

Nolato Magasin

No. 34 | October 2023

Breaking the mold
leads to top
design award

Silver medal in sustainability review

What do you do if a cleanroom isn't clean?

Technical advances on three continents

95% of CO₂ emissions are indirect

Expansion of Nolato in Romania

Company bikes bring everyday sustainability

Eco-design supports product optimization

The best stage to environmentally optimize a new product is at the drawing board. That's why Nolato has developed an eco-design model.



► Find out more on page 4

Monitoring and culture prevent threats

Recent years have seen a rise in threats to corporate IT environments, creating new demands for updated protection and better understanding.



► Find out more on page 8

Mass balance cuts carbon footprint

Mass balance has helped Wellspect HealthCare cut the carbon footprint of plastic in an existing product by 55%.



► Find out more on page 14

Sheep and solar create a win-win-win

Agrivoltaics is becoming more common. And it's in use at Nolato's solar farm, where sheep are keeping the grass down.



► Find out more on back page



Image above: The high-tech earbud which is more of an attractive piece of jewelry – an earring – showcases Nolato’s wide-ranging capabilities as a global and innovative end-to-end provider of sustainable solutions.

This magazine is produced for our customers, shareholders and employees, and anyone else with an interest in the Group.
Editor: Mats Håkanson | mats.hakanson@nolato.com | English translation by Oliver & Louise Dirs
Nolato AB, Torekov, Sweden | phone +46 431 442290 | info@nolato.com | www.nolato.com

RÖtt KRÖN Earring recognized with Red Dot Winner Award

A few years ago, Nolato Magasin showcased RÖtt KRÖN earbuds; a pair of wireless earbuds that looked like a piece of jewelry for the ear and combined the choice of materials, design and technology to stand out in every possible way.

The earbuds were injection-molded in zirconia ceramic, which had been sintered at 1,500 degrees Celsius and is one of the hardest materials imaginable, while also being biocompatible and hypoallergenic.

The choice of materials and standout design, along with opportunities to simply create ornamentation that really caught the eye, attracted considerable interest among Nolato's customers and colleagues.

"Using innovative solutions, we were able to show that Nolato had the in-house expertise to develop and deliver original consumer electronic products that genuinely stand out from the crowd," says Dan Wong, Managing Director of Nolato Lövepac Technology.

Raising the bar and breaking the mold

"These earbuds were still fairly conventional from an industrial/mechanical perspective," notes Dan Wong. "They adhered to a traditional product language that we now feel isn't enough to break the innovation boundaries and reflect our true opportunities to stand out.

"So we decided to raise the bar several notches, break the mold and come up with something completely different. And that was how 'The RÖtt KRÖN Earring' came about."

The Earring is a true example of visionary future wearables. The previous model's in-ear design has been updated to make it a more attractive piece of jewelry – an earring – rather than a traditional earbud.

Like its predecessor, the earring features a precious-gem-class zirconia ceramic acoustic chamber. The rest of it consists of a shape-memory titanium alloy plated with 18 carat gold, and degradable plastic that breaks down easily when the product reaches the end of its useful life. The unique combination of materials creates a product with an unusually low climate impact for a consumer electronics item.



The design has attracted a great deal of attention, and in June 2023 The Earring received one of the world's top design awards, Germany's Red Dot Winner Award for exceptional product design.

"The award is a feather in our cap," says Dan Wong. "Our development of The Earring has established yet another valuable showcase of Nolato's wide-ranging expertise as a global and innovative end-to-end provider of sustainable solutions."

Blurring the boundaries between fashion and technology

The judging panel said The RÖtt KRÖN Earring positions itself as a refreshing alternative to conventional earbuds. They were particularly impressed with how this wearable blurs the boundaries between fashion and technology: "It accentuates the wearer's personal style while offering convincing acoustic performance." The attractive, high-gloss material focuses attention on the sleek shapes of the earbuds, while the ergonomic design ensures a high level of wearing comfort. Thanks to the use of zirconia ceramic, the product is also biocompatible and hypoallergenic. ■



Eco-design involves environmentally optimizing a new product at the drawing board stage.

Eco-design: The drawing board is the best stage to environmentally optimize a new product

Nolato has established an eco-design model to support its customers. The model aims to make it easier to minimize the overall environmental impact of new products.

“The drawing board stage is when it’s most effective to environmentally optimize a new product,” explains Glenn Svedberg, Nolato Group’s Head of Sustainability. “The model therefore reviews those aspects that are important to consider when designing new products.”

Choice of material is the foundation

“Independent analyses have demonstrated that plastic often has a smaller carbon footprint than both glass and metal,” says Nolato Head of Sustainability Glenn Svedberg. “But different plastics also vary considerably in terms of their carbon footprint. The type of plastic used also depends on

the product’s area of application (pressure, temperature, tensile strength, dynamics/vibration, etc.).”

When Nolato’s experts propose a particular type of plastic, they always aim to replace traditional, advanced materials with simpler versions that are often more cost-effective and have a smaller carbon footprint.

But there are also other aspects that are important in the choice of plastic. The raw material, i.e. the basis used for manufacturing the selected plastic material, also plays a key role in optimizing the product’s overall environmental impact.

“It’s important to find alternatives to fos-

sil raw materials, such as materials that are bio-based or recycled, either mechanically or chemically,” notes Glenn Svedberg. “And then there’s the impact of transport, so we also have to think about where the raw material is produced.”

