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VALLOX

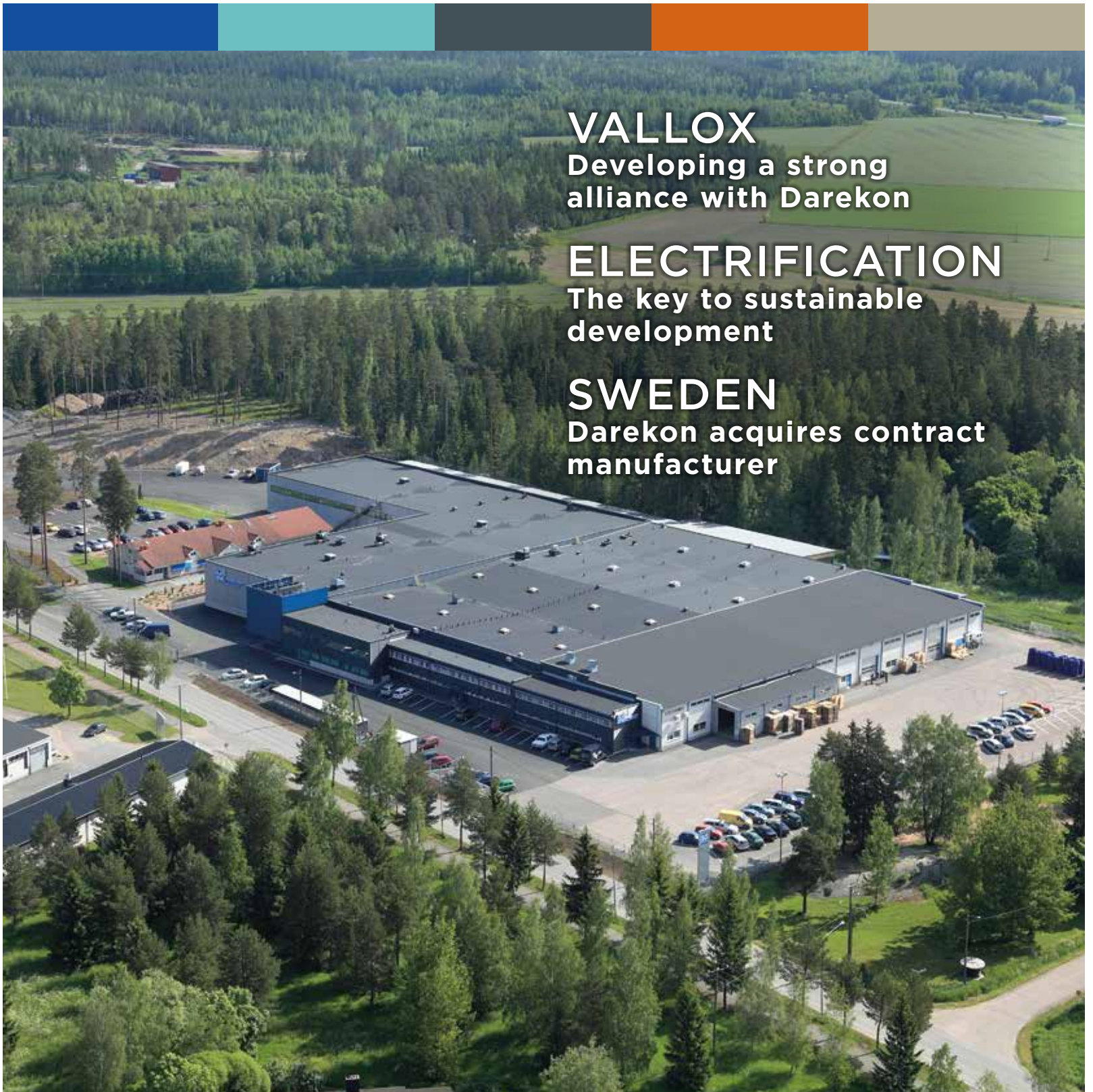
Developing a strong
alliance with Darekon

ELECTRIFICATION

The key to sustainable
development

SWEDEN

Darekon acquires contract
manufacturer



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AUTUMN • 2021

CUSTOMER MAGAZINE OF DAREKON LTD



Cuvaya

6 Vallox is the market leader in Finland in residential ventilation and is celebrating the 50th anniversary of its Loimaa plant. Cooperation with Darekon, which began seven years ago, has become very important for both companies.

10 Climate change mitigation is only possible through the electrification of the world's energy system. Finnish know-how can play a major role in solving the huge challenges this entails.

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“ Our success is based on continuous development.”

18 A company must make a positive profit and be solvent. Otherwise, it cannot develop, operate with high quality and take responsibility for its customers, staff and other stakeholders.

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Vallox's 13,000m² factory in Loimaa. The latest extension is missing from the photo.
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Consequences of the pandemic and our next steps...

Where last year's challenge was to understand and protect against the pandemic, this year has been a year of materials availability and price management. Supply chains have not been working as usual. First, there were challenges with semiconductor delivery times. Since then, the challenges have spread to all other electronic components and materials. Logistics has its own problems and in addition prices are rising and the laws of the jungle prevail in the market. On the positive side, there is work to be done and customers have a lot of needs.

This year's customer introduction is about Vallox Oy, a fine company celebrating the 50th anniversary of its Loimaa plant. The company is a leading player in its field in Finland, and a significant part of its production is exported. This is exactly the kind of company that is needed here.

It is the turn of Saila Syrjäso to feature in the magazine's personnel section. She came to Darekon as long ago as the 1990s. Her story tells us what we are and want to be. We always want to learn something new, and if we make mistakes we learn from them. Saila is a true Darekonian. A story worth reading.

At the turn of last year we bought a paint shop in connection with the Klaukkala facility. We found that we are better able to control the manufacturing process of surface-treated sheet metal parts with this move and thus better serve our customers. During this year, the paint shop's operations have been integrated into the Klaukkala plant's operations. More on that further in this magazine.

In September we acquired the Swedish contract manufacturer IHAAB Component Systems AB, which also includes SMD Production AB and KELAB Systems AB. The companies have a good customer base and skilled personnel. The acquired companies fit perfectly into Darekon's growth strategy and will be integrated into the Darekon Group.

Finally, I would like to wish a good autumn and thank all the people of Darekon for their contribution, our customers for their cooperation and the suppliers who have done their best to keep the operations running. Thank you very much!

Kai Orpo

“

We always want to learn something new, and if we make mistakes we learn from them.”

Changes in Darekon's organisation

Darekon strengthened its customer service team in August and appointed two new key account managers. **Pekka Antikainen**, director at Darekon's Klaukkala facility, is now also responsible for the operation of the Savonlinna plant following the departure of **Kimmo Turtiainen**. ■



Tero Suomalainen appointed Darekon's key account manager

Darekon has appointed IT engineer Tero Suomalainen as a new key account manager. Tero spent 16 years working for the mobile phone business of Nokia in Salo. Since then, he has worked elsewhere in the electronics industry, including eight years at Foxconn.

