ensto today

STAKEHOLDER MAGAZINE 2021

TWO BUSINESSES, **TWO FOCUSES**

Ensto's two businesses position the company for the new normal

CONTENTS

Ensto Today 2021

18

Marjo Miettinen, one of Ensto's owners and Chairman of the Board, remarks on Ensto's new strategy and the history behind it.

ensto today

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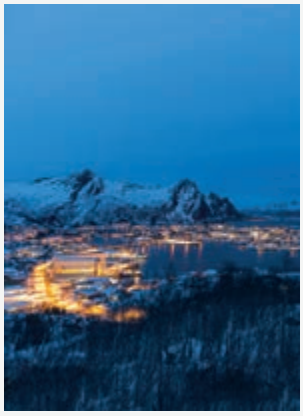

Cover: Ensto's two businesses position the company for the new normal

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From the Editor

The Strategy **Behind Success**

This issue is all about Ensto's new strategy, "Two businesses, two focuses," and the thinking behind restructuring Ensto Group into two separate businesses.

This strategy is what enables us to focus and specialize, and to be more customer-centric than our competition. This issue is also all about smart: our smart solutions, smart technology, and how we're making electricity smart by working closely with both our customers and academic institutions like Aalto University.

You'll also see how Ensto is battling Covid in a way that we'll come out stronger than ever, both in our capacity to serve customers, as well as on our balance sheet.

We've seen the world change dramatically in the last year. Ensto is keeping pace with that change. This magazine shows exactly how we're adapting in order to meet that change and while continuing to meet the needs of our customers.

Pia Hänninen
Head of Brand and Communications

Ensto: HEALTHY IN EVERY WAY

Ensto's "Two businesses, two focuses" strategy positions the company for the new normal.

Scott Diel *Oscar Lindell*

> WHAT THE PANDEMIC DID FOR US IS FORCE US TO ASK OURSELVES THE QUESTION: **'HOW WE WILL BE A WINNER IN THE NEW NORMAL?'**
>
> **HANNU KEINÄNEN**
> President and CEO of Ensto

In 2013, **Hannu Keinänen** left Ensto for the electronics manufacturing business. In February 2019, after six years away, he returned home to Ensto as its CEO. A short time later, the company was greeted by a global pandemic.

But Covid-19 did not hit Ensto as hard as other companies. Before the pandemic, Ensto had already consolidated factories, outsourced some production, reduced its product offerings, and reduced fix costs. "Thanks to steps we'd already taken, Ensto is very healthy today," says Keinänen. "Our top-line revenue is down thanks to the pandemic, but our profitability is up."

It's not only financial health that Ensto enjoys. The company has had relatively few Corona infections in its facilities and offices worldwide. "We've altered shifts, put up barriers, done whatever takes," says Keinänen. "Ensto is a place that stops the virus, not spreads it. We even have lower absenteeism than normal. What the pandemic did for us is force us to ask ourselves the question: 'How we will be a winner in the new normal?'"

WINNING IN THE NEW NORMAL: TWO BUSINESSES, TWO FOCUSES

To exploit the new normal, by December 31, 2020, Ensto has completed its restructuring into two separate businesses along a strategy termed "Two businesses, two focuses." The strategy allows employees in both businesses to focus and specialize, to be more customer- and business centric.

The first, our electricity distribution business, Ensto DSO, has the ambition to become the global leading expert for distribution system operators in select market segments. It seeks technology leadership in full covered conductor solution technology, underground networks business for cold shrink medium voltage, as well as the cyber-secured network automation business. Its growth will be primarily organic, through product development and market expansion.

The second, our building electrification business, Ensto Building Systems, will seek dominance in the Nordics and selected market niches. Ensto Building Systems will also compete in product-specific niches — like marine in Italy — where it has the potential to dominate. "The building segment is tough when it comes to profitability," says Keinänen, "so the unit will have the ability to be selective where they put their costs and resources."

While Ensto DSO and Ensto Building Systems are separate businesses, Keinänen says there will be instances when they'll work together. "There is room for cooperation between them, but we'll do it when it's beneficial to both."

ENSTO'S 100TH ANNIVERSARY

Keinänen is one who carefully monitors electricity and public opinion. He's noticed dramatic changes over the past decade. "A decade ago, electricity still conjured a lot of negative associations, like burning coal. Nuclear power was seen negatively. But now, thanks to the penetration of renewables, it's clear that electricity has new role to play." Today, he says, electricity is almost like a basic human right, an enabler of modern society and a builder of equality. "Electricity gave time to mother and children, allowed education, and this should happen globally."

It's not hard to get Keinänen to evangelize. "Electricity is the most efficient way to move energy from point A to point B. A power line for electricity is triple as efficient as any mechanical or hydraulic means of power transmission. Electric vehicles are four times more efficient than internal combustion cars. An LED is ten times more efficient than an incandescent bulb. Wind power is on par with any fossil fuels burning plant in cost per kilowatt hour."

But since the wind doesn't always blow, and the sun doesn't always shine, smart solutions like those Ensto makes are essential to efficiency. "Ensto is all about a better life with electricity," says Keinänen. "**Ensio Miettinen** started this company 63 years ago, and now everything is getting smarter. If we make the right choices now to stay healthy in every respect, then in 37 years' time we will celebrate our 100th anniversary."

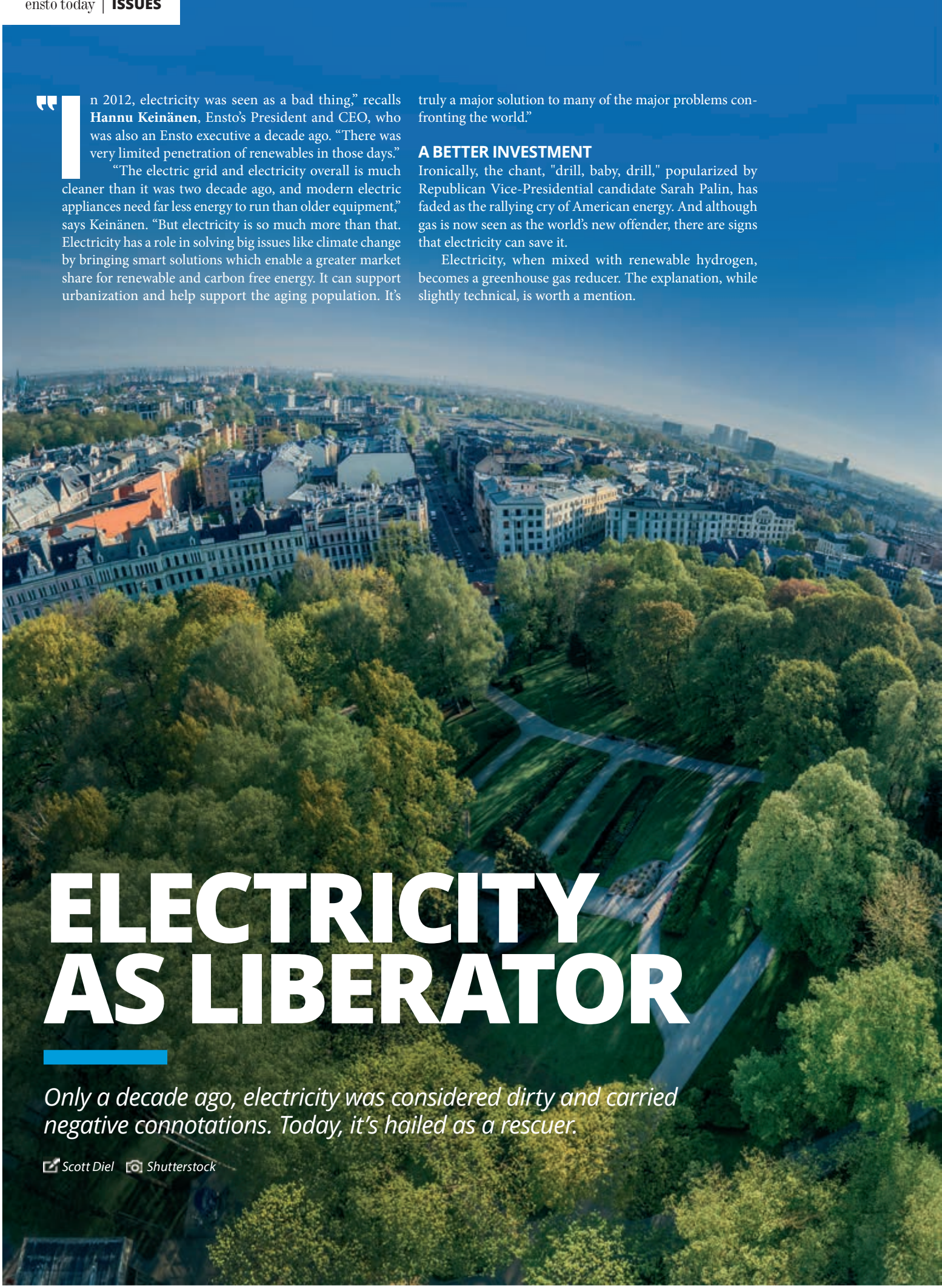
"In 2012, electricity was seen as a bad thing," recalls **Hannu Keinänen**, Ensto's President and CEO, who was also an Ensto executive a decade ago. "There was very limited penetration of renewables in those days."

"The electric grid and electricity overall is much cleaner than it was two decade ago, and modern electric appliances need far less energy to run than older equipment," says Keinänen. "But electricity is so much more than that. Electricity has a role in solving big issues like climate change by bringing smart solutions which enable a greater market share for renewable and carbon free energy. It can support urbanization and help support the aging population. It's truly a major solution to many of the major problems confronting the world."

A BETTER INVESTMENT

Ironically, the chant, "drill, baby, drill," popularized by Republican Vice-Presidential candidate Sarah Palin, has faded as the rallying cry of American energy. And although gas is now seen as the world's new offender, there are signs that electricity can save it.

Electricity, when mixed with renewable hydrogen, becomes a greenhouse gas reducer. The explanation, while slightly technical, is worth a mention.



ELECTRICITY AS LIBERATOR

Only a decade ago, electricity was considered dirty and carried negative connotations. Today, it's hailed as a rescuer.

Scott Diel *Shutterstock*

There are plans to mix renewable hydrogen to the gas supply to lower the greenhouse gas emissions: hydrogen can be produced with excess renewable electricity when there is no demand for it, and hydrogen burns completely clean, the only byproduct being water.

On the investments front, renewable energy is seen as a better investment than gas-fired transition plants. Even big oil companies, under pressure from governments and investors, are accelerating production of clean energy. There seems little doubt that renewables will be the main generators of electricity by 2025 and electricity is poised to eventually put the final nail in the coffin of fossil fuels. During the pandemic, electricity generated by renewables is forecast to grow seven percent, while overall energy demand is expected to be down five percent.

MORE THAN CLEAN ENERGY

But electricity, as Ensto's Hannu Keinänen sees it, is far more than just clean energy. Electricity liberates, enables, and empowers.

"Think of the poorest parts of Africa," says Keinänen, "and how a mother's time is used. Much of it goes to fetch the firewood or carry water. If we could bring electricity to them, then the mother won't have to spend all day gathering wood. Dark evenings can be filled with light to permit education. Mobile devices can be charged at home, saving the journey to town to charge at a café." Electricity as a fundamental right of a human being is an issue that's being explored and debated by academics and politicians.

"Electricity can help bring equality, and raise women's position in society," says Keinänen. "And Ensto is a direct part of this. We need to think about how we can be an even bigger part of this change."

SAVING THE PLANET

Electricity's role in preventing climate change continues to grow. "The solution is simple," says Keinänen. "We need to reduce the amount of fossil fuels we burn and increase our usage of clean energy."

Keinänen says one way to do this is through smart solutions needed to balance electricity production and consumption. "We can do this right now through price monitoring, checking consumption in buildings and homes, electricity quality, network automation, autonomous electricity generation, and emissions pricing."

Keinänen likes to draw attention to the fact that Finland has the one of the most – if not *the* most – reliable electrical grids in the entire world. "We're the most reliable," he says, "but we can also become the smartest. This is a great opportunity. Smart electricity can be the next Nokia of Finland."

Keinänen also likes to talk about a 63-year-old family company in Porvoo that plays a growing and important role in smart electricity.

> WE'RE THE MOST RELIABLE, BUT WE CAN ALSO BECOME THE SMARTEST. THIS IS A GREAT OPPORTUNITY. SMART ELECTRICITY CAN BE THE NEXT NOKIA OF FINLAND.
>
> **HANNU KEINÄNEN**
> President and CEO of Ensto

SMART ENERGY

THE ENSTO WAY

Energy storage brings system flexibility to smart energy control systems created to optimize energy generation and consumption. The intelligence for energy storage is being developed by Ensto engineers.

Scott Diel *Oscar Lindell, Jenni Niemelä*

> IT'S AMAZING TO HAVE A REAL ENVIRONMENT, TO SEE REAL NUMBERS, AND ENSTO PORVOO PLANT IS THE LABORATORY.
>
> **ANSSI SAVELIUS**
> Senior Vice President of R&D and Technology

In September 2020, HSK Sähkö Oy installed 450 solar panels on the roof of Ensto's main factory building in Porvoo. The panels will generate an estimated annual output of approximately 130,000 kilowatt hours – enough to fully charge 1,700 Teslas.

The panels themselves will only generate between three and four percent of the energy Ensto needs to operate the plant, but they are a major step forward toward helping to minimize total electricity usage, as well as reduce costs and emissions in an industrial plant. Energy storage, the solar power plant, and energy control system may be key elements in a new Ensto product.

