

Nolato Magasin

No. 27 | November 2016

Two acquisitions expand customer offering

➤ Find out more on page 6.

Christian Randau, Nolato MediTech

Nolato wins Swedish Lean Award | Efficient laser-based bonding
Overall approach gives product new start | Electronics certification
Why a Native American? | 15 metre-long injection moulding machine
Deft solution boosts clean room capacity

New task chair with micro-movements

Capella is a new task chair. Light, comfortable and ergonomic, it's created for active sitting.



➤ Find out more on pages 4-5.

Bluetooth-enabled ceramic jewellery

More designers have fallen for the tough, biocompatible ceramic zirconia.



➤ Find out more on page 7.

Efficient production for new truck range

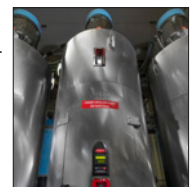
Optimised design and engineering create an efficient component production solution for Scania's new trucks.



➤ Find out more on pages 8-9.

Fully automated supply system

A fully automated material supply system provides even better conditions for an optimal production process.



➤ Find out more on page 10.



Christer Wahlquist, President & CEO

One Nolato

Nolato is a decentralised company. This provides the foundations for committed and motivated employees, while enabling us to make operational decisions in close contact with those who are affected by these decisions.

From an early stage, Nolato's organisation has been based on the fundamental idea that it is capable individuals, with knowledge and good ideas, working together that create a successful company.

Although it is these parts that create the whole, it's the whole that defines Nolato. Because, although we have a flat organisational structure with efficient decision-making lines, we are also *one* Nolato.

Our entire business is based on a shared foundation. We have shared values, shared technology and shared goals. Wherever in the world we are.

This means that, in cooperation with our customers, we can always draw on the extensive expertise that exists throughout the Nolato Group. It is on these foundations that we base our sector-related expertise in development and production, ideally adapted to each customer's particular needs and preferences.



Nolato 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
Translated by Oliver Dirs | Printed in Sweden

Nolato AB, SE-269 04 Torekov, Sweden
+46 431 442290 | info@nolato.com | www.nolato.com

Award from Volvo Cars recognises improvements

Nolato Lövepac has received an award from Volvo Cars for the improvements it has implemented and its security of supply.

It pays to make improvements. And so it has proved for Nolato Lövepac, which received the Volvo Cars *Quality Through Excellence Award (VQE)*.

"We've been working hard for a number of years on implementing extensive improvements", says Annelie Sjö, Quality Assurance Manager at Nolato Lövepac.

"We're all very proud. It shows that it pays to make improvements and to be constantly vigilant about the quality of our manufacturing.

"We're also grateful for Volvo Cars' support and involvement in our development as a supplier and what we've achieved.

"We now plan to implement further efficiency and improvement measures," adds Annelie. "We mustn't sit on our laurels and we need to carry on developing and ensuring the quality of our processes."



Quality Assurance Officers Tinette Sjöblom, Mikaela Enoksson and Jessica Hallin, together with Quality Assurance Manager Annelie Sjö, received the award from Bill Rosenlund and Gabriel Adam of Volvo Cars.

Nolato Group news

Johan Iveberg took up his new post on 19 May as President of Nolato Medical and member of Group management. Parallel to his role as business area President, Johan will remain Managing Director of Nolato MediTech.



Johan Iveberg holds an MSc in Engineering and, before joining Nolato, worked in the Trelleborg Group managing two production units. He has also held management positions at companies including Perstorp and Akzo Nobel.

Guido Vollrath has been MD of recently acquired Nolato Treff since 2010, and was formerly Production Manager. He holds an MSc in Plastics Engineering.



Wojciech Orlowski has been MD of recently acquired Nolato Stargard since 2007, and was formerly Production Manager. He holds an MSc in Engineering.





Nolato MediTech won the Swedish Lean Award 2015 for its production system.

Nolato MediTech wins Swedish Lean Manufacturing Award

Nolato MediTech was named winner of the Swedish Lean Award 2015 at the Swedish Lean Forum. Over four years the company has made 3,600 improvements to its business operations, boosted productivity by 50 percent and reduced both customer complaints and scrap levels by over 60 percent.

“We’re absolutely delighted,” says Johan Iveberg, Managing Director of Nolato MediTech. “Our focus on lean manufacturing, or Medical Excellence as we call our production system, has contributed hugely to our excellent performance in recent years.”

The Medical Excellence production system combines lean principles with good manufacturing and documentation practice (GMP and GDP). The work has involved the entire company, and Johan Iveberg believes this has also been a major factor.

“I’m passionate about lean manufacturing and I know what an impact it can have. But the momentum of our lean work has gradually shifted from the management to staff, and they are now leading this work themselves.”

Having the whole company actively onboard adds real impetus to these efforts. Nolato MediTech now has 25 different improvement groups that set aside time each week to work on improvements.

