

● technology

An easy-to-use maintenance system that runs on iPads

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■ case

Sandvik's experience of an automation project.

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Optimized production is important to our customers.

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**COCA COLA** has improved its production process and saved millions. Read their story. *Page 7*



# HOW SCANDINAVIAN INDUSTRY CAN RETAKE THE LEAD

## EDITORIAL

**DESPITE SIGNS OF BETTER TIMES AHEAD**, industrial companies still face hard times. To maintain competitiveness, industry has to improve and fine-tune its production processes. The signs we at Prevas see are that companies are getting ever more aware of the potential of productivity improvements and facility streamlining, both locally and globally. This includes identifying savings in existing facilities, e.g. to shorten lead times and improve the handling of product data. An important part of this is to establish solutions and methods for the capturing of data that facilitates analysis of event sequences. In order to achieve production improvements, one needs tools and methods that provide information not only on what is happening but also why.

– Ever more companies seem to have re-evaluated the connections between development, production and quality. That was the theme of Torun Nilsson's editorial in the Swedish business newspaper Dagens Industri on December 2, 2013. She also wrote with reference to the paper's conference on global production that the hope of seeing Scandinavian industry retake its status from better times in the past will not materialize.

So, how can industry act? Firstly: Scandinavian industry generally is in good shape and professionally acting. A good thing is that there is a significant potential for more efficient production but to capitalize on that, one must first get a picture of the current situation. This calls for measuring and analyzing operations. Some examples of such programs you can read about in this magazine. For instance, how Prevas helped Coca Cola Norway become the most efficient organization in Europe, and how we helped Sandvik implement an automation project that makes the entire global organization – and cooperation among the players – more efficient.

The fact that Prevas operates closely with its customers in collegial partnerships is highly appreciated by our customers and nearest of all are Prevas' consultants and project managers. For this reason, we have asked some of them which challenges they think our customers face and how we at Prevas are able to help. Among the answers we see that production optimization is high on our customers' wish lists. For this to happen, one needs to take a new and fresher look at how things are done, as SwedPaper, for instance, has done by putting their maintenance management system into "the Cloud" and running it from iPads.

By joining forces, there is a good chance that 2014 will become a year in which industry is able to keep more production and job opportunities at home.

Pleasant reading!

CHRISTER RAMEBÄCK

Senior Vice President  
Industrial Systems, Prevas AB



## PRODUCTION LOGISTICS, A NEW EXPERTISE CENTER

Production logistics is an area which is gaining in importance in industry, as a result of ever tougher demands for shorter delivery times, more consistent quality, more production flexibility and less capital tie-up.

The base of Prevas' new expertise center can be found in Gothenburg. For more than 30 years, Prevas' specialists of the new center have been developing production logistic systems for industry. By combining industry and production knowledge with innovative system platforms, Prevas is able to offer both expert services and efficient solutions in the field covered. ✖

## Driver of the development of MES

Dassault Systèmes, the creators of 3DEXPERIENCE, and a world leader in 3D design software, digital 3D mock-ups and PLM solutions, has entered into a partnership contract with Prevas.

Manufacturing Execution Systems (MES), play a central role in helping companies achieve a higher rate of innovation and competitiveness on the global arena.

– In a world in which even local companies compete on a global market, solutions that optimize production are becoming ever more important means to strengthen companies' competitiveness by improving time and cost efficiency. Prevas is a supplier with documented leading-edge competence and a strong customer base, which is why we feel confident that this tighter form of cooperation will benefit both parties, says Ylva Berg, CEO of Dassault Systèmes Scandinavia. ✖

### Innovation for Growth

Prevas employs 600 people, together serving as main supplier and development partner to leading companies in fields such as energy, automotive, defense, life science, telecom and engineering.

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

**Prevas**

# MAINTENANCE MANAGEMENT SYSTEM FOR LOFOTPRODUKT AS

**In order to safeguard quality and continued growth, Lofotprodukt AS is implementing an Infor EAM maintenance management system from Prevas.**

– It is important that we choose the right IT support so that we are able to grow while keeping our eyes on quality, says Rune Barosen Nilssen, factory manager at Lofotprodukt AS. "We were concerned with choosing a system which is well-reputed from similar applications. On this point, EAM stood out as a future-oriented, user-friendly and flexible alternative."

