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## EDITORIAL

# PARTNERSHIP – WHAT IS IT EXACTLY?

**AT PREVAS WE** we often conduct projects by partnering with our customers. It's in our DNA and we have uniquely long customer relationships, often for the purpose of contributing to our customers' growth and production efficiency. But what do we actually mean when we call ourselves partners? What's the difference between being a partner and "just" a supplier? And can a company be both – depending on a customer's individual needs?

I firmly believe – and many of our customers fortunately agree – that by having the opportunity to learn about customers' operations in depth, we become more effective in our deliveries, which benefits our customers. On partner projects, our fees are usually based on the value we provide as opposed to being hourly based. Our support agreements are a good example, where the provided value is in increased system availability and consequently higher productivity. There are also values here in the form of prompt response times and assurance of long-term facility expertise. Another example is when we deliver solutions for reheating furnaces to the steel industry. Here we're talking about results in the form of energy savings. So the definition of partnership can embrace several different aspects.

In this issue you can read about our collaboration with GKN, a company we've partnered with for many years and gradually developed an extensive solution for their production logistics and material handling. Material flows and stocking at assembly lines are being optimized, which is providing increased production capacity and higher efficiency.

I'm convinced that results-based partnerships promote innovation and create the absolute best conditions for working with customers in developing optimal solutions. Customers attain more efficient and safer production. We share the risks should anything not live up to expectations. And it's ultimately all about customer satisfaction, an area where Prevas always scores high. Contracts built on trust are invaluable for both parties. ✖



CHRISTER RAMEBÄCK

Senior Vice President  
Industrial Systems, Prevas AB

## Orica invests in new production plant

Orica Mining Services in Gyttorp manufactures, develops and markets fuse materials and bulk explosives for the mining and construction industries. To increase production capacity, Orica's global organization decided to invest in a new production facility in Gyttorp. The facility is being built on existing premises with Prevas as the collaborative partner for industrial IT. The order to Prevas includes among other things, development and installation of regulation and control systems for the new facility.

"Prevas' experience in production-related IT solutions, in combination with our previous successful collaboration, was behind our decision to continue working with Prevas," says Rickard Hallor, procurement manager at Orica.

## PREVAS TURNS 30

Prevas was founded 30 years ago at the beginning of the IT era and is now a leading player in the Nordic countries when it comes to technical product development, embedded systems, as well as industrial IT and automation. Innovation for satisfying customers' needs for increased competitiveness and growth has always guided our operations.



### *Innovation for Growth*

Prevas has approximately 600 employees and is the primary supplier and development partner for many leading companies in the energy, automotive, defense, life science, telecom and manufacturing industries.

[www.prevas.com](http://www.prevas.com)



## UNDER SKALET VISITS WATER TREATMENT PLANT

Ny Teknik and Prevas' web TV series Under Skalet (Under the Shell in English) visited the Henriksdal water treatment plant. Water for 880,000 people is treated here in a complex system of reservoirs, filters and machines.

WATCH THE VIDEO HERE:  
[nyteknik.se/underskalet](http://nyteknik.se/underskalet)



## Expansion in Uppland

Demand from our customers in Uppland is substantial and we're expanding our operations within industrial IT in the region. We now have a staff of about 40 in Uppsala working with product development and industrial IT.



## PRODUCTIVITY DAY 2015!

**We will be holding our annual Productivity Day on September 17 at Stockholm's World Trade Center.**

This is where leading industrial companies gather to share their experiences, and working together, lay the foundation for attaining new heights in productivity. Global competition is increasing and we must reduce energy consumption and environmental impact. At the same time we need flexible production to manage all product variants and to maintain quality – while still retaining the focus on customer demands – and the pace of development can be difficult to keep up with.

We're inviting you to a half-day of inspiration from your colleagues in the branch, who will describe what they have achieved in their operations. **The keynote speaker will be Ebba Lindsö**, former CEO for the Confederation of Swedish Enterprise and with long experience from trade and industry, politics and media. **The moderator is sports legend Tomas Gustafson**, Sweden's most successful ice skater of all time. Behind his success are years of hard training, often with somewhat unorthodox methods.