A BIGGER ECOSYSTEM

Even if Ensto's solar panels were capable of generating more electricity than the factory needed, the taxes levied do not make it attractive to sell surplus electricity back to the utility.

But the genius of this project is not about revenue: it's about balance. "The panels are a small part of the big picture, a bigger ecosystem," says **Anssi Savelius**, Ensto's Senior Vice President for R&D and Technology.

That ecosystem also contains a battery and an energy management system with edge intelligence, this intelligence developed by Ensto engineers. An interesting use case is demand response. During consumption peaks, when the frequency drops, Ensto can push energy to the utility network. "When there is too much electricity generation in the network and the frequency increases, the utility can dump excess energy into Ensto's battery," says Savelius. "The frequency containment reserve market offers an improved ROI for this kind of virtual power plant."

AN ENSTO PRODUCT

Since selling back to grid isn't always a good business decision, Savelius says, optimizing photovoltaic self-consumption makes sense. The battery can shave peak loads and optimize the use of stored energy by enabling consumption at times when grid prices are unfavorable. It can also be used to charge EVs in front of the factory or as a source of backup power.

Since this project is on the vanguard of R&D, Savelius says it's hard to estimate the return on investment. The investment itself – panels, battery, and control system – will run between 200,000 and 300,000 euros, the solar panels constituting the majority of the investment. "The point of the energy management system is that there's an embedded computer that knows when to feed electricity back to the grid or demand electricity from the grid, when to participate in the electricity market, and when to offer the battery to the factory or to EV chargers. This logic makes the ROI on this project a lot shorter than it might otherwise be, but it's still likely several years."

"Once all the elements are in place and connected," he says, "this could be a viable business. If we can combine the TSO [Transmission System Operator] and DSO applications to it, electricity market information, then one plus one is more than two. Connect enough applications and it starts to pay back. That's the case we're chasing."

PIONEERS

At this point, it's not yet a business. But if the energy control system works as Savelius believes it will, Ensto will have a product. Its partner in the project is HSK Sähkö, the electrical contracting company that installed the solar panels and battery systems. "You can't just sell the control system," says Savelius. "You need to sell the whole system solution, and that's why we're collaborating with HSK."

"Think of supermarkets and industrial plants," he says. "Our system could help them reach payback time much faster when they invest in a solar power system. They can make their CO2 footprint smaller and gain energy independence."

"We'll install the battery storage system in spring 2021. The control system will be prototyped next summer or autumn, with proof of concept in 2021, and the first iteration of commercial pilot on the market in 2022," Savelius says. The control system will be prototyped next summer or autumn with proof of concept in 2021, and the first iteration of commercial pilot on the market in 2022."

"These dates are dangerous promises, of course, when you're pioneers in a field," says Savelius. "It's amazing to have a real environment, to see real numbers, and Ensto Porvoo plant is the laboratory."◆

From left: Anssi Savelius, Hannu Keinänen, Hannu Kauppi (HSK Sähkö), Pekka Paananen and Juha Kuuluvainen. All the orange-vested gentlemen work for Ensto.

ENSTO DSO: A STRATEGY TOWARD SIGNIFICANT GROWTH

Ensto's "Two businesses, two focuses" strategy gives Ensto DSO the ability to chase ambitious growth.

Scott Diel *Oscar Lindell*

> GLOBALLY WE'RE SMALL, **BUT WE CAN GAIN THE TECHNICAL EXPERT POSITION.**
>
> **MIKA HAIKOLA**
> SVP, GLOBAL SALES AND BUSINESS DEVELOPMENT ENSTO DSO

A well-known, former Finnish corporate executive is reputed to have remarked that the test of a good strategy is whether it horrifies the listener when presented for the first time. Perhaps apocryphal, the story still runs true to the reaction **Mika Haikola**, Senior Vice President of Ensto DSO, sometimes receives when he notes his business' goal is to double turnover and increase profitability by the end of 2025.

"At first, some are incredulous when I say this," says Haikola. "But these are not my numbers. Our team has put these together, and when explained, they make perfect sense."

THE TECHNICAL EXPERT

Ensto has always been customer focused. But beginning January 1, 2021, Ensto DSO (Distribution System Operators), will have a structure that allows an even keener focus.

"Ensto DSO wants to be the technical expert for distribution system operators," says Haikola. "Even though we're a niche supplier with small components in the network, our components play a critical role."

A RECIPE FOR GROWTH

First, Ensto DSO will develop its portfolio to enable it to enter more markets. "One example of a growth area is underground cold shrink medium voltage," says Haikola, "but we're missing something from the portfolio for certain export markets such as the Middle East, where some of their underground voltage levels are not in our current offerings. We want to offer the full package. In a similar manner we are developing our network automation product offering."

Second, and in parallel, Ensto DSO will be looking at mergers and acquisitions. Opportunities are markets in Central European German-speaking countries, where Ensto DSO would have ready offerings but does not have a market presence. Another opportunity is acquiring technology that complements existing offerings. "Smart products are a good example of this," says Haikola, citing products with sensors that enable predictive maintenance, such as those which could take measurements in different locations in a distribution network for future use with machine learning or the IoT for predictive maintenance. "Ensto is very well known in joints and terminations," he says, "but there are customers expecting new things from us."

NEW GEOGRAPHY

Sometimes the secret to growth is simply about spreading the good message of Ensto DSO. "In Finland and Sweden we're known for products with amazing reliability and low life cycle costs," says Haikola, "but we need to expand that to every market we're in."

"We are known in Russia, for example," he says, "but we haven't been able to carry the message that if you invest a tiny bit more, you get much greater network reliability. In the Nordics we certainly carry that message, but we need to do it elsewhere."

California, the world's sixth largest economy, is another market where Ensto DSO has a growing role as a technical expert for its customers. All Ensto full covered conductor solution products have been qualified and approved by the State's large utilities. "Our efforts in less than two years have begun to generate revenue," says Haikola. "Our team confidently forecasts increasing turnover in the near term in California. For the medium- and longer term, we see success in the rest of the United States."

AND A HUMAN ON THE PHONE

Haikola says Ensto will be the technical expert the customer can actually get on the phone when they want to develop a product or improve their network — or when they just need an answer right now.

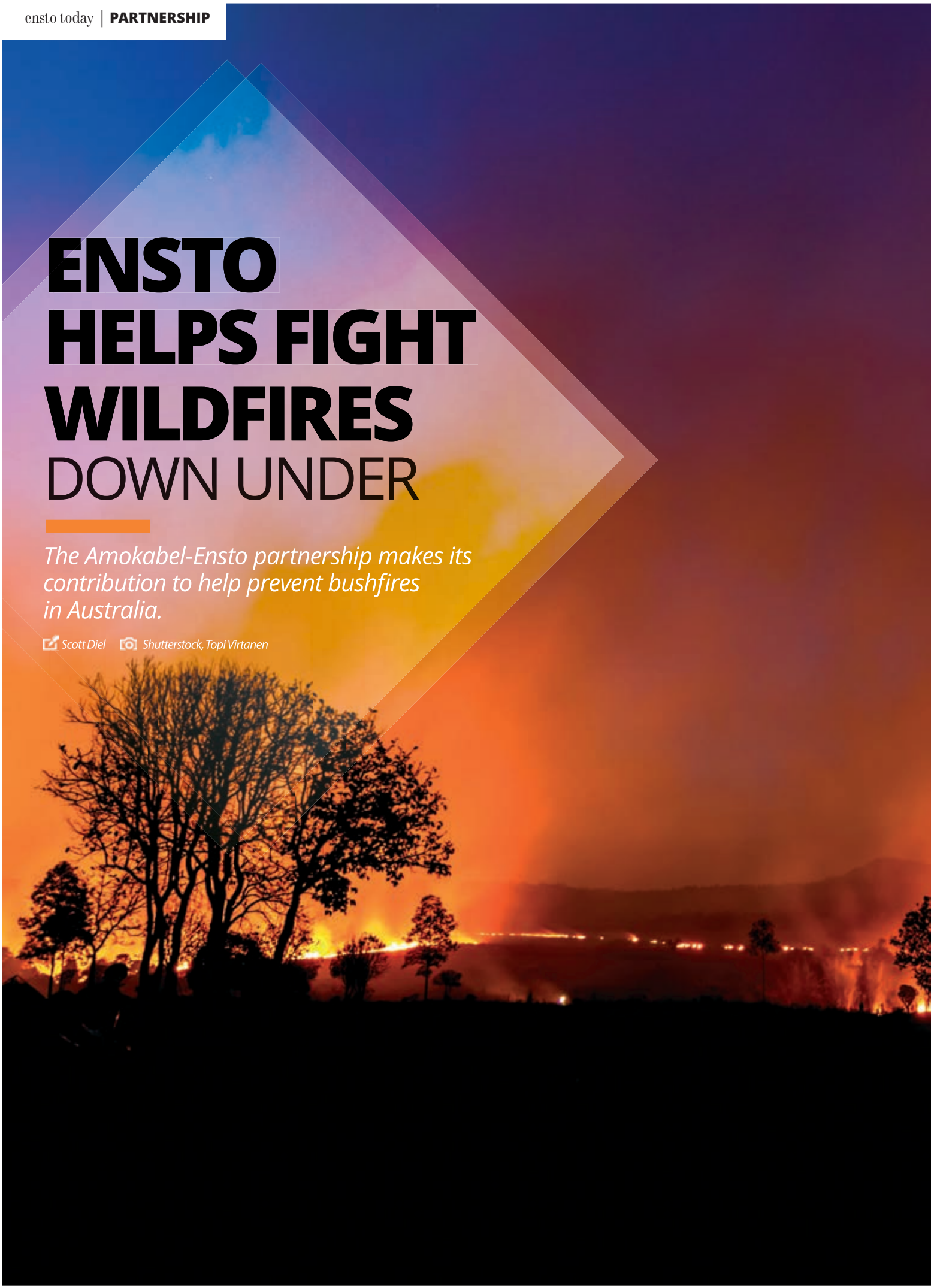
"Our customers know a person at Ensto and their phone number. This is totally unlike our biggest competitors, who have a 24-hour 0800 telephone number where the customer has no idea in what country it's being picked up."

While not all cultures transfer easily, Ensto's values and its way of caring for its customers in the Nordics will definitely be welcome in the rest of the world. "Globally we're small," says Haikola, "but we can gain the technical expert position." ◆

ENSTO HELPS FIGHT WILDFIRES DOWN UNDER

The Amokabel-Ensto partnership makes its contribution to help prevent bushfires in Australia.

Scott Diel Shutterstock, Topi Virtanen



Bushfires rage in Australia. Ensto and its partners are playing a role in fighting them.

Ensto's Christer Ohls installs a joint to a covered conductor with Zinfra installers in Melbourne on covered conductors training. In the background are Jim Tsirikis (white shirt) and Robert Doyle (blue shirt) of United Energy.

"Australia today is ground zero for the climate catastrophe," wrote a *New York Times* columnist in January 2020. Fires have claimed human lives, the lives of countless animals, thousands of homes, and millions of acres of land. "Ecological Armageddon" the newspaper called it.

Although fires are business as usual in Australia, the scale of recent fires is not. While climate change creates conditions susceptible to fire, fires caused by powerline are avoidable.

BARE WIRE

"In 2009 we had a bad bushfire season, and it was determined that 161 of the 173 lives lost in Victoria's Black Saturday wildfires were caused by powerline failures," says **Ian Flatley**, Australia-based Director of Groundline Engineering, a company that provides powerline consultancy services in Australia, New Zealand, and the United Kingdom. "Powerlines account for two to three percent of bushfires, but they contribute 80 to 90 percent of all deaths."

Flatley says the reason is that bushfires caused by powerlines spread rapidly. "Faults that ignite a wildfire are often caused by strong winds, which spread quickly over a wide area and prevent people from reacting quickly enough."

In 2009, a Royal Commission of Enquiry undertook an investigation to determine root causes and make recommendations. The verdict: bare wire conductors should be replaced with covered conductors. The scale of the recommendation is huge, and for rural Victoria alone in southeast Australia, that meant replacing 84,000 roadside kilometers of bare wire lines that were 45 years old on average. In 2016, Groundline was granted 291,000 Australian dollars to test covered conductor replacement options.

COVERED CONDUCTORS

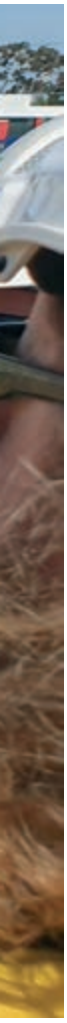
In early 2015, Flatley found himself in Sweden, talking about wildfires with **Fredrik Warme**, Technical Director with Amokabel, a Swedish company expert in the manufacture and distribution of cable. Amokabel, working closely with Ensto, had developed covered conductors for use in harsh Nordic winters. Flatley wanted Warme to create something for Australia, as well.

Amokabel designed one conductor for a conventional three-phase system, plus one for a single wire earth return system, a one-phase conductor used at end of lines to distribute to small communities. "Historically, they use steel wire in Australia," says Warme, "so they can use high tension between the poles. We made a thin, aluminum-clad steel conductor with a cover that could be used at high tension. The conductors are fully water-blocked conductor, triple extruded, very robust."

A UNIQUE PARTNERSHIP

Flatley saw the advantage in the Amokabel–Ensto partnership: "The massive benefit was that the supplier of the cove-red conductor was talking to the supplier of the fitting."

Amokabel's Warme says not all customers understand the importance of the relationship. "Customers will say 'We tried covered conductors and it doesn't work.' But that's because the supplier has only sold them a conductor and hasn't helped them



with installation. No training, supervision, and they struggle. To reap the benefit of our covered conductor we want to provide a systems solution, which we have with Ensto."

