

## **“ONLY HINGES FOR LIDS” – SUCCESS STORY OF A VA/VE PROJECT**

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Since 2016 Matthias Cleffmann is the Managing Director for Gebr. Echtermann GmbH & Co. KG in Iserlohn, Germany. The family owned business has got 65 employees and is the leading company in supplying taps for commercial kitchens in central Europe. Matthias Cleffmann worked before in the medical device market as the European Sales Manager. Between 2010 and 2016 he was the Director Sales at Gebr. Echtermann GmbH & Co. KG.



Dr. Marc Pauwels is co-president of Krehl & Partner in Germany, the leading Value Management Consultant Company in Germany. Since his start with VA/VE/VM, Dr. Pauwels performed hundreds of VM-related studies in Germany, whole Europe, USA, Mexico, Singapore, Saudi-Arabia and China and trained personally thousands of future VA/VE-specialists. In parallel to his work and since more than 15 years, Dr. Pauwels is president of the German Value Management Society, where he is – for instance - responsible for the development of technical guidelines and the annual German Conference of VA/VE. In SAVE International®, Dr. Pauwels is assigned Regional Director Europe. Dr. Pauwels holds the European Certificates of Professional for Value Management and Trainer for Value Management as well as the CVS certificate. He is a certified trainer for VM1 – VM3 and the MOD 1.



### **Summary**

The company Gebr. Echtermann GmbH & Co. KG is a niche provider for premium products in kitchen technology (figure 1). However, the customers are no longer willing to pay such a large surcharge for premium. Furthermore, new regulations and developing customer requirements are demanding for adapted solutions. With the experience on some successful VA/VE projects in the past, the management decided to start another VA/VE project on hinges for lids.

This presentation shows the success of VA/VE in this project and which success factors have been the most important.



**Figure 1: Echtermann produces work devices for pros**

## Initial Situation and Need for Action

As a premium provider, Echtermann is confronted by the fact that the price surcharge for premium which the customers will accept is tending to go down. Internet and catalogue providers with imports from Asia are exerting pressure on the standard products, e.g. hinges for lids. The price difference for a kettle producer as the direct customer between an Echtermann product and a no-name product can be up to 100%.

Moreover, because of new legal conditions, the use of nickel silver as basic material is no longer allowed. A switch to stainless steel is required. From customer's perspective, some disadvantages in handling and maintenance should be eliminated at the same time.

A third reason to start the project are the trends in this business:

- Better insulation of lids leads to higher weights and so the hinges must deal with higher forces
- Hygienic design is asked for more and more
- Diversification leads to further applications, e.g. for much smaller lids and thus hinges

Some facts about the hinges from Echtermann

Volume in 2015:	7800 pcs.
Turnover:	1,5 Mio. €
Variants:	44 different general variants (see also figure 2 342 sku 155.000 theoretical possible variants
Average cost:	around 100€

## Project Goals

The project goals for the VAVE project of the hinge for lids were as follows:

- Reduce manufacturing costs by 25% to enable stainless steel material change
- Discover new features for differentiating to the competition
- Discover new fields of application
- Better functionality, especially concerning the new trends
- Become market leader with a market share of at least 50%
- Provide continuing education to the participating employees and motivate them and
- Implement methods for systematic product development at Echtermann.



**Figure 2: Different variants of hinges for lids**

## **Project Plan**

The project ran for ten months during which 11 team meetings were held that were moderated by an external consultant. The client was the executive management to which progress reports were submitted upon a regular basis. The team consisted of employees from the Design, Purchasing, Production, Sales and Production Planning divisions.

The external consultant initially explained the method to the participants in a brief training class.

As a preparation for the project the analysis of the existing situation is very important. To find out the real needs of the customers, a three-step-plan was set up:

1. Interviews with direct customers (kettle producer)
2. Interviews with an intermediate dealer for France
3. Interviews with the end customers, i.e. chefs and kitchen personnel in a canteen

Moreover, the relevant competing products were procured and compared.

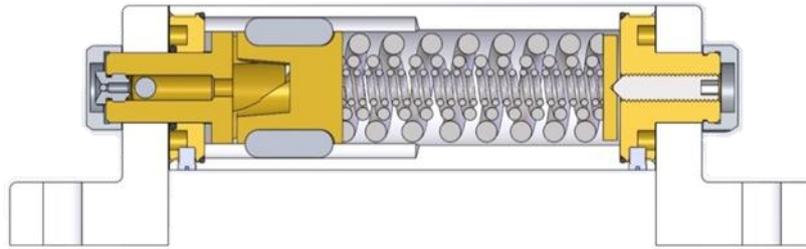
By means of these findings, the team methodically worked with VA/VE on the hinges for lids. The individual steps were:

1. Describe the as-is situation with a function analysis and the analysis of existing calculations,
2. Describe the target situation with a function analysis and the allocation of target costs,
3. Develop ideas for solutions. In this regard, ideas were sought for the functions via brainstorming. In cooperation with the Technology and the Purchasing divisions, alternative suppliers and materials were examined,
4. Identify solutions. The solutions were evaluated and presented to the executive management for decision-making purposes and
5. The implementation of the solutions was prioritized and then developed upon a step-by-step basis.

## **Some results of the analysis phase**

The first step in the project was to analyze the existing situation concerning markets, customer needs, competitors but also the product itself.