**You'll get tips and inspiration for how working together, we can make Sweden even more competitive.**

With nine different productivity seminars held in three sessions, participants will have the opportunity to listen to accounts from other companies that have made the "productivity journey", both locally and globally, and to discuss their experiences.



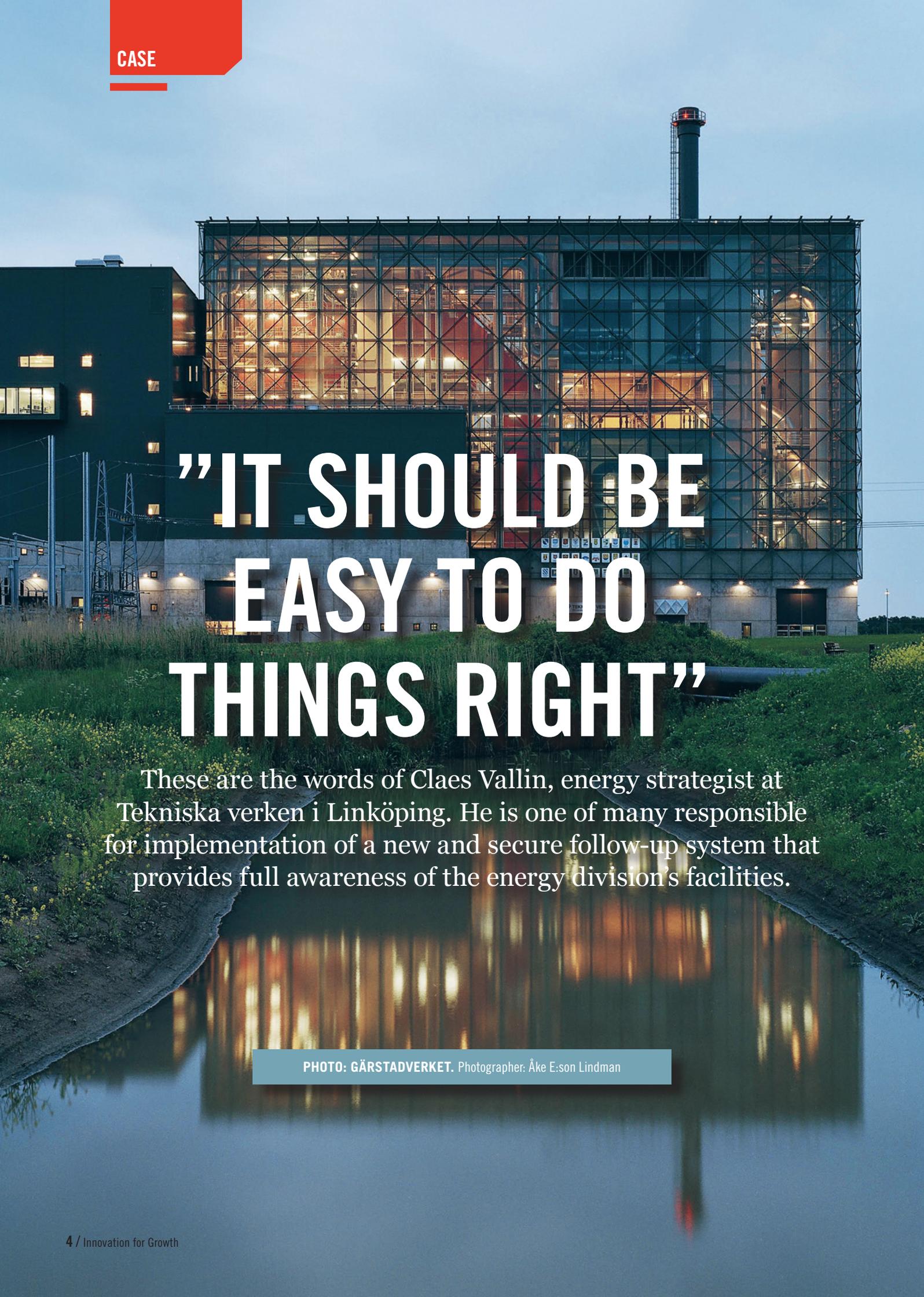
## Ambassador of the Year, Bernt Henriksen from Prevas

Several people were honored with prizes at the Västerås Science Park banquet. Västmanland county governor Håkan Wåhlstedt was in attendance to award the prizes, including Ambassador of the Year 2014. A prize that went to Bernt Henriksen at Prevas.