Other production factors are important too, such as the choice of renewable energy for the manufacture of the plastic material, and the manufacturer having certifications that confirm that the raw material is renewable.

Start at the drawing board

It’s the drawing board phase that determines how environmentally optimized the

product will be and how much this will cost. Design is key to optimizing weight and a component's structure based on specifications (strength, useful life, etc.).

Lower weight

Lower weight means less resource usage, as less material can be melted and cooled more quickly, making for a more efficient manufacturing process.

Injection molds are designed for optimal cycle time and isolating sections that need to be heated from channels that cool the component.

"The choice of other equipment is also crucial," explains Glenn Svedberg. "The unit that controls heating and cooling in the different sections of a mold has a significant impact on overall energy use in injection molding.

"The manufacturing location, i.e. the region and country, and the type of energy used to manufacture the product also have a major influence on the carbon footprint."

Area of use and circularity

How the product is used also plays a major role in calculating its environmental impact. Is it a passive or an active product? An active product will continue consuming resources, such as energy, over its useful life. A fossil-based vehicle, for instance, has a significant carbon footprint when it is used, whereas an electric vehicle charged with renewable electricity has a much smaller carbon footprint. This stage of evaluation is, however, primarily for Nolato's customer to assess.

"The final point that's key to optimizing a product's environmental footprint is circularity; that is, the ability to recycle the material when the product reaches the end of its life cycle," says Glenn Svedberg. "A product can hardly be deemed to be environmentally optimized if it's difficult or even impossible to recycle."

If the product is assembled, the method of assembly is also significant. Where possible, the same material is used throughout to make it easier to recycle the product when it reaches the end of its life. However, different materials are often needed to optimize a product's function, and this is beneficial if it can be easily dismantled during the recycling stage. ■

Nolato awarded silver medal in sustainability review

EcoVadis is one of the world's largest and most trusted institutions for the assessment of companies' sustainability work. Their methodology is based on international sustainability standards such as the Global Reporting Initiative, the UN's Global Compact and ISO 26000. Their assessments focus on how well companies integrate sustainability into their business strategy and management systems.

They examine how each company manages its environmental impact, working conditions, human rights, ethics and sustainable procurement, as well as how transparently companies report their sustainability work. They also take into account how the company's suppliers perform on these issues.

During the most recent review, Nolato

was awarded a silver medal for its work. This puts us in the best 13% of the more than 100,000 companies that have been reviewed. Nolato's total rating has improved from 54 in its 2022 review to 65 in this year's review.



"For sustainable procurement the improvement was 75%, from 40 to 70 points, due to our implementation of global guidelines in all Group units, which those units then communicate on to their suppliers," says Camilla Magnusson, Group Procurement Director. ■



Nolato Cerbo in Trollhättan is looking to make it easier for employees to cycle to work.

Company bikes and lockable charging room create everyday sustainability in Trollhättan

At Nolato Cerbo in Trollhättan, the everyday, simple route to a sustainable future is also important. That's why all employees are offered the opportunity to buy a bicycle – standard or electric – via the company for commuting to work.

"We want to increase the use of bicycles as a mode of transport for all our employees," explains Cecilia Hellner, CEO of Nolato Cerbo. "There used to be practical obstacles to this, such as a problem with bicycle thefts and the fact that we couldn't offer charging facilities due to the fire risk." But the problems have now been resolved

by building a locked bike storage room at the factory with space for charging several batteries at the same time. The charging points are connected to smoke detectors, which cut off the power if any smoke is detected in the room. A sprinkler system provides added protection.

"The storage room is available to all employees, and they can unlock it using an access tag. We hope this will now encourage more people to leave the car at home and cycle to and from work, which will have a positive impact on both people and the environment." ■



Nolato in Dongguan manufactures products for medtech and automotive customers.

What do you do if a cleanroom isn't clean?

A cleanroom should, by definition, be clean. Its entire purpose is to be a place where components can be manufactured in a guaranteed contaminant-free environment.

So what do you do if a cleanroom isn't clean? Clean it?

Unfortunately, it's not that simple.

A cleanroom is a production space with a controlled level of environmental pollution such as dust, hair and airborne particles. There are different classes of cleanroom, depending on what they are used for. Cleanliness requirements are expressed in terms of the number of permitted particles of a particular size per cubic meter of air.

Nolato uses cleanrooms for the manufacture of components used in medical applications, where cleanliness is crucial. They are also used, for example, in consumer electronics, which often sets extreme requirements for the surface finish of components.

To keep the cleanroom environment within these set levels, a cleanroom is a separate space, entirely self-contained from other areas of the factory using airlocks. Those

working in cleanrooms have to wear protective clothing such as hats, beard protectors, special overalls and shoe covers. There are also restrictions on what they may take into the room and what they may do while there. The ventilation system has highly efficient filters and the equipment is designed to be easy to keep clean.

Cleaning isn't enough

But what happens if it turns out that the room is not clean, and if, upon inspection, the components show signs of foreign particles? Cleaning doesn't suffice; most important of all is finding out why it isn't clean. Where are the foreign particles coming from, and how do you stop them from occurring?

Last year, Nolato GW in Dongguan, China,



A clean cleanroom in Dongguan

found some disturbances in cleanliness in a small number of components, despite the cleanroom meeting the necessary requirements. The decision was taken to initiate a 'lean' project based on 'Kaizen' and 'Six Sigma', focusing on the causes rather than just addressing the symptoms.

