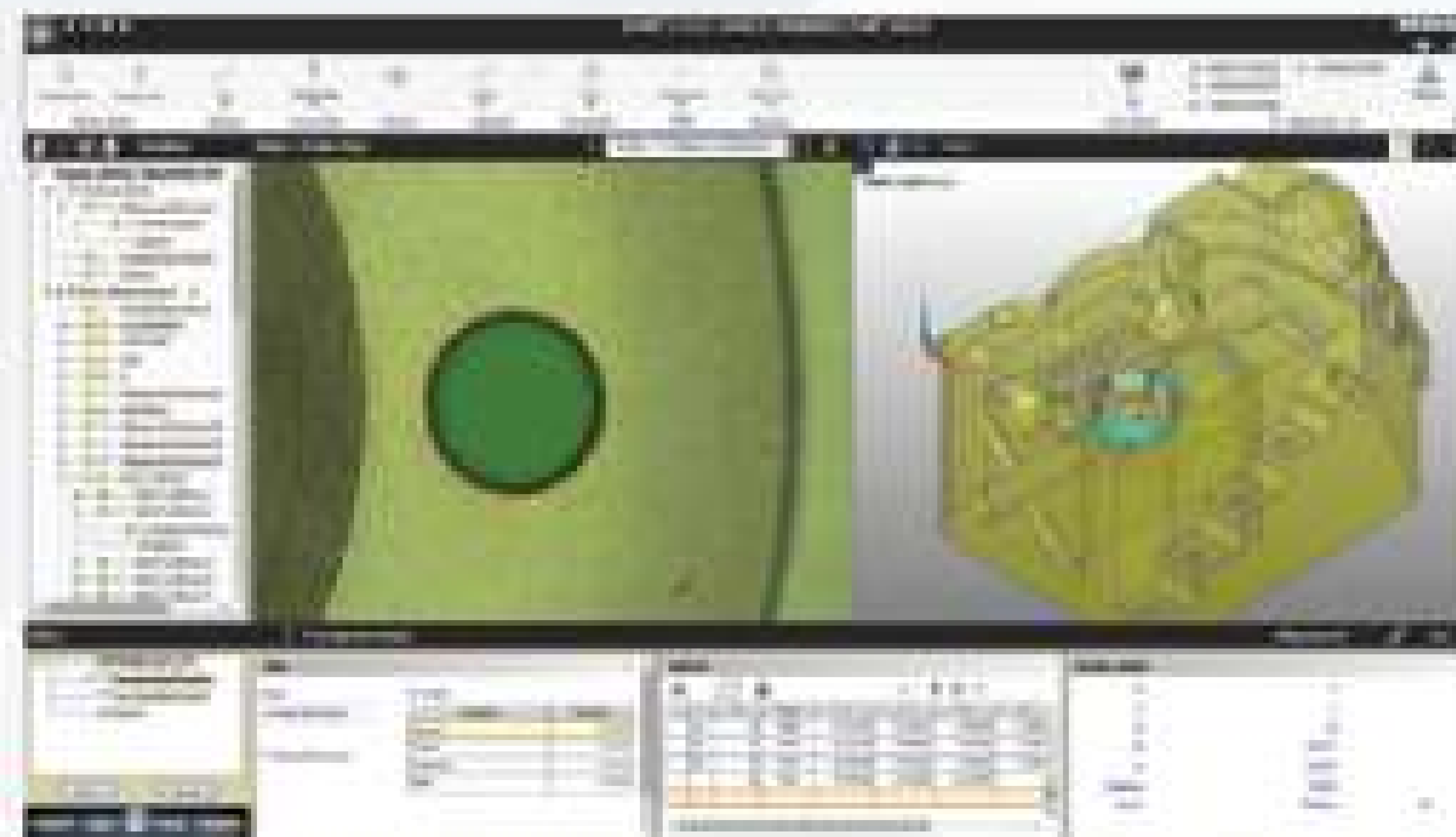
Unique High Capacity Benchtop Multisensor Measurement System

SmartScope® Flash™ CNC 300 is one of the most versatile benchtop systems OGP offers. With an expansive Z-axis of 250 mm to accommodate large parts, it combines state-of-the-art video and autofocus to deliver high productivity.