### The jury's statement read as follows:

"Our prizewinner is a prominent expert in his technical field of expertise and has many years of experience from his branch in resolving complex problems with efficiency. Over the years, both large and small companies alike in Västmanland have had the opportunity to have their plants streamlined to perfection by the prizewinner. Industrial IT, stock turnover speed, calculations for availability, plant utilization and quality are some of the concepts the prizewinner uses on a daily basis. Through his commitment displayed at the science park, our prizewinner is a very good ambassador and an important mentor in several projects conducted at the park, and has been a driving force as a project owner."





# ”IT SHOULD BE EASY TO DO THINGS RIGHT”

These are the words of Claes Vallin, energy strategist at Tekniska verken i Linköping. He is one of many responsible for implementation of a new and secure follow-up system that provides full awareness of the energy division's facilities.

PHOTO: GÄRSTADVERKET. Photographer: Åke E:son Lindman

Tekniska verken i Linköping has the ambitious vision of creating the world's most resource-efficient region. They are subject to very stringent regulatory requirements for environmental follow-up, as well as financial policies. The energy division consequently puts considerable time and effort into matters of energy recovery from waste and environmental reporting. Claes Vallin, energy strategist at Tekniska verken i Linköping, talks about the new production follow-up system, which after a longer test period will be implemented in the autumn of 2015.

Prevas has partnered in developing and building the software platform and also maintains a complete system back-up and can restore both data as well as the entire system.

The departure point was an Excel-based administration platform. But with the new platform, data is gathered in an in-house-developed system based on Prevas' standard products, with all data available at a single location from where all necessary changes are made. The basic concept for the data collection platform was to provide immediate access to all data at one and the same location. A location where everything could be safely stored and modified as necessary – reports, statistics and environmental measurements. We placed this system in the production network so that it would be a closed system with dedicated communications over either leased or company-owned fiber-optics lines out to the plants; an own integrated system that gathered all generated data. Nonetheless, the system is extremely flexible and can communicate with all other relevant devices and databases.

One of the greatest challenges was in environmental follow-up and generating reports for regulatory bodies, where it could be devastating if errors occurred. The environmental requirements are such that if we can't fulfill them, we would have to shut down all operations. Among many other things, we have to submit approximately 10 reports each year with about 1,300 unique topics relating to energy and fuel. This makes having reliable data an absolute must.

To maintain credibility, we must have complete awareness of operations. This involves for example, measuring output at specific boilers and making any necessary adjustments, all from a single location. The information must be traceable so that we can see initial values, who

has changed values and why. Gathering data in Excel with linked Excel documents is the exact opposite of this. Although Excel offers a number of benefits, the problem is that it is vulnerable and mistakes are very easily made. And these mistakes are passed on further in the system without being traceable. It should be easy to do things right!

But it's not enough with a database to be able to process data, and the most common method of resolving environmental follow-up in real-time is to use many small systems. By getting this data into a large shared system we can integrate it with data from other systems as well as from local installations, so that production statistics can be more easily produced – statistics for fuel data, taxes, electricity tariffs and environmental statistics. Actually just about any kind of data can be included. What is most important is that we integrate real-time follow-up of production and environmental data. Legal requirements are very stringent these days, so if we are to work credibly with sustainability matters, we must have full awareness of the substances being released. The solution mainly applies to the large installations in Linköping, but it can be expanded to all other installations as needed.

We are also subject to rigorous safety requirements. Our system may only go down for a maximum of 24 hours each year, and then preferably due to reasons beyond our control.

We're safety fanatics and want extreme flexibility and safety all at the same time – modern technology but in an old fashion way. This type of system is necessary for example, to incinerate waste and to ensure that we do not inadvertently allow propagation of errors made in Excel.

The operations we conduct leave no room for mistakes. In procuring the system we prepared a very specific list of requirements with 15 main requirements, 100 sub-requirements and an additional 30 requirements. We have also conducted the entire procurement in close consultation with the suppliers and spent a day and a half with those who were still along at the end of the process. We spent two years on preparations and then another year on negotiations in accordance with Swedish public procurement legislation. There is no similar, off-the-shelf solution on the

market. We're the ones with advanced expertise of our operations and the supplier's job is to help us retain it. And we've found the perfect partner.