"Our goal was to fully meet our own exacting internal requirements, which involved achieving a continual level of zero components with foreign particles," explains Robert Chen, Assistant General Manager at Nolato GW Dongguan and the project's team leader.

The project began with a detailed preliminary study of the current status, comparing the findings with the desired outcome. The project categorized any contamination found, reviewed previous particle counts



n, China, photographed through an observation window as no one is allowed in unless they are wearing full protective clothing.

and analyzed different sources of defect, which were ranked by priority using a calculation system based on frequency and severity. The causes were presented in a fishbone diagram to aid the analysis of causal connections and identify the actual root causes of the problems.

Started asking questions

“On this basis, we started asking questions based on 5 Whys and soon saw a pattern of causes of the contamination,” explains Robert Chen. “Based on these patterns, we were able to establish an action plan with measures to eliminate the various sources of contamination.”

Five of the Six Sigma phases have now been completed and follow-ups have shown that the problems have been

resolved; the cleanroom was clean once again. In true ‘lean’ spirit, Nolato GW Dongguan’s management is now continuing to work on quality management issues by carrying out regular ‘Gemba walks’.

“Although everything is now running well, we’re carrying on with continuous improvements to ensure we remain one step ahead,” says Robert Chen. ■

SOME INTERESTING TERMS:

Kaizen: An approach to achieve continuous improvements rather than a specific end goal.

Lean: An approach that aims to maximize the benefit for customers and minimize resource waste.

Six Sigma: American methodology for improvement projects, largely inspired by Kaizen.

Fishbone diagram: Method for estab-

lishing the link between cause and effect to highlight the main problem.

5 Whys: Method to identify the root cause of a problem by asking Why five times and creating a follow-up question for each new answer.

Gemba Walk: Observation tour of production to understand, learn more and show respect for the place where the value creation takes place. Gemba is a Japanese term that means ‘the actual place’. ■

Constant monitoring and an open culture help us prevent security threats

Recent years have seen a rise in threats to corporate IT environments, creating new demands for understanding, preparing and regularly updating protective measures.

"It's traditionally been deemed sufficient for computers to have a firewall and antivirus software, but that doesn't get you far these days," says Jonas Tillberg, Global Head of IT for the Nolato Group.

Stronger capabilities

So Nolato now has protection in place that entails a high degree of automation, constantly examining suspicious activity in our computers and network.

"Our global SOC (Security Operations Center) works around the clock identifying and eliminating threats in and to our IT environment," explains Jonas Tillberg.

Firewalls remain a vital tool. They can still manage the basics of controlling the flow of traffic between different networks and allow or block specific types of traffic. This is done based on predefined rules.

"But what's different now is their ability to identify, monitor and filter traffic at a deeper level," notes Jonas Tillberg. "This enables the analysis of the content of the data being transmitted over networks and stops attempted breaches in real time."

Another security measure entails dividing networks into different segments to reduce the potential attack surface. This makes each segment a separate unit containing a group of units that can communicate with each other within the segment, but not necessarily with units in other segments.

"The purpose of network segmentation is to create safety zones within the network,

which limits the spread of potential threats and attacks," explains Jonas Tillberg. "If a segment is affected by malicious code or an attacked unit, the rest of the network is isolated and can't be damaged by the same threat."

Phishing a human risk

"But it's not all about technology; the people using the computers also need to understand the risks associated with things like phishing," notes Jonas Tillberg. "In many cases, phishing is now a more troubling risk for companies than purely technical attacks, as phishing is based on the manipulation of people."

An example of phishing is a fraudster using sophisticated email messages to obtain an employee's username and password to facilitate entry into IT systems and carry out attacks inside the firewalls.

But these messages may also entail the fraudster pretending to be a senior executive ordering the worker to pay large sums of money into an account.

"These emails are often convincing, with the correct sender and well-written, credible content," notes Jonas Tillberg.

Simulation improves knowledge

"To raise awareness among our employees of this type of crime, we use simulations, in which we create realistic scenarios of fraudulent emails," says Jonas Tillberg. "These messages are similar to those sent by



cybercriminals, and employees are encouraged to recognize and report them."

Following the simulation, employees receive immediate feedback and access to relevant training material to improve their knowledge. This helps develop a better



Nolato's global Security Operations Center works around the clock identifying and eliminating threats to the Group's IT environment.

understanding and greater vigilance of the methods that criminals use.

Open culture allows us to act quickly
Along with the simulations, regular training is also provided to increase awareness

of current IT security threats. This offers employees an insight into methods in order to prevent them, and into the best way to protect the company's, customers' and their own personal data.

"We encourage our employees around

the world to create an open communication culture and welcome the reporting of suspicious activity and potential security risks," concludes Jonas Tillberg. "This allows us to act quickly in the event of any incidents and prevent serious security threats." ■

Nolato's Technical Design Centers in Europe, Asia and North America merge

A key aspect of Nolato's business involves us sharing our expertise in design, materials and high-volume production to support our customers in their product development. By applying our end-to-end approach, experience and skills in advanced technologies, sustainable solutions and cost-effective production, we can help customers in the project phase develop new products with optimal functionality, lower environmental impact and reduced production costs.