Tero, from Turku, is a calm professional with a good sense of humour. He enjoys a wide range of sports, as well as hobbies at his cottage. Tero, who joined Darekon in mid-August, will be responsible for liaising with designated customers and participating in acquiring new customers.



Mauri Seppälä appointed Darekon's key account manager

Darekon has also appointed electronics engineer Mauri Seppälä as a new key account manager. Mauri, a graduate of Tekniska Läroverket i Helsingfors, has been active in the sales and customer service of electronics assembly lines and related equipment in Finland and the Baltic countries since the beginning of the 21st century.

Mauri lives in a detached house in Pornainen with

his wife and two dogs. Three adult children and the first grandchildren complete the family. Mauri is pragmatic, helpful and a good listener. His free time is spent doing chores in the detached house and jogging with the dogs. Mauri, who joined Darekon at the end of August, will be responsible for liaising with designated customers and working to establish new customers.



Pekka Antikainen appointed Darekon's Savonlinna plant director

Klaukkala's plant director Pekka Antikainen additionally took over the operations of Darekon's Savonlinna plant in July. Pekka will continue as the plant director of Klaukkala and will share his working time equally between both plants. Pekka's previous tasks have been reorganised so that his working time is sufficient to direct both facilities.

"The end of the summer has been a good and interesting time to get to know the Savonlinna plant and its competent staff. Savonlinna is a beautiful city and the jogging paths are good," says Pekka, who now lives in Savonlinna for about half of his time.

Paperless production makes life smoother

Darekon's Haapavesi facility has completed a project to convert all production documents to electronic form. Each workplace has a personal terminal where the employee opens the job, reports the completed work steps and records the time worked. Up-to-date documents for each work step are always available and any changes reach all staff straight away.

Three main goals

The first goal was to improve the productivity and quality of manufacturing. Minimising paper output from production eliminates quality problems or line downtime due to possible old document versions.

The second goal was to improve the meaningfulness of work by developing working methods and



tools. The employee sees the jobs waiting on the screen and can independently take the next job.

Thirdly, printing waste and printing costs are reduced. This is important for both the environment and the economy.

Fluency in production

"We introduced the new system at the beginning of June and during the summer the project was completed," says **Antti Järviuoma**, plant director at Haapavesi. "The system has got off to a good start, only some small adjustments are being made.

"The system has eliminated unnecessary double work when different forms and tags no longer need to be filled in and copied. The introduction of the system was made possible by our new ERP system that has a browser-based interface.

"The project has been completed and the set goals have been achieved." ■

Darekon has acquired a Swedish electronics contract manufacturer

Darekon has acquired the entire share capital of Swedish firm IHAAB Component Systems AB in Stockholm, following an agreement signed in September. The company's subsidiaries SMD Production AB and Kelab Systems AB are included in the transaction. The acquisition is part of Darekon's planned strategy of international expansion.

SMD Production AB and its sister company Kelab Systems AB offer their customers electronics contract manufacturing throughout the value chain, from prototyping and PCB assembly to final product assembly, complete testing and customer packaging. The company specialises in the manufacture of medical equipment and industrial electronics.

Long-term procurement process

"The procurement process can be said to have started a few years ago, when we conducted a survey of companies in the Baltics, Scandinavia and other neighbouring areas that could complement our operations," says **Kai Orpo**, CEO of Darekon Oy. "Four to five years ago, we first came into contact with SMD Production.

"The company's turnover is about four million euros, its 25 employees operate in 1,000 square meters of space in Stockholm and the customer field is suitable for us."

A basis for the acquisition, according to Orpo, is Darekon's strategy to enter the Swedish market. The company's operations will continue as before and the previous owner and CEO **Peter Strömgren** will continue as CEO for the time being.

The acquired company's operations and cooperation with Darekon's other plants will be developed on a long-term basis. The company's skilled staff also bring more expertise and local knowledge to Darekon's organisation. Darekon's greater resources



and good financial standing will also give the acquired company even better opportunities to grow and strengthen its position in the Swedish market.

"The Swedish market is interesting for us," Orpo continues. "Through the acquisition, our knowledge of the Swedish market will improve and we will learn more about the local supplier field, for example. We believe in the industry and want to move forward. This acquisition provides excellent support for our long-term growth strategy."

Long traditions in the sector

The roots of the operation go back to the early 1970s, when K E Levin Styrssystem AB developed and manufactured electronic equipment. The company also had its own products, such as phase monitors, start relays and inclinometers. The company has also delivered more than 90 per cent of the control systems for excenter presses on the Swedish market and continues to supply spare parts. SMD Production AB has been

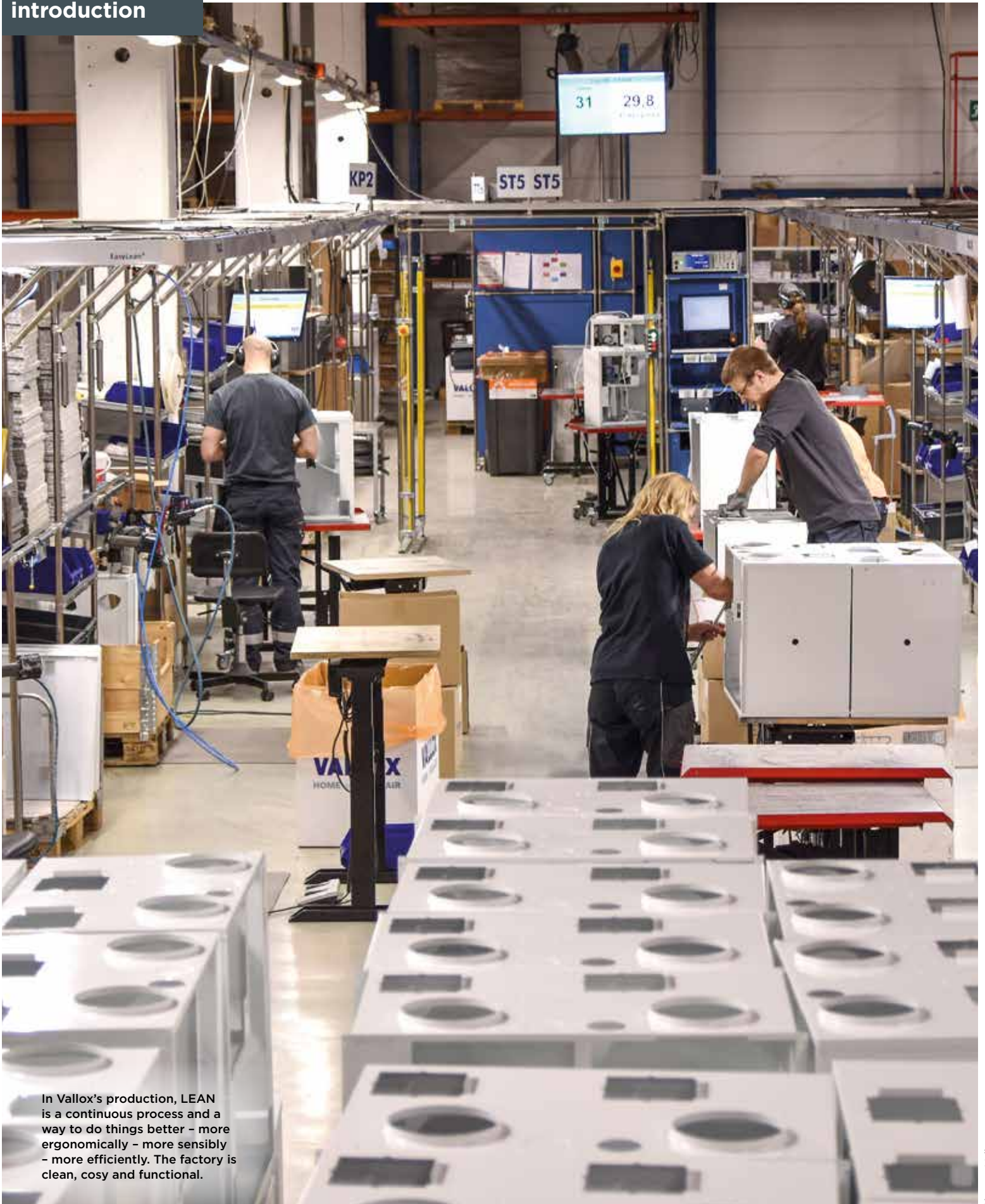
formed over the years through acquisitions and mergers.