“One of the challenges has been to combine the continuous improvements of the lean approach with the requirements of our medical technology business. We work in an industry in which all changes potentially pose significant risks.”

The fact that the company has succeeded despite this is testament to its work over the past four years: 3,600 improvements have been implemented, customer complaints have decreased by 60 percent and scrap has been cut by 65 percent. Security of supply is up from 95 percent to 99 percent and productivity has increased by more than 50 percent.

Lean measures have also resulted in improvements for employees and not a single serious accident has occurred in four years. The trends in the regular employee surveys conducted by Nolato MediTech are very positive:

“Everyone now knows there are two aspects to their job: not only what they are currently doing, but also the continued development of that,” notes Johan Iveberg.

Judging panel’s comments

“Nolato MediTech has a long tradition of responsible business that combines efficient business operations with ethics, responsibility and environmental awareness. They have a clear vision of being a world leader by creating a world-class business. The Medical Excellence production system, based on the company’s values, is their framework for developing the business, in close cooperation with both customers and suppliers. The development of its corporate culture and its improvement measures are being further developed through the use of manager and employee training days which emphasise creativity. 3,600 improvements have been made over four years. During that time, the company has had no serious accidents, reduced customer complaints by 60%, decreased scrap levels by 65%, has security of supply of 99% and boosted productivity by over 50%. Nolato MediTech is an inspiring example for all types of organisations that aim to be world-class!”

New President and CEO

Christer Wahlquist, who has worked at Nolato for 20 years, took up his post on 5 February 2016 as the new President and CEO of Nolato.

Christer Wahlquist is 44 years old and holds an MSc in Engineering as well as an MBA. He has significant international experience in marketing, production and acquisitions. He has worked at Nolato since 1996 and, over the past 10 years as business area President, has successfully developed Nolato Medical into a global player with operations in Europe, North America and Asia. He has been a member of Nolato Group management since 2005.

“With his broad business experience and in-depth knowledge, Christer is the right person to continue the highly successful development of Nolato over recent years,” said Chairman of the Board Fredrik Arp.

Christer Wahlquist succeeds Hans Porat, who after eight years as President and CEO, left Nolato to retire.

Innovative and logical task chair with well-balanced micro-movements

Capella is a newly developed task chair from Kinnarps. It's lighter, comfortable and ergonomic, with well-balanced micro-movements incorporated into the seat for active sitting. And most of its plastic components are supplied by Nolato.

The Capella task chair is based on a new approach, offering a mechanism with a seat and back that follow the user's movements entirely independently of one another. Small well-balanced micro-movements in the seat also create minor changes without the chair feeling unstable.

"Sitting doesn't mean sitting still, which is why the chair encourages your body to move to provide for optimum wellbeing, even though you're sitting down," says Magnus Berggren, a designer at Kinnarps.

Working with researchers

"We worked with researchers at Chalmers University of Technology in Gothenburg. That also provided us with a logical approach for all the chair's functions, which is important in allowing the sitter to really use the chair in the right way," notes Magnus Berggren.

"One example of this is the grey components on the setting controls, made of soft plastic, which indicate that you need to turn them to change the settings."

As well as being ergonomic and attractive, the chair is lighter than other, similar chairs. That's positive not only for today's activity-based work environments, where the chair is used by lots of people, but it also makes for a better work environment for Kinnarps' assembly staff. This has been achieved by replacing weightier materials with lighter polymers offering the same function and, for example, by using magnesium instead of heavier metals.

Nolato main supplier

The main supplier of the plastic components for the Capella is Nolato Polymer in Ängelholm, Sweden, where Per Berlin and Thomas Lindberg are managing this project that includes around 40 different plastic components.

"We work very closely and constructively with Kinnarps," says Per Berlin. "We were involved early on in the process so we've been able to contribute our experience in materials and engineering to create an optimal production solution."

"Working with a large number of inter-linked components allowed us to get an overview, giving us better opportunities to support our customer. This benefited both parties and ultimately led to a better product."

Nolato injection-moulds the components at its Ängelholm plant in both soft and hard polymer materials. The work involves lots of overmoulding, as well as



Thomas Lindberg and Per Berlin manage this project at Nolato.

the assembly of complete functions for the chair, such as the armrests, which are supplied ready for assembly at Kinnarps.

“We’re now looking at how we can help Kinnarps by also supplying a complete function for the chair’s height adjustment,” comments Thomas Lindberg, Senior Production Engineering Manager at Nolato in Ängelholm. “That will make things even easier for the customer.”

Win-win situation

Tomas Bäckman is Kinnarps’ purchaser for the project and was involved in bringing the Capella chair to market. He is very pleased with Nolato as a supplier.

“It’s an advantage that we can concentrate on what we’re best at, so we welcome Nolato’s efforts to supply us with more complete functions. It’s a win-win situation.”