Customer-specific products represent a significant portion of Nolato's manufacturing. This means that it is the customer's ideas, preferences and needs that form our starting point. By supporting customers with our experience and expertise in advanced technologies, sustainable solutions and cost-effective production, Nolato can help ensure that the customer's products have optimum functionality, that high-

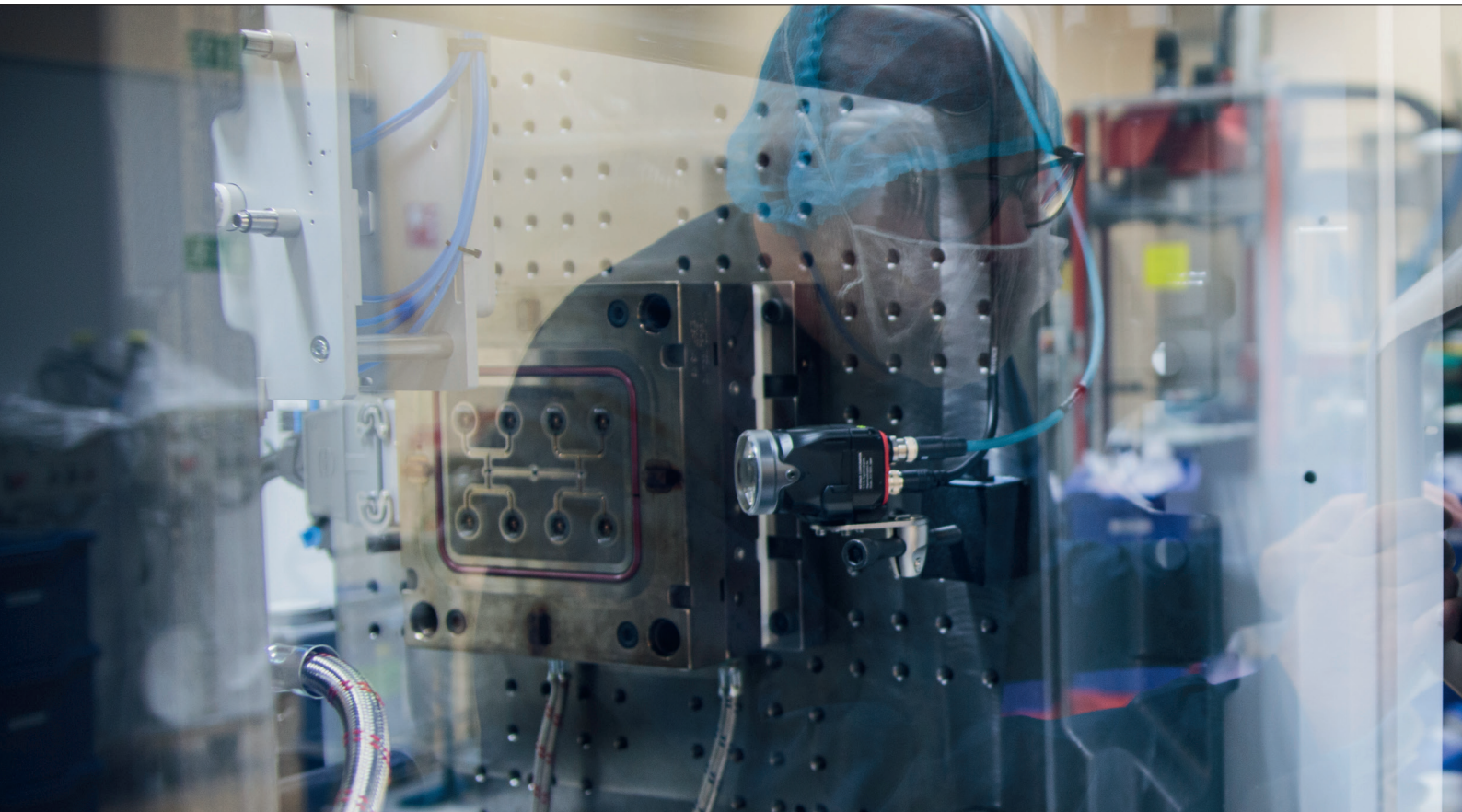
volume production is more cost-effective, and that the products have a reduced climate impact and are easier to recycle at the end of their useful lives.

Much of this work takes place at Nolato's Technical Design Center (TDC), which employs some 50 people in Europe, North America and Asia. TDC is also home to Nolato's 200 or so in-house toolmakers, who focus on developing and manufacturing

new molds that require various specialisms and who can also support local units by carrying out more extensive maintenance and upgrades to existing molds.

Important foundation for success

"Nolato's holistic concept is an important foundation for the company's successes," says Patrik Ingvarsson, TDC EU Director. "Although Nolato's main focus is on produc-



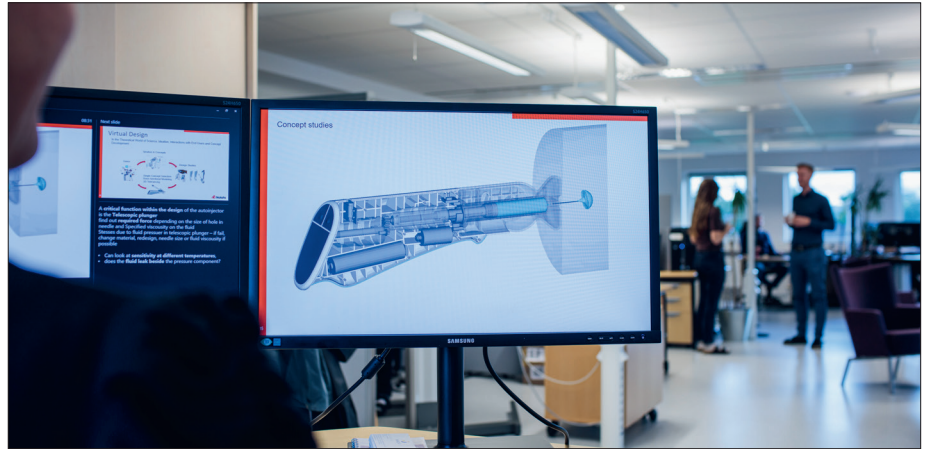
tion itself, supporting customers during the development phase is an extremely important and growing part of the business.”

