

## Lean, leadership and the long-term perspective

### Lean from idea to part of the DNA

Since 2007 Solar has been on a journey. A journey with Valcon as co-pilot during which eight subsidiaries have adopted lean as part of their DNA. The organizational change has been huge, the results are impressive and for the work done Solar was acknowledged with the Productivity Award 2010 of the Confederation of Danish Industry. [Read the articles on page 2 and 7](#)



### Leadership, leadership, leadership and lean

Lean is not a project, but a new way of managing and running a business. Therefore Solar has been focussing massively and consistently on leadership development at all levels.

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### The money is hidden in the interfaces

Lean provides a common language which makes it easier to communicate and collaborate across traditional borders. The result has been quantum leap improvements for Solar. Time-to-market has for example been reduced from 42-60 to 4-8 days in various subsidiaries.

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### Moving the supplier closer to market

NKT Cables receives its sales figures more quickly, and both Solar and NKT Cables require smaller buffer stocks. These are two examples of efficient lean cooperation between customer and supplier.

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# Visibility and standardisation create superior results for Solar

**Lean has created impressive results within Solar across functions and national borders. Today, all Solar activities have one overall aim: Creating value for the customer!**

During the autumn of 2006, Solar's group management carried out a survey among the employees. The survey showed that the value they created for the customers, themselves or the organisation was not clear to Solar's employees. Nor was the value created by the management clear to the employees.

## How do I create value?

"It was definitely a problem. In my opinion, visibility regarding the meaning and the effect of the work you do is decisive for any employee's job satisfaction, regardless which type of job you have", says Flemming Tomdrup. That was one reason why Solar chose to introduce lean as an integrated part of the group's management model. It was done under the name Solar Lean Way.

## Alignment of processes

The other reason was a major wish to create closer ties and synergies among the individual countries by means of standardised working methods.

"The same task was handled very differently in each country and by the individual employees. In our opinion, great advantages could be obtained from "aligning" the processes across national borders. We also expected the standardisation of processes to facilitate the

implementation of the new, centralised IT solution which we were planning to introduce," says Flemming Tomdrup.

The aim was to introduce standardised processes, thus also introducing a common language and mindset for all employees and managers across Solar companies in Norway, Sweden, Denmark, the Netherlands, Germany, and Poland.

## Management and commitment

According to Flemming Tomdrup, two principles have been decisive for Solar's lean implementation. One is a focus on management from day one; the other is the focus on involving local organizations and employees so that they will fundamentally take on the responsibility for their own improvements.

He says, "We have focussed on changing our management style.

A bit simplified, you could say that the managers used to be competent professional specialists, who were able to dictate all the right answers to the employees. Today, managers focus on training the employees and the organisation to find their own solutions to the problems".

Solar has introduced systematic training of all managers in lean management and lean principles. The group has also trained a team of lean agents both at group level and in the individual countries who provide support and give advice to the managers in the day-to-day improvement work.

At the same time, Solar has introduced a management evaluation tool. The latest management evaluation shows improvements of between 50-200% for the managers who have been involved in lean.

## Consistency and long-term perspective

In 2007, Solar's top management decided to go for lean. The top management believed that this was the right method for the group in order to achieve the improvements and create the value for the customers which Solar wants. The results confirm that this was correct. "Lean has improved our competitiveness considerably. We have created great results within productivity, quality, time-to-market, cultural development, customer focus, employee satisfaction, etc.", says Flemming Tomdrup.

Valcon has assisted Solar all the way from strategy through the establishment of lean tools to management training and execution support. Benny Madsen, Valcon Director, says, "There is no doubt that one of the reasons why Solar Lean Way has achieved such good results is that lean was not seen as a project but as the creation of a new culture. It is lean with a long-term perspective.



*Flemming Tomdrup, Group CEO, Solar*



Lars Goth, Supply Chain Director, Solar

## FACTS ON NKT CABLES

NKT Cables develops, produces and sells low, medium and high voltage cables, cable solutions and accessories, and temperature monitoring systems and complete OPGW/OPPC solutions.