Testing of the data system is currently underway at our site. Because we must observe extreme caution, we'll be running the old solution alongside the new for three to six months. This says something about how sensitive this is. We cannot risk a situation in which we've steered towards real-time data from the system, only to discover that we've unintentionally failed to fulfill a legal stipulation. We're owned by the Municipality of Linköping and this is also where I make my home. I want to be able feel safe with my heating and power plant. We want to stay on the right side of the regulatory values by a good margin, and be able to operate with the emission quality the community requires. ✖



**Claes Vallin**

ENERGY STRATEGIST  
TEKNISKA VERKEN I  
LINKÖPING

## ADVANTAGES + & DISADVANTAGES -

- + Own expertise for environmental calculations (critical factor for success)
- + One data/calculation system to master
- + Safe environment for financial policies, including calculations
- + All relevant data at a single location
- + Clarity in how and where data is archived
- + Traceability
- + Excel is available for analyses and quick jobs
- + Enables joint operations monitoring
- Centralized environmental monitoring is vulnerable to communications failures  
*Solution:* Redundant machines at the most important installations
- Requires carefully thought-out IT security solutions

# PREVAS & MAXIM TRIUMPH AT THE WORLD'S TRADE FAIRS

CHECK OUT THEIR IMPRESSIVE CREATION  
ON YOUTUBE: <https://youtu.be/bvqOCpn1EiU>



What does a beer mug and Industry 4.0 have in common? Quite a bit as it turns out. Read about how Prevas and Maxim Integrated attracted trade fair visitors by the thousands.

**HOW DO YOU STAND OUT AT A TRADE FAIR WITH 76,000 VISITORS IN SOUTHERN GERMANY WHEN THE AMBITION IS TO ILLUSTRATE THE SIGNIFICANCE OF INDUSTRY 4.0?**

**ANSWER:** You let Prevas build a production cell together with Maxim Integrated, a company with 9,000 employees, all who are experts in integrated circuits. You use the latest technology with components that are at the absolute leading edge of automation along with a product from the cell that no one can resist – a beer stein.

Using sensors that communicate with large volumes of data content with incredible precision and that can detect various shades of colors, weighing cells and temperatures with extreme accuracy, and then putting it all together into an integrated cell, controlled and maneuvered from an iPad is modern to the extreme. To then communicate with an industrial printer with free text has not been seen in the market either. We demonstrated this for the first time in November of 2014 at Electronica in Munich.

The trade fair attracted 76,000 visitors and we had the most frequented demo of the entire fair with long lines from morning to evening. At most, people were waiting in line for an hour and twenty minutes for a stein.

What drew such interest was that visitors could use an iPad to choose a color that matched their favorite kinds of beer. You could then type in anything you liked, such as your name, and start the order. The job was sent from the iPad in image format to the receiving server PC, where it was converted into a format the printer could handle. Thereafter the image was sent to the printer which then verified that the right image had been received. Once the color sensor found the right stein, the palette was fixed and the robot retrieved the stein. The stein's handle was then oriented so that the text would be correctly positioned and a check was also made that the weight was right and that there were

no defects. Next the robot rotated the object in front of the ink jet printer and the custom text was applied. After a brief drying period in front of strong lamps and an extra check of the weight, the stein was ready to use.

The incredible success of the demo has resulted in Maxim continuing to travel the world with its modern production cell. ✖

## FACTS: Maxim Integrated

Maxim wanted to increase understanding of how automation components are used in practice. This is why they contacted Prevas. The assignment was to train their technicians around the world. Courses were held in Nice, Shanghai and San Jose, as well as Västerås for sales staff, and covered information about sensors, actuators and naturally PLC systems. Also included was hands-on programming of actual systems.

### DO YOU WANT TO KNOW MORE?

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MATERIAL HANDLING IN THE AUTOMOTIVE INDUSTRY:

# SAFE AND EFFECTIVE LOGISTICS SOLUTION FOR GKN'S ASSEMBLY

A consistent security approach at GKN's plant in Köping led to increased production capacity and higher efficiency.