There has been a TDC focused on the medical sector for many years now. It was based on the technological successes Nolato had had since the end of the 1990s, with an equivalent resource for the development of mobile phones in Kristianstad in the business area known at the time as Nolato Telecom. During the first decade of the 2000s, our Integrated Solutions business area built up resources in China, with an emphasis on consumer electronics. When Nolato later became established in the US in 2010 via the acquisition of Nolato Contour, a TDC was also set up in the US shortly after. In 2020, additional development resources were added via the acquisition of what is now Nolato GW.

Resources on three continents

These resources have now been merged to create a group-wide, global Technical Design Center with resources in Europe, North America and Asia.

“Our global TDC functions as a hub within Nolato to support customers in the development of new products, from project launch to industrialization. The basic premise is to



Supporting customers at the development phase is an important part of Nolato's operations.

be experts in areas such as simulation of the prospective design to see how it works in reality, including assembly of modules and system products, as well as the integration of electronics in the products and advanced decorative technologies,” explains Patrik Ingvarsson.

Our mission is to work with our customers using advanced analysis tools to clarify the connection between the product's function and the design of each individual component, and thus understand the significance of using resources in the right way.

“It's generally accepted that the cost of a

product is determined during the development phase. The same can be said of the product's environmental footprint: 80% relating to a product's eco-design is determined at the drawing board stage,” notes Patrik Ingvarsson.

TDC employees therefore also work alongside Nolato's sales organization to contribute their expertise at the start of a new customer project, particularly if it has not yet been decided which of Nolato's production units would be best suited to the project.

Knowledge bank

Part of the process also involves TDC engineers working closely with local experts at the production units.

“We recognize the principle behind One Nolato, and also regard TDC as a knowledge bank that harnesses internal networks to keep continually up to date with the experience and expertise that exists among over 200 qualified project engineers at our production units on three continents,” notes Bill Torris, Director TDC North America. “The opportunity to transfer expertise from different customer sectors is a significant part of our customer offering.

“Without close collaboration between TDC and the individual production units, there's a risk of everything being just theoretical,” stresses Bill Torris. “Nolato's considerable experience of efficient production, combined with detailed knowledge of the customer's market, means there is never a gap between theory and practice.

“And that's something that is of huge benefit to our customers in their projects.” ■



Important to encourage involvement as a company grows

During periods of expansion, how do you ensure a business doesn't lose its efficient decision-making structure and keeps everyone focused and feeling a sense of responsibility? One way is by behaving as though the business isn't so large.

Nolato has experienced considerable growth over the past few decades. When it was listed on the stock exchange back in 1984, the Group comprised four companies in Sweden with a workforce of 175 and annual sales of SEK 90 million. Today the Group employs 6,000 people and consists of over 30 wholly owned subsidiaries in Europe, Asia and North America, with combined sales of SEK 10 billion.

For some time, Nolato's fundamental culture was built on 'interaction between capable individuals with know-how, good ideas and a sense of responsibility creating a successful company'.

Close relationships

In practice, this meant that the Group was made up of a number of smaller companies, each with between 50 and 100 employees, an enterprising CEO, a flat structural organization and a close relationship with all its employees.

When Ericsson's vast plastics plant in Kristianstad with a thousand employees

was acquired in 1997 – a move that can be regarded as the birth of the modern-day Nolato – the business was therefore swiftly divided into several companies. The aim was, at least in part, to be able to adapt conditions to Nolato's somewhat more small-scale culture, with its strong focus on the customer and employee relationships.

Able to see the bigger picture

Today, 25 years on, customer focus and job satisfaction are still very much at the heart of our business. But it's not about dividing up the business anymore, but rather about creating virtual companies within a company.

"Some time ago we identified a real need to take a more active approach to our ownership of the various streams within the company," says Kristian Larsson, Sales Director at Nolato MediTech. "We needed to be even better at managing our existing customers, with clearer responsibility for the processes.

"We realized that everyone involved in a

customer relationship also needs to be able to see the bigger picture, not just the finer details."

As a result, the company's customer-related business was divided into five different value streams. Each value stream was assigned a value stream manager with ultimate responsibility for both customers and the employees who are part of the value stream.

The plant was also adapted to the value streams, and instead of employees who worked with specialist departments such as quality management, logistics or technology being grouped with others in the same specialist function, everyone working within a single stream – regardless of function – relocated to the same premises.

Clearer and more focused

"This simple move meant that the departments became secondary; it led to everyone working towards the same goal, with effective communication and efficient decision paths," explains Kristian Larsson. "Another effect was that it created more contact between the various specialist areas, which simplified work within the value streams.

"The results have been that both customers and employees are now happier. There's a natural ownership in our organization; everything has become clearer and more focused."

Some of the other larger Nolato companies are also working based on the same principles to create ownership and focus. Nolato Contour in North America calls it customer-centric teams, while Nolato Hungary has flow managers. But it all amounts to the same aim: creating commitment and clarity that leads to good business and job satisfaction. ■



The management of the Beta value stream at Nolato MediTech hold a brief status update.