"We've worked together twenty years now," says Warme of Ensto. "We're two separate companies representing one conductor solution. **Christer Ohls**, Ensto's Export Sales Manager, and I recently traveled to Oman and Greece. We introduced Ensto in Australia, they introduced us in Africa. Everything functions together, and I think it's quite rare on the world market for two companies to see the benefit and work so closely together."

NOT AN 'AUSTRALIAN PROBLEM'

Australia's situation at the national level, unfortunately, is more complicated than simply bringing in the right technology. Flatley says that technology a utility needs must be approved by an economic regulator. (Two trial areas of several kilometers each have been installed and approved.) "Safety is a state issue but economic approval is federal. Until economic drivers are the same as safety drivers, we'll remain in this predicament."

Australia is under increasing pressure to solve the problem. International press coverage of wildfires is one form of pressure. Newspapers have chronicled how tennis players at the Australian Open find themselves unable to play due to wildfire smoke. They have exposed how Australia fires carry dirt to glaciers in New Zealand, and how they are connected to reduced air quality in other countries. Flatley is somewhat optimistic that success stories at the state level can help make change at the federal level.

APPROVED BY UNITED ENERGY

In February 2020, the Ensto-Amokabel solution received approval for use by the Australian utility, United Energy, in Victoria. "It's met the performance requirements in our specifications and proved itself in field trials," says **Jim Tsirikis**, Principal Engineer for Distribution with United Energy. "The covered conductor is now in use as business as usual."

He praises the logistical feat performed by Ensto and Amokabel to service a market more than 15,000 kilometers from the Nordics. "I have a lot of praise for these companies, given the tyrannies of distance. They've supplied good support and helped us transition."

Tsirikis says the transition from bare conductor has been smooth. "There are other insulated conductor technologies like high-voltage aerial bundled cable, however these require specialized cable jointing skills which are not required for covered conductor. This is a big benefit."

A GLOBAL SOLUTION?

Step by step, covered conductors are catching on. Groundline Engineering's Ian Flatley sees opportunities for the solution well beyond Australia.

"Bushfires are a global problem," he says. "They're an issue in Portugal and California. Covered conductor technology is a frontline defense against bushfires. It's the sensible and responsible thing to do." ◆

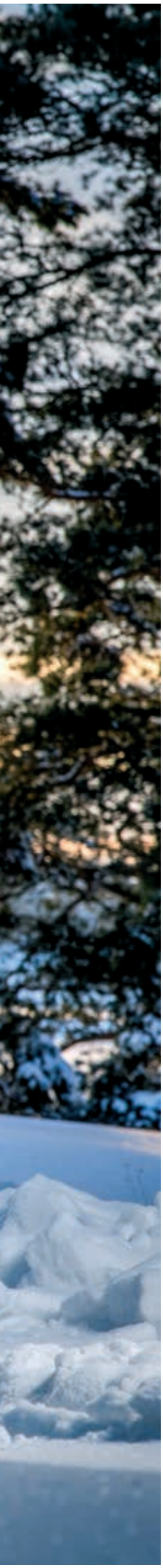
> COVERED CONDUCTOR TECHNOLOGY IS A FRONT-LINE DEFENSE AGAINST BUSHFIRES. IT'S THE SENSIBLE AND RESPONSIBLE THING TO DO.
>
> **IAN FLATLEY**
> Australia-based Director of Groundline Engineering

Ensto Product Manager Topi Virtanen (in blue shirt) with installers from Zinfra, one of United Energy's contractors.

DIFFERENT, NOT CRAZY

Marjo Miettinen, one of Ensto's owners and Chairman of the Board, remarks on Ensto's new strategy and the history behind it.

Scott Diel *Oscar Lindell*



Ensto has undergone some significant changes over the past years, but the majority of them have not been in any way connected to Covid 19. The seeds of Ensto's "two businesses, two focuses" strategy were planted as early as 2018, when the third generation of the Miettinen family became Ensto owners. The strategic process began actively in 2019 when **Hannu Keinänen** started as Ensto President and CEO.

"The new Ensto strategy has been discussed for a long time," says **Marjo Miettinen**, one of Ensto's owners and Chairman of the Board. "But it was this new generation of owners who began asking new questions that really drove forward this new strategy. Strategy is always a process, not a project."

NEW GENERATION, NEW QUESTIONS

"The new generation had a huge interest in sustainability," says Miettinen, "and wanted to understand how the company was leading in sustainability at every level." Their world views differed, as well. "They were focused on what was happening inside Ensto, but also outside of the Group, Finland, Europe, and even globally. What's happening in other continents, for examp le, in India or USA was important to them."

"Their networks were different, too," she says. "Putting their networks together with mine can enable us to expand faster."

The new generation was also keenly interested in leadership issues. "They discussed how Ensto should be led. They wanted to know about the leadership philosophy of Hannu [Keinänen] and how he would lead the company."

NEW GENERATION, NEW STRATEGY

When Hannu Keinänen returned to Ensto as President and CEO in 2019, this discussion among owners was brought to life in a new strategy, "two businesses, two focuses."

"To create this new strategy all the owners were involved, plus the Ensto board, and Ensto management," says Miettinen. "It was a joint process and everybody was committed."

Miettinen says dividing the company into Ensto DSO and Ensto Building Systems makes more sense for both customers and employees. "When you break it down, some of our businesses are about distributing electricity, and the other parts are about using electricity. Customers are different. The new strategy is also easier for our employees, because it allows them to focus on fewer products and solutions. Still, we are keeping our good history and brand alive in both businesses."

> IT WAS THIS NEW GENERATION OF OWNERS WHO BEGAN ASKING NEW QUESTIONS THAT REALLY DROVE FORWARD THIS NEW STRATEGY. **STRATEGY IS ALWAYS A PROCESS, NOT A PROJECT.**
>
> **MARJO MIETTINEN**
> Ensto's owner and Chairman of the Board

LIVING WITH COVID

While Covid hit some businesses extremely hard, Ensto was in a favorable position for two reasons. "Without electricity, there's no modern society at all," says Miettinen, "so Ensto products are needed regardless of the pandemic. In a modern society, electricity is a right of human life, an enabler of equality, a focus for energy efficiency, and one solution for climate change. We can say that electricity is a fundamental right of human life."

Second, Ensto's balance sheet was strong before Covid, and Ensto succeeded in keeping its factories in both Finland and Estonia open the whole year in 2020. "Everyone at Ensto was working hard to keep our customers satisfied," says Miettinen, "which meant special measures to protect our employees by guaranteeing a safe working environment."

Those who could, worked from home. Risk of infection was minimized by limiting visitors to plants and encouraging safe distancing. Shifts were added to ensure greater distance between workers. Facemasks were required and Plexiglas placed between work stations. The lunch schedule was changed in the name of safety, and in the Porvoo factory proximity cards are being used.

FAMILY COMMITMENT

In 1986, **Ensio Miettinen**, Ensto's founder, wrote, "I act, or try to act, in a manner that bridges the gap, or creates a synthesis, between technoculture and humanism." It's a topic that has preoccupied Marjo, as well. "R&D can't be separated from the human," she says, "and vice versa: human beings need digital working methods. The idea of digitalization is to help people in their work."

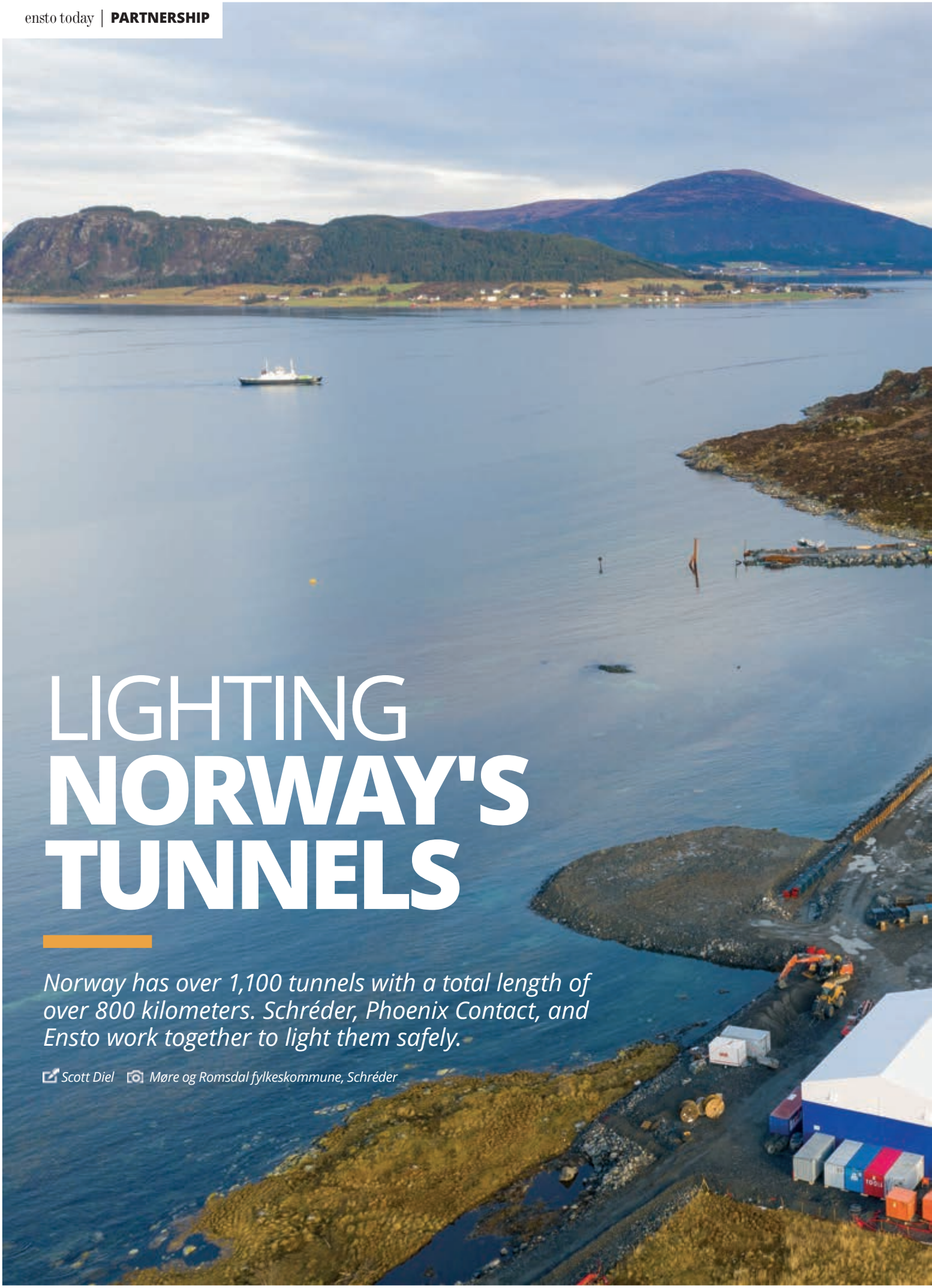
The new generation of owners has committed to the company, too. After the company created its mission, "Better life. With electricity," they created a family mission, "Better future. With family."

"This family mission shows their commitment that we would do our best together to develop Ensto," says Miettinen, "and this is getting more and more interesting."

CRAZY IN A GOOD WAY

On her blog, Marjo Miettinen once described sending a postcard to her father that she found in a gas station in Finland. The card read *I'm not crazy, just a little bit different.* "My father framed it and hung it on his bedroom wall," she says. "And now this same postcard is hanging on my youngest son's bedroom wall."

"Sometimes we think creative people are crazy, that we can't work with them," she says. "But we also need rational people to help realize a crazy-sounding idea. This card is a great reminder that we need all types of people – crazy, rational, tech, non-tech, younger, older – to help bring ideas to life and create an excellent company."



LIGHTING **NORWAY'S TUNNELS**

Norway has over 1,100 tunnels with a total length of over 800 kilometers. Schréder, Phoenix Contact, and Ensto work together to light them safely.

Scott Diel *Møre og Romsdal fylkeskommune, Schréder*

On Norway's west coast, four tunnels will be built in spectacular surroundings, creating tunnels to islands where earlier only a ferry connection was available.

Formwork on the portal for the Haramsfjord tunnel from Hestøya is underway.

Driving from bright sunlight into a dark hole and re-emerging is routine for many of Norway's citizens. But what most don't realize is what a great feat of engineering makes that journey both safe and efficient.

"Traditional street lighting goes on and off with the seasons, but in tunnels it's linked to the intensity of the sun and the density of traffic," says **Koen Van Winkel**, Business Segment Manager, Tunnels, for the lighting company Schréder. "Tunnel lighting has a huge safety impact and requires a massive amount of energy. If you trim the light level to match the real need, then you can save a lot of euros."

DECADES OF TUNNEL EXPERIENCE

Van Winkel knows tunnels. Schréder is one of the world's foremost manufacturers of outdoor lighting. The fourth-generation family company, founded by Jules Schréder of Belgium, has been lighting public spaces for 112 years. If you've visited the Champs-Elysées, the Chunnel, or the Coliseum in Rome, then you've seen their work. Less famous, though, are their tunnels, which they've been lighting since the 1960s and which have contributed significantly to the company's success.

Norway has over 1,100 tunnels, some well over 100 years old. The modern ones are dug using explosives and tunnel boring machines, all with impressive accuracy. To make those tunnels safe for drivers requires technology no less precise. Ensto, Schréder, and Phoenix Contact of Germany have partnered to make that happen.

