Metamorphosis -

from the "Quick-Win to the "permanent win”

CUSTOMER

Gust. Alberts GmbH & Co. KG
58849 Herscheid

PROJECT

Inventory optimisation at GAH Alberts

CASE STUDY

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Gesellschaft für
Unternehmensberatung GmbH
Kaiserstr. 100
52134 Aachen / Herzogenrath

AACHEN - EINDHOVEN - LONDON

www.ak-online.com

ak@ak-online.com
+49 (0) 2407 9565-0

Content

ANALYZE - SIMULATE - AUTOMATE A QUANTUM LEAP AHEAD	**Abels & Kemmner** brings the optimisation potential of supply chains to light and replaces gut feeling with facts.
Thanks to our **unique consulting approach**, we help companies to achieve sustainable concepts, which we validate and optimise and implement in a secure and agile manner.	**As a pioneer in** logistics simulation and automation in supply chain management, we combine strategic and operational consulting with powerful digital methods.

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With suitable short-term measures that target the strongest inventory drivers, large inventory reduction effects can be achieved very quickly. However, to ensure that these quick wins do not fizzle out again just as quickly, additional sustainable measures must be taken to achieve permanently optimally aligned inventory structures. Together with Abels & Kemmner, GAH Alberts managed to drastically reduce inventories by starting with short-term measures. Subsequently, an optimised planning and scheduling system developed in parallel led to permanently low inventories.

In order to make planning and scheduling even more performant, GAH Alberts launched a project in January 2009 that, in a first step, aimed at a quick inventory reduction. Only after this first quick-win step was the systematic and sustainable reduction of inventories implemented. The advantage of this strategy is that quick wins create liquidity quickly and only then do you have to implement sustainability.

About >>>

Gust. Alberts GmbH & Co. KG operates internationally at five locations with around 430 employees. Now in its fifth generation, GAH-Alberts has developed into a successful and steadily expanding system provider for trade, craftsmen and industry in Germany, Europe and the rest of the world.

Innovative products and ideas around the house and garden, with which new things can be achieved and tried and tested things can be made even better. What began in 1852 as a blacksmith's shop in the heart of the Sauerland region now encompasses a range of well over 7,000 articles in the do-it-yourself segment. The products can therefore be found in almost every DIY store and specialist retailer.

www. gah.de

What Quick-Win does not mean

The term quick-win may sound a bit like starting the stock mower, setting the cutting height and then blindly driving over the stocks. Such actions are not meant, however, because they very quickly lead to a later "quick loss" after the first quick successes: some articles continue to have excess stocks after such actions, while others lose the desired service level so quickly that one does not have to wait long for the justified reactions of the customers. Completely changing the planning and replenishment strategy from one day to the next is not a suitable quick-win strategy either, as one cannot or should not turn such a big wheel without the right concepts and working out the appropriate strategies. Attempting to do so would certainly lead to major problems in planning and execution and generate a plethora of negative effects that were not considered. So brute force methods are not meant.

What Quick-Win means

Really sensible measures to achieve quick wins are characterised by the fact that they essentially take place in the existing planning and logistical environment. They are not subject to any rolling recurring optimisation and are therefore rather static actions with a one-off character. Nevertheless, the potentials to be raised are identified systematically and in a well-structured way, the steps to be taken are carefully worked out and the effects of the actions are regularly checked. By definition, the goal is to quickly achieve economic success.

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Why quick wins are not enough

Once quick wins have been achieved, it is crucial that the first rapid successes are also supported by sustainable measures in order to have the optimal inventory structure in the warehouse not only today, but at all times in order to realise the desired service level. GAH Alberts has now also completed this transformation from quick win to permanent win and the results are far above the targets set at the start of the project.

The Quick Win Measures

After a rough survey of the processes, initial simulations and stock driver workshops, a set of measures was defined that should lead to a significant reduction in stocks in the short term. Primarily, indications from so-called inventory driver workshops and inventory simulations were used to identify the right measures.

