

RELATIVELY SIMPLE PRODUCTS FOR ELECTRICAL INSTALLATIONS

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Picture 1: Bus holder GRIP

Project Description

The company OBO Bettermann GmbH & Co. KG (OBO) is a worldwide leading company for products in all areas of electro installation. The company was founded in 1911 and has been developed to a full range supplier for trendsetting installation technology. With 2.300 employees and approximately 30.000 products, a total turnover of 380 Mio. € is reached. The share of export is around 35%. With a lot of its products, OBO is market leader.

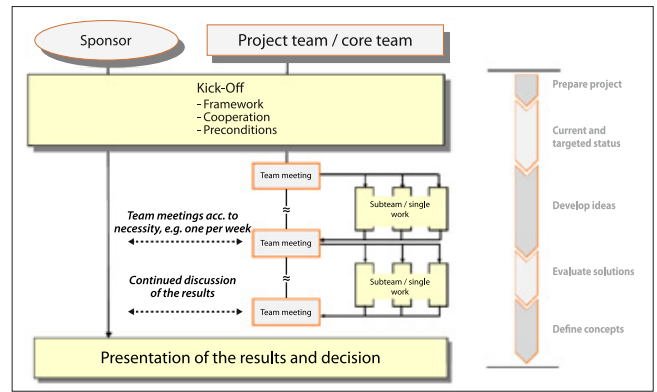
One of the OBO products is the bus holder GRIP. It is a product to bundle and collect cables and tubes, it is suitable for wall and ceiling mounting and it can be fastened using knock-in anchors. The advantage of the GRIP is that cables and tubes can be refitted anytime.

Project structure

The goals for this project are the following:

- » Reduction of production cost by 25%
- » Better performance in accordance with the customer requirements
 - Increase of sales
- » Timeline: New concept ready in 6 months

An interdisciplinary team with participants from R&D, production, purchasing, product management, technical controlling, sales and tool making is set up to work on the project. The structure of the project is shown in picture 2.



Picture 2: Structure of the project at OBO

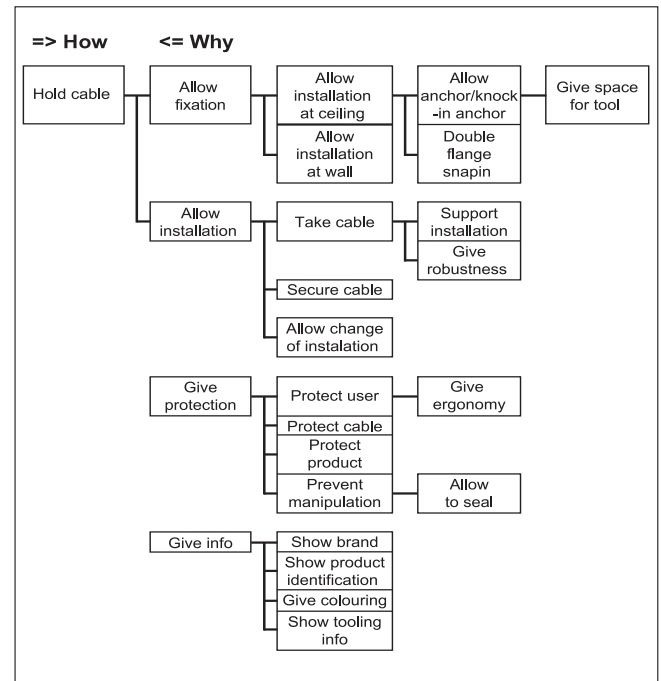
Analysis phase

Within the analysis phase, the team is working on the definition of the markets and customers, their specific needs,

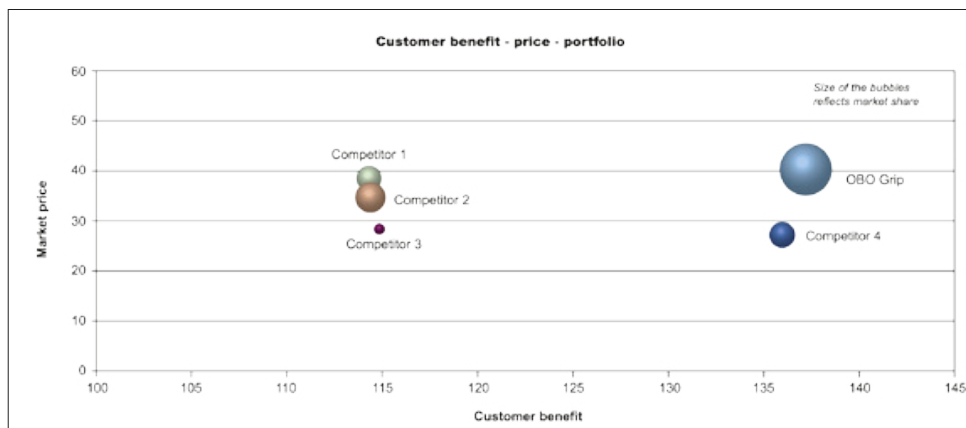
a competitor analysis and of course the function analysis for the current status as well as for the targeted status.