The company has modern machinery and a good readiness to supply demanding electronic equipment. Surface and through-hole mounting is produced, and the company also offers PCB repair and modification work. Production series are typically relatively small, but the range of services is comprehensive and the service flexible.

The company has an ISO Class 7 cleanroom, it manufactures cable harnesses, and products that go into severe conditions can be potted. The company also provides electronics research and development services for its customers. The final assembly and production of units ready for customer deliveries are part of the range of services.

The company has a certified ISO 9001 quality system, ISO 13485 certification for the manufacture of medical devices and ISO 14001 environmental system certification. ■

Customer introduction



In Vallox's production, LEAN is a continuous process and a way to do things better - more ergonomically - more sensibly - more efficiently. The factory is clean, cosy and functional.

Photos: Vallox

A STRONG ORDER BACKLOG BOOSTS DAREKON'S AND VALLOX'S RAPIDLY DEVELOPING COOPERATION

VALLOX IS FINLAND'S MARKET LEADER IN RESIDENTIAL VENTILATION

Vallox Oy is celebrating the 50th anniversary of its Loimaa plant. The cooperation between Vallox and Darekon, which began in 2014, has deepened in just a few years, with Darekon being Vallox's main supplier of electronic components and Vallox becoming one of Darekon's top ten customers.

Good ventilation is the best life insurance for a home. It affects the condition of the building and its entire life span. Even more important is the impact of ventilation on living comfort and the health of residents. Vallox has particularly invested in the energy efficiency of ventilation equipment, as ventilation is in continuous operation. Vallox systems work reliably in all seasons and all climatic conditions.

Vallox's long history in brief

Vallox's history dates back much further than 50 years, back to 1945, when the Finnish state's metal plants – later Valmet – in Tampere began to manufacture ventilation

equipment as war reparations. Twenty years later, production was transferred to Pansio and the Loimaa plant began operation in 1971.

Vallox Oy was born in 1987, when Valmet gave up the ventilation business and sold it to the operating management in a MBO transaction. Initially there were four owners, a little later three. After the turn of the millennium a majority stake in the company was sold in 2002 to the German family company TOP AIR AG.

Vallox is mainly active in residential ventilation, but this year has expanded its product range by launching compact air handling units suitable for office and commercial premises as well as public buildings. Vallox

has a turnover of almost EUR 40 million and employs about 150 people.

About half of Vallox's sales come from exports, with Germany the main market and the Baltic countries, Denmark and Russia in the mix. Vallox's products have a strong market position in Germany.

Residential construction keeps order books full

"Right now our order backlog is on the fly," says **Sari Ponkala**, purchasing and quality manager at Vallox Oy. "Residential construction in Finland and the world is growing well, which is directly reflected in our order backlog. During the corona period the importance of ventilation became clear, particularly



“

Darekon's internal quality standards are often even higher than ours.”

when the goal is to keep employees and customers of business premises healthy. It is also important to us that our customers receive the products they have ordered quickly without unnecessary delays. That is why we are currently building an extension of 2,000 square meters to our former 13,000 square meter facility.

“In Finland, our market share in residential ventilation is more than half, so it is very difficult to increase it. In Europe, the situation is different for many reasons. Ventilation has traditionally been treated by opening the window, and there is not necessarily a similar need for actual heat recovery as we have in Finland. There are also some national differences in the requirements for ventilation in buildings. Our ventilation machines are known to be the best for winter conditions and the automation and sensors of the machines are at the forefront of the industry.

“Operation is made as easy as possible and the machine recognises the necessary adjustments itself. Our technical support is really good and the people who answer the phone know the ‘spirit world’ of the products. Overall, the products are user-friendly and of high quality. The guarantee of quality is that each machine is functionally tested before delivery to the customer.”

Energy saving, automation and cleanliness

According to Ponkala, special attention has been paid to energy efficiency

in the design of its ventilation equipment. The devices save more energy during their life cycle than manufacturing consumes, compared to a situation where there is no mechanical ventilation or only exhaust ventilation. In current tightly sealed houses, the moisture in the dwelling is removed in a controlled manner and does not condense to cause problems. In Finland, heat recovery is of course of great importance.

The devices have the Key Flag symbol, which means that the domestic content of the products is over 50 per cent. Eurofins certifications demonstrate the functionality of products in accordance with the certification criteria. In Germany, DIBt (Deutsches Institut für Bautechnik) and Passivhaus certifications are used, respectively. Vallox has a certified ISO 9001 quality system, and an ISO 14001 environmental system certification.

Newer devices can be connected to a cloud service, allowing them to be managed entirely on a computer or mobile device. The physical control panel is then only in a technical room, or may not be needed at all. Thanks to advanced automation, manual adjusting is very rarely needed. Today it is a clear recommendation that the ventilation unit is always on and the built-in carbon dioxide (CO2) sensor ensures that the ventilation is always at the right power.