By streamlining the logistics flow at a larger assembly plant, the time-honored technical giant GKN Driveline can now deliver to more customers in the automotive industry. The background for the new supply solution is in the company's meticulous approach to internal safety.

GKN's history is one of success, with the plant having gone from Volvo as its sole major customer to manufacturing components for a large number of different automotive manufacturers. This has increased the need for more material at the assembly lines.

The new material supply solution enables material to be delivered to assembly in smaller units. From having worked with entire pallets that were delivered with forklifts, the necessary parts are now brought out in boxes, which means that smaller volumes of each part can be moved at a time. An essential advantage

of the solution is that less space is required at assembly line storage areas and that less material needs to be handled.

Thomas Möller, Material Handling Engineer, Logistics explains:

"The biggest reason for our changed work process is that we were no longer permitted to use forklifts in assembly out of consideration to employee safety. GKN's motto at all our plants around the world is 'Think Safe'. If something happens at a plant, anywhere in the world, we immediately assess and analyze the incident, and then implement a corrective measures program to achieve the highest possible safety. The gains in efficiency are naturally a substantial extra bonus. The challenge was in eliminating eight forklifts and finding alternative ways of transporting all the parts that are constantly delivered from our automated



Thomas Möller, Material Handling Engineer, Logistics with a parts cart at GKN in Köping.

main warehouse to the respective assembly lines' local part shelves.

"At GKN we divided the parts into two material types. One is for light materials that are taken from parts withdrawal units in the main warehouse, box by box. These parts units have a specific location and are supplied with pallets with the right parts based on the needs at the various assembly lines. Logistics personnel take out parts based on supply needs and load a 'logistics moped', which is then used to drive the parts out to the respective assembly lines and fill the parts shelves. The other material type is delivered on full pallets, which are driven out to parts carts that are docked in the main warehouse. The parts carts are then coupled together into a logistics train that pulls the carts in the train to the assembly lines. Prevas' software solution automatically keeps track of parts levels on the lines' pallets and requests replenishing when levels reach a predefined point. To avoid material shortages, we always have two pallets at the assembly lines – one active and one for backup. The optimized logistics flow has greatly improved efficiency in assembly." ✖

## FACTS: GKN Driveline

About 1,000 people work at GKN's plant in Köping.

GKN, which manufactures components for 4-wheel drive vehicles, has been a Prevas customer since 1991. Prevas has created a specially adapted MES solution for the entire plant based on the LIPS platform. The new solution is a complement that increases safety and improves efficiency for a large number of assembly lines.

Prevas is responsible for overall delivery of application software in LIPS, while GKN and other suppliers are responsible for electrical and mechanical solutions, certain aspects of automation and IT hardware.

### DO YOU WANT TO KNOW MORE?

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# PRODUCTION IMPROVEMENTS

IMPROVING INDUSTRIAL PRODUCTION METHODS AND MAKING THEM MORE EFFICIENT IS AT THE CORE OF OUR OPERATIONS.

As global industrial competition increases – at the same time as customers are

demanding faster deliveries, higher product quality and multiple product variants – the need for continuous streamlining of processes is also increasing. Ownership demands for higher returns on investments put the focus on tied-up capital and getting more out of existing production facilities. This necessitates continuous

work with utilizing capital more efficiently and streamlining processes.

Prevas has been making customers' production plants more efficient for many years. With experience from several different industry segments, Prevas can assure competitive solutions.

Prevas typically enters the picture when a company sees that it isn't attaining its full potential when it comes to productivity, quality or volume, for example.

## SUPPORT FOR PRODUCTION MANAGEMENT

Among other things, we analyze work methods, internal workflows (not the least between units), bottlenecks as well as attainment of appropriate key figures. When new production facilities are being planned, Prevas is there to help ensure that the investments will pay off.

Our assignments are usually in the form of operational studies and analyses, project management or general operational support. Well-proven standard methods, further refined by Prevas, have been utilized in innumerable assignments over the years in making customers' operations more efficient.

To make Prevas' advanced expertise more accessible, we have founded a Center of Excellence to more readily provide services that will improve your profitability and competitiveness. ✖

## DO YOU WANT TO KNOW MORE?

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CENTER OF EXCELLENCE  
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