“Our cooperation with Nolato has grown steadily in recent years. They provide us with good technical and project support,” says Tomas Bäckman. “We feel they offer quality in all aspects of their operations and provide our designers with excellent feedback over the course of a project. That makes our work easier and helps us successfully take the product from the drawing board to producing a finished task chair.”

Award-winning chair

In addition to its ergonomics, Capella’s attractive styling has also drawn plaudits. It won the Good Design Award at Chicago Athenæum Museum of Architecture and Design’s annual prize-giving for the world’s most innovative and groundbreaking products, giving another meaning to the phrase ‘sitting pretty’.

BACKGROUND: Kinnarps

Kinnarps is Europe’s leading provider of interior solutions for offices. The company is privately owned and is headquartered in Kinnarp, a small town in south-west Sweden, and has production and assembly operations in five factories in Sweden and Germany.





Treff, now called Nolato Treff, manufactures advanced precision components and supplies for diagnostics.

Acquisitions in Switzerland and Poland expand customer offering

In autumn 2016, Nolato acquired two European companies, Treff in Switzerland and Grizzly Medical in Poland, expanding our customer offering and providing access to new markets.

“Acquisitions are an important part of our growth strategy, and we are continually working to boost shareholder value by identifying high-quality companies that complement our offering, hold solid market positions and have a high level of technical expertise, as well as a corporate culture that is a good fit with ours,” said Christer Wahlquist, President and CEO of Nolato.

“So we’re pleased to have completed the acquisition of these two companies, which will be a good match for Nolato, expand

our customer offering and give us access to new markets in Europe.”

High level of technology

Treff, which is the larger of the companies, is based in Degersheim, a town in north-east Switzerland in the canton of St Gallen, around 30 kilometres from Lake Constance and the German border. The company has around 190 employees and is focused on high-tech development and production of plastic products for medical technology and industrial customers.

“It’s a great company with good management and a good organisational structure,” said Johan Arvidsson, President of Nolato Industrial. “It’s well managed and well invested, with a high level of technology and strong skills in high-volume production, assembly and advanced automation.”

The company has been family-owned since it started in 1946 and is a good fit with our corporate culture. The current management will remain with the company.

Treff manufacturers supply products for



Grizzly Medical, now renamed Nolato Stargard, is mainly involved in the assembly and post-processing of medical device components.

medical and self-care diagnostics (in-vitro diagnostics, IVD), as well as technically advanced precision components for various industrial segments. The company's sales for 2016 are estimated at just over SEK 450 million.

"The acquisition gives us a presence in the German-speaking part of Europe. It will open doors to a large group of new and internationally leading customers, particularly within medical technology," said Nolato President and CEO Christer Wahlquist. A number of these are already customers of Treff.

Within the Nolato Group the company will be called Nolato Treff. Around two-thirds of the business will be reported within Nolato Industrial, and one-third within Nolato Medical.

Assembly and post-processing

Grizzly Medical is involved in the assembly, post-processing and quality assurance of medical device components. The company, which has annual sales of around SEK 25 million and good profitability, has been a supplier to and partner of Nolato Medical for many years. The factory is located in Stargard in north-west Poland, two hour's drive from Berlin.

"This is a relatively small but strategically important acquisition that boosts our capacity in the low-volume, clean room-based production segment, including assembly and post-processing," said Johan Iveberg, President of Nolato Medical. "We are seeing growing demand for complex products and systems that require manual or semi-automated processing."

Short production runs

Grizzly Medical, which in the Nolato Group will be called Nolato Stargard, has around 90 employees. The company was established in 1996 and has provided manual and semi-manual processing for Nolato for almost 20 years.

"Stargard is logistically a good location for our Swedish operations as it's only around 100 kilometres from the ferries between Ystad and Poland," said Johan Iveberg.

"The acquisition gives us even better opportunities to compete on short production runs with high value added."



Vinaya's necklace is made of zirconia from Nolato. It sends the wearer subtle vibrations when a particular call or message is received, allowing their phone to remain out of sight.

Bluetooth-enabled jewellery made from ceramic from Nolato

Zirconia, or zirconium dioxide, is a tough material that is fully biocompatible, which means wearers of items made from zirconium dioxide won't suffer any allergic reaction.

Use of zirconia has previously been restricted by an extremely complicated production process. But, together with materials suppliers and researchers at Chinese universities, Nolato has developed material mixtures that make production easier and allow the material to be used in high-volume manufacturing.

Nolato Magazine has previously showcased the Miragii smart pendant. The material has now started to be used in oth-

er eye-catching products. For example, London-based technology design studio Vinaya has developed a collection of Bluetooth-connected rings and pendants made from zirconia.

Another London-based firm, digital health company Cloudtag, is using zirconia from Nolato in its new family of wearable sensors.

These discrete, light sensors continually measure a range of health indicators in users and then transfer them wirelessly to a smartphone. The material's properties mean the sensors can be worn on the body around the clock without causing any problems.