The business has production and sale in Denmark, Germany, Norway, the Czech Republic, Poland, and China, and sales offices throughout the world. Globally, NKT Cables has about 3,100 employees and a turnover of about 850 million Euro in 2009. The company is owned by the industrial group NKT Holding A/S with about 7,938 employees.

# Lean and openness strengthen supplier relations and remove waste

**Solar is working lean-wise with several of its large suppliers, including NKT Cables. "We have removed lots of waste and have become a better supplier. Closer collaboration strengthens both us and Solar", says Peter Hem, CEO of NKT Cables.**

As we all know, a chain is only as strong as its weakest link. Therefore, Solar has a natural wish to

spread its good lean results to both suppliers and customers in order to strengthen the total value chain even more in the fight for the favours of the end users.

### Solar's advantages

"We have cooperated closely with NKT Cables in order to implement lean in our business relation. NKT Cables had previous experience with lean, and it was therefore easy to keep in step. We started our common lean work with NKT Cables in Denmark, and we are now on our way to spreading the model to Norway, Sweden, Poland, the Netherlands, and Germany", says Lars Goth, Supply Chain Director of Solar, adding:

"We have established VMI collaboration, meaning that sales figures are forwarded automatically on a daily basis to NKT Cables from our ERP System to NKT Cable's ERP system. Our advantage is smaller buffer stocks, shorter times of delivery, quicker product launches, and quicker response to market fluctuations".

### Supplier advantages

"We receive sales figures sooner

and more frequently. This gives us a chance to become a better supplier to Solar, because we can deliver faster and more precisely. Our delivery quality is stable at more than 99%", says Peter Hem, CEO of NKT Cables.

"The cooperation brings us closer to the market and enables us to prioritise our production resources much better to cover the needs on the market. The result is higher inventory turn and improved capacity utilisation".

Few businesses dare take this step. Peter Hem points out that the openness and confidence established by Solar and NKT Cables are unique in Europe. "There is much talk about strengthening the supply chain through closer cooperation, but in practice, few businesses dare take the step. Solar has shown courage and a visionary attitude and has taken the full step, which opens major commercial advantages for us as well as for Solar."

Both Peter Hem and Lars Goth point out that joint value stream mapping has been decisive. When



Peter Hem, CEO, NKT Cables

customer and supplier take a holistic view of the supply chain, the parties disclose all inappropriate aspects, and together the parties define the future value stream – with short implementation period and therefore quick effect. In addition to the above, the improvements include an optimisation of:

- existing VMI parameters
- transport
- order/data handling and other administration
- handling of goods
- the customer's ability to deliver
- determination of responsibility

and the creation of a platform for ongoing improvements with a common goal.

## FACTS ON THE VMI INTEGRATION

VMI stands for Vendor Managed Inventory and means that NKT Cables on a daily basis receives sales figures from Solar which are automatically transferred from Solar's IT system to NKT Cables' IT system.

The sales figures form the basis of NKT Cables' ongoing production planning.

Similarly, NKT Cables will receive automatic orders from Solar, stating products, volumes and the exact date when NKT Cables is to deliver the order to Solar on the basis of agreed times of delivery and rates of turnover for the products.

# No lean without leadership development at all levels

**Lean is not a question of tools. It is above all a question of people undergoing change. Therefore Solar has focussed heavily on leadership development through training, coaching, evaluation and follow-up at all levels.**

Solar's management and organisation had only very limited knowledge of lean in 2007 when the senior management made the strategic decision to stake on lean in order to enhance Solar's business development.

"Our first initiative was to launch a course programme for all managers at all levels in Solar's companies. The course included introduction to and training in lean leadership principles in order to provide

the managers with management competences which may support the creation of a lean culture with ongoing improvements," says Heidrun Marstein, HR Director.

The aim was to develop managers who:

- involve and include
- communicate, lead and are visible
- have the ability to develop new competences and create change

"If we succeed in the above, we will have created an environment in which everybody is good at learning and sharing knowledge. This will again lead to an efficient organisation which takes responsibility," Heidrun Marstein continues.