Schréder produces the luminaires, Phoenix Contact supplies the cabling and connectors and the control system, and Ensto provides the junction boxes, as well as the dedicated sales organization in the Norwegian market. Together, it's a highly sophisticated plug-and-play tunnel lighting system, and it couldn't have happened without Ensto, Schréder's exclusive partner in Norway, Finland, and Estonia.

CORROSIVE ENVIRONMENTS

Leading the Norway projects is **Jens Nilsen**, Head of Ensto Lighting in Norway. Compared to other projects, tunnels are particularly challenging says Nilsen. "The lighting components will spend a 20-year lifetime in the tunnel, where it's a very unfriendly environment. They're subjected to salt from inside the tunnels, salt used on the roads, and the exhaust from trucks creates this aggressive environment which erodes all but the best materials and treatments. The project documentation is also critical to achieving the best results for the customer."

Since it began cooperation with Schréder in 2017, Ensto has won, among other projects, two major tunnel projects in Norway. The projects are comprised of a total of five tunnels of 17 kilometers in length, all to be delivered in 2021. The Nordøyvegen project will bring access to islands of 2,700 inhabitants that were previously only accessible by ferry. The Lunnertunnel project is the

> IT'S PARTNERSHIPS LIKE THIS ONE THAT CAN MAKE THINGS HAPPEN. **ENSTO** IS GREAT BECAUSE IT'S A CULTURE WHERE YOU CAN BUILD SOMETHING NEW.
>
> **JENS NILSEN**
> Head of Ensto Lighting in Norway

reconstruction of a four-kilometer tunnel which, remarkably, will only be closed for 12 weeks.

Nilsen says it's the Ensto-Schréder-Phoenix trio's plug-and-play solution is one of the reasons that speed is possible. "Schréder and Phoenix worked together to build the Lumgate/ATS control system. If you put up the luminaires, use the quick connect cables, press play on the ATS control panel, then the whole tunnel works. If you have to change a luminaire, you take the old one down, put in a new one and it automatically plays its role."

ENDLESS TUNNELS

There are a lot of tunnels in Norway, and the country is building even more. Hundreds are slotted for renovation within the next ten years, all of which must eventually meet EU safety regulations for lighting, ventilation, and other factors.

"It's partnerships like this one that can make things happen," says Nilsen. "Ensto is great because it's a culture where you can build something new." And there will be a lot of new tunnels in Norway.

Jens Nilsen

As a result of the collaboration with Schréder, Ensto's portfolio of outdoor lighting products has expanded from park lighting to road, street, urban, sports field, tunnel, and accent lighting. Here are two of those key products for outdoor- and tunnel lighting.

Modular and efficient LED solution for tunnel lighting | Schréder

T-FLEX

T-FLEX is a revolutionary, modular-based platform, designed to enhance the road tunnel lighting experience. This one single platform includes: luminaires, optical and power units, flexible mounting, smart cabling and control solutions.

Launched in September of 2020, the first installations of this product have already begun in Norwegian tunnels.

The time-saving, versatile and high-performing street lighting solution | Schréder

IZYLUM

This Schréder luminaire, among other uses, lights streets and bridges for the Nordøyvegen project. It's a robust yet compact outdoor LED luminaires that is connected-ready for easy installation and maintenance. Open water is a very demanding environment, making the advanced technical characteristics of this luminaire ideal.

ENSTO BUILDING SYSTEMS: FOCUSING FOR BETTER CUSTOMER SERVICE AND GROWTH

Dedicated teams and factories will enable Ensto Building Systems to dominate in its home market, the Nordics, and selected niche markets.

Scott Diel *Oscar Lindell*

The "building" in Ensto Building Systems (EBS) may be taken as a noun or a verb, which is just one sign of the flexibility and agility of the business that offers electrification and lighting solutions for buildings, but also building solutions applicable for multiple industries.

That agility and focus are enabled by Ensto Group's "Two businesses, two focuses" strategy, which recognizes the fundamental differences between the two businesses in the Ensto Group. EBS's scope is defined as the Nordics and selected niches. Its sister business, Ensto DSO, pursues markets and customers at the global level.

"EBS customers have a different set of needs, and the market dynamics are different, so we'll use focused teams to serve customers even better," says **Jukka Tiitu**, President of EBS. "All our functions, like product management, R&D, sales, manufacturing, are structured based on the needs of EBS's business and customers, because it's agile specialists who will win."

NO MULTIPLE HATS

EBS's success formula calls for dedicated teams, clearly defined business owners, and precise targets. "People won't wear multiple hats," says Tiitu. "You need to be a specialist in your segment to better serve the customer and see changes in market needs. With this approach, the result will be growth."

The EBS specialists will be organized into seven different product areas.

Lighting, an already proven successful Ensto product area, will have one product owner with dedicated resources in its markets. **Industrial electrification** will focus on enclosures and components on a global level. **Residential electrification** will handle heating, wiring accessories, and panel boards. **Cable management** will concentrate on cable ladders, trays, rails and trunkings. **Cabling systems** will focus on office electrification in France. **EV charging** will address the fast-growing electric vehicle charging market with a wide smart charger portfolio. The **Marine** team in Italy will focus on passenger cruise ships, where it's a leading lighting and electrification supplier to Europe's largest shipbuilders in Italy, France and Finland.

CLEAR GEOGRAPHY

EBS's goal is to be the leading smart electrical solution provider in the Nordics. "We're big in Finland, we're a successful player in Sweden, and we're still rather small in Norway," says Tiitu. "We'll be balancing that out by growing, especially in Sweden and Norway, without forgetting our native Finland. Additionally, we see material growth potential in our niche markets like Marine in Italy, heaters in Russia, office electrification in France, and in our global industrial electrification business."

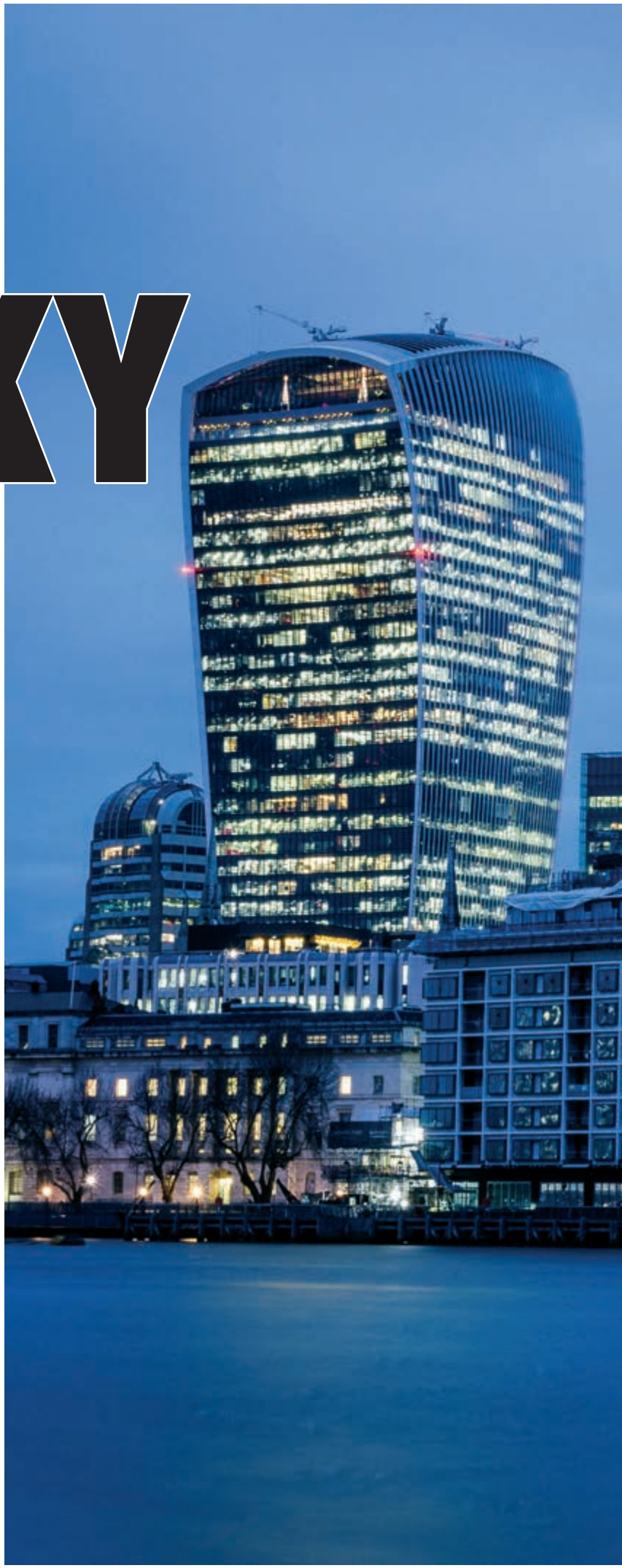
Concentration, specialization, and dedicated resources, with profitable growth as a key in decision-making, is EBS's plan for growing along with its customers.

"Customer satisfaction is a key to success, and we measure it on a weekly basis in order to be able to react fast and develop our activities accordingly," says Tiitu. "Employee satisfaction is also important, since happy employees create happy customers. EBS will be lean and mean and more agile than our big competitors."

EBS WILL BE LEAN
AND MEAN
AND MORE AGILE THAN OUR BIG COMPETITORS.

JUKKA TIITU
President and Managing Director
Ensto Building Systems

EBS's LUCKY 7



In keeping with its new corporate strategy, Ensto has split into two business units. Ensto Building Systems is taking it even further and dividing itself seven ways.

Scott Diel Shutterstock

Seven is significant. In Christian scripture, seven symbolizes completion or perfection. There are seven notes in the musical scale. The phases of the moon last seven days. Osiris led his father through seven halls. Seven is a prime number. Seven is thought to be lucky and is most named as a favorite number by people everywhere in the world.

With all that fortune on its side, Ensto Building Systems (EBS) consists of seven product areas: Lighting, Residential Electrification, Industrial Electrifications, Cable Management, Cabling Systems, EV charging, and Marine. The reason? Because specialists win.

SPECIALISTS WIN

Jackie Joyner-Kersee is undeniably a great athlete. She's among the all-time greatest athletes in the heptathlon. She's won six Olympic medals and was voted by *Sports Illustrated for Women* magazine as the Greatest Female Athlete of All-Time. But in the seven events that comprise the heptathlon, she holds not a single world record. In fact, the record holder in a single athletic event always performs better than the world's best heptathlete.

Some athletes are good at both, of course, but even they can get distracted. Barbora Špotáková, the world's greatest javelin thrower, also happens to hold the hepathalon javelin record. But she threw more than ten meters farther when she wasn't forced to do six other things. (Špotáková's javelin world record is 72.28 meters, but her best in the heptathlon – also a record – is 60.90 meters.)

EBS knows that a jack of all trades is a master of none, and so it's giving its specialists the opportunity to specialize. Each product area has its own business owner. What to sell and where to sell it is that director's decision. EBS's salesforce will also be divided among seven areas. And the entire staff has focus and aim: a crystal clear understanding of who they work for and what they're to do.

THE CUSTOMER WINS, TOO

"For each of our seven product areas we'll have the best specialists in the industry to talk to," says **Jukka Tiitu**, President and Managing Director of EBS. "A lighting customer, for example, will get connected to a lighting specialist, whether in sales, product management, or tech support."

When a product area is present in a market, it means that customers can count on full lifecycle support. "EV charging is good example," says Tiitu. "The work doesn't end with the purchase of the unit. We don't take the money and say 'Thank you very much, good luck.' We want to be absolutely sure that if we're building up the infrastructure with the customer that we can be there with him/her for the lifecycle period of the product."

THE MAGIC OF "7"

Just as in athletics, a great service and support team must back up the athletes. It's the only way to reach maximum potential. As part of EBS, the seven product areas will get this support. Service, support, and specialization are the future.

"In the grand scheme of things these seven areas will make EBS greater than the sum of its parts," says Tiitu. "Lighting is important. EV charging is important. The seven areas are what's important, and it's the product areas that will change the business." ◆

LISTENING: THE HEART of R&D

Hearing what customers, sales, and product managers say is at the core of a healthy R&D culture.

Scott Diel *Oscar Lindell*

> IT'S THE TEAM MEMBERS WHO POSSESS THE EXPERTISE, AND THE DIRECTORS WHO HAVE TO EMPOWER AND ENABLE OUR VERY SMART GUYS IN R&D.
>
> **ANSSI SAVELIUS**
> Senior Vice President of R&D and Technology

Dr. **Anssi Savelius** was born with a curious mind. As a kid he was interested in building, and he tinkered with electronics and mopeds. He didn't blow up his parents' basement with a chemistry experiment, though he will admit to once freezing a room in the university accelerator laboratory when he left the valve on a bottle liquid nitrogen open overnight (minus 196 degrees Celsius). "The next morning the entire lab room was frozen. I became famous for this at the accelerator lab."

Savelius earned a PhD in experimental nuclear physics, and his keen interest in pioneering energy measurement technology led him to a career at Enermet Group (acquired by the Swiss company, Landis+Gyr, in 2006). In May 2020, his path led to Ensto, where he joined the company as Senior Vice President of R&D and Technology.

CUSTOMER-DRIVEN R&D

While one might imagine an R&D laboratory as a kind of skunkworks where mad scientists bring ideas to life and create gadgets fit for James Bond, reality is more mundane. "Genius is fine," says Savelius, "but what if the customer doesn't want it?"

Real life is more of a symbiosis, he says. "The product development team does the research and design, and the lab does testing and verification. We need new innovations, but we've got to understand what the customer needs. So we listen to the customer, and we collaborate heavily with Ensto's sales- and product management teams." It's this agile approach that will differentiate Ensto from the giants and make it a world-class provider in the product niches it selects.