It is also worth mentioning the good air filtration of the equipment, keeping dust out of the premises. In the export

market, filtration is often emphasised and also in Finland, especially for those with pollen allergies. In large cities, traffic-generated dust is also a problem and thanks to the ventilation device the window need not be opened, as has traditionally been the case in Central Europe.

Strong investment in product development

“We have a very strong investment in product development,” Ponkala continues. “About one-fifth of all our officials work in product development. In product development, we always think about the big picture and roadmap of development... what kind of products need to be brought to the market, when and what they replace. In the product maintenance process, improvements are constantly being considered, some of which can be made to existing equipment and some to future developments – this is always considered during development.

“Customers are listened to carefully and, for example, construction companies play an important role, as do foreign customers. In many cases it is a challenge to ensure that all wishes are met. On the other hand, it is not good to make too many variations.

“We have our own refrigeration and sound laboratories, which is a strong competitive advantage. Previously, time had to be set aside for testing with an outside laboratory, now it is all in our own hands. We get prototype products tested better than before and finished products on the market faster.”

Darekon has become an important supplier

The role of electronics is central to today's air conditioners, which have a lot of processors, sensors, and intelligence.

Petri Kettunen, Darekon's sales director, was already familiar to Vallox, so it was easy to start cooperating with Darekon. The co-operation started cautiously at first, but soon caught the wind under its wings. The invoicing for the first year of co-operation was a modest EUR 6,000, but the following year the transaction started in earnest. Last

Saija Lentonen operates the “supermarket”, where the materials of the products are delivered to the assembly line at the right time and in the right place.



year, trade of well over a million euros was completed.

“Our first deal was 300 connector cards with six RJ connectors. The price was such that I still remember it after seven years,” jokes Ponkala.

Since then, the agreement on pricing has also apparently been good, as Darekon manufactures tens of thousands of products for Vallox annually. Processor cards are made for all ventilation units – with software pre-loaded and the units functionally tested. Darekon has built a lot of testing environments for Vallox products and the test data of the processor cards is individually stored.

Other products to be manufactured include controllers, CO2 sensors and electrical assemblies. The controllers are delivered to Vallox by Darekon, pre-packaged in sales packaging. They are no longer touched by Vallox, but Darekon’s delivery is trusted and the controllers go as they are to the customers. All deliveries to Vallox take place from Darekon’s Klaukkala logistics centre.

An agile and high-quality partnership

“Vallox is a good and important customer for us in many ways,” says Kettunen. “Of course, volume is one thing in itself, because Vallox is the third largest customer of our plant manufacturing the products. The series sizes of production are suitable for us

and the need for the products is quite regular and stable. It makes planning and anticipation easier.

“The confidentiality of the cooperation is indicated by the fact that the contact is maintained at many levels. For example, Vallox’s product developers discuss work with our test designers. Buffers have also been agreed for almost all products, so we are able to supply goods for even more unexpected needs.”

Ponkala is also satisfied with the functionality of the cooperation: “Darekon is currently the main supplier of electronics to us. There are other suppliers alongside because of risk management – we can’t concentrate everything on one supplier. Darekon has become very important, above all thanks to the smooth cooperation.

“Darekon is agile and the right size to have enough purchasing power. Even small requests are handled flexibly – the delivery of 10–20 test sets has not been a problem. Darekon has saved us from many troubles over the years.

“Darekon’s delivery reliability is good, cooperation works on many levels and we can trust the quality of the products. Darekon’s internal quality standards are often even higher than ours. Overall, everything has gone really well. Of course, there are always smaller and bigger challenges, but they have always been handled in cooperation. I believe that

our cooperation will continue and develop in the future.”

More comprehensive entities

According to Ponkala, Vallox’s future plans include even larger entities, more advanced automation and the search for new markets. In terms of automation, Vallox has been at the forefront of development for a long time, and with the increase in requirements, this provides a strong foundation for the future.

“We have made many innovations, some of which have even been ahead of their time,” Ponkala estimates. “The most important thing is to focus on the essentials and do that well.”

Of the electronics requirements, Ponkala considers testability and reliability to be the most important. Testing requirements are growing and the contract manufacturer is expected to manufacture even larger and more complete units in the future. Climate goals also guide future solutions. Carbon dioxide emissions during the life cycle of products must be taken into account and minimised.

Above all, in heat recovery, building regulations guide the operation, as there are certain minimum amounts of ventilation that must be implemented. Finland is a pioneer in the purity of ventilation and this, together with good management of the whole, provides many opportunities to expand the export market. ■



Sari Ponkala and Petri Kettunen examine the processor card of the ventilation unit and the control panel, which Darekon delivers to Vallox, with its documents ready in the sale package.



The role of electricity in the global energy system will grow strongly as societies seek ways to mitigate climate change. This development offers huge challenges and opportunities for Finnish product development, engineering expertise and the entire electrical and electronics industry.

ELECTRIFICATION IS THE KEY TO SUSTAINABLE DEVELOPMENT

Climate change is one of the greatest risks to the future of mankind. Global warming is causing desertification in warm areas, extreme weather events – extreme heat and drought as well as heavy rains and hurricanes – drastic changes in crop growth conditions, and rising sea levels. The biggest cause of climate change is the increase in atmospheric carbon dioxide (CO₂), which causes the greenhouse effect. The world has set ambitious targets for reducing CO₂ emissions.

The world works on fossils

Fossil fuels dominate world energy production, but the shift to zero-emission energy sources is essential. With the exception of biofuels, almost all emission-free energy is produced as electricity, the role of which will grow enormously in the coming decades.

More than 80 per cent of the world's energy is produced by fossil fuels, especially oil, coal and natural gas – the largest of which is oil, with more than 30 per cent. Electricity accounts for less than 20 per cent of the total, but is likely to grow strongly. Of course, almost 40 per cent of electricity is produced with coal, but the share of renewables is gratifyingly almost 30 per cent already.

Industry consumes about half of the world's energy, and heat accounts for about 75 per cent of this. Heat is also needed to heat property and homes. Heating accounts for about half of the world's total energy consumption and produces about 40 per cent of the world's CO₂ emissions. Transport accounts for about a quarter of energy consumption and is almost entirely powered by oil.

Nuclear power accounts for 5 per cent of world energy production, biofuels for almost 10 per cent, hydropower for 2.5 per cent and other renewables for more than 2 per cent.

The researcher sees opportunities

Peter Lund, professor of engineering physics at Aalto University, is a well-known researcher and advocate of renewable energy sources. In his view, the role of renewable electricity as a way of beating global warming is central.

"The price of energy is a key guiding factor in future energy solutions," says Lund. "The strength of renewable energy is that, with the exception of bioenergy, virtually all other renewable energy sources have free fuel. Wind and sun are available for free use. All that is needed is an investment in the equipment that utilises them. Fossil fuels always come at a price and, in addition, investment in equipment is needed.