– Prevas made a very good impres-

sion during our evaluation of the different alternatives, adds Håvard Henningsen, technical manager at Lofotprodukt. "I have never encountered an IT supplier who focused as hard as they did on implementation of the system and who created as many smooth and efficient work processes while at it. This approach made us feel confident that we made the right choice and that we will get more out of the system in the future." ✕

## Technip goes for Infor EAM

Technip is a global supplier to the oil and gas industry and is active in 48 countries throughout the world. The Norwegian operations have been using Infor EAM for years, which is a flexible maintenance management system and well suited to the tough requirements for quality and functionality that are typical of the offshore industry. When the Technip Group wanted to use Infor EAM also beyond the borders of Norway, the Group called in Prevas to provide assistance.

– We know the importance of understanding the operations and challenges of the customer. The fact that Technip in Scotland also placed their trust in us we regard as confirmation of the fact that we do a good job, says Tord Svanqvist, Center of Excellence Manager for Enterprise Asset Management (EAM) at Prevas. ✕



Assorted photos from Productivity Day, September 19 at World Trade Center. The day is a meeting opportunity for Prevas' customers and partners. Kajsa Bergkvist was moderator and inspirer during the day.

# NEXT PRODUCTIVITY DAY SEPT 18, 2014





# HOW COCA COLA IMPROVED ITS PRODUCTION PROCESS

Since 1997, Coca Cola Enterprises Norge AS is responsible for production sales and distribution of Coca Cola's products in Norway. **In cooperation with the maintenance organization of Coca Cola Norway**, Prevas has managed to make the facility at Lørenskog the best run one in the entire European Group, progress which **saves the company millions.**

## HARD WORK BEHIND THE PRODUCTION IMPROVEMENTS

In cooperation with Prevas, Coca Cola Enterprises Norge AS has gone from remedial maintenance to preventive ditto throughout the entire production process under the umbrella term World Class Maintenance. This has led to gains in the form of higher production efficiency and lower costs of production, maintenance and energy. The highest level of production efficiency reached so far, measured as Overall Equipment Effectiveness, is 93 percent as against 46 percent four years ago (2009).

– We have worked hard at this and got lots of help from Prevas and Infor EAM, says André Nilsen Ibenholt, manager of Utilities & Facilities at Coca Cola Lørenskog.

## EASY MEASUREMENTS AND ANALYSES

The task of going from remedial maintenance to preventive upkeep throughout the entire production process was started in 2006.

– Since then we have worked strategically and methodically toward the goal of becoming best, says Nilsen Ibenholt, holding up the following success factors:

By integrating the Infor EAM system with our SAP administrative system, maintenance became a much more

integrated part of our entire production process. It was also important to get a simple and logical structure of all our machinery. True, it took time to build up the structure manually but we benefit from that now when all the information about our equipment is collected and stored at a single location.

The maintenance function has also gotten a clearer role in the organization and thanks to Infor EAM, planning and follow up of maintenance activities have become easier. Last but not least, it is now possible to analyze and evaluate the maintenance work. By means of key performance indicators in Infor EAM and graphic display in QlikView, planning and follow up of the maintenance work has become very easy.

– The analysis section of the system is the smartest part. It helps us find the improvement candidates we need to fix on our way toward World Class Maintenance, says Nilsen Ibenholt.

## SMARTPHONES AND TABLETS ARE PART OF THE SOLUTION

The biggest boost for Coca Cola Norway was the transition to a wireless system based on Prevas' application Psiam Connector, which runs on iPads. Thanks to that simple and self-instructing interface for smartphones and tablets, the maintenance system of Coca

Cola Norway is much more accessible and user friendly, which, in turn, made it more used.

– The simplicity and the responsiveness of the system are important features, making the users prone to registering even small problems and actions taken. Through Connector on iPad, all have access to all the basic functions of Infor EAM and all its information everywhere. And if the need arises they are able to take pictures of the faults they report. All this makes the reporting quick, simple and efficient, notes Nilsen Ibenholt.