The World Most Comprehensive Metrology Software

ZONE3 Metrology Software represents a totally new way of working with multisensor measurement systems. Its interface clearly displays relationships between parts, sensors, datum alignments, and machine tooling. ZONE3 uses CAD models and other innovative features to automatically and effortlessly generate measurement routines.

ZONE3® Express/Pro

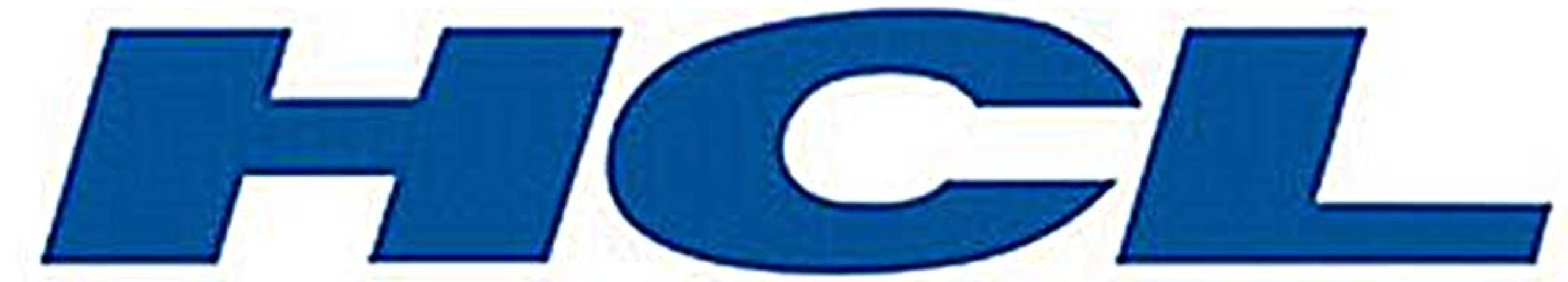




# HCL Technologies Launches A Global Hackathon to Identify Long-Term Technology Solutions to The Covid-19 Pandemic

HCL Technologies, (HCL), a leading global technology company, today announced a multi-phase hackathon, “Better Health Hackathon: #CodeforCOVID19,” to crowdsource technology innovation to find solutions for the immediate and long-term societal impact of the COVID-19 pandemic, including pandemic containment and prevention; diagnosis, treatment and therapeutic management; recovery and return to normal; and systemic solutions for future crises.

As part of the program, HCL has partnered with Microsoft and International SOS, the world's largest medical and travel security services firm, who are providing business and technical oversight to the contest and feedback to team entries. In addition, the Better Health Hackathon is bringing together a wide-ranging and prestigious group of executives and companies, across multiple industries, to serve as judges and advisory panel members. This includes scholars from Johns Hopkins University, University of Cambridge, Tuck School of Business, The University of Queensland, Indian Institute of Technology, Kanpur, and subject matter experts from HCL.



The competition is open to technology innovators, entrepreneurs and problem solvers from the global developer community. To date the Better Health Hackathon has received more than 7500 registrations from 600+ unique organizations and academic institutions spanning 350 locations across 52 countries. To engage top talent in the coding community, the Hackathon is partnering with BeMyApp to leverage their expansive network of coders and tech enthusiasts. The Hackathon is open to eligible participants who are at least 18 years of age.

“The unique capabilities and strength of HCL’s global ecosystem of partners, coupled with the immense talent and best minds from the tech, developer and entrepreneur communities, enables us to make a significant contribution during the COVID-19 pandemic,” said Arthur Filip, Executive Vice President, Sales Transformation & Marketing, HCL Technologies. “Technology has a big role to play in alleviating the challenges brought on by the pandemic, addressing solutions for successful containment and the reorientation of business and society. We are honored to curate a very enthusiastic, committed and deeply talented global community to help us in this important work.”



## Monitor Critical Remote Equipment from Anywhere



- **Simple:** Effectively gather data from your distributed assets without the large capital investment. No software purchases or maintaining of data servers is required.
- **Flexible:** Cut ties to the control room and make your data available wherever an Internet connection exists. View remote assets via computer, tablet, or smartphone. Be notified of alarms via e-mail or text message.
- **Secure:** Have peace of mind through protected connection, collection, storage, and retrieval of data. All data is secured through a next-generation security platform and stored on redundant servers. Retrieval of data requires user/password authentication.