Optimised design and engineering creates efficient production solution for Scania

After 10 years' development and SEK 20 billion in project costs, in August 2016 Scania presented its new truck range. A range with new cabs, new technology, new services and new insights. And with Nolato as a supplier of 70 different items.

Scania's new truck range, its first in 20 years, is Scania's largest investment in its 125 year history. After 10 years' development, SEK 20 billion in project costs and over 10 million kilometres of test driving, it has launched its global initiative. Initially, the focus will be on vehicles and long-haul transportation services, but more options will gradually be introduced as more of Scania's factories are reconfigured.

Scania has focussed strongly on customer profitability in its development of the range, with the company promising at

least 5 percent lower fuel consumption. The new trucks have been well received and the long-haul range has already won the prestigious International Truck of the Year 2017 award for its driver comfort, safety and economy.

Supplying for new cabs

The most noticeable features of the new range are the new cabs, for which Nolato has been contracted to provide a number of items for the newly introduced R and S cabs. And more items will be added

as other cabs go into production at Scania around the world. Nolato is supplying more than 70 items.

"For us, work on the project started in 2013 with supplier audits and an extensive tendering process," says Andreas Pettersson at Nolato in Götene, Sweden. "Now that we have started actual production, the majority of the items are being supplied direct to Scania's assembly plants, while for other items we have been designated by Scania as a supplier to their Tier 1 suppliers."





Nolato had six project managers and around 10 production technicians involved in the development of the new items for Scania.

Numerous points of contact

“As we’re supplying everything from small to very large items in a range of materials, most production groups in the factory are involved in the project,” explains Andreas Pettersson. “We also have numerous points of contact with the customer, with effective direct contact between our and Scania’s

purchasing, quality, project, production and logistics units.

“As Scania involved us at an early stage, we have been able to actively support the customer by proposing improvements, both in terms of the design of individual items and what materials to use for the best results.

“The aim has been to optimise design in order to create the most efficient and effective production solution for Scania, both financially and in terms of quality,” says Andreas Pettersson.

BACKGROUND: Scania

The items being supplied for Scania’s new truck range include both exterior and interior components. Production comprises three-component injection moulding in materials such as PP, TPE, PE, PC/PBT and PA with a clamping force of up to 3,200 tonnes. For certain items, application of foam gaskets and/or assembly is also provided.



The applicator is manufactured using a fully automated, continual process that also includes individual and batch packaging.

Overall approach to product after customer moved applicator production

When a major international pharmaceutical company moved production of a vaginal applicator from a US-based manufacturer to Nolato Medical in Sweden, an overall approach was adopted to give the product a new start.

A while ago, a large international pharmaceutical company asked Nolato Medical to take over production of an applicator for self-administration of vaginal medication.

The product had previously been man-

ufactured in the US, which was far from ideal logistically. There was also scope for developing the design in order to simplify production and ensure quality.

But the pharmaceutical company wasn't

particularly interested in having exclusive rights to the product.

"The solution resulted in us adopting an overall approach to the product," explains Kristian Larsson at Nolato Medical in Hörby, Sweden. "We redesigned it and have created an optimised production solution, right up to the packaged product.

"Our customer gained some advantage in using the updated applicator design, but we are now also offering it to other pharmaceutical companies," says Kristian Larsson. "We can easily adapt the design of the product to suit different tablet sizes.

"We can also provide it with individual markings, logo and exterior design as part of the production process."

The applicator is produced using a fully automated, continual process that comprises two-stage injection moulding, application of exterior design, assembly of the components, individual sealing of each applicator in a plastic bag and batch packaging of sealed applicators in larger plastic bags.



The entire process takes place in a class 8 clean room at Nolato Medical in Hörby, Sweden.

Deft solution boosts Nolato's clean room capacity

What do you do when you receive a large order for a product that needs to be produced in a clean room but you have no clean room capacity left? You solve the problem, of course.

Some time ago, Nolato MediTech in Lomma, Sweden, received an order for a product that needed new production cells in class 8 clean rooms. But the plant's existing clean rooms were already running at full capacity and there was no time to build more clean rooms.

The solution was to transform an existing hygiene-class production facility into a clean room. This was a fairly major change, as the production floor had to be cleared, resurfaced, have its ventilation upgraded, have staff and materials access controls installed and be adapted to the new machines. It was a process that would normally take several months.

Fully occupied

The problem was that the facility was fully occupied with production of ongoing supplies to another customer. Those supplies couldn't be interrupted or delayed.

"But we still found a solution," says Per Persson, Production Engineering Manager at Lomma. "In consultation with the customer whose production the refurbishment would affect, we started running

additional production and built up inventory so we could continue delivering supplies throughout the construction period."

Meticulous planning

Once this stock was built up, everything was moved out and refurbishment started. Thanks to meticulous planning, the clean room was ready just five weeks later.