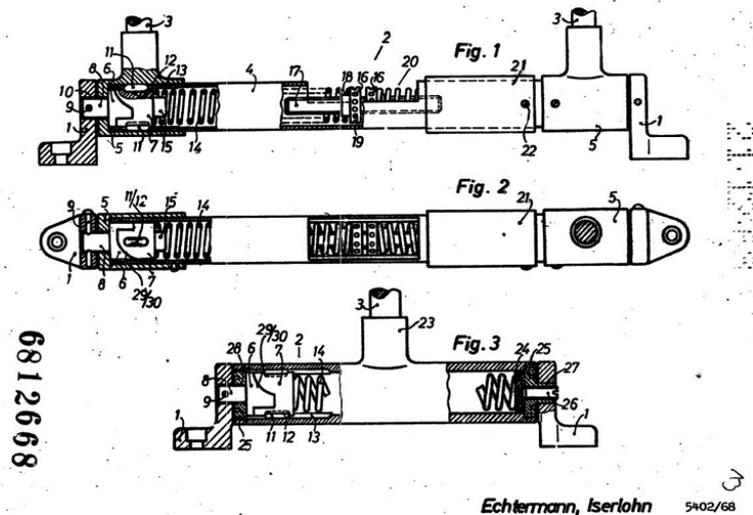
Figure 3 explains schematically the way of functioning of a hinge for lids.



**Figure 3: Scheme of a hinge for lids**

It is not only a pivot point for the lid, it also has to ensure the fixation of the lid above a certain opening angle and at the same time ensure the closing of the lid below this certain angle. Therefore, inside the hinge you can find some curves and springs and some minor components. The hinge must work under all circumstances in a kitchen, i.e. also higher temperatures (coming from the kettle) and vapor.

The existing concept for such a hinge for lids is already very old and is still based on a company owned utility patent from the sixties (see figure 4).



**Figure 4: Echtermann utility patent from 1968**

Also, all competitor products, that fulfill the same functions, are working according to this principle. Thus, it seems that the work principle is good and valuable and that the degree of freedom for a new revolutionary solution is not very big.

The result of the competitor analysis is shown in figure 5. It shows a difficult market situation. The own product has the biggest market share with a good performance at a high price. Competitor 1 offers two products with even better performance. One at the same price level, the other one much more expensive. Competitor 2 is cheaper and offers less performance. The market share is also relatively high. Competitor 1 has a technical problem with its products, which is not visible in this chart. That's why the market share is still low. But this also the thread for the future: Once the technical issues are solved, these products could be a real competition for Echtermann's products,



Figure 5: Result of the competitor analysis

Another step in the analysis phase is the function analysis. This very important method was performed with the team and the results have been the function structures for the as-is state as well as for the should-be state. Together with the routing of the reference product and based on the buying decision criteria, the team also performed the function cost analysis. The graphic result is shown in figure 6. It becomes obvious that there are 2 main cost drivers of the existing product: Hold lid and Fix lid. The second most important functions are Pivot lid, deliver aesthetics and Deliver safety. For the rest of the functions, almost no money is spent. This is the first hint for the next phase, the concept phase: Start idea finding at the most expensive functions.

The picture for the should-be function costs is much more balanced. And there are other functions that seem to be more important for the customers. These are fix lid and deliver safety, but also deliver aesthetics and support opening. The latter function doesn't exist in the today's product. So, beside the search for ideas concerning a dramatic cost reduction, also ideas are wanted for a product improvement.

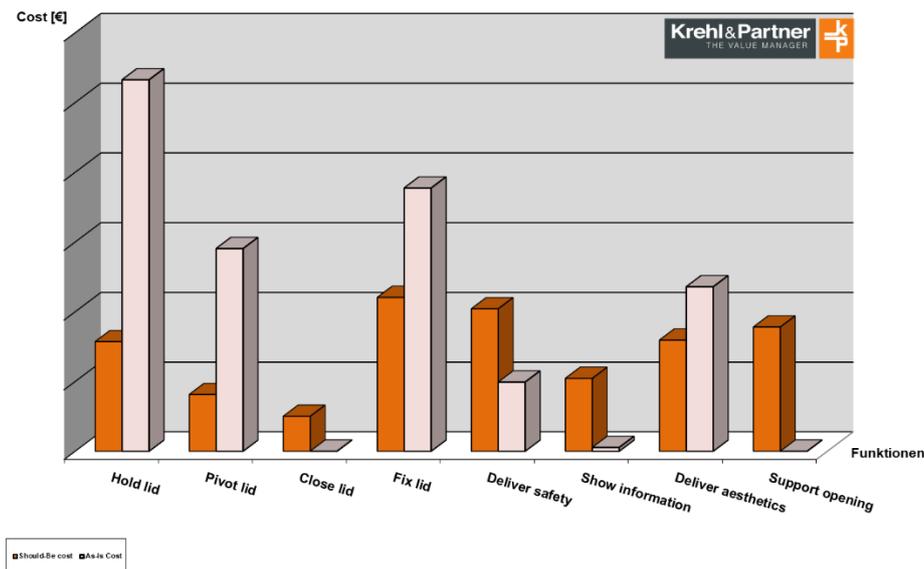


Figure 6: Result of the Function-Cost-Analysis



## **Project Results**

The project was successful! One important goal, the cost reduction to enable the material change to stainless steel, was fulfilled. Some of the cost reductions also include a better functionality for the own assembly, the after-sales service and of course the customers. Examples are the cartridge design, a new positioning device for the opening angle and the long-life greasing, Additionally, new innovative solutions could be found: Adapter for different lid types, integrated water tube and integrated signal solutions.

At the moment, the new solutions are in the implementation phase and the market launch is under preparation.

Again, Echtermann could show its design and production competence, which was supported by the methodology of VA/VE and a neutral facilitation, to be one of the leading providers of professional kitchen equipment.