"Wind electricity is currently the cheapest way to produce new electricity in Finland. Its production cost is about 30 euros per megawatt hour (€/MWh). In the solar zone, for example in the Persian Gulf, the price of solar electricity is even less than 10 €/MWh, and we also have solar electricity that is competitive in many applications, especially between spring and autumn."

According to Lund, wind and solar electricity currently account for almost 10 per cent of total electricity production, but according to the latest scenario of the International Energy Agency (IEA), the share could be as high as 70 per cent in 2050. The volume will increase tenfold.

Different solutions for electricity

The decentralisation of electricity generation to very small units is one of the factors that characterises future scenarios. Wind farms are located around the world in suitable windy areas and also on the open seas and coastal waters. In the case of the sun, the scattering is even greater.

“Electricity is a convenient way of moving energy and an easy-to-use energy source – it will involve a lot of new innovations,” says Lund. “The role of the consumer will change, especially in the case of solar energy, when the consumer can also become a producer. This creates new needs for production pooling, trading and storage. In Germany, for example, there are already more than two million photovoltaic systems that generate electricity for the national grid.

“Electricity will play a key role in transport, especially passenger cars. There are already a lot of functioning implementations for passenger cars. There is still a question mark about heavy long-distance traffic. It will operate longer with biofuels and perhaps hydrogen and fuel cells.

“Hydrogen is the easiest synthetic fuel and can be made with electricity through water electrolysis with an efficiency of about 75 per cent. Storage is a bit awkward, but possible at least for professional use, hardly on the consumer side. Hydrogen can be stored as liquid in very cold form or as gas at 700–1,000 bar pressure in composite bottles.”

Large-scale storage of electricity is still relatively difficult and expensive except for hydropower, which has its own challenges, but energy can be stored very easily as heat. On the other hand, small-scale electricity storage may become very widespread when “second-life” batteries are released from electric cars in the future. The car battery is renewed when its capacity has dropped to about 70–80 per cent of the original. For a long time to come, such a battery could serve as electrical storage for a detached house or distribution network.

Synthetic fuels and industry

According to Lund, hydrogen is a key medium in the use of electricity as a fuel and in industry. Hydrogen and carbon dioxide used in the Sabatier process produce synthetic biogas, ie. methane, CH₄, which is the same as natural gas. Different alcohols and other carbon-based compounds can be produced using different catalysts. The carbon in these compounds is obtained from carbon dioxide, which

can be trapped even at the end of a pulp mill chimney or directly from the atmosphere.

“You have to be careful with methane though, because it is almost a hundred times more efficient as a greenhouse gas than CO₂,” remarks Lund. “Of course, it will only remain in the atmosphere for about 12 years. In Western countries, however, leaks are very small and electromethane is an easy fuel insofar as the finished infrastructure exists.

“Another possibility is methanol, CH₃OH, which remains at room temperature as a liquid. It is toxic – it must not be drunk – and can be made in a number of ways, like from water gas, which contains hydrogen and carbon monoxide. Complex chains can be made from carbon dioxide and hydrogen, almost even diesel. Is this necessary though – quite a bit can be done with even simple solutions.”

As an example of the use of hydrogen in industry, Lund refers to SSAB’s steel plant, which has already produced some tens of tonnes of steel by hydrogen reduction. Traditionally, the reduction has been done with coal and SSAB is for the moment one of the largest producers of CO₂ emissions in both Finland and Sweden.

Heating – and also increasingly cooling – uses electricity to run heat pumps in both industry and housing. According to Lund, heat pumps will become even more common because they make it possible to utilise various waste heat and other free energy very efficiently. At best, one part of electricity produces 3–5 parts of thermal energy.

Finland’s opportunities in know-how

“Asia currently produces 60 per cent of the world’s emissions, Europe 9 per cent and the number is declining all the time,” continues Professor Lund. “Whatever we do here, it does not have a very big impact on the whole. Still, it is not worth sinking into despair, because with knowledge we can influence things much more than our size entitles.

“Finland has a high level of know-how in electrical engineering – starting from Strömberg’s heritage from

the end of the 19th century. In electrical engineering and electronics ecosystems, we have a strong foundation of small and large businesses. This competence should now be harnessed as a national strategy – to develop a competence cluster, whose competence, development, financing and marketing will be honed to the peak.

“Finns underestimate their skills! You could say we’re wearing yurt robes and sprinkling ashes on top of our heads. There are many opportunities. There are and will be many challenges in the energy system that need to be addressed. For example, the resilience and reliability of electrification has always been our strong point and now we should be able to productise it as part of a major global energy shift.”

According to Lund, the energy sector already now offers a lot of new business opportunities throughout the value chain – from technology producers to users. How to integrate solar and wind on a large scale, how to harness artificial intelligence, big data and manage the energy mix? All this requires a lot of technology and hard know-how.

“The energy system is like a symphony orchestra that has to be made to sound harmonious,” compares Lund. “The same goes for electricity. If there is no intelligence and control, the result is only cacophony. The electrical and electronics industry and IT have an important role to play in maintaining harmony in energy change.” ■



The energy system is like a symphony orchestra that has to be made to sound harmonious.”



Peter Lund is a professor of engineering physics researching future energy issues. He is particularly interested in multidisciplinary perspectives on energy. Lund works diligently in international forums and holds numerous positions of trust. He is a member of the Finnish Climate Panel.



Anssi Pinola is a third-generation painter who is thoroughly familiar with the various painting methods and all the materials and equipment of the paint shop.

DAREKON NOW HAS A SURFACE TREATMENT FACILITY

THE PAINT SHOP COMPLEMENTS THE OVERALL SERVICE

Darekon has acquired the business of a paint shop operating on the same property as Darekon Oy's Klaukkala manufacturing facility. Darekon has used the services of the paint shop quite extensively over the years. The business acquisition now provides an opportunity to further develop the paint shop's operations and increase Darekon's self-sufficiency in the surface treatment of products.

Surface treatment work has been undertaken at the Klaukkala facility for a long time – long before Darekon acquired the sheet metal business from Mecanova in 2009. The last owner of the paint shop, which had been operating since the early 1990s, was IdeaPaint Oy from Tampere, from which Darekon bought the business. The paint shop also continues to offer its services to external customers.

Third generation painter

Anssi Pinola, who has a long background in his field, has been the manager and shareholder of



The acquisition of the paint shop will bring new smoothness to our sheet metal production.”

the Klaukkala paint shop since 2014. He continues the work of **Martti Kukkonen**, the previous manager, now retired.

“Dad and grandfather worked in America in the 1960s and learned car painting there,” says Pinola. “In the early 1970s, they moved back to Finland and set up their own car paint shop. Dad ran the car paint shop for twenty years and then moved to Sievi to run a powder paint shop. I started my career there as a painter at the age of 15 and worked for several periods of time.