"During that time we also optimised the production structure for the existing product so it took up much less space than before," explains Per Persson. "That gave us lots of room for the new production cells and we were able to start production on schedule."

The facility, which is now a class 8 clean room, has a highly efficient system for supplying the injection moulding machines with electricity, air, water and plastic raw material. Those cables normally come down from the ceiling, but the new facility has one metre-wide media ducts inside the outer walls. This allows each machine to be easily connected to the socket on the wall.

"We've now got a very effective setup,"

notes Per Persson. "And as well as being practical, it's also much easier to clean than when we had pipes coming down from the ceiling."

And that's important in a clean room.

BACKGROUND: Clean room

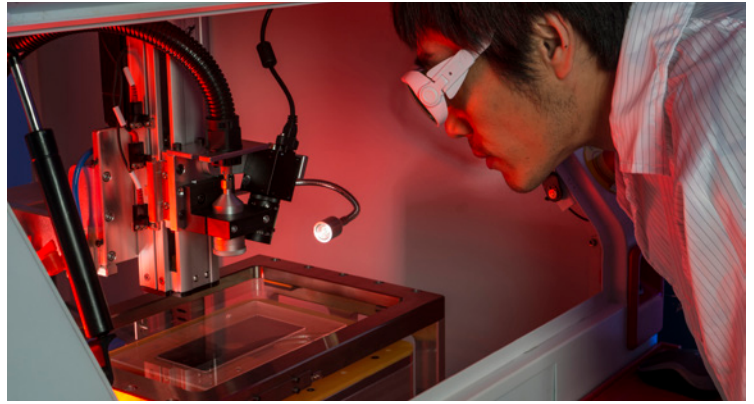
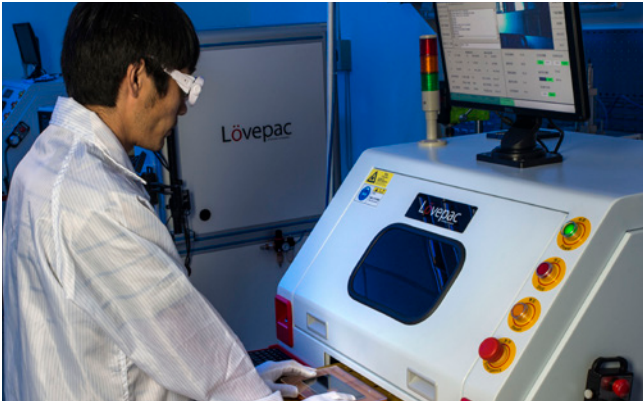
A clean room is a room with a controlled environment. Air passes through a HEPA filter to remove particles, fittings are chosen to be easily cleaned and staff are dressed in clean room suits and hair nets. Staff with facial hair must wear beard covers. All entries of staff and materials must pass through airlocks.

A lot of Nolato Medical's production takes place in clean rooms, and Nolato Telecom also has clean rooms for processing surface-sensitive components for mobile phones, for example for painting or metallisation.

Hygiene rooms are a more basic form of clean room with more basic ventilation and fewer restrictions.



The new clean room has an efficient system for supplying injection mould machines.



The bond is activated by a laser beam. Re-exposure to the laser allows the unit to be reworked if there is a manufacturing error.

Efficient laser bonding saves time and resources

Lövepac Converting has developed a new bonding technique for the assembly of components such as display screen panels. The new technique, which is based on a laser-activated adhesive, is very quick to apply in manufacturing and provides a strong waterproof bond between materials.

“Our new bonding technique has sparked significant interest among manufacturers, particularly of fitness trackers and smart-watches, as well as different types of handheld consumer products,” says Dan Wong, Managing Director of Lövepac Converting.

The adhesive tape is activated immediately during assembly by being irradiated with

a laser beam. No curing time is required, making the process quick and efficient.

A major advantage of the new technique is that, while it provides a strong bond, it’s easy to rework the materials if an error occurs in manufacturing. The material can be deactivated through re-exposure to a laser beam, allowing easy reassembly or

replacement of a component. This eliminates time-consuming and labour-intensive removal of residual adhesive when a product needs to be reworked.

Lövepac Converting has developed a complete system for the new bonding technique, including laser equipment, adhesive and technical solutions.

New containers for moisture-sensitive medication and supplements

The Packaging Design Centre at Nolato has developed an expansion of the Cerbo Solid container range. The Cerbo Solid W has a similar design to the Cerbo Solid range, but the new packaging has a maximised 34 mm neck opening, and an excellent-fitting closure system for low MVTR, reinforced by extra wall thickness. The optimised closure and thick walls of the container ensure additional safety and superior tightness for solid dose pharmaceutical products.

Powderpac is a brand new range of containers and closures specially designed for

the containment of powders. Container variants range from 625 ml to 7715 ml, making them ideally suited for packaging in the sports protein market.