By means of preemptive maintenance throughout the entire production process Coca Cola Norway has reached a production efficiency that makes it one of the Group's best production facilities in Europe in terms of production efficiency and costs of production, maintenance and energy. ✖

**Should you want to know more or find out what Prevas can do for you, please contact:**

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**Photo by: HP Deutschland**

# SWEDPAPER RUNS ITS MAINTENANCE SYSTEM FROM IPADS

SwedPaper bought Paper Machine No. 2 at the Korsnäs Mill in Gävle from the BillerudKorsnäs Group. The divestiture was a condition imposed by the EU Commission for allowing the Billerud and Korsnäs groups to merge. **As soon as the ink had dried on the contract**, the work begun with installing and commissioning a maintenance management system from Prevas.

SwedPaper, the new private papermaking group of Sweden took over the ownership and the running of PM2 along with some 60 employees. The deal also included a number of long-term agreements with BillerudKorsnäs, some of them covering the supply of commodities such as pulp, steam and water, others the provision of premises and other infrastructures, including IT support.

– PM2 is a machine that is known for making good paper and for having a well-functioning organization. That is why we wanted to take over, says Lars-Åke Brännström, CEO and one of four co-owners of SwedPaper who all have plenty of business experience, particularly from the pulp and paper industry.

## THE CONCERNED STAFF HAD A SAY IN THE CHOICE OF MAINTENANCE SYSTEM

Early in the selection process, Infor EAM emerged as a strong candidate for a new maintenance management system to replace the existing one. Important requirements for the new system was increased productivity from the daily work, user-friendliness and mobility.

– The main reason why SwedPaper chose Prevas' solution was that it is easy and efficient to use and that it makes production more efficient. Its user-friendliness was confirmed early in the process. The Infor EAM system is already a big name in maintenance management internationally and used in many different fields. Through the contract with SwedPaper, Prevas is now breaking into the Swedish papermaking industry, something we of course are happy about, says Tord Svanqvist, manager of Prevas' Center of Excellence in EAM.

– In comparison with the existing maintenance management system at BillerudKorsnäs, Infor EAM emerged as a better choice from all angles, from price and functionality to flexibility and user-friendliness, according to Brännström.

As new owners and operators of the machine it was important to us that the staff concerned was involved in the selection process

– Prevas contributed to this by demonstrating the system and by letting the staff test-run it. The response was very positive, which led to unanimous acceptance. The users liked Infor EAM immediately! It is easy to use, flexible and can quickly and easily be adapted to the needs of the organization, continues Brännström.

## TIME-PRESSURED INSTALLATION

When the EU approved the merger in mid-June, SwedPaper had a month and a half at its disposal to get the new maintenance management system up and running by the 1st of August.

– Without proper control of safety-related issues such as interlocks and emergency stops, we would not have been allowed to take over the operation. For this reason, our time schedule was very tough and made worse by the fact that work had to be done at the peak of summer when people are on holiday, explains Brännström.

Prevas managed delivery, installation and commissioning in full accordance with the plan.

– All concerned dug in admirably, in order for us to manage this undertaking, from the consultants of Prevas who installed and commissioned the system to the IT staff of BillerudKorsnäs who made sure the the transition from the



old system to the new ran smoothly. It turned out to be a robust and secure process in which all concerned were at the posts or available all the time. That experience boosted our confidence in Prevas, stresses Brännström who is very satisfied with everything.

## GROWTH PLANS

Production is now under way at SwedPaper and Brännström is optimistic about his company's development prospects.