Nolato PPT develops and manufactures windows, valves and gaskets that are used to shield electronics.

UK-based EMC company acquired

Nolato acquired UK-based P&P Technology in spring 2023. The company, based in Maldon, Essex, northeast of London, provides component- and materials-based electronics shielding solutions to ensure electromagnetic compatibility (EMC).

P&P Technology, which is now called Nolato PPT within the Nolato Group, was founded in 2014 and has around 20 employees. It has annual sales of around SEK 25 million with good profitability, along with a diverse customer base in areas including the aviation and automotive sectors.

Strong market growth

“We are seeing continued strong market growth in the EMC area and believe new business opportunities are being generated as developments in areas such as automotive electronic systems increasingly require

both EMC shielding and heat dissipation,” notes Christer Wahlquist, Nolato President.

Adapted solutions

Nolato PPT is now part of the Integrated Solutions business area. The customer offering includes a wide range of shielding windows, valves and gaskets that can be adapted to customer needs. The company will cooperate closely with US-based Nolato Jabar, which operates in the same customer area.

“We’ve been in touch with them for some time,” says Berndt Johansson, Managing

Director of Nolato Jabar who is managing the integration of Nolato PPT into the Nolato Group.

Stronger presence

“Nolato PPT gives us access to additional production technologies, a broader customer base and a greater presence in the UK and the rest of Europe.

“Nolato PPT is a small company but is a perfect fit with Nolato’s plans for continued growth in shielding solutions.” ■



Mass balance is starting to be used in the production of LoFric Elle to gradually replace fossil raw materials with bio-based circular raw materials.

Mass balance cuts carbon footprint

Mass balance for plastic is a useful way of slowly introducing renewable raw materials by mixing them with fossil raw materials to gradually phase them out of a product. We wrote about this in the last issue of Nolato Magasin.

Wellspect HealthCare has now started using the method in the production of a urine catheter, which has cut the plastic's carbon footprint by 55%.

Global medtech firm Wellspect HealthCare, headquartered in Mölndal outside Gothenburg, has now begun using mass balance as a method of gradually replacing fossil raw materials with bio-based circular raw materials in a urine catheter made by Nolato and sold under the name LoFric Elle (see issue 32 of Nolato Magasin).

Game-changer for medtech

The mass balance method makes it possible to trace the amount of bio-based circular raw material entering the value chain and attribute it to a product that is leaving the value chain. Compliance is verified by ISCC (International Sustainability and Carbon Certification), and both the manufacturer and the customer are certified or licensed.

"Identifying more sustainable raw material sources to produce medical plastic products is a game-changer for manufacturers of medical devices," explains Svenn

Poulsen, Group Vice President at Wellspect HealthCare. "By replacing fossil raw materials with bio-based ones, we reduce the carbon footprint of the end product without affecting the product's clinical performance."

Safeguarding quality

The original LoFric Elle catheter, launched in 2019, was made using solely conventional fossil-based raw material sources. Now mass balance is being used as a method of transitioning to bio-based circular raw materials, while guaranteeing the same medical quality as before.

According to Wellspect, the mass balance method reduces the carbon footprint of plastic in the product by 55% compared with the original product.

"In short, mass balance means we order the necessary amount of bioplastic from one of our raw material suppliers," explains Ancil Petersson, Sales & Marketing Director

at Nolato Cerbo. "Our supplier, in turn, buys in the corresponding amount of bio-based raw material, mixes this with fossil raw materials and produces the granules that we use in our injection-molding machines."

The exact same mix is also supplied to the raw material producer's customers that did not order bio-based raw material.

Overall increase in bioplastic

"So although the product we manufacture is not manufactured from pure bio-based raw materials, we know that our order has increased the amount of bio-based plastic used overall in the plastics industry," says Ancil Petersson. "The method shares many similarities with developments within global electricity production; it's the same electricity in the cables for everyone, but if you only choose electricity from renewable sources, the overall electricity mix is greener for everyone." ■

Transformation into a supplier of customized medical devices

Just over 10 years ago, when Nolato acquired UK firm Cope Allman Jaycare and renamed it Nolato Jaycare, it was largely a specialist manufacturer of standard pharmaceutical packaging.

Active development

The company has since been actively developed and has now been transformed into a supplier of customized solutions for both pharmaceutical and medtech customers.

Nolato Jaycare's operations are now

based in Newcastle upon Tyne in the north-east of England, having previously also included a unit in Portsmouth in the south of England.

End-to-end solutions

"Our aim today is to offer our customers comprehensive solutions, from the initial development phase right up to high-volume production of complete, assembled and packaged products," explains Matthew Cooper, Sales Director.

"We have further enhanced our in-house

expertise, while harnessing the wide-ranging knowledge and experience that exists in this area throughout Nolato.

"We now have several new cleanrooms in Newcastle, with a total area of 1,800 square meters. We've gradually created a competitive plant for world-class production of medical devices, and strengthened our resources in key areas such as project management, design, sustainable production and a lean approach," notes Matthew Cooper. ■



Nolato Jaycare has been transformed into a supplier of customized solutions for both pharmaceutical and medtech customers.



Application to SBTi and measurement of Scope 3 emissions are clear indications that Nolato takes responsibility.