Securely and cost-effectively send important operating condition and remote site information, as well as alarms, to your control room or to your operators: EAGLEi remote monitoring. The EAGLEi Cellular RTU is a remote monitoring solution offered jointly by Phoenix Contact and EAGLEi Data LLC. This solution uses secure cloud-based data management to allow access to remote systems via a cellular network. The EAGLEi Cellular RTU is great for industries such as water/wastewater, oil and gas, or any remote application that needs monitoring.

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## Sanden, Argo Graphics and NEC Introduce PLM System for Managing Design and Manufacturing Processes Globally



Sanden Holdings Corporation (Sanden), in collaboration with Argo Graphics Inc. (Argo Graphics) and NEC Corporation (NEC), has introduced a Product Lifecycle Management (PLM) system that centrally manages the company's design and manufacturing processes globally.

By using PLM to consolidate and manage data, such as CAD data and bill of materials (BOM), which have conventionally been managed by each Sanden site around the world, processes can be standardized throughout the company, helping to reduce work hours for design, optimize inventory management, and reduce procurement costs. This system began operation at sites in Japan earlier this month, and is scheduled to gradually expand to overseas sites in the future.

In the manufacturing industry, it has become an urgent task to promote the digitization of design, production engineering and process reforms through the use of ICT to strengthen international competitiveness.

In particular, Sanden has been managing data related to design and manufacturing at each of its company sites around the world. Therefore, improving the efficiency of processes from design to manufacturing and optimizing inventories through the centralized management of data have become major challenges.

Accordingly, Sanden has worked with Argo Graphics and NEC to resolve these issues by introducing a new PLM system that globally unifies and manages design and manufacturing processes.

In addition, this system is built in a cloud environment in consideration of international access, establishing a globally consistent new manufacturing process. Sanden will further accelerate management efficiency and customer value enhancement by utilizing this system globally.

Argo Graphics supported construction and operations of the new system with its 3DEXPERIENCE platform, a PLM which can globally manage data for development and design, such as CAD, drawings and CAD BOM, and streamline the design and development work of teams.



## Brain Gain: Stunning New MRI Tech Advances Neuro Research and Clinical Translation Capabilities

At this year's virtual ISMRM meeting, GE Healthcare is showcasing new technologies to enable neuro research to better understand Alzheimer's disease and traumatic brain injury, as well as accelerate clinical translation. The 510(k)-pending SIGNA 7.0T, as well as research devices SIGNA ultra-high performance (UHP) 3.0T and the head-only MAGNUS gradients, represent GE Healthcare's continued dedication to advancing neurological research and clinical translation with leading institutions around the world.

**SIGNA 7.0T** is designed to overcome the limitations of the majority of today's clinical MRI systems by leveraging the ultra-high field magnet technology within its core. With approximately five times more power than most clinical systems, **SIGNA 7.0T** is designed to detect subtle structures that may be significant for clinicians and researchers alike. This new 60-centimeter bore system is designed to be a more powerful tool to image neurodegenerative diseases as well as extremities. **SIGNA 7.0T** features UltraG gradient technology, GE's most powerful, whole-body gradient coil, designed to meet the needs of ultra-high field imaging speed and resolution. This system features the familiarity of SIGNAWorks applications platform so clinicians can use the latest state-of-the-art applications such as deep learning-based platform tools like AIR x brain for automated slice positioning and Silent MR imaging. In addition, **SIGNA 7.0T** will be equipped with Precision RF transmit and receive architecture designed to enable improved image quality and research flexibility.



**SIGNA UHP 3.0T** is an investigational device configuration that delivers improved visualization of microstructure changes that may arise in disorders such as Alzheimer's and Parkinson's disease. The research gains that **SIGNA UHP 3T** provides are a result of significant design improvement incorporated into the UltraG gradient technology, the RF architecture, and the SIGNAWorks features. **SIGNA UHP 3.0T** benefits from sharing many of the same high-performance components as the 510(k)-pending **SIGNA 7.0T** but at the lower field strength, thus enabling more research sites to access this advanced technology at lower cost. As a whole-body 3T system, **SIGNA UHP 3.0T** can be used to scan all clinical anatomies.