– We are banking on taking over most of the customers who previously bought paper from our machine, but we also have to find new customers to utilize its full potential. For this reason, SwedPaper has entered into cooperation with Ekman & Co, which is one of the biggest trading houses in the world in pulp and paper with their 190 employees in 24 countries on five continents, says Brännström. ✖

**Should you want to know more or find out what Prevas can do for you, please contact:**

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# SANDVIK'S EXPERIENCE OF INTRODUCING A GLOBAL AUTOMATION PROJECT

**"I AM GLAD I DIDN'T KNOW WHAT I WAS GETTING MYSELF INTO!"**

Those are words from Mikael Herdin of Sandvik. His business area at the tools maker Sandvik is Machining Solutions, a division that makes machine tools. During Prevas' Productivity Day 2013, Herdin delivered an interesting lecture about the way in which Sandvik carried out an automation project with assistance from CellManager.

Sandvik, the globally operating engineering group which is active in machining, metallurgy and equipment for mining and construction, began its automation journey in 2000 with Mikael Herdin as primus motor.

The challenge Sandvik faces is that it has production facilities in different countries, many containing special departments, that it has over 10 000 items on its list of products, delivery times as short as five days, and delivers custom-made products in as small quantities as 1-5 per order.

– The result exceeds expectations but it is important to understand that it is not only about automation. In order to arrange for a well-functioning, cost-effective and flexible production,

three different factors must be managed: culture fears and technologies. The rewards from introducing a global concept are more efficient work processes, shorter installation times, more robust functions and more cost-effective solutions, says Herdin. "The solution had to be global due to the fact that Sandvik operates on different markets with different conditions and prospects. In addition our production has to be flexible, for instance, in cases of production stoppages. In such cases, we must quickly be able to relocate production to some other facility while upholding the same consistent quality.



**Mikael Herdin**

Manager  
Maintenance and Production  
Method Development  
Sandvik

# Mikael Herdin's 10 BEST TIPS for introducing a global automation system

## 1. THINK STRATEGICALLY!

Think five to six years ahead. When it comes to this point, I would dare to say, today, that we did OK at Sandvik. Even if costs become a little higher initially, the payoff has been very good! The most important thing to keep in mind, in the long run, is that whatever you do today must be able to cope with tomorrow's challenges. In other words, it is about visualizing a future goal in which people, the organization, and technology interact.

## 2. DON'T CREATE PRODUCTION ISLANDS!

Traditionally, processes are described in flow charts as a straight line or as a wheel. But Sandvik's processes are like gear wheels that engage with one another. If you don't get that engagement, you won't get anywhere. Don't create unique production islands! They are neither flexible, nor cost-effective.

## 3. STANDARDIZE!

There is the notion that standardization hampers creativity, but in reality, standardization is a key to getting flexibility and creativity to go hand in hand. Ready-made modules are a good thing! Think LEGO, which is smartness exemplified in its apparent simplicity, providing almost limitless possibilities. Standardized building blocks spawn great creativity!

## 4. THINK GLOBALLY!

Standardize user interfaces and production parameters. Operators must feel at home when coming to work, regardless of country in which he/she lives and works. Use a common, global, terminology. Linguistic terms must be identical or at least similar across all production parameters. Use symbols rather than colors, since some people are color blind. Place visual functions and manuals right on the objects and create a standard procedure for acceptance tests.

## 5. THINK IN NEW WAYS!

Think in terms of configuration rather than design. That kind of approach makes it easier to specify requirements – by parameters – for different projects. Automation must be built from standardized blocks, not from scratch every time.

## 6. USE EVENT-DRIVEN LOGIC!

Robots, machines, and machine operators must cooperate around every task. This eliminates the risk of one link in the chain breaking and the entire chain coming apart. The traditional way of thinking is in terms of chains of events but that is too rigid of a way to think. Technology must act more like an operator thinks and acts, i.e. it must analyze what is happening and act accordingly, rather than on the basis of a predefined sequence of events.

## 7. THE CULTURE

With all respect to technology, the most important factor is the corporate culture and management's ability to get the staff involved. We underestimated the role and importance of each staff member, right from the beginning, but learned fast the importance of operations development. It is important to handle the internal anxiety that easily develops and to explain the common benefits of the automation process under way.

## 8. OWNERSHIP

It is important to buy the constituent modules, the LEGO blocks, to make ownership of them a clear-cut issue. We live in a changing world and to safeguard the results of a development project, it is important to consider who will own them. It may happen that one switches partners for different reasons in the future and then it is a good thing to not have to pay for that development a second time.