Current calculations:

95% of Nolato's CO₂ emissions are indirect and fall within Scope 3

Nolato is adopting a proactive approach for a climate-neutral, circular future, and is taking responsibility for helping to counter climate change. The Group has ambitious emissions targets, aiming to reduce carbon dioxide emissions from energy usage, Scope 1 and 2 of the Greenhouse Gas Protocol, by 80% by 2025 compared with the average for 2011–2012.

Work on measuring the Group's Scope 3 emissions began in spring 2023, with the

results becoming available in September. A company's Scope 3 emissions refer to the indirect greenhouse gas emissions throughout a company's entire value chain, including those associated with raw materials, purchased services, transport, business travel, waste and employees' travel to work.

Latest Scope 3 figures

The calculation shows that 95% of the Nolato Group's total climate emissions come

from Scope 3 emissions, compared with 1% from Scope 1 (direct emissions that occur in its own business activities) and 4% for Scope 2 (indirect emissions from purchased electricity, heating and cooling).

Scope 3 is divided into 15 categories. Nolato's emissions have been calculated by category and separately for each group company, which provides useful knowledge about what is generating these emissions. This analysis shows that it is the purchase



of raw materials, components and services, which, with around 70% of total emissions, account for the lion's share of the Group's total climate impact.

Important sustainability milestone

"This is a crucial milestone for our sustainability work and consistent with our commitment to help fight global climate change," says Christer Wahlquist, Nolato President and CEO. "The results of this measurement allow us to quantify our overall carbon footprint and identify opportunities to reduce our climate impact throughout the value chain."

Nolato has applied for membership of the Science Based Targets initiative (SBTi) and committed to the 1.5-degree target, pledging zero emissions by 2050. The result of the Scope 3 analysis is essential information to establish science-based emissions tar-

gets for the business and for the targets to be approved by SBTi.

After a company has signed up to the SBTi, it has two years to submit its targets, which are then reviewed. Once the targets have been approved, progress in relation to these targets is reported annually; this relates to both the company's own emissions and emissions from its value chain. From 2024, Nolato's Scope 3 emissions also have to be reported under the EU's new CSRD sustainability reporting directive.

We take responsibility

"The application to SBTi and the measurement of Scope 3 emissions are a clear statement to Nolato's stakeholders that we take responsibility for our business being in line with the Paris Agreement's aims to limit global warming," concluded Christer Wahlquist. ■

New President of Industrial Solutions

Anders Björklund has taken up the position of President of Nolato's Industrial Solutions business area and head of the consumer electronics market segment. He will also be a member of Nolato Group management.



"By combining our Industrial Solutions offering with our provision within consumer electronics, we are creating a broader, global customer offering in these areas," says Nolato's President and CEO, Christer Wahlquist.

Anders Björklund holds a master's in materials engineering from KTH Royal Institute of Technology and joins Nolato from his position as CEO of Kanthal. Prior to this he worked at Gunnebo Industries, Volvo Construction Equipment and Ericsson. ■

Anders Ericsson new member of Group management

Anders Ericsson, head of Nolato's growing EMC (electromagnetic compatibility) business, is to be a new member of Nolato's Group management.

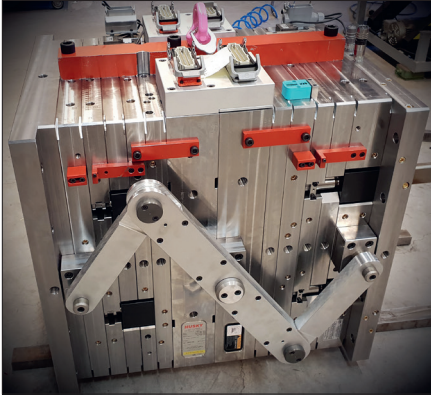


Anders joined Nolato in 1999 and for many years he has been Managing Director of Nolato Silikonteknik, where the Nolato EMC business first started. He holds both a degree in mechanical engineering and an MBA. ■

Nolato company recognized for best chemicals management

Nolato Cerbo, which develops and manufactures pharmaceutical packaging in Trollhättan in the west of Sweden, has been recognized by Chemgroup Scandinavia as having the best chemicals management in 2023 among medium-sized organizations.

Chemgroup, whose aim is to make the administration and management of chemicals in businesses as simple as possible, has for many years been examining businesses' approach to risk assessment, along with procedures and improvement efforts. ■



Precision injection mold manufacturer joins Nolato

Nolato has acquired tooling firm Be-Må, which has been renamed Be-Må Molds in the Nolato Group. The company, based in Värnamo, Sweden, makes precision tooling for the injection molding of medical and other products.

“Nolato has been working with Be-Må for almost 30 years,” says Johan Barkentin, Managing Director of Nolato MediTor.

“They’re very good at manufacturing molds for injection molding of silicone rubber, for example, and have long been major suppliers to both Nolato MediTor and Nolato MediTech.

“Having Be-Må in the Group will bring us on board at an even earlier stage than we are currently and allow us to help customers make test molds as well.” ■

Customer award for Nolato Dongguan

Since 2003, the team at Nolato in Dongguan has been a proud supplier to US company Samtec Inc., whose products extend from high-speed, power and ultra micro switches, to optics, RF and cables.

In March of this year, Nolato GW Dongguan received Samtec’s 2022 Supplier Outstanding Performance Award in recognition of its excellent support month after month throughout the year.