“In 2007, I started working as an installer in a company that made painting lines. The task





Painter Reido Pohla paints an enclosure in a painting jig.



The enclosure painted in the jig has no paint at all inside.



Paint shop worker Mari Silvennoinen removes protective tape from finished pieces.



Reido Pohla fills the transport rack with painted enclosures going to the oven.

involved installing and maintaining the lines. Then I moved to the Lainisalo paint shop to build a new painting line. There I did various installations and all sorts of painting tasks – all my life I have been doing things related to painting.”

Versatile pre-treatment

The service range of the Klaukkala surface treatment plant is comprehensive and includes various pre-treatment steps, powder coating and wet painting. Grain blasting with different materials is also part of the range.

The washing line pre-treats virtually all the parts to be painted. The pieces are washed clean of dirt and oil to ensure that the paint adheres. The washing line is directly connected to the painting line in most paint shops, but separate in Klaukkala. This improves flexibility when, for example, straight sheets are washed before edging and welding on the sheet metal mill side.

After mechanical fabrication, the pieces are naturally washed again before painting. Often, the parts are also protected because, for example, threads and grounding points are to be kept free of paint.

In many cases, protection is done by taping, but because taping is slow, slightly larger series use jigs that protect unpainted areas and significantly speed up production. The people at the paint shop have developed several very innovative jigs. Sometimes the paint from the area not to be painted can also be removed with a vacuum cleaner or blower, which removes the powder paint from the desired point before curing the paint in the oven.

Mostly powder coating

According to Pinola, epoxy, polyester or other coatings, for example, can be used in powder coating, depending on the intended use. Powder coating is used especially for painting metal parts, but other materials can also be painted with powder. Pieces intended for outdoor use are treated and painted differently than those for warm interiors.

Usually one layer of paint is sufficient, but if necessary it is possible to use a separate primer and topcoat. The more challenging the conditions, the greater the film thickness of the paint. Choosing the right materials and methods is a key part of a paint shop's expertise.

In powder coating, a fine-grained powder is sprayed onto the surface of the object in a painting chamber where the spray gun and the object to be painted are at opposite static electricity potentials. Static electricity causes the powder to adhere well to the surface of the object. After spraying, the piece moves on a conveyor track or cart to an oven where the powder melts and finally adheres to the surface of the piece. The oven temperature is typically 180-200°C and the pieces remain in the oven for 10-20 minutes. After baking, the piece is inspected, cooled and ready for use immediately.

Klaukkala also performs wet painting, where one large product group to be painted is concrete products. Wet painting has a wider range of options than powder coating, there are usually more paint layers and there are many material options.

Fluency with your own paint shop

"The acquisition of the paint shop will bring new smoothness to our sheet metal production and facilitate logistics," says **Pekka Antikainen**, Klaukkala's plant director. "Previously, this paint shop handled about a third of our products to be painted, and our share of their production was in the order of 40 per cent. Now the number has already clearly increased and the share continues to grow.

"Immediately after the acquisition, the paint shop's staff has been strengthened and there is still a need for additional people. The paint shop is also moving to two shifts instead of the previous one."

According to Antikainen, their own paint shop will improve the flexibility of sheet metal production in many ways. Thanks to the separate washing and painting lines, the different work steps are not directly connected to each other and, for example, the pre-washing of the plates before edging and welding is flexible.

The transport distance between the sheet metal factory and the paint shop is only tens of meters, so the logistics are extremely simple. This significantly speeds up deliveries and smaller jobs can be taken in if necessary at very short notice.

Quality and continuous development

"Painting is often a 'necessary evil', but the right coating gives the product significant added value," Pinola underlines the importance of surface treatment. "Many special coatings can be essential to the operation of a product. These can be, for example, coatings related to thermal

management or surface friction. Various nanocoatings are coming strongly into the picture and ceramic coatings can even be used to treat pistons and bearing surfaces of internal combustion engines.

"We are a relatively small paint shop and our competitiveness is in quality. We make the highest quality possible, which is our strength. Complaints are really rare. On large automatic lines, it is extremely difficult to achieve such high quality.

"We also deal with very difficult products that our competitors don't like. Protecting by taping is time consuming, but protecting without taping is often challenging. We have succeeded well here and we are strong in this area over many competitors."

Pinola is pleased that the paint shop has been merged into a larger organisation. It brings him a lot of new things to learn, for example in managing the quality system and the ERP system, but the back support of the big organisation brings certainty and gives the opportunity to develop the business further.

More capacity and technology

"We have a clear need to increase the paint shop's capacity, because Darekon will bring us a lot more work to do," continues Pinola. "The goal here is to do most of what has been done outdoors before. At the same time, we also want to serve external customers well.

"Painting equipment has been regularly renewed with today's technology and the next steps are, for example, equipment that can be used to make individual markings on painted products. Technologies that include laser marking and printing.

"Coatings are being developed better and better and the visible revolutions in nanotechnology and thin film coatings will change a lot. It's great to be involved in this process and planning for the future, even though I have less time for my own practical painting." ■



Darekon's paint shop is bright and clean. More and more of Darekon's customers' products are treated there.



Saila Syrjäsoo's work as a PLM manager involves a lot of technical issues. Here, she tests the assembly jig just completed for the customer's new product.

Cuvaya

A SUPPORTIVE AND HAPPY PLM MANAGER BELIEVES IN THE POWER OF COLLABORATION

SAILA SYRJÄSUO IS A LIFELONG LEARNER

In 1999, Saila Syrjäsoo joined Darekon Oy's head office in Roihupelto. Saila, who has business and administrative qualifications in the field of foreign and eastern trade, came to handle the logistics of the firm's Polish manufacturing facility and many financial administrative matters. Today, however, her role as PLM manager is closer to that of an engineer.

The title "lifelong learner" means that Saila is interested in new things and always wants to learn more. Whether it's work-related study or leisure activities, she has really internalised the concept of lifelong learning.

Saila wants to thank her colleagues

At the beginning of the interview, Saila says she wants to say something:

"I moved from the head office to the Klaukkala facility in December 2009, immediately after my maternity leave, to take care of tasks related to the integration of the facility. Darekon had just acquired the Klaukkala plant business," says Saila.

"The reception was absolutely awesome! People received me sincerely and warmly. I was immediately thrilled with the people at the facility, their skills and professionalism. The mechanics and sheet metal were completely new to me. I am grateful for how these people taught and trained me in the secrets of mechanics. Without their openness and willingness to guide me hand in hand – specifically the production workers – I would not have grown into this job that I am doing now.

"I have enjoyed the moments when I got to work in production and its various stages. I haven't visited the welding shop yet. Hand welding of seams is interesting and it would be a good skill to know. I wonder if I could book a training day for welding?"