There are two types of innovation that Ensto engages in. The first is incremental innovation, an approach that improves and modifies existing products. For example, an investment can be made to broaden Ensto product families and make them more cost effective. "Take clamps and connectors," says Savelius. "We can modify them so they'll work in the US market. We can revisit material selection for efficiencies in production."

The second approach is radical innovation for Ensto. "We can connect new technologies like IoT to existing products," he says. "We can monitor the condition of the underground line, using temperature- and partial discharge measurements in the terminations, for example. With this data you can predict faults in the line — predictive maintenance helping customers to be as sustainable as possible. It also means lower maintenance costs for the customer. And the utility companies are interested in the data we collect."

UNIVERSITY RELATIONSHIPS

Under Savelius's leadership, Ensto will continue to develop its relationships with universities. One relationship is with Aalto University, Finland's science and research university. Ensto funds research and retains the intellectual property rights.

A current initiative is the product development of an arc suppression coil designed to prevent wildfires caused by earth faults in medium voltage networks. "It's essentially a large inductor that reacts in a millisecond to suppress an electric arc when trees touch overhead lines," says Savelius. "It works thanks to electronics, software, and a unique algorithm — and we're the only ones who have it." The product is currently in proof of concept stage in the lab, with the pilot scheduled for 2021.

A second initiative with Aalto is building smart sensors. "In substations, for example, there are cable endings with an insulator that needs to be cleaned by the utility network," says Savelius. "Currently those are cleaned according to a schedule based on time. But our smart partial discharge sensor enables preventive maintenance to be done when it actually needs done, making utility network maintenance work more predictive and efficient."

'OUR VERY SMART TEAM'

Savelius believes in focus as expounded in Ensto's "Two businesses, two focuses" strategy. He speaks of clear responsibilities, taking on projects that can yield results, and listening. "We need to give everyone across the organization a chance to express their ideas." And those ideas often come from those close to the product and the customer.

"I'm more of coach than someone who gives hard directives," he says. "The bosses are not the experts. It's the team members who possess the expertise, and the directors who have to empower and enable our very smart R&D team."◆

Alexandre Zaitsev, TA's Director of Development, and Margit Salminen, Ensto's Sales Manager for EV Charging, with one of Miilukorventie's first Ensto EV chargers in Espoo.

TAKING **RESPONSIBILITY**

Finland's TA Companies chooses Ensto's EV charging solutions for the electrical future of its residents.

Scott Diel *Oscar Lindell*

Tomi Turunen from Lohjan Sähkö ja Automaatio Oy worked as the Project Manager for Miilukorventie Apartments.

TA Companies, is one of Finland's major real estate developers and management companies. The TA portfolio includes office buildings, hotels, and approximately 20,000 rental, right-of-occupancy and owner-occupied apartments.

With so many apartments come parking places, which TA also owns and manages. Although most of TA's residents don't yet drive electric vehicles, it's clear to the company that EVs are the future. They're taking action today for tomorrow's reality.

HOW TA SEES THE FUTURE

"If we look ahead as far as 2040," says **Alexandre Zaitsev**, TA's Director of Development, "we see that almost all vehicles in Europe will be electric." By 2030, Zaitsev predicts TA will have around 30,000 parking spaces. He knows these can't be equipped with EV chargers overnight, so he's begun the process systematically.

TA parking spaces are dedicated, and rented by apartment residents. When an EV-driving resident requests a charging unit, TA's team of electricians installs one, plus five other Ensto chargers nearby for future needs. "If there are other residents in the same unit that need them, then they get them," says Zaitsev, "but if no one has requested one, we install five more anyway." It's always possible to reach an agreement to exchange parking spaces when a resident switches to an electric vehicle.

TAKING RESPONSIBILITY

To build its EV charging infrastructure network, TA selected Ensto as its partner. Zaitsev says there were three reasons for doing so.

The first is the ability to guarantee quality. "We need to know what's happening with our real estate," he says, "and Ensto's solution allows us to maintain control." To install EV chargers, TA uses its own installer team and also employs outside contractors, but only those trained and certified by Ensto.

Some of TA's technicians are also Ensto trained and certified, so they only need to consult the factory for non-routine issues. "We answer directly to our residents," says Zaitsev, "and if we contract out the service it's very difficult to ensure quality. With this solution we can guarantee quality."

The second reason is cost control. "TA Group is obligated to produce a cost-effective infrastructure for our clients," says Zaitsev. "Doing it ourselves means we can control costs and react very quickly."

Finally, having full control of its charging infrastructure is in keeping with TA's corporate ethos. "Using the Ensto EV Manager backend system, we can see exactly how much energy we're using and calculate CO2 emissions reductions in these stations." Zaitsev says this isn't something their residents ask them to do, but rather it's the right thing to do. "CO2 reduction is part of our company culture."

ENSTO ONE

The charger of choice for TA is Ensto One. It's available in 3.6kW (16A) or 7.4kW (32A) with a Type 2 socket as a default. TA's Ensto Ones also feature the additional Schuko socket, which means internal combustion engines can also use it to plug in for heating. (Note to readers in southern regions: Finland's winter temperatures are often colder than minus 20 degrees Celsius. It's common to plug your car into an electrical socket. It warms the engine and helps the engine start in the morning, and prolongs the engine lifecycle.)

Zaitsev says that TA residents drive an average of 50 to 60 kilometers per day. "If they charge at home with Ensto One, then it's enough for the next day's driving. And for our drivers it's also very common to be able to charge at their workplace, plus supermarkets and service stations. Ensto One made the most sense for our needs."

GOOD AT LISTENING

Margit Salminen, Ensto's Sales Manager for EV Charging in Finland, is the one responsible for getting the word out about this product that makes the most sense. She says that when she first met with TA in 2018, Ensto One didn't yet exist. "I think listening is one thing that Ensto is really good at. We develop solutions according to the customers' needs, and Ensto One was designed for housing cooperatives like TA. It's lighter, less expensive than other units, and it covers their needs."

> WE CAN SEE EXACTLY HOW MUCH ENERGY WE'RE USING **AND CALCULATE CO^2 EMISSIONS REDUCTIONS IN THESE STATIONS.**
>
> **ALEXANDRE ZAITSEV**
> TA's Director of Development

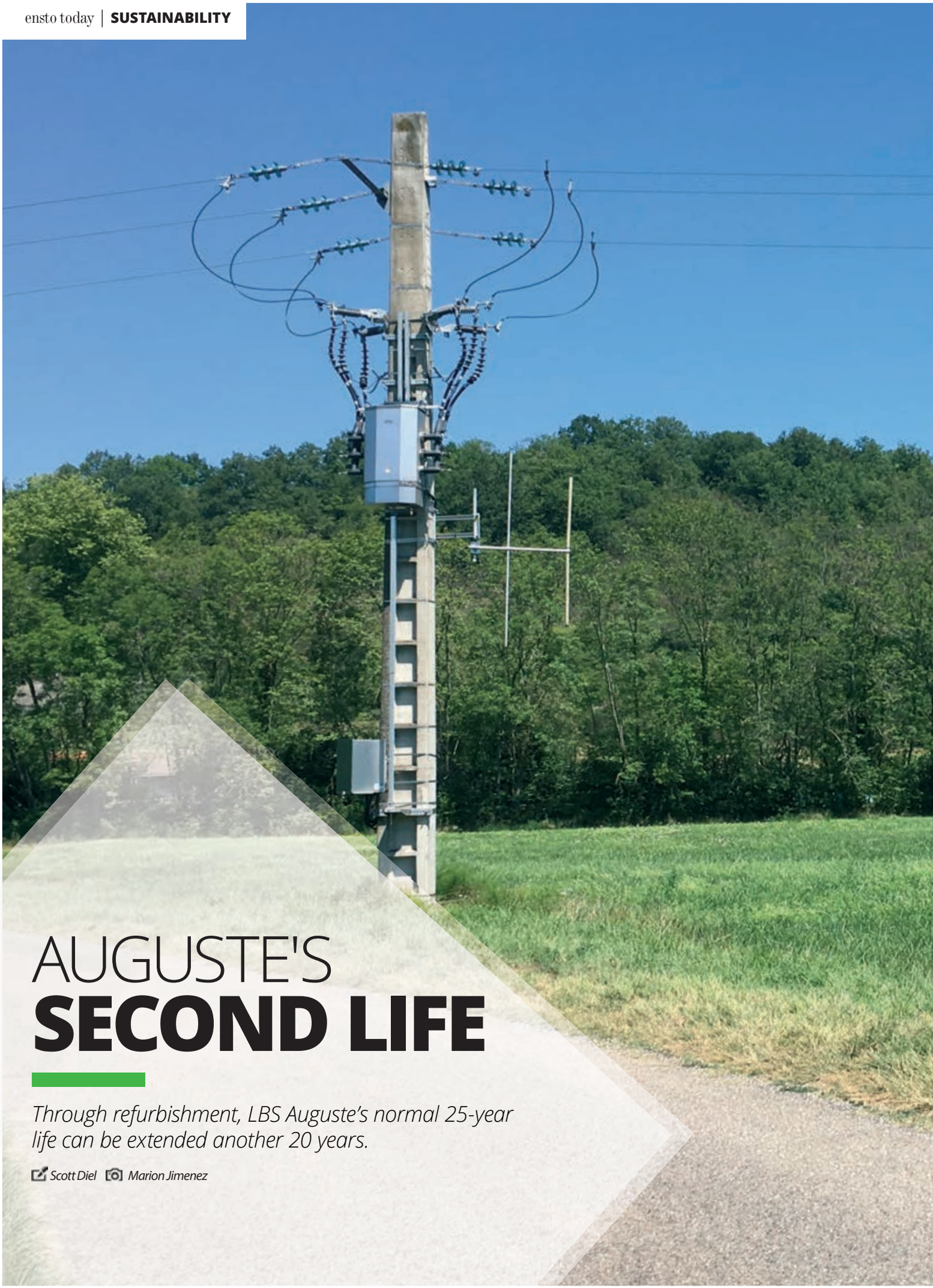
Salminen spends much of her time developing the reseller concept that's been so successful with companies like TA.

Ensto has long-term relationships with many electrical contractors, and Salminen convinces them to expand cooperation. "We develop, manufacture, and provide service," she says. "The contractors sell, install, maintain, and — perhaps someday — will operate the charging networks. We train and certify them. The better they know our solutions, the better they install and sell. This allows us to focus on doing what we do best, which is hardware, software, and services."

CLOSE TO HOME

Since home charging is currently the fastest growing segment in EV charging in Finland, Margit Salminen has her hands full. In Finland's roughly 90,000 housing cooperatives alone, there are around 2.6 million apartments and 1.2 million private homes. They don't all need EV chargers yet, but they soon will.

"These potential customers like the fact that Ensto is Finnish, and that it's so easy to make direct contact with a factory representative," says Salminen. "They know we're a stable company that's close to home."◆



AUGUSTE'S **SECOND LIFE**

Through refurbishment, LBS Auguste's normal 25-year life can be extended another 20 years.

Scott Diel *Marion Jimenez*

> THE QUICK RECONDITIONING TIMES MEANT **THAT OUR BUSINESS WAS NOT IMPACTED DUE TO DOWNTIME.**
>
> **BERTRAND CLOT**
> Enedis' Medium Voltage Overhead Lines Team Leader

Auguste is an overhead load-break switch (LBS) produced by Ensto in Bagnères-de-Bigorre, France. It is the only LBS on the market with with the safe advantage of an embedded voltage transformer.

Auguste is well known as a fail-proof solution to reconfigure a network in the event of problem, isolating a faulty section and allowing the maximum number of customers to remain with electrical service. Auguste's technology employs SF6 gas, sulfur hexafluoride, used to reduce isolation distance and better extinguish an electric arc compared to air.

The product's design life is 25 years, and it's popular with customers like CAMEG, Algeria's national electricity provider. So far, more than 10,000 units are at work in Africa, with an additional 6,000 working in France. Now, thanks to Ensto's refurbishment program, Auguste's life can be extended an additional 20 years.

CUSTOMERS WIN

Refurbishment means the unit is removed from the field and transported to the factory in Bagnères-de-Bigorre. The SF6 gas is removed from the unit, and a careful inspection of the medium-voltage switch is performed by skilled specialists using dedicated equipment. To optimize Auguste's second life, it's also possible, upon a customer's request, to add a pressure sensor or add sensors with increased accuracy.

Once refurbishment is complete, SF6 gas is replaced in the unit, and it is shipped back to the customer for reinstallation in the field where it may serve its network for an additional two decades.

Customers win by knowing that the Auguste unit has been checked by the manufacturer to ensure its operational integrity and upgraded, when desired, with the latest technology. Economically speaking, the refurbished Auguste costs roughly half the price of a new unit. The customer also gets peace of mind, knowing that there is no chance of leakage of SF6 gas in an old unit.

ENEDIS CHOOSES REFURBISHMENT

One customer who recently benefitted from an Auguste refurbishment is Enedis, which manages public electricity distribution network for 95 percent of continental France.

Enedis upgraded 34 Auguste units in 2020, and has begun 23 refurbishments in 2021. Enedis' **Bertrand Clot,** Medium Voltage Overhead Lines Team Leader, says there were two reasons for choosing refurbishment. "We wanted to avoid the manufacturing of a new device with all that that implies environmentally. The other reason is economic: the cost of a refurbished Auguste is less than that of a new one."

Clot was also impressed by Ensto's speed. "The upgrade was extremely fast — just a month and a half. This is very competitive and even less than the time for receiving a new device. The quick reconditioning times meant that our business was not impacted due to downtime."