The simulations showed the top 100 articles with inventory reduction potential. These were then scrutinised in detail according to the causes of the stock, and some of them were converted for planning purposes or reduced through appropriate use. In addition, the following measures were carried out:

- Feeding of zero parts (no consumption for at least 12 months) into a structured utilisation or recycling process.
- Reduction of reorder points with an MB envelope < x
- Reduction of safety stock with a self-service envelope < x
- Reduction of batch sizes with an LG turnover < x, orientation towards packaging units and, where possible, adjustment to exact batch size
- Stop replenishment of stock for articles with
  Stock range > replenishment time * x and stock value > y €
- Correction of pre-plan values where the plan quality deviates significantly
  (average deviation of planned versus actual quantity)
- Checking open orders for planning necessity, cancellation or postponement if necessary.
- Reduction of demand lead times in the system
- Allocation of monthly requirements to weekly requirements

The articles identified according to the above criteria formed action lists that were handed over to the employees of the respective departments concerned, e.g. disposition, sales or purchasing, for processing. In intensive workshops with Abels & Kemmner, a large number of articles were discussed directly on the ERP system and the further handling of the articles was determined.

The result of the efforts to achieve quick wins was that after approx. 4 months, stocks had already fallen by more than 13%, while service level had not diminished.

Permanent wins in an optimised planning environment

While the short-term measures continued to have an effect, the permanent win had begun to be

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secured in parallel. A concept for optimising planning and scheduling, including the system-supported rolling adjustment of all relevant scheduling parameters, was developed. The concept provided for switching from the previously pursued push strategy in replenishment to a pull strategy wherever possible. Previously, pre-planning values were entered into the system twice a year, which then had a planning effect. In the future, a large part of the article spectrum will be planned and scheduled based on consumption. However, since new planning is carried out on a rolling monthly basis, decisions must of course be made every month as to which articles are suitable for consumption control, which MRP type should be assigned to them, how the relevant parameters, e.g. safety stock and reorder level, are to be dimensioned for them or how the target availability level to be specified is to be set. These decisions are taken by the planner from a set of rules that was mapped in the ERP optimisation system DISKOVER. The set of rules checks the parameter settings in the ERP system daily and adjusts them automatically. The set of rules takes into account the following information, among others:

- ABC licence plate
- XYZ number plate
- Life cycle indicator (ELAN)
- Material type
- Special indicator for storage life
- Length of the consumption history

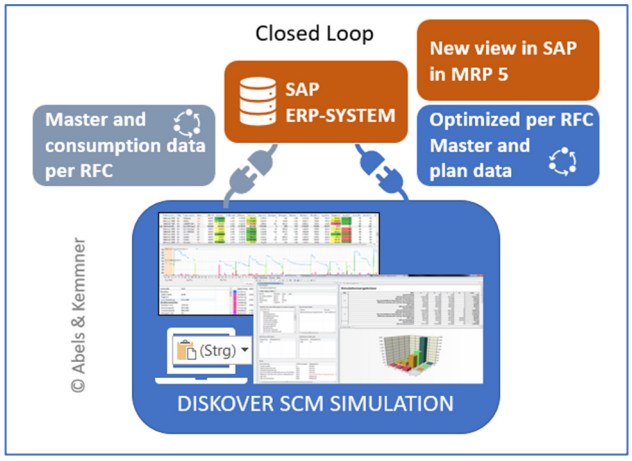

Image: Simulation delivers reliable results

Since there can be events at any time, not just at the end of the month when rolling planning is carried out, that can influence the demand for prefabrication and the reorder level, the sales staff are required to enter such information into the system on an event-driven basis and thus in a timely manner. Typical events in this area are promotions or new or discontinued customers with significantly high purchase quantities. In such cases, the sales department should make absolute and / or percentage corrections to the forecasts created by the system in the sense of exception planning. The corrections are then aggregated at item level and processed further, as each sales employee carries out this activity for his trading partners. The closed loop between DISKOVER and SAP, which is run through every night, directly ensures that all special events in the sales planning are taken into account, whereby the statistical forecasts and relevant sales information are integrated into the effective sales plan.