## Rohde & Schwarz Significantly Enhances 5G Device Certification Capabilities With The R&S TS8980 Test System

Rohde & Schwarz fulfills the certification entry criteria (CEC) for a greatly increased number of the Global Certification Forum's (GCF) work items (WI) and PCS Type Certification Review Board (PTCRB) requests for 5G FR1 RF conformance testing. Thanks to 572 new GCF validations and 215 new PTCRB validations for the R&S TS8980FTA-3A, the updated version of the leading RF test system R&S TS8980 can now perform a broad range of 5G device certification tests.

The device certification process is vital for the mobile communications industry, since compliance with GCF and PTCRB certification requirements ensure that handsets operate as specified in various networks. Following the recent test case validations for a large number of 5G frequency bands and band combinations, the R&S TS8980FTA-3A now fulfills 23 test platform approval criteria (TPAC) for GCF WIs and can therefore be used for a wide range of device certification and testing applications.

The R&S TS8980 is a unique test solution for all radio access technologies for GSM, WCDMA, LTE and 5G, and is a well-established tool for consistent RF tests from R&D to conformance testing. The integrated test system, operated by the R&S CONTEST sequencer software, offers high efficiency and precise, reproducible measurement results. When combined with the R&S CMX500 radio communication tester, the R&S TS8980 offers a unique, smooth upgrade path to 5G for users who already have a previous version of the solution. The R&S TS8980 is a popular RF conformance test system family and the only one on the market that supports mobile technologies from 2G all the way up to 5G on a single platform.





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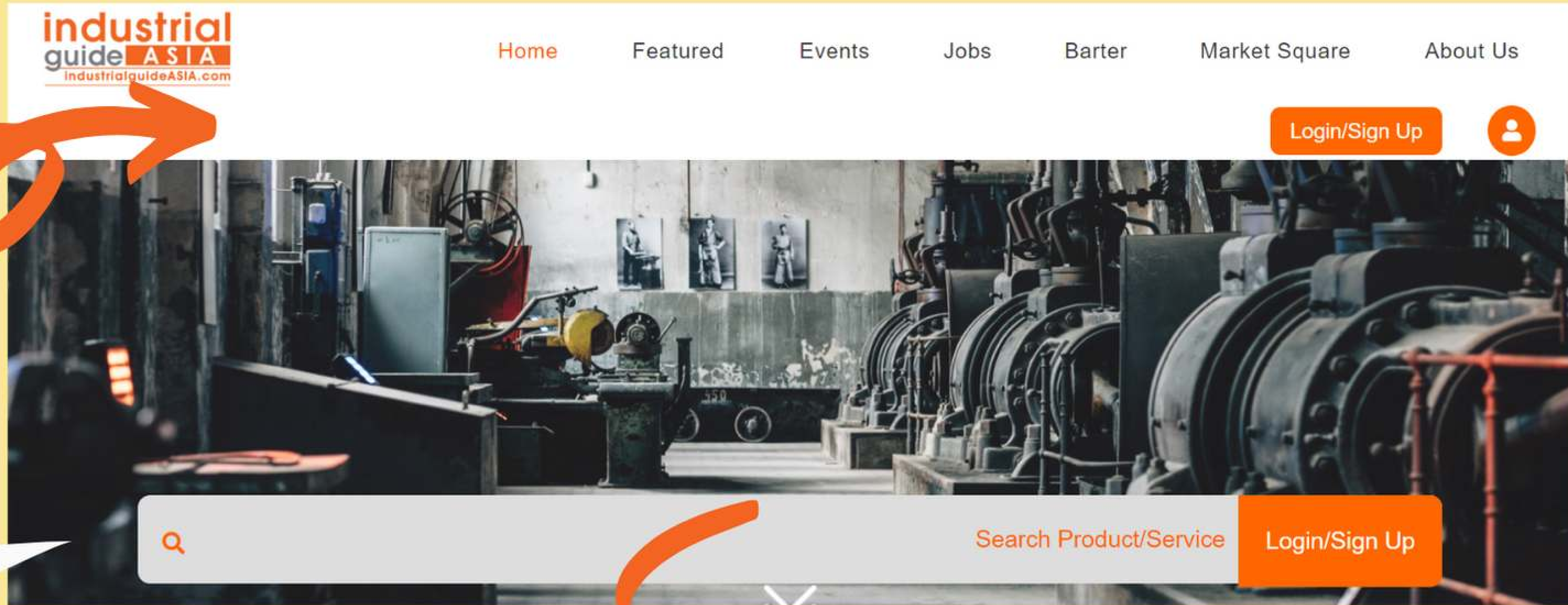
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#### **PowerGen Asia Jakarta**