THE ENVIRONMENT WINS

Julien Grégoire, Ensto's Customer Support Specialist, says that while price is important to customers, there is real growth in the general consciousness about sustainability and the way we consume, and everyone appreciates the fact that Auguste's life can be nearly doubled.

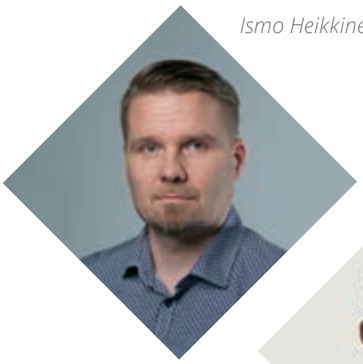
"We have a chain of retail appliance stores across France now with the slogan, 'Don't throw it out, repair it,'" says Grégoire. "Even though the shop sells new televisions and washing machines, they still advocate repairing your old ones after the warranty has expired. Most everyone understands that we have to change the way we consume." To that end, a dedicated spare parts catalog for Auguste is also in the works. In addition, Ensto also offers refurbishment for its IA2T air break switch controller, though this product is used only in France.

Grégoire spends up to 75 percent of his time on the road in Europe, Africa, and Russia dedicated to Auguste, where he assists with installations and troubleshooting. "We really are giving a second life to Auguste," he says. "And both the customer and the environment are the winners." ◆

OPERATIONS: WHERE THE **CONSTANT IS CHANGE**

Ensto's operations have undergone dramatic changes over the past year. Niko Helander explains what and why.

Scott Diel Oscar Lindell


Ismo Heikkinen


Kaarel Suuk


Tomasz Bilinski


Sami Soiramo

Ensto Group's new strategy, "two businesses, two focuses," has already had an impact on Ensto factories. The words of the strategy articulate Ensto's desire to allow employees in both businesses, Ensto DSO and Ensto Building Systems, to focus and specialize, to be more customer- and business centric.

The changes taking place on Ensto factory floors are the actions behind those words.

DEDICATED FACTORIES

In summer 2020, Porvoo's heater line was moved to Keila, Estonia. Soon, the production of the EnstoNet installation system will also leave Porvoo for Keila. "Our strategy is for the Porvoo factory to focus on pure component manufacturing and highly automated assembly lines," says **Niko Helander**, Senior Vice President of Ensto Operations. "All the actions we're taking are about identifying the Porvoo plant's core and investing in it."

The investment Helander references is significant. Five million euros will be invested in Porvoo over the next year and a half. "We added a third SLIW [an insulating piercing connector] component machine in September. In November, we added a SLIW automatic assembly line. And we'll add an UNFA automatic screwing machine soon to automatically screw joints and cable lugs." Helander says heat shrink manufacturing is also going to be relocated to Porvoo's main building. We have an extruder and expander that we'll move them inside after a year. Then we'll add a second expander."

In Keila, an investment of over one million euros will be made to add a second DESMA machine. The DESMA is a silicon joint producing machine. "Add the EnstoNet machine – another million-euro investment – and the heater line, and there will be lots of new production coming out of Keila," says Helander. "Our goal is to begin automating the Keila factory. We've already added an automatic forklift that doesn't require a driver. We are starting to purchase cobots, and will continue to do so over the next five years. Our goal is to have half of production semiautomated by the end of 2025 in Keila."

The "two businesses, two focuses" strategy, means that Ensto Building Systems (EBS) and Ensto DSO will be using dedicated factories. Larger factories will be solely dedicated to one of the two businesses, and smaller factories, like the St. Petersburg plant, will be separated on the production floor. Ensto's Porvoo factory will become a subcontracting factory, making and selling components for both EBS and Ensto DSO. Ensto factories in France, Spain, and India will also focus on either EBS or Ensto DSO.

Changes are being led by Helander at the group level, as well as for the Ensto DSO business. **Ismo Heikkinen** leads operations on the EBS side. "Everyone will have a home, either EBS or Ensto DSO," says Helander. "This way of working gives us focus. We can't be at our best if we're handling ten types of production. Splitting the business means focus, focus, focus."

CORONA CHANGES

One recent change that no strategy could have anticipated has been that of Corona. Ensto has been fortunate that the disruptions caused by Corona have been manageable. "If you go back to Corona's beginning, in February," says Helander, "we saw problems with the supply chain in China. **Tomasz Bilinski** and the Procurement team worked very hard to solve issues fast. We needed to use planes, trains and boats to get goods to all factories, but we solved the problems." Ensto increased its stocks for A-product components, meaning products generating 80 percent of sales.

But this autumn, more than the supply chain was disrupted. Eighteen Corona cases were diagnosed in Keila. "Half had no symptoms at all," says Helander. "The only reason we know is because we had a program to test everyone."

Now close contact has been eliminated and employees wear masks all day. "**Kaarel Suuk** and his team have done remarkable work," says Helander. "They worked two weeks day and night to stop the spread. We never needed to shut down the factory, though we did close the enclosures department for one week."

Helander says all Ensto factories have also undergone modifications in the name of safety. "**Sami Soiramo** is testing a program in the Porvoo plant where every worker carries a proximity tracing card in their pocket. If two people come within two meters of each other, the cards start beeping. Come closer than a meter and the card shouts and blinks at you! If someone would get sick, then we can trace any contact they've had."

A HIGHLY-SKILLED FUTURE

Although it may seem like the future is automation, nothing will happen without Ensto's highly-skilled workforce. "In every area people are working extremely well," says Helander. "We've got a new strategy, plus a pandemic, and we've had to ask a lot of Ensto operations people. Nobody has complained. Our operations people are truly a great asset who are able to do whatever it takes."

"Our people are so used to changes," he says. "If there are no changes they'd wonder if something was wrong. Lean methods teach us to change." ◆

OUR PEOPLE ARE SO USED TO CHANGES, IF THERE ARE NO CHANGES THEY'D WONDER IF SOMETHING WAS WRONG. LEAN METHODS TEACH US TO CHANGE.

NIKO HELANDER
Senior Vice President of Ensto Operations

ENSTO **OPERATIONS**

Around the world, wherever we manufacture, Ensto strives for operational excellence.

1. PORVOO, FINLAND
ENSTO DSO

- Personnel: over 100
- Production area: 15,600 m²
- Focus: Component manufacturing and highly automated assembly

Manufacturing of:

- Metal components and surface treatment (electroplating)
- Underground network heat shrink accessories
- Connectors for overhead line networks

2. KEILA, ESTONIA
ENSTO DSO

- Personnel: ~ 220
- Production area: 10,000 m²
- Focus: Automated assembly of final products and silicone injection molding

Manufacturing of:
- Underground networks cold shrink accessories
- Final assembly of overhead and underground products

3. KEILA, ESTONIA
ENSTO BUILDING SYSTEMS

- Personnel: ~ 150
- Production area: 3,300 m² + 3,000 m² ready by 02/2022
- Focus: Manual and automated assembly and testing of final products

Manufacturing of:
- Enclosures
- Electric vehicle charging
- Components
- Heating systems
- Modular wiring

4. PAIDE, ESTONIA
ENSTO BUILDING SYSTEMS

- Personnel: ~ 60
- Production area: 3,070 m²
- Focus: Manual assembly and testing of luminaires and powder coating of components

Manufacturing of:
- Luminaires

5. ST. PETERSBURG, RUSSIA
ENSTO DSO

- Personnel: over ~ 40
- Production area: 1,200 m²
- Focus: Multiple products assembly

Manufacturing of:
- Overhead line products
- Voltage boosters assembly
- Metal products assembly

6. ST. PETERSBURG, RUSSIA
ENSTO BUILDING SYSTEMS

- Personnel: over ~ 15
- Production area: 1,400 m²
- Focus: High-volume manufacturing of panel heaters and assembly of other heating products

Manufacturing of:
- Heating systems

7. DUNBOYNE, IRELAND
ENSTO DSO

- Personnel: ~ 20
- Production area: 930 m²
- Focus: Design, manufacture, final assembly and testing of low voltage products

Manufacturing of:
- LV distribution panels
- LV pillars
- EV distribution panels
- Overhead fuse switch & cut outs

8. VILLEFRANCHE-SUR-SAÔNE, FRANCE
ENSTO DSO

- Personnel: ~ 110
- Production area: 11,000 m²
- Focus: Automated and manual assembly of medium and low voltage products

Manufacturing of:
- LV distribution panels
- LV circuit breakers
- MV Air switches
- Control command
- Fault passage indicators

9. BAGNÈRES-DE-BIGORRE, FRANCE
ENSTO DSO

- Personnel: ~ 70
- Production area: 3,500 m²
- Focus: Automated and manual assembly of high, medium and low voltage products

Manufacturing of:
- MV load break SF6 switches
- MV surge arresters

10. NÉFIACH, FRANCE
ENSTO BUILDING SYSTEMS

- Personnel: ~ 30
- Production area: 2,500 m²
- Focus: Injection molding, extrusion of plastics and metal components and automated & manual assembly of standing poles

Manufacturing of:
- Plastic & brass components
- Standing pole solutions
- Plastic & aluminum trunkings solutions

11. LLERS, SPAIN
ENSTO BUILDING SYSTEMS

- Personnel: ~ 60
- Production area: 3,400 m²
- Focus: High flexibility and manual assembly

Manufacturing of:
- Socket box solutions (commercial & data center)

12. CORMANO, ITALY
ENSTO DSO

- Personnel: ~ 5
- Production area: 600 m²
- Focus: Assembly of specific cold shrink products to Italian markets

Manufacturing of:
- Cold shrink products

13. DELHI, INDIA
ENSTO DSO

- Personnel: over ~ 30
- Production area: 4,000 m²
- Focus: Multiple products assembly to Asian markets

Manufacturing of:
- Overhead and underground products
- Final assembly of wide range of products

AN ACQUISITION IN THE NAME OF GROWTH

Ensto's "Two businesses, two focuses" strategy drove the acquisition of Renley in Ireland. Ensto Renley now pursues ambitious growth.

Scott Diel *Adobe Stock, Ensto*

When Renley, a manufacturer of low and medium voltage products for distribution system operators (DSOs), came up for sale in Dunboyne, Ireland, the company was immediately on Ensto's radar. That's because **John Carolan**, who'd worked at Ensto UK since 2019, had worked for Renley the previous 16 years.

Ensto's strategy of "two businesses, two focuses," and its interest in acquisitions for growth, had been made crystal clear and was top of mind for Carolan. "I knew about potential for growth in the UK and Ireland and this was the driver," says Carolan, now Managing Director of Ensto Renley. "I knew we could both grow Renley and introduce Ensto products in the UK and Ireland." Ensto Group management shared his opinion. The acquisition was completed in December 2020.

A NATURAL FIT

The two businesses were a good fit. Culturally, there was a match. Renley is well known in its markets for building superior customer relationships. "Lots of customization work is done by Renley for DSO customers," says Carolan. "You've got to understand the market and customer. We're the first point of contact for developing solutions for our customers. And both Ensto and Renley share an upfront culture: ask a question and you get a straight answer."

The two companies were also highly compatible at a business level. Renley manufactures both British standard products for the UK and EU standard products which are used in Ireland. Carolan felt that Ensto's underground solution – joints and terminations, network automation solutions – as well as overhead switches, could be sold in the UK. Importantly, he saw the potential for growth in Renley's home market, Ireland.

The modern and spectacular Samuel Beckett Bridge in Dublin is modeled after the harp – Ireland's national emblem.

RENLEY: WHAT'S IN A NAME?

No one is quite sure where the name Renley comes from. "And no one has ever asked until now," laughs **John Carolan**, Ensto Renley's Managing Director.

Legend holds that the "Ren" in Renley came from the last three letters of the founder's surname, Gabriel Warren. But no one knows about the "ley." Consider this an invitation to sleuths and fiction writers.

RAPID GROWTH

Renley currently dominates the Irish market for both low voltage overhead fuse switches as well as the underground segment for cabinets and pillars. But in the UK, it is not the market leader. "We're shooting to significantly grow our share in the UK," says Carolan.

But how is that achieved? Carolan says it's done through an aggressive sales focus and drive. "We don't need more production capacity yet. We're mostly final assembly and testing on the factory floor. Just-in-time works well for us." In other words, growth will come from spreading the good word about Ensto Renley.

"We're known as a company that delivers on promises," says Carolan, "and this is just a major feature for us. We see the customer challenge and put together solutions for these challenges. We work with procurement and technical. We understand the stakeholder risk. We offer a holistic solution that our competitors cannot offer and, importantly, our customers trust and believe in us."

LONGER TERM?

Ensto's acquisition may also give Renley geographic reach that it didn't have before. Carolan sees longer-term potential for using Ensto's network to sell Renley's British-standard products in Africa and other parts of the world where it's in use. He also sees potential application for Renley's products in renewables like solar and wind, where Ensto has good relationships.

As the two companies begin to integrate their supply chains and operations, Renley will enjoy better buying power and benefit from Ensto's scale.

"But the big thing is that both Ensto DSO and Ensto Renley expect growth," says Carolan. "We want to grow our business in the UK and Irish markets, and we also want to integrate and offer value back to Ensto." ◆

BUSINESS AS THE INFINITE GAME

Ensto's board member Pekka Puustinen on strategies for success in an unpredictable world.