## Evaluation of management competence

At the same time, Solar launched an evaluation tool, Navigator, developed by TNS Sifo. The first Navigator evaluation was carried out in 2007. The next evaluation was carried out 18 months later in 2009, when many of the managers had completed the course and several departments had implemented lean. Navigator is an employee survey with the primary aim of examining the organisation's ability to create customer value, and at the same time the employees will evaluate their managers' management performance. The evaluation in 2009 shows a very large improvement for the managers who had been working with lean.

"The Navigator tool has been used for management evaluations in a number of global businesses. But never before TNS Sifo has seen improvement curves as steep as in the departments where we have been working with lean. By working systematically to strengthen management competence, we will at the same time strengthen the ability of the organisation to create value for our customers", says Heidrun Marstein.

## Middle managers with difficult position get a new role

Heidrun Marstein points out that Solar has had special focus on the role of the middle managers in the lean implementation. Lean is very much a question of boosting the employees' enthusiasm and knowledge with a view to improving all value streams in a busi-

ness. Employees who used to get instructions from the middle manager will suddenly be in charge of a whiteboard meeting and contribute to planning the week's operations and prioritising suggestions for improvements. The middle manager may very well get a feeling of being dispensable and less valuable for the business.

"We have therefore made an effort to prepare the middle managers for the new role as middle managers in a lean culture. First of all, the idea is to introduce the middle manager to the basic lean tools. Secondly, the new manager behaviour which will support the inclusion of the employees must gradually be developed," she says.

## 240 managers training, more to come

The training has started with the group management, as the senior



Heidrun Marstein, HR Director, Solar

## FACTS ON SOLAR

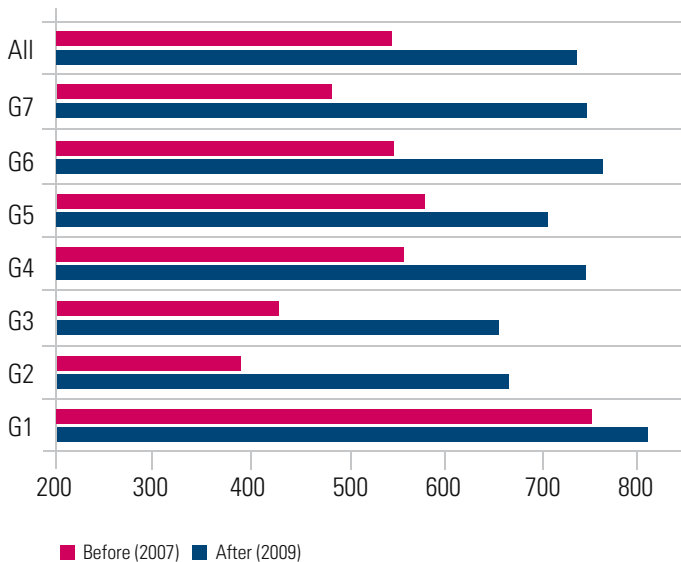
Solar is one of the leading technical wholesalers in the northern part of Europe.

The Solar group is an international wholesaler within electricity, ventilation and HVAC.

Through its subsidiary Aurora Group, Solar is also active on the market for consumer electronics. Solar was established in 1919 under the name of Nordisk Solar Compagni and has since the establishment had its headquarters in Kolding.

The group has about 3000 employees and companies in Sweden, Norway, Denmark, Germany, Poland, the Netherlands, Finland and the Faroe Islands. The annual turnover in 2009 was 1,431 million. Solar is listed at Nasdaq OMX Copenhagen.

## Development in Value Creation Capital



- The graph clearly shows an increasing tendency for all groups where LEAN project has been completed in 2007-2009
- After running the LEAN project all units are scoring 600 or higher
- Especially the lower scoring units have improved their overall result



Value creation in lean departments in Solar 2007-2009 as measured by external standardised method (tns-SIFO)

managers wanted a taste of their own medicine. The group management has adopted lean seriously and its leadership competences are being evaluated.

In each of the Solar companies a lean sponsor has been appointed. The sponsor has the steering role and is responsible for the lean implementation in his own company. All sponsors meet annually at so-called Sponsor Summits to share experiences across companies.