Large-diameter screw closures (89 mm and 120 mm thread) are supplied complete with a single-piece IHS liner for sealing and tamper evidence.

Both the containers and closures can be manufactured in a range of colours to offer or maintain brand identity.

The containers are round in shape to simplify decoration (with labelling, shrink sleeve or printing).



Cerbo Solid W

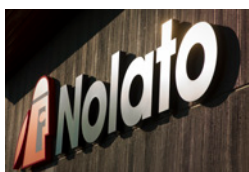


Powderpac

Why does the Nolato logo feature a Native American?

Yes, why does our logo include the profile of a Native American? It actually all makes sense if we look back a little.

Early on in the company's history, the marketing used images of a Native American tapping liquid natural latex from a rubber tree. That image was gradually stylised and started being used as a symbol for the business, and was then included in the logo for the original Torekov-based company called *Nordiska Latexfabriken*



i Torekov (The Nordic Latex Factory in Torekov); in 1982 it changed its name to the contract-

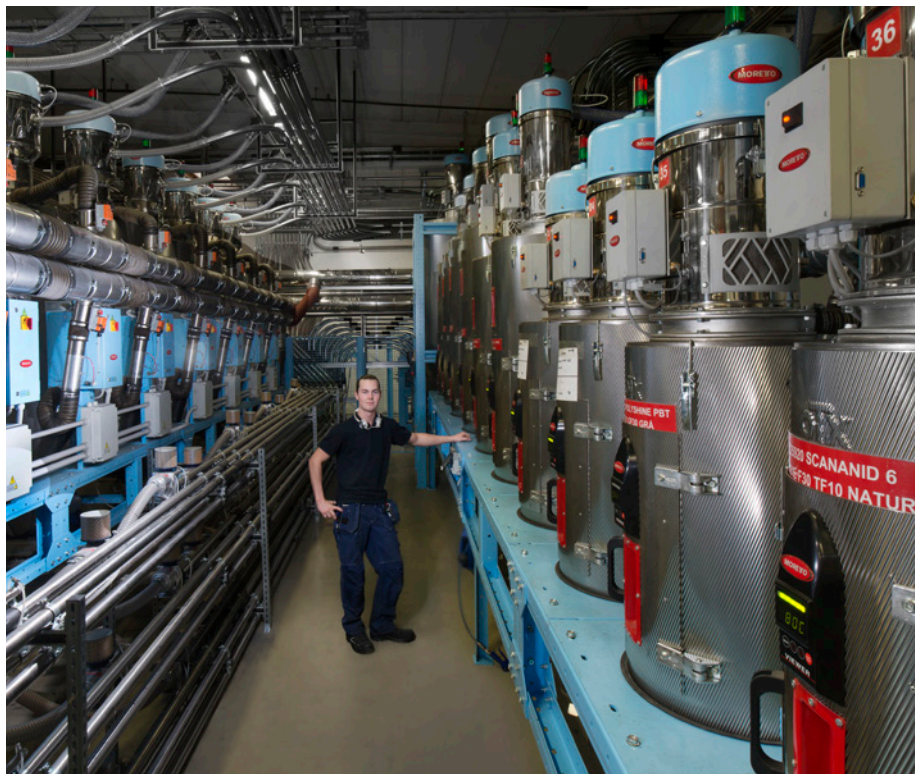
ed form *Nolato*. However, all the subsidiaries acquired over the years continued using their original logos. The current logo was then produced in 1995 for the entire Group and it seemed only natural to retain the image of the Native American, which was stylised still further.

Today, natural and synthetic latex are used in a relatively small proportion of the Group's output. Nolato MediTor, one of the two plants based in Torekov, still produces latex products, including breathing bags and catheter balloons used in heart surgery. Besides this, plastic, silicone rubber and TPE are the main materials now used. The only remaining company focused on rubber-based production was sold in 2013.

Nolato Hungary receives award from Wellspect Healthcare

For the third consecutive year, Nolato Hungary won the Supplier of the Year award from Wellspect Healthcare, for the production of surgical products.

"We're delighted to win this accolade," said Norbert Meleg, VP Sales and Administration at Nolato Hungary. "To win it twice was great. To win it three times is even better. But to win it three times in a row is a real testament to the brilliant work that our employees do."



Oliver Jacobsson, who works in maintenance and servicing, with the new system's dryers.

Fully automated material supply boosts efficiency

At Nolato Gota, based in Götene, Sweden, the supply of raw material for injection moulding machines is now fully automated and reviewable by using an advanced system for storage, drying and distribution of plastic raw material.

When the material arrives from the supplier, it is placed in one of the supply stations. When it is due to be used, it's drawn up into one of the 36 material dryers, where it's dried to precisely the right moisture content and then transferred through pipes to the right injection moulding machine.