Scott Diel *Oscar Lindell*

> WHEN IT COMES TO ENSTO, THE CRUCIAL DECISION WILL BE TO CHOOSE **WHAT GAMES TO PLAY AND WHERE TO PLAY THEM.**"
>
> **DR. PEKKA PUUSTINEN**
> Member of the Board at Ensto

"The role of rolling strategy work is to make sure the executive team is surprised by nothing," says **Dr. Pekka Puustinen**, a former Chief Strategy Officer of OP Financial Group. Puustinen was recently appointed as Deputy CEO of Pohjola Insurance Ltd., Finland's largest insurance company, which is owned by OP Financial Group. Last year, he added another title, Member of the Board at Ensto.

FLEXIBILITY

Until September, Puustinen played the role of Nostradamus backed by data for OP Financial Group. He was charged with anticipating any and all trends which may affect OP's business and daughter companies such as Pohjola Insurance. Today, Pohjola uses five lenses in order to form its world view: technology, customer behavior, competitive environment, regulation, and the economy.

"Business is an infinite game," says Puustinen. "Nobody is going to 'win,' though some players will be successful and some won't. To be successful you've got to be responsive to the environment. The players change, the rules change, but the game never ends."

This infinite game philosophy gives Pohjola flexibility. "It's impossible to think five years out," he says. "Russia proved that didn't work. What organizations need is an adjustable vision. What if new regulations come out that cost us 100 million euros? You need the opportunity to change your plan."

ROLLING STRATEGY

The five lenses, or dimensions, give Pohjola a vision of what's happening in the world within the next five years, an opinion which coalesces in strategic focus areas decided on an annual basis — an opinion that can be changed when new information arrives.

This flexibility runs throughout the entire organization. Pohjola is thousands of employees strong, and they're organized into teams, with technology people, UX for example, integrated into business teams, which are responsible for both profits and costs of development. "We put the customer on top, the teams underneath. The teams form tribes, and the tribe leads. Tribes have agile coaches and tech leads. There are daily standups and bi-weekly sprint- and retro meetings."

It can sound like Puustinen is describing an IT company, but he chooses a roulette wheel in Vegas as an analogy. "When we budget we're not focused so much on the money. Let's say we put 100 million on development. The question then is how many teams do you get for that money. Your teams are your chips, and you place them according to market realities." Currently, Pohjola sees face-to-face services on the wane as mobile and internet gain steam. "We see that and start to think about how we place our teams."

Pohjola's way of working has resulted in some real successes. Sixty percent of contacts related to Pohjola insurance claims — tens of thousands of claims per year – are handled via chatbot.

ENSTO AND THE INFINITE GAME

So what does Puustinen, as an Ensto board member, think Ensto ought to prioritize? "First of all, there are some things that every company should focus on. For example, in the longer-term, you've got to reduce operating- and capital expenses — not just 10 percent, but by a factor of five. This can be done through technology that enables less friction in our own processes, especially in customer processes.

An example is OP retail bank's face-recognition system for payments. "It was not the face we were interested in," says Puustinen. "It was the friction it removed. All you have to do is push one button. And this technology will be seen in both B2B and B2C." To reduce friction Puustinen says companies must organize themselves from the customer value perspective and not from their own process perspective, taking end-to-end responsibility from the customer's point of view.

"When it comes to Ensto, the crucial decision will be to choose what games to play and where to play them. Currently, we have many products and business lines, which will cause us to ask ourselves 'What are the games where we can deliver superior value?'"

Success will be contingent on understanding what advantage Ensto brings, identifying opportunities, and making tough choices. "Remember that you can't take advantage of any opportunity if you don't decide what opportunities you're not going to pursue. For a small company, it's better to be the best at one thing than the best at ten things."

Puustinen characterizes Ensto as a brilliant company with a brilliant history, and is singularly impressed by the clear values established by founder Ensio Miettinen. "I've read Ensio's thoughts on leadership, and I think he'd be happy with the approach of a vision and a target. But he understood more than anyone in his time that the people are the ones who'll make the decisions within the framework you establish."

REMEMBER THAT YOU CAN'T TAKE ADVANTAGE OF ANY OPPORTUNITY, **IF YOU DON'T DECIDE WHAT OPPORTUNITIES YOU'RE NOT GOING TO PURSUE."**

DR. PEKKA PUUSTINEN
Member of the Board at Ensto

GETTING **SMARTER TOGETHER**

The Internet of Things is making everything smarter – and university partnerships make Ensto smarter.

Scott Diel *Aalto University, Oscar Lindell*

Markus Kohtamäki (seated) measures the partial discharge of medium voltage underground accessories. Janne Lappalainen monitors the testing in the lab.

It's not just your refrigerator that's getting smart. So are power networks. But with smart products, whether consumer or industrial, often the problem is retrofitting them into a system where everything else is old. An industrial-academic partnership is one way to address this challenge.

HARNESS AND INTEGRATE

"You know how most companies focus on quarterly results?" asks Dr. **Matti Lehtonen** of Aalto University, who supervises the university's collaboration with Ensto. "Well, in power systems there's a saying that a quarter means 25 years."

Since a transmission line may last 100 years, or a power plant 70 years, things change slowly in power systems. "You have several generations of tech in the system at the same time, and you have to make everything work together despite differences in life cycles."

"We talk a lot about the Internet of Things," says Lehtonen, "but so far that's mostly people communicating. The next phase is technology systems with wide geographic coverage. Our challenge is to harness and integrate all these objects, enabling amazing new things."

As a supplier of accessories and components for network construction, Ensto is challenged with reconciling the corporate quarter with the power network quarter. Embedded intelligence is coming, and Ensto is changing its role in the new digital world. One way it's doing that is through corporate-university partnerships.

Professor Matti Lehtonen

A FULL UNDERSTANDING

Ensto has worked together with Aalto University in Finland for over two decades, and Professor Lehtonen has been one of the key contacts. The partnership allows for Ensto to get cutting-edge thinking and for Aalto to find practical application for ideas.

The funding burden is shared by both parties, and it gives freedom for long-term thinking and idea development. When new ideas are finally brought to fruition, the corporate partner then is in the first position to negotiate the intellectual property rights.

But most exciting of all, "It's an opportunity that can bring us closer to a full understanding of something,"

THE ARC SUPPRESSION COIL

One area both parties would like to increase their knowledge is self-extinguishing arcs in power lines. "There is no full understanding or agreement in academia or the engineering world about the limits of self-extinguishing technology," says Lehtonen.

Imagine medium-voltage lines running through a forested area. High winds cause a tree to lean against the powerline and an electrical arc is created, similar to that from a thundercloud. Fires caused this way have been dramatically visible in places like California and Australia. An arc suppression coil (ASC) can lower the current flowing through the line and extinguish the arc before causing a wildfire.

ASCs are not new. Versions of them have been used in Europe for several decades. Most of the ASCs in use are motor driven or use a fixed coil and are slow to react, says Aalto's **David Sevsek**, a doctoral student who focuses on control algorithms and coil performance for the ASC project. "Our ASC will change the inductance during the fault in a matter of milliseconds to lower the impact of the fault."

In other words, fewer wildfires with a technology that is simpler and cheaper than everything on the market. Not only has this never been done before, the technology is adaptable for network topologies of the US and Australia.

The Ensto ASC full-scale prototype's proof of concept has been completed and the product will be soon put to work in the field. Although developed in partnership with Aalto University, the Ensto ASC is fully an Ensto product, with Ensto owning full intellectual property rights.

PRE-ACTIVE SENSORS

Another concept made possible by the Internet of Things is the idea of a self-healing network, what Lehtonen calls Self-healing 2.0. Aalto and Ensto are developing a partial discharge sensor to play a role in the network.

"Say a cable terminal sparks because of dirt," says Lehtonen, "and the arc comes and flashes over. In transformer boxes there are cable endings where you have an insulator that needs cleaned by the utility network. Our sensor can tell if this is going to happen and signals the utility to clean it. Our technology is pre-active as opposed to reactive. Currently, cleanings are done according to a time schedule, not according to actual need."

Lehtonen says this technology exists, but at a cost that only makes sense for highly critical parts of a network. "We're coming up with cheaper sensors that can be installed elsewhere. The phenomena are the same, the implementation similar, but the volume and cost-benefit feasibility is totally different."

These smart sensors won't come to market immediately, says Lehtonen, since the market must still catch up with the technology. "We have the knowledge to do it, but the bigger question is the interest and awareness of benefits among power companies, which is only now emerging."

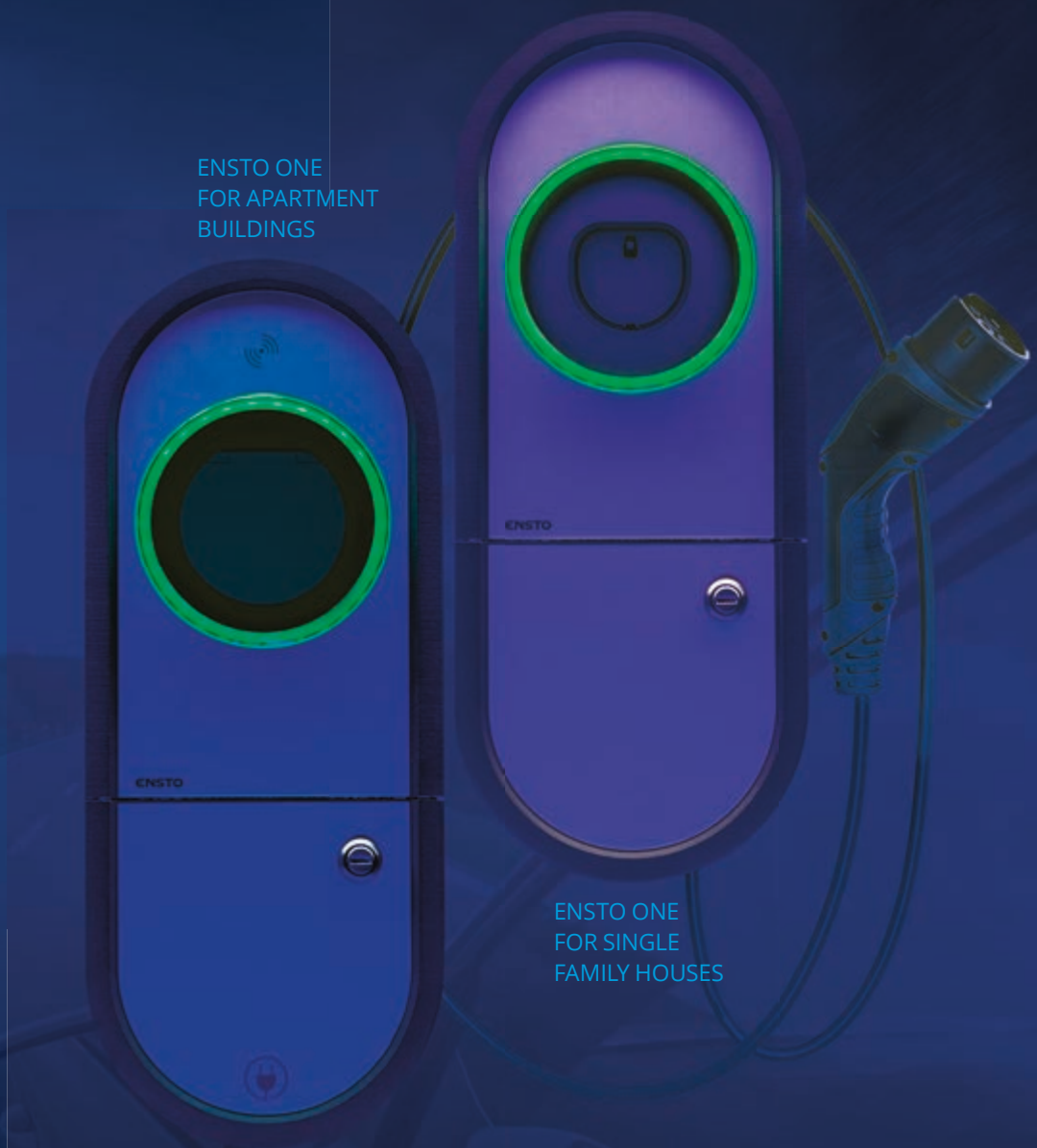
> OUR ASC WILL CHANGE THE INDUCTANCE DURING THE FAULT IN A MATTER OF MILLISECONDS TO LOWER THE IMPACT OF THE FAULT.
>
> **MATTI LEHTONEN**
> Aalto University

A GOOD RECRUITING TOOL

Another reason that the Ensto-Aalto relationship works for both is that it has proved to be a good recruiting tool. Over the past couple of decades, a few Aalto students and academics have made the move to Ensto. It's an ecosystem where smart people can move from the lab to industry and perhaps back again.

David Sevsek, who'll complete his PhD at Aalto in 2021, is currently employed half-time at Ensto. Will Ensto turn him toward the dark side and hire him full time? "Well," he laughs, "for the time being I'm committed to finishing my PhD." ◆

Ensto One
Super Electric Driving Experience!