## 9. COLLEGIALITY

Work closely with your supplier. We cooperated closely, almost as in a partnership, with Prevas and its staff members.

## 10. FIND THE RIGHT LEVEL!

A big challenge is finding the right level for the development project, i.e. not making it unnecessarily complicated but still capable enough for many years to come. ✖

Should you want to know more  
or find out what Prevas can do for you,  
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# Optimized production, high on the wish lists of our customers

PRODUCTIVITY IMPROVEMENTS, BETTER INTERNAL COOPERATION AND DATA HANDLING ARE HIGH ON THE AGENDA OF OUR CUSTOMERS. THAT BECAME APPARENT WHEN WE ASKED THREE OF OUR STAFF MEMBERS WHICH CHALLENGES OF OUR CUSTOMERS ARE PARAMOUNT AND THE WAY IN WHICH THEY THEMSELVES HAVE CONTRIBUTED TO SUCH IMPROVEMENTS.

**1) Which productivity challenges do you think our customers are facing?**

**2) Have you been involved in any productivity-improving projects?**

**3) What do you think Prevas' role is in this?**



**Jonas Fogelberg, M.Sc.**  
Prevas Karlstad

**1)** A challenge is to work toward a shared goal within the organization, where a good performance indicator, affecting everybody, is lead times (i.e. to reduce such times). Another is getting all staff members to take part and see every problem detected as a potential improvement.

**2)** It is important to spend one's time on the right things. In one company I had a leading role in a big logistics project. If the logistics don't work, then optimization of individual machines will have limited effect. Problems will continue to play cat and mouse with management and eliminate the profits they thought they had secured. That project laid the foundation for further subsequent production improvements.

**3)** We have the competence required to identify areas for improvement and a toolbox for acting on them. We can offer customers state-of-the art support systems for all their production-related activities.

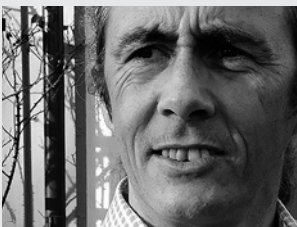


**Hans Österberg,**  
Management  
Consultant  
Prevas Finspång

**1)** Product data handling is the alpha and omega! For my customer, product data and ditto structures are complex and the handling thereof constitute a large portion of the work flow. Order Processing manages many customer projects and have quickly to translate every order into specifications the downstream staff understands unambiguously. The more standardized that data is, the faster the process will run.

**2)** I have worked on issues handling and project management for one of our design tools (Comos) to fix errors and improve the functionality of the tool – as well as improve the quality of product data and shorten lead times in the design and release processes. These efforts enabled a more global use of the tool.

**3)** Prevas is already well entrenched in manufacturing industry in Industrial Systems and Product Design. Now, when we are also able to provide Management Consulting, there is more to do for us to help customers meet their challenges. As written, I think an important improvement potential can be found in the product data handling of the organization, which can pave the way to higher work-flow efficiency and less duplication of effort.



**Desmond Currivan,**  
Project Engineer  
Prevas Malmö

**1)** Ever stiffer competition is the greatest challenge. It drives down market prices and reduces profit margins. In order not to fall behind, one needs to find cost reductions in one's existing production facilities. Good-quality product data, available to all who need it, boosts productivity, while the opposite, of course, reduces performance. This means that the need for process and method analyses, for the purpose of identifying and eliminating bottlenecks, is on the increase.

**2)** When analyzing a customer's machinery, we discovered unused production capacity, which led to big cost saving in the maintenance area.

In cooperation with the customer's production and maintenance planning staff, we worked to move all maintenance to work-day time. We succeeded in moving 85 percent of the maintenance work over to work-day time and in boosting machinery utilization from 50 to 80 percent. In these ways we at Prevas contributed significantly to the customer's achievements.

**3)** As an impartial observer, we are able to help customers, for instance in the prestudy phase to examine production or their MES systems with fresh eyes. We can assist in the identification of all those productivity losses that likely have a great impact on the customer's profitability and his ability to grow.