“The award is a great example that highlights Nolato GW Dongguan’s steadfast customer service, as well as Nolato’s objective of building solid, long-term partnerships with both suppliers and customers,” comments Ron Tomes, General Manager at Nolato Dongguan. ■

Expansion of Nolato in Romania Moving to a brand-new plant

Nolato’s production unit in Romania is continuing to expand and has moved into a new facility not far from the old one, close to the city of Ploiești, some 80km north of Bucharest.

“The new facility opens up far more possibilities, because it’s a modern environment and everything is under the same roof,” says Site Manager George Coman. “The total space of just over 4,000 square meters for production and warehousing gives us the capacity for additional customer projects in the form of more injection molding machines.”

The facility is well equipped, with an overhead crane, sprinkler system and staff areas. It also has a smaller carbon footprint than the previous site, as it is so well insulated that it does not require gas heating. “Even its geographical location is an improvement, as we have better connections with the major roads,” explains George

Coman. “And soon there’ll be a new freeway nearby, which will provide us with faster transportation to western Romania.”

Nolato in Romania is a satellite company of Nolato Hungary; they share the same company management and have joint sales, design and logistics departments. The site has a workforce of some 50 people.

Although the unit in Romania is still quite small compared with Nolato Hungary, with its almost 800 employees, it plays a key role in Nolato’s end-to-end customer offering.

“A general trend we’re seeing in the market is that customers are demanding shorter and less vulnerable supply chains,” notes Anders Björklund, President of Industrial Solutions.

“We’re seeing extremely strong demand in the Eastern Europe and Romania region, and our customers there are highly satisfied with what our team in Romania is delivering.” ■



Although the plant is still quite small, it plays a key role in Nolato’s end-to-end offering.



Nolato's Mexico plant is in Querétaro, a few hours' drive north of Mexico City.

EMC production now in Mexico too

Nolato's plant in Mexico has gained expertise and resources within EMC – electro-magnetic compatibility – that is, materials and solutions to eliminate electromagnetic interference between electronic components.

The new resources in Mexico complement Nolato's existing EMC offering, enabling us to provide solutions in Sweden, the UK, Hungary, China, Malaysia, the US and now Mexico as well.

The plant enjoys a central location in Mexico in the city of Querétaro, roughly three

hours' drive north of Mexico City. It became part of Nolato as a result of the major acquisition of GW Plastics in 2020, and now supplies customers across all of Nolato's business areas.

In addition to EMC production, Nolato GW Querétaro works mainly with the design, development and production of business-critical components and assembled products for medtech and automotive industry customers. Production takes place both in standard environments and in cleanrooms. ■



The new resources in Mexico complement Nolato's existing EMC offering.

Nolato certified as a Nasdaq ESG Transparency Partner

There is currently a clear trend among investors of considering more than just purely financial returns on an investment. It is now normal to factor in a company's work relating to climate change, human rights and diversity, as we know that the management of these issues has a long-term impact on a company's performance.

To offer investors a reliable source of data in these areas, Nasdaq, which operates some of the world's largest stock exchanges, provides a central database with data in these areas, known as the Nasdaq ESG Database Portal. Unlike many other similar databases, the information in Nasdaq's portal comes direct from listed companies.

In line with Nolato's objective of transparently reporting our work relating to environmental and social responsibility, we report our data in these areas to the Nasdaq portal and have been certified as a Nasdaq ESG Transparency Partner. ■



Updated Code of Conduct

Nolato's Code of Conduct is an important part of the business. It serves as an introduction and guide to our fundamental business principles and our way of operating.

As the Group is growing and now operating on three continents with different cultures, it is important for us to be transparent and clear about the requirements we impose on ourselves and our stakeholders.

The Code of Conduct has therefore recently undergone a review to ensure it reflects current conditions. It is our ethical compass, and must be followed by everyone who acts on behalf of the company.

The new Code of Conduct is available at www.nolato.com/coc. ■



Solar farms don't just generate energy; they help boost biodiversity as well.

Agrivoltaics

A win-win-win for sheep, costs and the environment

Outside the town of Åhus in southern Sweden, Nolato has one of Sweden's largest solar farms.

Nolato gets around 15% of its annual electricity in Sweden from a solar farm outside Åhus in the region of Skåne. The solar farm is the size of eight soccer pitches and generates around 8 GWh of electricity a year.

The ground on which the solar panels stand is covered in grass. And as everyone who has a garden knows only too well, grass takes a lot of work to keep under control. This is also true of the solar farm. Using a tractor mower didn't seem the right choice for maintaining the solar farm, either in terms of the farm's purpose or costs.

So the grass is now maintained by a flock of sheep, who do the job in return for a constant supply of food. It's a win-win-win for

the sheep, costs and the environment.

Combining farming and solar energy – known as agrivoltaics – is becoming increasingly common, as it optimizes the productivity and efficiency of land use.

And thanks to the shade that the solar panels create, the sheep grazing solar farms are generally happier and healthier.

A study in the journal *Applied Animal Behaviour Science* demonstrates that sheep that grazed on a solar farm spent 70% of their time in the shade of the solar panels and grazed 8% more than sheep in an open field. In addition, the nitrogen content of the grass was much higher in the solar farms because of the shade and soil moisture,

making it more nutritious and digestible for the sheep.

These solar farms also contribute to increasing biodiversity, with open landscape in which grass, herbs and flowers flourish, along with insects, pollinators and small animals.

The solar farm has been 'sheep-proofed' for safety purposes, and the shepherd has been trained in how to operate in an electricity generation facility. ■

ABOUT:

The solar farm is a partnership between power producer Alight, electricity trader Bixia and Nolato.