Boosting efficiency

"The system is fully automated all the way up to the injection moulding machine," explains Johan Björk, Maintenance Manager at Nolato Gota. "We previously had to switch hoses manually to get the right raw material to the right machine. Now

the system manages everything itself. As soon as operating staff switch to a new production order, the material system receives a signal telling the injection moulding machine to access the right material for the new order."

Flexible system

The new system is highly flexible, and can access material from all supply stations and send raw material to all injection moulding machines.

"The system also allows us to review what temperature the material was at for the manufacture of a particular component, when it started drying and whether the air flow was correct.

"We've also started using a moisture meter so we can go back and review that value, which together with other parameters gives us even better data to optimise the production process."



Cevira from Photocure.

Certification for integration of electronics

Nolato MediTor has expanded its ISO 13485 certification to also include the integration of electronic functionality.

“Gaining certification to also work with integrated electronics in products is a natural step for us as we’re entirely focused on medical technology customers,” says Michael Holmström, Managing Director of Nolato MediTor in Torekov, Sweden.

Increased home care

Most medical devices now need to be able to communicate with their environment. Not just with nearby devices or within a hospital, but also over the internet so they can be used at home, reducing the time that patients require hospital resources.

“Electronics have long been used in medical care,” says Michael Holmström. “What’s new is the increasing development and adaptation of electronic devices to make them so user-friendly and reliable that they can be used by patients at home.”

Significant experience

Nolato has extensive experience of developing and manufacturing polymer products with integrated electronics for the consumer market, such as mobile phones. This medical technology certification represents a further strengthening of Nolato’s customer offering in this area.

Global perspective on Nolato’s sustainability work

The new global sustainable development goals that come into effect in 2016 and apply to all countries around the world carry significant hopes that the business sector will be able to work with these global targets and, through technological development and other means, contribute to long-term sustainable development of society.

It’s a nice thought – but how will it work in practice and how will it change Nolato’s sustainability goals?

Nolato Magazine put these questions to Antoine Bonnamy from France, who used Nolato as a specific example in his master’s dissertation at the International Institute for Industrial Environmental Economics (IIIEE) at Sweden’s Lund University about the application of these global targets in the private sector.

What really is the difference between the new global targets and the previous millennium goals?

“These Global Goals have a better comprehensive approach to sustainable development,” notes Antoine Bonnamy. “They’re clearly interlinked and a real effort has been made to prevent these goals counteracting one another. They’re also grounded in a very extensive process in which the 193 UN member states, lots of organisations and, not least, representatives from business, have been involved. The fact that the business sector will participate actively in realising these targets is also important.”

Should Nolato use these goals in its sustainability work?

“Nolato already uses a number of sustainable development goals, which is good and provides a transparent overview of progress and setbacks. I can see all 17 of these global targets being used in some way by Nolato, but some of the targets are more relevant than others. Targets such as



All 17 global sustainable development goals can be used by Nolato, writes Antoine Bonnamy in his master's thesis.

‘Health and Well-being’, ‘Gender Equality’, ‘Sustainable Energy for Everyone’ and ‘Decent Labour Conditions and Economic Growth’ are some examples. Other high-priority goals for Nolato are ‘Sustainable Industry, Innovation and Infrastructure’ and ‘Climate Action’.

But will Nolato actually use these global goals?

“Antoine Bonnamy’s dissertation provides a good background to how the goals can be used by businesses,” says Torbjörn Brorson, who is Nolato’s Head of Sustainable Development and Professor at the IIIEE. “As an initial step, we will be clearer in showing the link between Nolato’s goals and the Global Goals. We’ll do this in our next sustainability report and in our UN Global Compact submission.

“And it will soon be time to update our own goals and we’ll take a view on how the official global goals may affect the formulation of goals at our level,” notes Torbjörn Brorson. “We’ll also be following the development of indicators and key figures for the business sector with interest.”

BACKGROUND:

The world’s leaders have committed to 17 global goals over the next 15 years, addressing poverty, inequality, injustice and the climate crisis.

Energy audits to reduce carbon footprint

Keeping the Nolato Group running each year requires 167,000 MWh, which is the equivalent to the energy consumption of more than 8,000 houses or a small town. The Group's energy consumption costs around SEK 120 million and each year generates around 57,000 tonnes of the greenhouse gas carbon dioxide.

Long-term energy targets

Energy and carbon emissions issues have a high priority at Nolato and we have set long-term targets to increase energy efficiency and reduce carbon dioxide emissions. We are undertaking numerous measures to make our energy usage more efficient and the key performance indicators in this area are moving in the right direction, i.e. down.

Nolato also started introducing the ISO 50001 energy management system. Nolato Jaycare in the UK was the first company to be certified.

The plant in Hungary is doing important work by replacing 'dirty' fossil-based electricity with clean hydropower-based electricity from Switzerland.