Last summer Saila paddled the rapids of Kapeenkoski at the border of Äänekoski and Laukaa for the first time with her Packraft. In terms of rapids, Kapeenkoski is a class II rapids, ie slightly difficult.

“

I was immediately thrilled with the people.”

Photo: Esa Manninen



Everyone is responsible for the work environment

Saila has thought a lot and studied issues related to relationships and well-being at work. Among other things, she has participated in the Dipoli lectures of the philosopher **Esa Saarinen** and internalised the term “psychological safety”.

“I am glad that the word ‘sustainability’ has been included in Darekon’s strategy,” Saila continues. “We are a sustainable actor. This also includes social responsibility. It is physically and mentally safe for all of us to work here. People are encouraged to be themselves, to feel, to make mistakes, to make suggestions for improvement and to receive feedback in a constructive way. I uphold these principles in my own leadership.

“Everyone is equally responsible for a common work atmosphere. Everyone creates it with their own activities over and over again every day.

“And sometimes there can be bad days, but how do you express it without being cranky with others...? ‘I’m irritated, but this isn’t because of you, I had a bad morning.’ Saying – choosing words – I try to develop my interactive skills in my recent leadership position and encourage others to do the same.”

Studying helps understanding

In her studies in the 1990s, Saila graduated as an economist in Eastern and foreign trade. For Darekon, she came primarily to handle import and export forwarding for the Polish side of the business. Poland was not yet a member of the EU at the time, but joined the

European Union in 2004. At the Roihupelto office, she was Darekon’s third employee, in addition to **Kai Orpo** and **Kari Koponen**.

“Polish customs clearances were always associated with a lot of paper work and bureaucracy. I also transported stuff to the airport and the harbour and did everything else needed. Young woman as I was, I said at the beginning that: ‘I don’t make coffee, but otherwise I do anything’.”

In addition to her work, Saila has constantly wanted to develop herself further and has completed courses such as a specialist vocational degree in business administration, courses at the open university and the school of economics, and much more.

“I have studied art history, management, accounting and other university courses,” Saila continues. “I am now completing Master’s degree level Industrial Digi-Robo Expert training for engineers at Häme University of Applied Sciences. The training is a perfect ‘smart bomb’ to Industry 4.0 solutions.”

Hobbies for excitement and relaxation

Saila and her two daughters live in a detached house in northern Espoo, where there is room for many hobbies.

“The old house and its heating is in itself a hobby. There is plenty of woodwork almost all year round.”

Saila does a lot of volunteering with children and young people, most recently in a pop-up youth café. She has been involved in the activities of the Mannerheim League for Child Welfare, served on the parents’ association and boards of the girls’ school,

and coached and cared for the girls’ football teams.

“As my children grow up, there is more time for my own hobbies and consumption of culture. I miss live music enormously right now; rock concerts, atmospheric jazz evenings, choir performances and sunny festivals.

“For the last three years I have been practicing rafting with an open canoe, which is terribly exciting. I have paddled in Salla, Kymijoki, Kuusamo, Tuupovaara and you know where. For this season, I got a Packraft, which is an inflatable small canoe. I also tried an alternative commute route along the Lepsämäjoki River, but it was somewhat slow and rugged.”

Another water-related hobby is sailing, which is still more of a dream than a hobby.

“It’s awesome when you get to the open sea by sailboat. The space of the sea and the silence of the surroundings are impressive. There is room on the sea to breathe and relax.”

Aiming for a good centenary party

“I think that life is about continuous learning and self-development. Life is about maintaining mental well-being and physical well-being. I want to stay active for as long as possible, enjoy life for as long as it lasts.

“I’m not ready as a person yet. I want to continue to develop and learn new things. The world is full of interesting things and phenomena that I have not yet had time to get acquainted with.

“I don’t know yet what I will be when I grow up, but the long-term goal is to have a good centenary party.” ■



WHAT IS THE PURPOSE AND JUSTIFICATION OF A COMPANY'S EXISTENCE?

The purpose of a company is to make a profit for its owners – this is an easy idea – and there is no need to think about it further. In the stock market and the turmoil of the quarterly economy, this seems to be an advanced guideline. However, there are other points of view.

Long ago, in the 1970s, one of the School of Economics's entrance examination books was called "Company Objectives and Operations". The basic principle was that the company should make a profit – money for its owners. There were, of course, many ways to achieve this and probably that included keeping customers happy. Now, 50 years later, things are usually thought of much more broadly.

A company has a mission, vision and values

The mission is the company's operating idea, the reason for its existence. The mission answers the question of what the organisation wants to do on a permanent basis. In addition to mission, vision and values are defined for business. Vision is the cornerstone of everyday management. It is a vision of the ideal position of the firm in the future and aims to create an image of the future for each employee that appeals to both thought and emotion.

The company's values, in turn, are part of everyday operations and its management. Values can include responsibility, honesty, and trustworthiness, although these are more self-evident today. In fact,

company values do not need to be defined in advance, but written in verbal form they better reflect the reality of the activity. Practical operations and everyday reality form the company's values.

In addition to the above, it is good to mention the company's strategy. The range of means is based on the company's values and is intended to ensure that the vision is realised. The strategy is usually drawn up for a few years ahead and is a living tool that evolves as the company and the world evolve.

Companies often publish their mission, vision and values on their websites and brochures, for example. However, they always exist in one form or another, even if they are not written anywhere.

Defining goals is not occultism

The strategy is based on the company's mission. It is based on known and predictable facts. Wild guesses should not be used as a basis for a strategy, and the best outcome is achieved when the company's employees are involved in drawing up that strategy.

The principles for defining a company's goals and justification for existence may seem difficult to master, but in reality that is not the

case when using judgment and common sense. On the other hand, countless consultants make a good living by teaching and advising companies on these matters.

Darekon has written down its mission, vision and values.

“We want to present the key principles of our operations in writing,” says **Kai Orpo**, CEO of Darekon Oy. “I think it makes them easier to understand, helps all parties to internalise our principles and reduces the possibility of misunderstandings. We address these issues regularly in the management team and make corrections and adjustments as needed.”

Darekon’s mission: Our mission is to enhance the competitiveness of our customers by being a strategic partner for them.

Darekon’s vision: Our vision is to be a sustainable contract manufacturer of medical equipment and industrial electronics by offering customers flexible and high-quality services.

Darekon’s values:

Customer-focused: We offer added value for our customers through a flexible and cost-effective service concept that starts by identifying customer-specific needs. Our activities are based on a confidential, transparent and mutually beneficial long-term partnership.

Result-orientation: Our success is based on a profitable business which aims to increase the company value in the long run. Being efficient and competitive helps us to secure business continuity and growth. Sustainable growth can be maintained through the continual satisfaction of our customers and personnel.

Continuous business development: Our success is based on constant development. Its core is knowledgeable, innovative and motivated staff.