In the rolling calculation of the reorder points to be discontinued, the special task arises that not only the strong seasonal business, but also the necessary prefabrication due to limited capacities must be taken into account.

Determination of the prefabrication requirements

If, as at GAH Alberts, you have to prefabricate for the new season months in advance, then you face a very special problem: The time of sales is still a long way off, but you still have to decide which products to produce fully specified and put into stock. In accordance with the trumpet effect, which means that the forecast for the distant future is affected by more fuzziness than the forecast for the

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near future, the risk of producing the wrong materials or the wrong quantities is naturally much higher. If this problem cannot be solved, the optimal inventory structure and the desired service level will be jeopardised.

At GAH Alberts, the ABC/XYZ classification of articles is used to decide which articles are to be given priority in production and in which quantities. The basic idea is to give first priority to articles that are in regular production, as these have a lower risk of ending up as slow-moving items. The order is from A to C and X to Y, i.e. first AX-items, then BX-items and so on. Only X and Y parts should automatically be brought forward, but not Z or Z2 parts, which have a very sporadic consumption characteristic. If the bottleneck situation has not yet been resolved, a note should be issued and the planner must intervene manually.

In addition, a "pull-forward factor" is used. This tells how much of the quantity to be produced may be brought forward. This factor is article-specific and can also be used to control that certain articles are not prefabricated at all.

An item can pass through several bottlenecks in succession. This leads to the fact that one bottleneck with its prefabrication in turn influences the other in its utilisation situation. This situation must therefore be resolved iteratively for all bottlenecks.

Setting the optimal parameters

The corrected production situation is then used to determine corrected reorder points so that the planned prefabrication can also be implemented operationally for consumption-controlled articles. For this purpose, the reorder points are raised with a calculated time lead earlier than determined by the ERP system. The consequence is that, deviating from the actual consumption situation, an increased reorder level triggers replenishment at an early stage. In addition to other parameters, such as the MRP type to be set, the reorder level is transferred to SAP, where it is then taken into account in day-to-day business. SAP can thus generate planned orders and purchase requisitions at any time on the basis of optimally set parameters, which deliver the right material at the right time in the right quantity.

Conclusion of the project

Gust. Alberts GmbH & Co. KG has succeeded in streamlining processes, reducing costs and at the same time achieving the specified service level. New strategies and processes have been established in planning and scheduling, which, supplemented by significantly expanded system support, achieve the desired performance and planning quality.

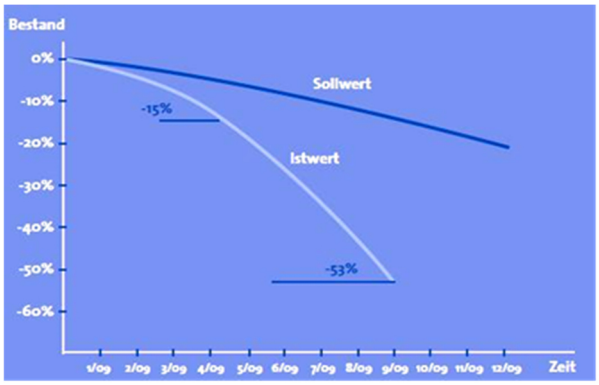
Impressive results were achieved through the realisation of quick wins and the rapid transition into permanent wins. After a stock reduction of 13% in 4 months, after 9 months the stock had been reduced by 53%. In order to be able to correctly classify this achievement, one must once again bear in mind the project objective, which was: 30%, half of which in the first 12 months.

The Permanent Win is on its way

By changing its strategy from push to pull mechanisms, introducing rolling planning that processes forecast and sales information into production plans and optimised MRP parameters, GAH Alberts

has long since further optimised and automated planning for the following season. The permanent win is on its way.

Sustainable inventory reduction despite seasonal business



The target was to reduce stocks by about 30%, half of which already in the current year.

After a stock reduction of 13% in 4 months (quick wins), stocks were reduced by 53% after 9 months.

The measures to achieve the permanent wins have once again led to a reduction in stock and have clearly exceeded the targets set: The original project goal was achieved in 1/3 of the time. The overall target was exceeded by almost 1.8 times.