Each company also has its own

team of lean agents who are to support the lean work. They also meet regularly with lean agents from other companies and are regularly evaluated by colleagues from other companies. A total of 240 managers at different levels have completed Solar's Lean Leadership course, and according to Heidrun Marstein, more are on their way.

### 30 minutes' fluent presentation

In May 2010, all Solar's Lean Change Agents met in Brøndby where they were to make a 30

minutes' presentation of their work to each other. "Many agents are people who are used to work in the day-to-day operations and they are not trained to make presentations in English. I can assure you that there were a lot of nerves before the event. But it was amazing to see how easily all agents managed their presentation because they were enthusiastic and supported each other. It was very emotional and the experience of the year for me as head of HR", says Heidrun Marstein.

## FURTHER INFORMATION

If you need more information on Solar's lean implementation, please contact:

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## VALCON AND INTERNATIONAL LEAN TRANSFORMATIONS

- Valcon is a Scandinavian consulting firm with offices in Denmark, Sweden and Norway, and international offices in the Czech Republic, India and China. Valcon provides consulting services within strategy, finance, operations, innovation and sourcing.
- Valcon has implemented enterprise wide and often international Lean/Operational Excellence programmes in a number of businesses within manufacturing, distribution, service and the public sector and covering all functional process areas such as sale, logistics, production, R&D and support functions.
- Valcon is typically part of the entire process: Setting the strategy. Leadership development and training. Change management. Building up lean offices and training of internal lean agents. Establishment of policy deployment and performance management processes. Implementation support and value realisation.
- Valcon's consultant profile is characterised by experienced consultants with an average of 8-10 years' seniority within both line management and consulting. Valcon takes a pragmatic, direct and challenging approach. Valcon emphasises the creation of action and quick results and wants to be present on the "shop floor" where the practical solutions are implemented. Valcon can set up international consultant teams and thereby provide the best possible match to the customers' organisation and needs.



*Benny Madsen, Director, Valcon, has been overall responsible for Valcon's team of consultants working for Solar*

# Do it today!

**Solar Norway has introduced an established practice to solve all deviations immediately. That is one example of the consequence of introducing lean operations management in Solar Norway.**

"Without the right leadership behaviour, working with lean is fruitless. Good operations management is the basis for successful lean," says Stein Gunnar Sanne, Finance Director and lean sponsor with Solar Norway.

Lean within Solar Norway is a question of establishing common goals and involving everybody. According to Stein Gunnar Sanne, this requires a visible management style with ongoing status follow-up. Therefore, Solar Norway has invested heavily in developing the leadership of the managers, balancing and clarifying management responsibility and implementing systematic follow-up on operations.

## **War room makes the management visible**

Solar Norway has among other things introduced a control centre, or war room, at the central warehouse to make the management of the central warehouse more visible. The warehouse collects all relevant information so that it becomes visible and available to all about 100 employees at the warehouse.

This implies performance management, continuous consolidation of data from various cells, facts-based action, employee involvement, and one effect of the war room is full transparency and quick response to deviations.

## **Follow-up, follow-up, and follow-up**

"We have established numerous routines to ensure continuous follow-up to determine whether the operations are running as we would like them to," says Stein Gunnar Sanne. This includes:

- Management and employees follow up on operations on an hourly basis and follow up on status compared with the schedule on visible boards.
- In case of deviations or risk that the day's target production will not be achieved, immediate reaction is possible so that the problem is solved and the day's target achieved
- Operations manager and employees carry out a performance review every day during which they follow up on the previous day's production, and the reasons for deviations are solved so that they will not be repeated the following day
- Operations manager and employees hold a Kaizen/KPI meeting each week at which they follow up on the most important KPIs and discuss and initiate ideas for improvement. This is done both in the individual teams and for the value streams across teams.

## **Small improvements of the improvements**

"The careful follow-up means that we keep on track and learn from our mistakes. You could say that the model has ongoing improvement in its DNA, and that we are aiming at the small improvements of the improvements", says Stein Gunnar Sanne



*Stein Gunnar Sanne (left), Finance Director, Solar Norway*

# The potential is in the interfaces

**Solar is working intensively to improve processes across functions. Already in 2007 Solar Sweden improved time-to-market from 2 months to 1 week.**

Solar's product portfolio includes more than 1.5 million SKUs. The speed for new products and the customers' expectations of fast delivery of the latest products keep increasing, and at the same time the life cycles become shorter.