Buying decision criteria	Importance
Easy installation of cables	5
Image	5
Easy handling	5
Flexibility of installation on walls	5
Robustness	4
Possibility of mounting more GRIP	2
Ergonomy	3
Design	2
Possibility of writing	1
"Remote" Handling	1
Small size/high volume	2
Bonus system for customer	1
Design cover	1

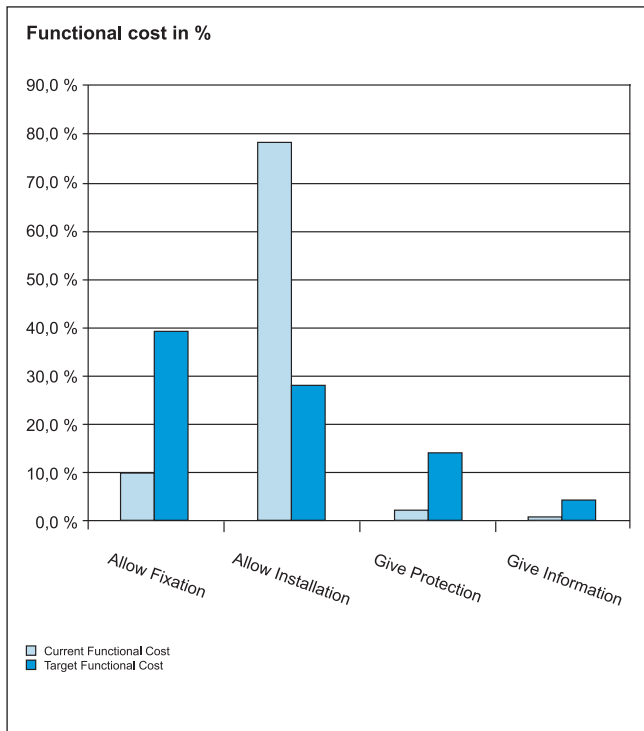
Picture 3: Buying decision criteria and their importance



Picture 5: Example for the function analysis: Current status



Picture 4: Market analysis for the GRIP on the basis of the buying decision criteria



Picture 6: Function cost of the main functions in percentage

The main conclusions at the end of the analysis phase are the following:

- » Our product GRIP has already a good standing in the market: good customer benefit, high market share and also the highest price.
- » Other competitors are coming closer and can already compete technically.
- » Our biggest disadvantage is the inflexibility in installation (only by knock-in anchors)

→ **The goal of the project is verified!**

- » The most costly function today is “Allow Installation” and from customer perspective this is too much.
- » The customer would pay more money for the function “Allow Fixation”, but also for “Give Protection” and “Give Information”

→ **First focus in the project on “Allow Fixation”**

Concept phase

The project team starts to find ideas concerning the idea “Allow Fixation” by brainstorming. All ideas are put into a table without any evaluation. Only questions for better understanding of the ideas are allowed. Afterwards, a first rough evaluation is performed. Only criterion at that time: Is the idea feasible according the project goals or not.

In that way, the team could cut the ideas by one third. In the second evaluation step, the potential cost savings, the necessary efforts and additional pros and cons are defined. This procedure is then followed for all functions so that in the end all product functions are treated. With this information, the team is able to set up a new concept, including the most powerful ideas.

The Value Analysis project is not finished at this point – it just starts. To get the new defined product with the fulfilled goals, all the ideas included in the defined concept have to be followed. Each idea is described in a good way; a responsible person and the task are defined. The core team gets together in the weekly team meetings to review the status and results of the tasks. When there are deviations from the expected results or problems in the execution of the task, the team is able to directly take corrective or supporting actions.

The following table gives an overview of the main tool in this phase: the list of ideas, the defined concept and the responsible persons with their tasks (not translated, shall only give the overview).

Nr.	Idee	GB	Potenzial €	Fixkosten €	Konzept 1	Fixkosten €	Information	Aufgaben
1	Keine flammwidrige Halterungen	D	0,000		1	0,00		Auswirkung auf den Markt und Deckungsbeitrag (Herr X)
2	Weniger Größen (z.B. keine 8er)	D	0,000		1	0,00		Wer kauft die eigentlich (Kundeneinsturk)?
3	Befestigung mit Kabelanker	N				0,00		Auswirkung auf den Markt und Deckungsbeitrag (Herr X)
4	Mehrforn-Nester (z.B. 4-fach)	K	0,060		1	0,06		Machbarkeit überprüfen Herr X
5	Blockpolymer anwenden (15% weniger Zykluszeit)	D	0,004		1	0,004		Machbarkeit überprüfen Herr
6	Automatische Verpackung	K	0,040	x	1	0,04	x	Machbarkeit überprüfen Herr
7	Karton ändern	N				0,00		Standardgrößen, Stapelbarkeit der Paletten
8	Doppelflanschdübel ersetzen durch einen billigeren	N				0,00		xxxx
9	Preise anpassen bei Halterung mit Dübel und ohne Dübel	A	0,000			0,00		Abhängig vom Gesamtergebnis des Projekts
10	Verpackungen vereinfachen (weniger Verpackungsvarianten)	D	0,000		1	0,00		Siehe 9, Es gibt 50 Stück und 100 Stück im Karton
11	Eigenfertigung der Dübel (z.B. Ungarn)	N				0,00		Ist teuer
12	Annehbarkheit durch eingespritzte Formelemente	D	-0,001		1	-0,0013		erledigt Aufgabe 16 Herr X

Picture 7: Extract from the main tool: Ideas, potential savings, concept and tasks

The results

This project is a really successful one. The goal of cost reduction by 25% is not reached – it is over fulfilled: approximately 40%! And in addition, a new functionality is realized by adding a coupling element that allows the user to fix the product also with a gas pressure nail gun. The main steps for the cost reduction are:

- » New tooling with multiple mold cavity
- » New material with less cycle time (-15%)
- » Automatic packaging
- » Reduction of material with the help of FEM