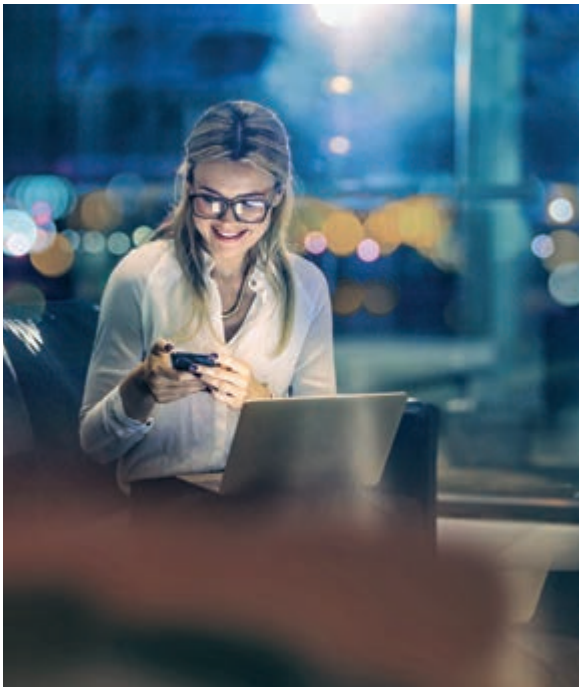


Ensto One is a fast, smart, and safe charger for shared use in apartment buildings and parking garages. Power options include fast charging up to 22kW, which keeps you going when you're in a hurry. Ensto One, combined with the smart EV Manager, makes your charger fleet-connected, operable and updated for future needs. Ensto One displays monitor charger availability, report consumption with an easy-to-use visual interface, and user control. Ensto One is designed, manufactured and tested by pioneers in the EV charging business with more than a decade of experience. Ensto One is truly The One for you!

Power options:

1x16A	1x32A	3x16A	3x32A
3,6 kW	**7,4** kW	**11** kW	**22** kW
18 km drive with 1 h charge*	36 km drive with 1 h charge*	55 km drive with 1 h charge*	110 km drive with 1 h charge*

** The charging speed is indicative and may vary depending on the temperature and the car's internal charger.*



Workspaces

Smart lighting control and easy space management

Ensto Workspaces is a smart solution that offers users a new way to enjoy wireless control. The technology combines traditional and modern control methods: illumination can be adjusted with push buttons, sensors and a mobile app. In addition, Workspaces includes many other modern features, such as the monitoring of space usage rates and the identification of free parking spaces. Through Workspaces' technology, Ensto Workspaces offers its customers the opportunity to create modern work environments where employee well-being and satisfaction are a priority.

Ensto Primus

The best in its class!

The amount of light present has been proven important for better work and learning results. Adaptable school premises and modern workspaces place their own demands on today's lighting. Lighting affects alertness in both workplaces and schools. Primus offers a flexible and versatile solution for this environment. Primus is a new general luminaire which satisfies many project needs and is surprisingly affordable. The simple body satructure of Primus hides versatile possibilities of project tailoring for control systems, electrification, and installation.

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More information about Ensto's products, services and solutions on **ensto.com**

Deep base of Cubo S

Provides space for cables

Ensto Cubo thermoplastic enclosures have gained a strong position in electrification solutions for a variety of industries. The newest addition to the extensive product family is the Cubo S with a deep 75 mm base. It offers even more space for cable joints.

New sizes offer the familiar Cubo quality in 42 different options with gray or clear cover, plain sides, or metric knockouts, as well as three cover height options (25, 50, 100 mm). All of them have a base height of 75 mm and dimensions are 175x175 or 175x250 mm.

Composite line post insulator

Safe, undisturbed and easy to install

SDI82.2M20 composite line post insulator is part of the FCCS (Full Covered Conductor Solution) product range.

- Easier and faster to install: Separate pulling wheels or helical ties are not required. The tightening of the conductor in the insulator can be done quickly with a wing nut.
- Safe and undisturbed: The upper part of the insulating plastic makes the installation safe and prevents the formation of a corona.
- Durable and long lasting: The composite material has excellent electrical properties and UV protection.

Cold shrink accessories

Conveniently adapt to the needs of varying network conditions

Cold shrink technology is fast, simple and, most importantly, offers uniform installation quality. Ensto's accessories for underground distribution networks are comprised of high-quality product packages tested according to international standards. Hybrid and cold shrink joints and terminations, with the addition of screened separable connectors, have multiple uses and a wide range of applications. Geometric stress control components integrated into the products provide stable performance in a variety of network conditions. The packages contain all the needed components required in terminating or jointing medium voltage cables.

New Smart e-RTU 2020:

Multi-protocol and cyber-secured

Ensto has launched a new generation of RTU Control Command Box, which follows new requirements to contribute for better electrical distribution availability and cybersecurity protection. This device drives fault detection, remote operation and protocol communication to SCADA of an MV OHL Load Break Switch or MV UG Ring Main Unit switch. The new e-RTU 2020 is equipped with CPU board (Central Processing Unit which opens to new functionalities, such as:

- Cybersecurity for datas communication and control access
- Communication protocol redundancy (between several international protocol)
- Additional inputs / outputs data collection
- Additional events storage

PARA DRESSAGE RIDER

JESSICA KERTTUNEN AIMS HIGH

Ensto is sponsoring Finnish para dressage rider Jessica Kerttunen who as a young sportswoman is a perfect match for the company's sponsorship policy. Para dressage is dressage for riders with an eligible permanent physical impairment.

Kaisa Kaikkonen *Nelli Kuusela*

Finland's **Jessica Kerttunen**, a 23-year-old dressage and para dressage rider, is out to conquer the world. Her plan is to compete in the 2022 World Championships in Denmark, as well as in Paris in the 2023 European Championships and 2024 Paralympic Games. This year, the Finnish Olympic Committee has granted Jessica and two other Finnish para dressage riders elite sport financial support to prepare for the Paris Olympics. The Tokyo 2020 Olympic Games were rescheduled for July 2021, and Jessica is waiting for confirmation of her participation.

The Corona pandemic has affected Jessica's life and training. There was practically no travel in 2020, and many national and international training camps and competitions were cancelled. Jessica was suspended from her employment at the airport security check, which has had financial impact on her training, but her weekly dressage training sessions with individual trainers have continued to take place. Unemployment, though, has also meant virtually unlimited time for training. Jessica has actively trained and exercised in a variety of ways, both alone and in groups: circuit training, fitness boxing, kettlebell training, running, and gym workouts.

In addition to riding at the international level in para dressage, Jessica is a national level dressage rider in Finland. Ambitious, goal-oriented Jessica has represented Finland in the European Championships twice and in the Nordic Championships several times. In 2015, she won Finland's Championship. Jessica's competition horses are named *Westside* and *Ladykiller*, a.k.a. *Sulo*, and both have earned medals with Jessica.

Jessica's plans for 2021 are still partly open and depend on the corona pandemic situation. Still, the International Ypäjä Spring Dressage competition in Finland is on the calendar for March and her motivation is high. Along with a successful competitive career, the optimistic young woman dreams about studying food science in university and about living the good life.

Ensto is proud to sponsor Jessica in 2021. She is a perfect match for Ensto's company sponsorship policy which emphasizes cooperation with young people. Jessica also reflects the Ensto values that reach the very core of the idea of sponsorship: responsibility, human centricity, innovativeness, and collaboration.

The enlightened daily grind of EnstoMan.
(Yes, superheroes must work, too!)

ENSTOMAN

ENSTO

When it comes to alarms, EnstoMan loves the ticking sound of his Bulova copper wind-up model.
In all other things he's modern.

He's been biking to work lately, keeping that middle-aged engineer's body in shape. His watch monitors his heart rate and his office temperature adjusts automatically, according to what kind of ride he's had.

Good morning, mother!

Let there be light!

the lights...

they are so pretty...

A new PR!

Coffee's ready and hot when he sits down, since the sensor in the building's entrance noted his presence.

Ensto Workspaces knows EnstoMan likes the lights dim in the morning and they adjust accordingly.

Crap! I forgot my password!

Ensto Workspaces recognizes the needs of EnstoMan, after an intensive ride, it's better to stand than to sit. The work desk automatically changes to the preferred height.

No need to always reserve. Ensto Workspaces recognizes your presence and books the room.

Okay, who's still using internal combustion?

Better Life.
With Electricity.

slide 1 of 89,732

A token sent by email to customers gives them permission to enter for my glorious presentation. No more waiting in the lobby.

A heat map allows lowering the temperature in unused areas, and also provides information to reconfigure the work area for better use.

THE END
well, not until 17:00 :)

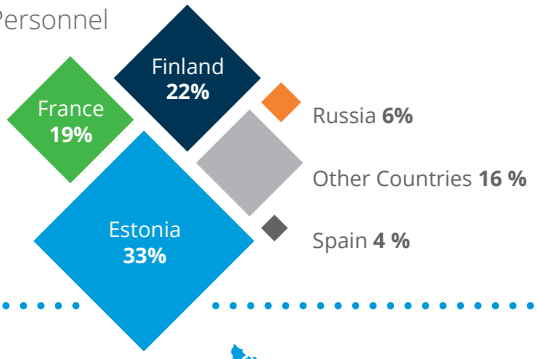
ENSTO in Brief

WHO WE ARE

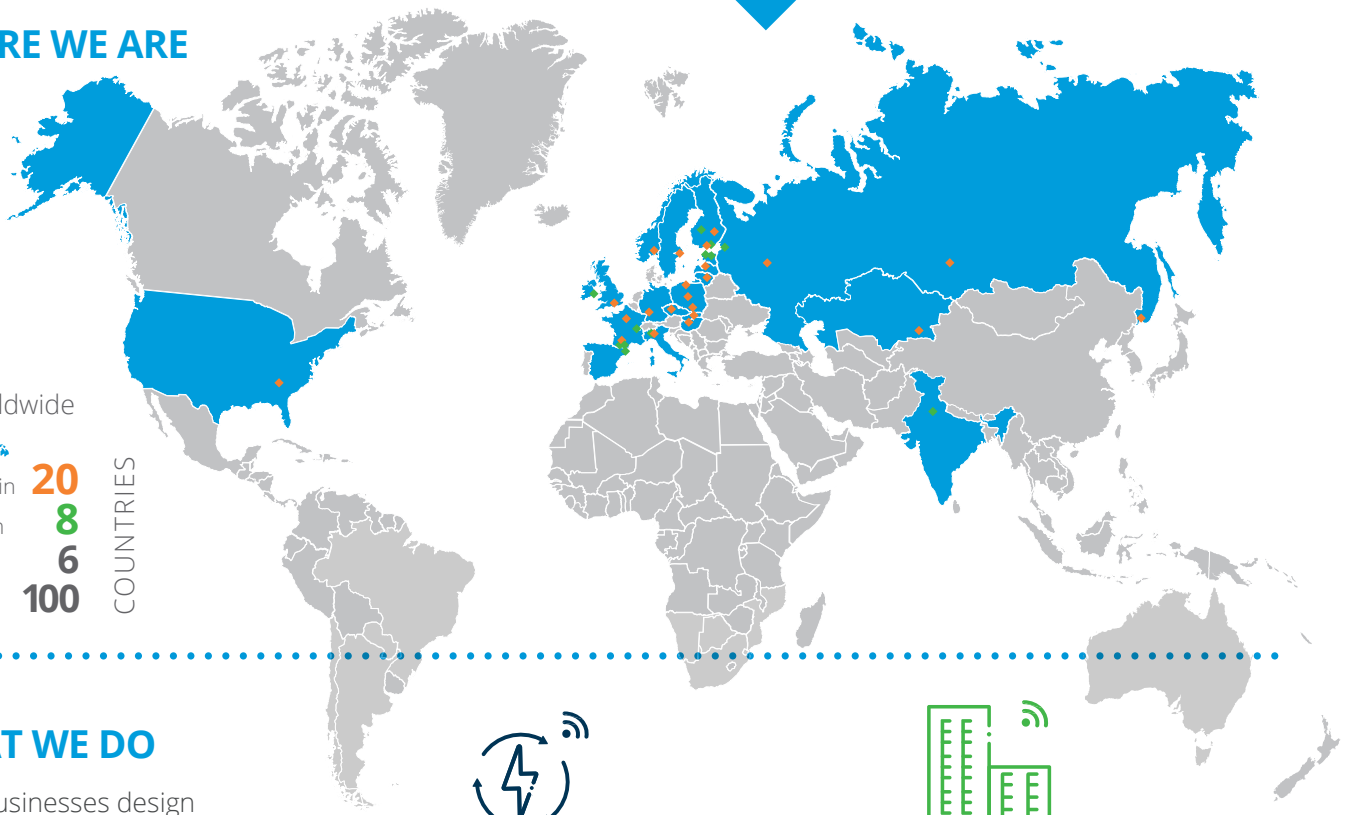
Ensto is an international, growth-oriented family company **POWERED BY PEOPLE** since 1958.

1,350

Personnel



WHERE WE ARE



Ensto Worldwide

Sales offices in **20** COUNTRIES
Production in **8**
R&D in **6**
Selling to **100**

WHAT WE DO

Our two businesses design and provide reliable and smart electrical solutions and expertise for electricity distribution, buildings, industries, traffic and marine.

Ensto DSO
Leading expert for distribution system operators

Ensto Building Systems
Leading smart electrical solution provider in the Nordics and a strong specialist in selected niche markets

Turnover

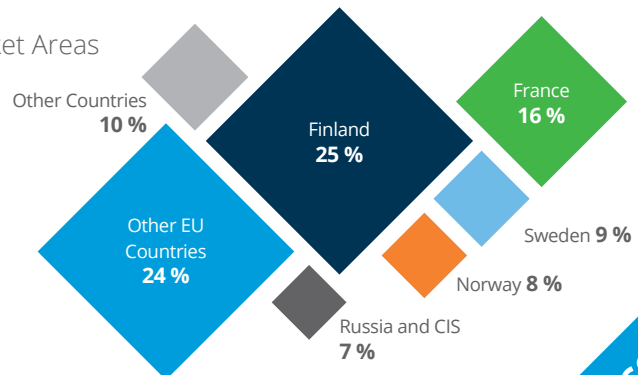
250 M€

Businesses

51%
Ensto DSO

49%
Ensto Building Systems

Market Areas



Better life.
With electricity.

We believe in a better life with electricity and a more sustainable tomorrow.

ensto.com