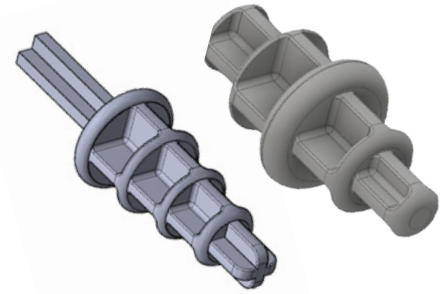
Under the EU's new Energy Efficiency Directive, all large companies must carry out energy audits. These audits must be done by certified auditors according to established guidelines and the results and planned measures must be reported to the authorities in the relevant country.

Audit is an eye-opener

Nolato Polymer, based in Torekov and Ängelholm, Sweden and Torekov-based Nolato MediTor carried out this type of audit in 2015 and Per-Olof Jansson, Property and Maintenance Manager, is very pleased.

"We've been fairly successful in our work on energy issues and thought we had a good handle on energy consumption in our properties and the different production processes. The systematic audit was a real eye-opener and things we didn't know were so significant turned out to be consuming a lot of power," says Per-Olof.

Similar energy audits are now being conducted at Nolato's plants across Europe, which is good for both the environment and for Nolato's bottom line.



The 'Ice Cream Cone' and the Hertilta Plug are two new products in Nolato Hertilta's standard range for masking and assembly.

Expanded range of masking and installation products

Nolato Hertilta has a large standard range of proprietary plugs used for masking during painting, assembly work and transportation. The company is now expanding into other products sought by customers for installation and assembly.

Wider range

"Our customers have shown they want an even wider range of products," says Stefan Persson, Managing Director at Nolato Hertilta since autumn 2015, having previously been Sales Director.

The company has long focused on supplying different types of masking and protective equipment to sectors including manufacturing, but it's now expanding into installation supplies such as clips, wall plugs and cable grommets.

Innovative new products

"We've also presented some innovative new products this autumn," adds Stefan Persson. The two new Hertilta masking plugs both fit a range of hole dimensions, reducing customers' need to have lots of different-sized masking plugs and cutting the time needed to mask each hole.

"The 'Ice Cream Cone' is similar in shape to the Hertilta Plugs, but it's even easier to use as the entire plug can be pushed into deeper holes."

All the products can be purchased direct from nolato.com/hertiltaonline



Nolato Cerbo employees hand out refreshments during the run.

Refreshing involvement for school run

In August, 4,000 school children in Trollhättan, Sweden took part in a run along the canal that passes through the town. They were provided with refreshments halfway along the route by employees of Nolato Cerbo, which manufactures pharmaceutical packaging in Trollhättan.

"It's nice to help young people get

involved in physical activities," said Maria Sandersson, Area Sales Manager at Nolato Cerbo, who together with her colleagues helped hand out drinks to the children.

"We're just glad to be involved in a local event. Lots of employees at the factory have children running here and it's nice to be supporting this kind of initiative."



The size of the machine can be seen as a production fitter prepares the new mould. He is standing where the mould will hang.

15 metres long, 4 metres high, with a clamping force of 3,200 tonnes

For the production of items such as large components for the automotive industry, Nolato Gota has invested in an advanced injection moulding machine with 3,200 tonnes of clamping force.

It can produce two-component plastic items weighing up to 11–12 kg for the first stage and over 5 kg for the second stage. The machine itself is 15 metres long, 4 metres high and weighs 190 tonnes.

Making us more competitive

The machine's large dimensions can be seen in the image above, with the assembler standing inside the machine where the two halves of the mould normally hang. That's right – hang. The circles indicate the position of magnets that hold the up to 40 tonne mould, which doesn't need to be screwed in place. This simplifies the process and cuts the time taken to change moulds.

“This machine is a great example of

how Nolato is developing,” says Öivind Nilsrud, Technical Project Manager at Nolato Gota. “We're the only business with a two-component injection moulding machine of this size in the region, which makes us more competitive in the market for large, complex products.”

Four-component moulding

“We also have smaller machines that can handle up to four-component injection moulding,” says Öivind Nilsrud. “We use those for manufacturing items like high-gloss, exterior decor panels for cars.

“First, we injection-mould a supporting frame (PC/ABS), then in stage 2 we use the same mould to over-inject the frame using a plastic material with a deep black piano gloss (PMMA), and we then apply a bead of polyurethane to part of the surface to create a seal. This all happens as a single process, which makes for highly efficient production.”

BACKGROUND: Clamping force, 4C

Clamping force is the pressure applied in injecting the plastic into the mould. The larger and more complex the component, the greater the clamping force required. 3,200 tonnes is equivalent to more than 2,000 cars stacked on top of one another. So the equipment needs to be highly stable to ensure nothing in the machine is disturbed under such stress.

Two-, three- and four-component injection moulding (also known as 2C 3C, 4C) enables components consisting of two, three or four different materials to be produced in a single process.