"Our time-to-market is an important parameter in the fight for the customers. If the customer cannot get the latest generation of a product from us, but they can from our competitor, we risk losing a customer," says Oscar Fredell, Supply Chain Manager with Solar Sweden, adding, "Therefore we started working on the cross-functional time-to-market process already in 2007. Since then we have been involved in a large number of other cross-functional processes. In our experience, the interfaces between the functions cause the largest waste, and therefore also have the largest optimisation potentials".

## **Lean wall-to-wall**

Solar Sweden completed a value-stream mapping of the product-to-market value stream. It showed among other things that the order confirmation lead time from our suppliers covered several days. An improvement initiative driven by the employees succeeded in removing so much waste that the lead time was reduced to less than 24 hours.

The same tendency applied to the reception of goods at the two central warehouses where the lead time for the reception of goods was reduced from 48 to 8 hours. Also the marketing department has achieved considerable improvements in the time required for the collection of data and materials and producing and delivering sales presentations for the new products to the customers.

Solar Sweden then started introducing lean principles in all 40 drive-ins where the customers can collect the products, in order to ensure that new products will reach the customer even faster.

## Speaking the same language enhances communication

"Lean has given us a common language which everybody understands. That makes it easier to communicate and optimise across the "silos" in our value chain, so that we may avoid the classic sub-optimisations. We are working to create process thinking

everywhere," says Oscar Fredell. Since 2007, Solar Sweden has implemented a large number of cross-functional process improvements within for example handling of returns, IT problems solving, customized packaging of consignments, etc.

programme, and he adds, "This shows how far we have come with lean, because we have seen it as a cultural journey, not a project".

## Long-term improvement of the business

Benny Madsen, Valcon Director, who provides assistance for Solar's lean journey, points out the close connection between lean initiatives and business strategy. "Solar has been very good at linking all the lean initiatives with the business strategy in the individual countries. Once a year the country management review their strategic targets and plan the necessary Lean initiatives for the coming period. You can say that the countries have used lean to execute their strategy".

## Results which matter

Lars Goth and Klaus Petersen point out that lean has created many important results in many dimensions for Solar: "Thus our customers in Denmark have experienced a doubling of the delivery quality since 2007. They have also seen

that we are able to make new products available in the course of few days, whereas previously we needed several months".

## But it does not stop here

Solar is already spreading lean culture and process improvements to suppliers and has declared an ambition to share the good results with Solar's customers. Therefore, the group has formed Solar Consulting to help customers get started on lean transformations.

"We are now entering a new stage in the lean work. Improvement proposals no longer originate from the corporate lean functions. The improvement work runs on its own in the individual countries, and there is frequent exchange of experience across the countries. Lean has created a pull from the countries who now ask for help with a view to implementing improvements. That is in itself evidence that we are well on our way to creating an improvement culture within Solar", says Lars Goth.

# Consistent focus on lean creates results

**From day 1, Solar decided to implement lean fully and completely. It is all about finding your own formula and following it through. It takes time and must be maintained – but the Solar results show that it is worth it.**

Keeping focus and commitment to the lean implementation has really not been a problem. From the start, Solar was very much aware that lean is not to be considered as a project with a duration of six or twelve months. It is a method of managing and running a business. So it is necessary to make a choice – is this the direction we want our business to go? Solar has from the very start answered this question with a "yes" and taken the necessary consequences.

"And we will keep doing this for the years to come. In 2007 we designed our road map for the lean journey until 2010, and we have stuck to the plan. We have reached all our targets, and in some areas we are way above the target. Now we are establishing the road map for 2010-2015, and we are flooded with ideas from all parts of the or-

ganisation for the journey," says Klaus Petersen, Lean Manager.