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JAKARTA, INDONESIA

### 23-26 SEPTEMBER 2020

#### **MTA Asia Bangkok**

BANGKOK INTERNATIONAL TRADE &  
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BANGKOK, THAILAND

### 23-26 SEPTEMBER 2020

#### **Sheet Metal Asia Bangkok**

BANGKOK INTERNATIONAL TRADE &  
EXHIBITION CENTER (BITEC),  
BANGKOK, THAILAND

### 23-25 SEPTEMBER 2020

#### **Smart Factory Korea Busan**

BUSAN EXHIBITION & CONVENTION  
CENTER (BEXCO), BUSAN, SOUTH KOREA

### 23-25 SEPTEMBER 2020

#### **Semicon Taiwan Taipei**

Taipei Nangang Exhibition Center  
TAIPEI NANGANG EXHIBITION  
CENTER (TaiNEX 1), TAIPEI, TAIWAN

## OCTOBER 2020

### 6-9 OCTOBER 2020

#### **MOGSEC Virtual 2020**

ONLINE EXHIBITION  
<http://www.mogsec.com.my/>

### 7-9 OCTOBER 2020

#### **Plastic Expo Osaka**

INTEX, OSAKA, JAPAN

### 13-15 OCTOBER 2020

#### **International Metal Technology**

#### **Taiwan**

TAICHUNG INTERNATIONAL  
EXHIBITION CENTER, TAICHUNG,  
TAIWAN

### 23-24 OCTOBER 2020

#### **Virtual Metalex Vietnam**

ONLINE EXHIBITION  
<https://www.metalexvietnam.com/>

### 20-23 OCTOBER 2020

#### **ProPak Asia Bangkok**

BANGKOK INTERNATIONAL TRADE &  
EXHIBITION CENTER (BITEC),  
BANGKOK, THAILAND

### 20-22 OCTOBER 2020

#### **TENAGA Expo & Forum Kuala Lumpur**

MALAYSIA INTERNATIONAL TRADE &  
EXHIBITION CENTRE (MITEC), KUALA  
LUMPUR, MALAYSIA



## **NOVEMBER 2020**

### **3-5 NOVEMBER 2020**

#### **Cosmex Bangkok**

BANGKOK INTERNATIONAL TRADE & EXHIBITION CENTER (BITEC), BANGKOK, THAILAND

### **3-6 NOVEMBER 2020**

#### **PTC Asia 2020**

Shanghai New Int'l Expo Centre  
SHANGHAI NEW INTERNATIONAL EXPO CENTRE, SHANGHAI, CHINA