Transparency, honesty and reciprocity

“We know the customer’s needs and technical, commercial and schedule requirements,” says **Petri Kettunen**, sales director of Darekon Oy. “Knowing these issues, we will raise any matters in a timely manner that could potentially become challenges in the foreseeable future. The key account manager does not focus on the next order, that is done by the order handler. Sales staff discuss what might happen in a year or two – discuss a longer time span with the customer’s strategic sourcing management. This is the transparency of operations.

“Transparency on the part of the customer is often an advantage for him as well. In many cases, the customer tells us which other contract manufacturers supply them with products. A customer hardly ever relies on just one supplier. Sometimes a competing supplier has had a shortage of a certain key component that we happen to have more of in stock. Then we can even help a competitor because the advantage for both of us is the success of the customer in the long run. And sometimes we may need help from a competitor.”

Sustainability is self-evident

Or is it? Environmental cleanliness, recycling and minimising the carbon footprint are increasingly on the agenda



The core of success is knowledgeable, innovative and motivated staff.”

and every business is forced to act with these things in mind. If not voluntarily, then before long it will be by legal requirement.

However, sustainability is also much more. The company has responsibility for all its stakeholders, social and economic responsibility for its employees, and responsibility for the future of its customers. It may be an exaggeration to call the latter a “responsibility”, but a sensible company really strives to improve the competitiveness of its customers. This is key to ensuring a successful common future – at least when business partnerships are at a deep level.

Responsibility for staff is central because they do all the work that is sold to customers and their skills, resilience and motivation have a significant impact on operation and its quality. The company’s values are mainly realised in the operations of the staff.

“We try to communicate as clearly as possible all the way to the level of practical production what the needs of our customers are,” says Kettunen. “We want the staff to understand their importance throughout the production chain. If the work is done on a bad day, the product may one day fail and could even cause great damage. We also encourage customers to visit the factory and tell the team about their product and how well they think the work has been done by us.

“We may have been reasonably successful because we have low staff turnover. Professionalism, know-how and ‘tacit knowledge’ accumulate, benefiting the customer, staff and Darekon.”

What about the money and making a profit?

Listed companies unceasingly monitor the stock exchange price with a close eye. Interim financial statements are prepared four times a year – quarterly. It is best for the company’s management to make sure that the numbers rises steadily and that each quarter is preferably a little better than the previous one.

This mechanism sometimes makes long-term operation very cumbersome. Significant investments or important changes in operations may not yield results for a long time and yet they may be essential to the company’s future.

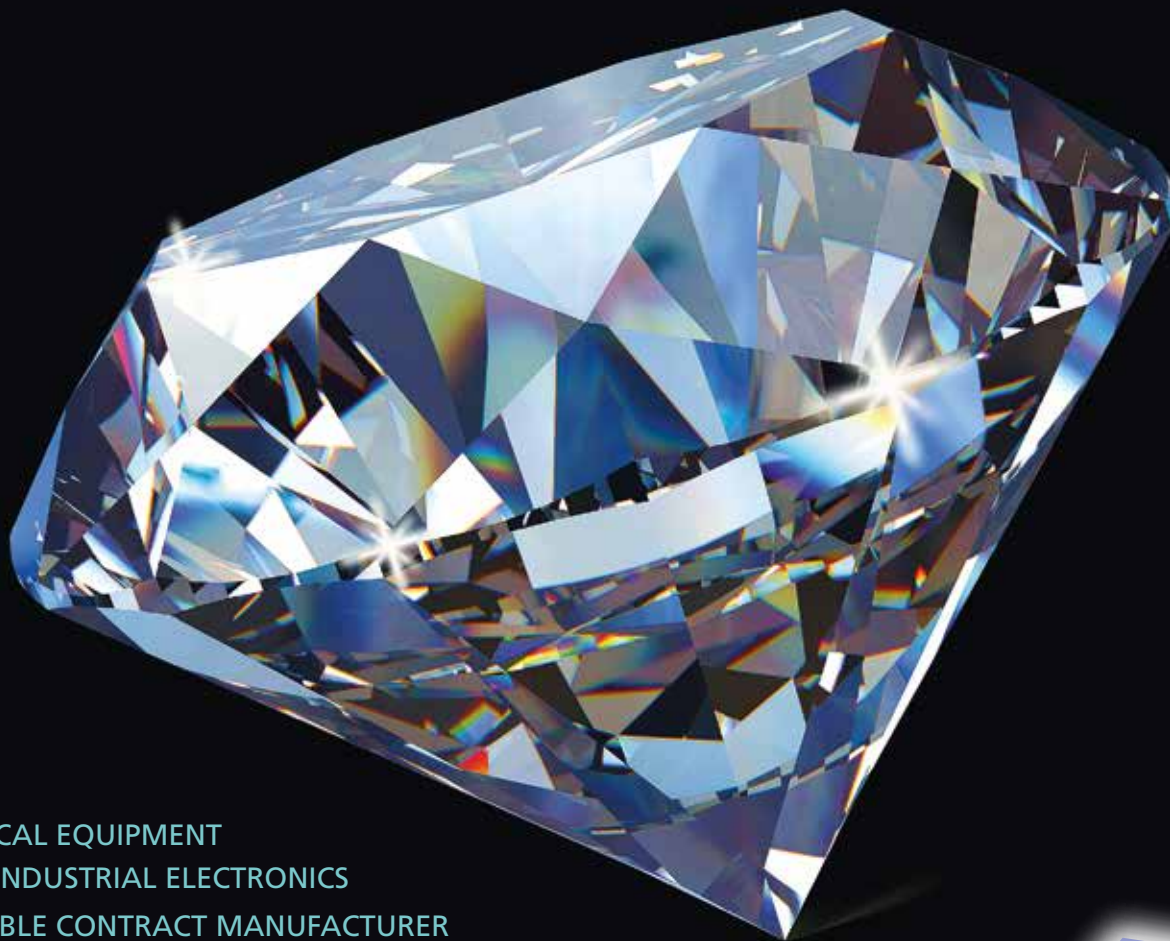
“A company must operate profitably,” says Orpo. “However, the result should not be automatically distributed to the owners, as the company’s solvency is an essential factor in enabling the company to cope with unexpected emergencies or make profitable investments. Operations also always tie up capital, and it is much cheaper and safer to operate with the firm’s own funds than with debt capital.

“For example, our component warehouse always binds up a considerable amount of capital – up to several months of turnover. However, without the warehouse, our operations would not be possible and we would not be able to meet the needs of our customers.”

Darekon is a family business with only a few owners. Investments are made on the basis of evenly paced long-term plans. Growth takes place organically and sometimes through considered acquisitions.

Customers, staff and other stakeholders have so far given legitimacy to Darekon’s existence. The goal of the company’s management is that this will continue in the future. ■

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