## Danish productivity champions

"When we started in 2007, Klaus set up a qualitative target: we were to win the productivity award granted by the Confederation of Danish Industries in 2010. At the time, nobody found that realistic. But in April 2010 we did, in fact, receive the award", says Lars Goth, Corporate Supply Chain Director, who is group sponsor for the lean



*Klaus Petersen, Lean Manager, Solar*

# Solar doubles its quality and improves its competitiveness

**Solar has done well in spite of the financial crisis and is well prepared for growth. Lean has created remarkable results for the technical wholesaler. Here are some examples of results from Solar's companies.**

Solar's lean implementation has created considerable results in many areas, such as:

- Productivity
- Delivery quality
- Supplier performance
- Handling of returns
- Time-to-market
- Employee satisfaction
- Management competences
- Net working capital

According to the group's CEO, Flemming Tomdrup, there is no doubt that Solar's improved competitive-

ness has almost exclusively been caused by the implementation of lean.

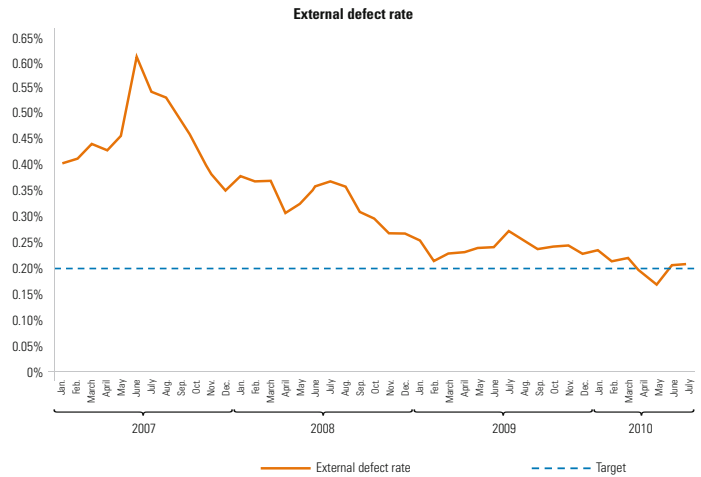
## Every little helps...

"Many elements are involved in the improvement of a business like Solar, and the accumulated effect of the many small and large results makes the difference on the market", says Jens Andersen. He is today Director of Solar Germany, but until recently he was sponsor for the lean processes of Solar Denmark. He adds:

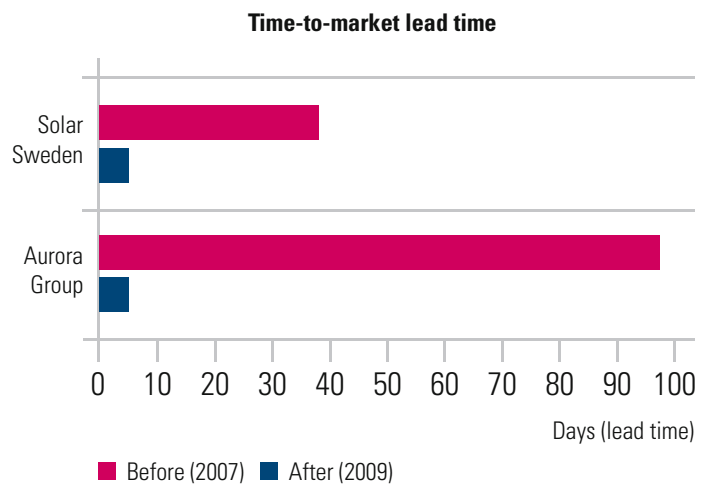
"In Solar Denmark we chose the following priorities: Employee satisfaction, quality and efficiency. It is my clear opinion that our rather soft approach has created the massive results within for example quality, time-to-market, inventory level and returns".



**Fig. 1: Development in delivery quality as seen by the customers**  
Figures from Solar Denmark



**Fig. 2: Development in the time-to-market lead time**  
Figures from Solar Sweden and Aurora Group



## DANISH PRODUCTIVITY CHAMPION

In 2010 Solar received the Productivity Award 2010 of the Confederation of Danish Industries (DI) for its remarkable results of improving the operating efficiency and its competitiveness.

Solar has focused considerably on up-qualifying all managers in the group and has at the same time implemented improvements throughout the organisation", says the head of productivity of DI, Jens Kristian Jørgensen, who handed over the award.