### **4-7 NOVEMBER 2020**

#### **ProPack Vietnam Hanoi**

HANOI INTERNATIONAL CENTER FOR EXHIBITION (ICE), HANOI, VIETNAM

### **4-7 NOVEMBER 2020**

#### **MTA Vietnam - Ho Chi Minh**

S.E.C.C, DISTRICT 7, HCMC, VIETNAM

### **10-12 NOVEMBER 2020**

#### **METALTECH & AUTOMEX Virtual Exhibition**

ONLINE EXHIBITION  
<https://metaltech.com.my/exhibitors-info/>

### **30 NOV-2 DEC 2020**

#### **AsiaWater Kuala Lumpur**

KUALA LUMPUR CONVENTION CENTER (KLCC), MALAYSIA

## **DECEMBER 2020**

### **2-5 DECEMBER 2020**

**Tools & Hardware Indonesia Jakarta**  
JAKARTA INTERNATIONAL EXPO, INDONESIA

### **2-4 DECEMBER 2020**

**Asia Warehousing Show Bangkok**  
BANGKOK INTERNATIONAL TRADE & EXHIBITION CENTER (BITEC), BANGKOK, THAILAND

### **7-9 DECEMBER 2020**

#### **EMAX 2020**

ONLINE EXHIBITION  
<https://www.virtualexpo.emaxasia.com/>

### **10-12 DECEMBER 2020**

#### **Myanenergy Yangon**

MYANMAR EXPO HALL, YANGON, MYANMAR

### **16-18 DECEMBER 2020**

#### **VIMAF & VSIF Vietnam**

SECC SAIGON EXHIBITION & CONVENTION CENTER, HO CHI MINH, VIETNAM





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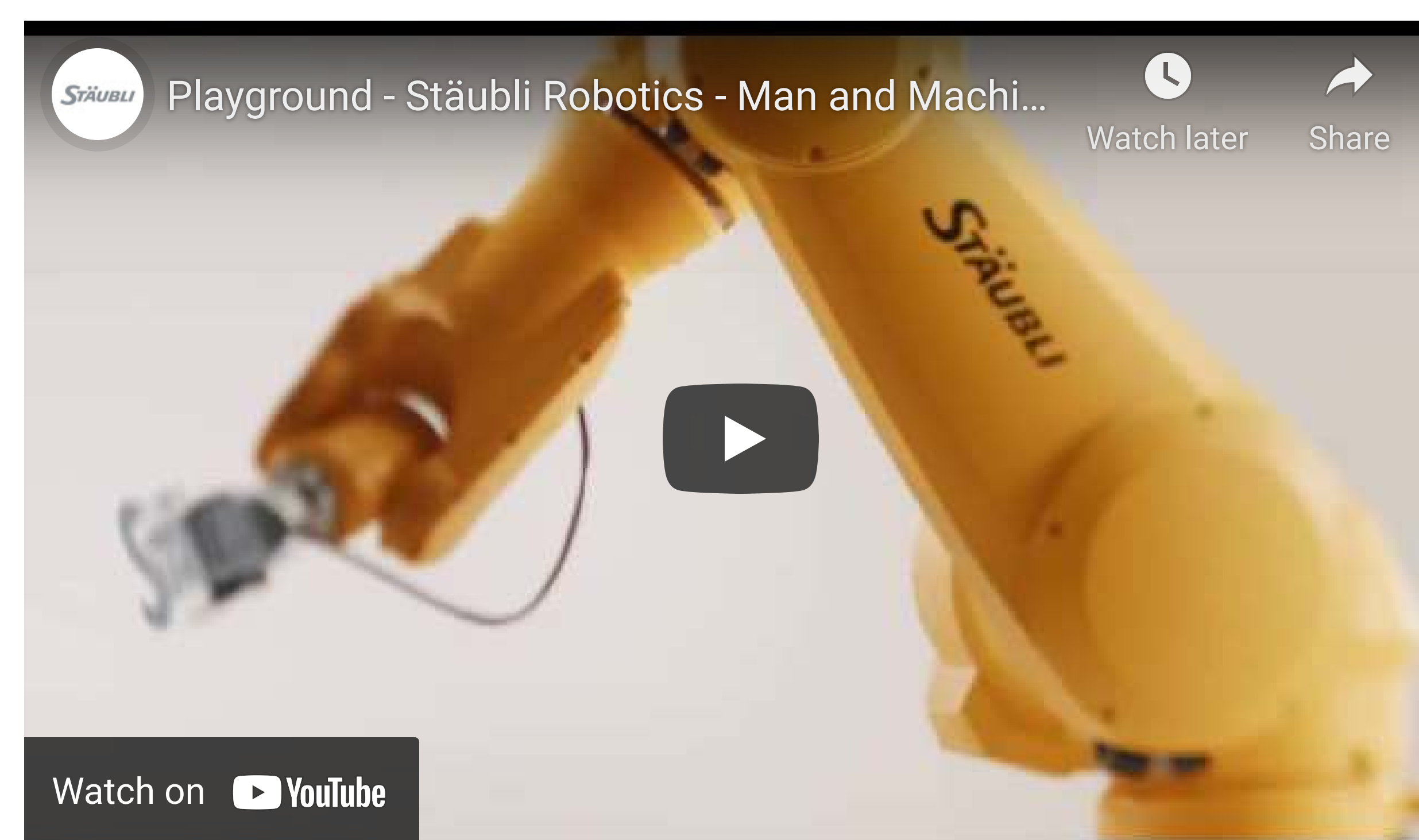
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