

# Co-Design in a Pressure Cooker

Tips & Tricks for Designers and SMEs



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# Initiators

The Co-Design Pressure Cooker is a joint initiative of Syntens, Utrecht University of Applied Sciences and the Province of Utrecht. The objective is both to gather and share knowledge on how SMEs can realize effective innovations by means of co-design methods.

## Utrecht University of Applied Sciences

The Utrecht University of Applied Sciences Product Design & Engineering readership uses the Co-Design Pressure Cooker as input for the User Involvement in small design agencies graduation course, the involvement of the user in the design process. The Readership wants to be a bridge linking education and practice by means of research projects. Utrecht University of Applied Sciences and seeks to enhance the regional enterprises' innovative powers.

Want to know more?

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## Syntens

Syntens is an innovation network for Small-to-Medium Enterprises (SMEs). Its 270 innovation consultants are familiar with the world of SMEs and with the world of knowledge institutes. They are able to connect supply and demand of knowledge quickly and easily. Syntens is funded from public sources, of which the Netherlands Ministry of Economic Affairs is the most important client. This allows the services of Syntens to be independent from commercial interests and to be free of charge.

Want to know more?

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## Province of Utrecht

The Co-design Pressure Cooker is one of the initiatives supported by the Province of Utrecht for the development of the creative sector. The Co-design Pressure Cooker is part of the "Culture and Economy" development programme, established to bring about co-productions between the normal Utrecht business world and the creative sector. The Province encourages this cooperation because knowledge and creativity have become the main competitive factors in the present-day economy. Scouts of the Province are constantly looking for cooperation opportunities between designers, artists and entrepreneurs.

Want to know more?

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# Introduction

## **By the authors**

The Co-Design Pressure Cooker was set up to gather knowledge on co-design in product development activities of Small-to-Medium Enterprises (SMEs). This booklet gives an impression of ten projects conducted in the Province of Utrecht, the Netherlands. In these ten projects, a total of 22 companies were involved. 5000 booklets have already been printed in Dutch and handed out to SMEs for knowledge dissemination. We have received ample requests from the international community, which leads us to believe that there is an international audience for the cases conducted and knowledge gathered. This is why we decided to publish an English version of this booklet. The booklet will be followed by a scientific publication on the knowledge gathered for the academic community. Feel free to contact us for more information on this project.



# Foreword

## Entrepreneurship in *The Pressure Cooker*

Doing business fast, smart and effectively, that is the Co-design Pressure Cooker's objective: an initiative by Syntens and Utrecht University of Applied Sciences that is made possible with support of the Province of Utrecht.

The idea of the Co-design Pressure Cooker is both simple and efficient. Digest the ingredients for an innovative product or a promising new service in a proverbial pressure cooker. How? By involving future users at an early stage and – together with designers – convert their findings into real improvements. An enormous amount of creativity and practical information will become available shortly, with the advantage of bespoke tailoring for the entrepreneur. The supply will immediately attune to the demand, a quality which is looked for by any entrepreneur all the time!

The Province is happy to bring co-design to the attention of the Utrecht business community. We have added the project to our "Culture and Economy" development programme. Co-design shows entrepreneurs a new way of doing business and innovating. Utrecht is ranked high on the list of most creative Provinces. We want to strengthen this particular position by building a bridge between the business world and the exceptional suppliers of innovation. The Co-design Pressure Cooker will contribute to expand the position of Utrecht as a leading creative area.

From now on co-design is not only reserved for large enterprises such as Philips and Microsoft but also for the Utrecht SMEs! The know-how of the Co-design Pressure Cooker becomes available for them. Consequently to me this publication is a manual enabling any ambitious entrepreneur in the Province of Utrecht to reap the benefits.

Warmly recommended!

**Jan Ekkers,**  
**Representative for Economic Affairs for The Province of Utrecht**





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# 1 | The ingredients of The Co-Design Pressure Cooker

## Planning, Objective And Operating Procedure

*In what aspects do co-design projects in large companies differ from those in SMEs? Which methods are fit for SMEs? What are the success factors and what are the pitfalls? Questions like these lay the foundations for the Co-design Pressure Cooker. From March through mid-June and together with a designer and co-designer ten SMEs have developed a phrasing of a question in a co-design course. The phrasing and the operating procedures differed, yet the deadline did not: each team was given ten weeks time, from set-up to completion.*

### What Is Co-Design?

Co-design is an operating procedure in which the end user is invited to actively participate in the design process. Already from the initial step in the product development the user takes on an active part. This is most interesting because effective innovation arises through responding to – often hidden – users' needs. Co-design is a completely different approach than the one in which product innovations are based on new technology, the so-called technology push. The basic principle of co-design is not technology, but the users' desires and needs. The terms co-design and co-creation are often mixed up in practice. Co-design is a collective name for the many methods that can be used in several design stages. Co-creation is one method in which users think of solutions and help consider the conceptualization.

### How Does a Pressure Cooker work?

Working with a pressure cooker involves the cooperation of experts in different disciplines, working under high pressure on a challenging issue. Working against the clock encourages attentiveness, focus and creativity.

*"It operates just like a pressure cooker. You probably know how it works: usually in the Netherlands water will boil at a temperature of 100 degrees Celsius in a normal pan and with a normal air pressure of 1 atmosphere. If the pressure is raised – as is the case with a pressure cooker – the temperature at which water will boil, will rise. This higher temperature leads to a reduced cooking time. In the pressure cooker (under high pressure) the boiling point will be 118 degrees Celsius and the cooking time will be roughly about one third of the time needed with a normal pan."*

### Planning for The Co-Design Pressure Cooker

A strict time limit of ten weeks and a restricted budget meant for 38 hours for the co-designers and 19 hours for the designers. These were the main components of the Co-design Pressure Cooker. Within these frameworks ten co-design teams have elaborated an individual issue between the end of March and mid-June, 2009.

## Recipe for Success Co-design Pressure Cooker

### Ingredients:

10 x three collaborating parties:  
SME entrepreneur  
Co-designer  
Designer  
10 x challenging issue

### Preparation time:

10 weeks

### Tools:

Pressure Cooker

### Result:

Practical sample cases  
Interesting perceptions  
Tips and tricks for SME entrepreneurs  
Recommendations for designers





Each co-design team had three players:

- SME entrepreneur in the Province of Utrecht who reflects on a new product or a new service and highlighting on the perception of the user instead of on technology.
- A co-designer: a designer/advisor specialized and trained in bringing out (hidden) users' needs.
- designer who visualized a concept for a new product or service based on the perception of the user's social world.

Although the issues of the ten co-design teams differed a lot, all teams demonstrated an unanimous pursuit. It was the intention to achieve a perception of the opportunities for a new mass product or an innovative service concept by highlighting the users. By means of various co-design methods the teams made the (hidden) desires and needs of the users more explicit.

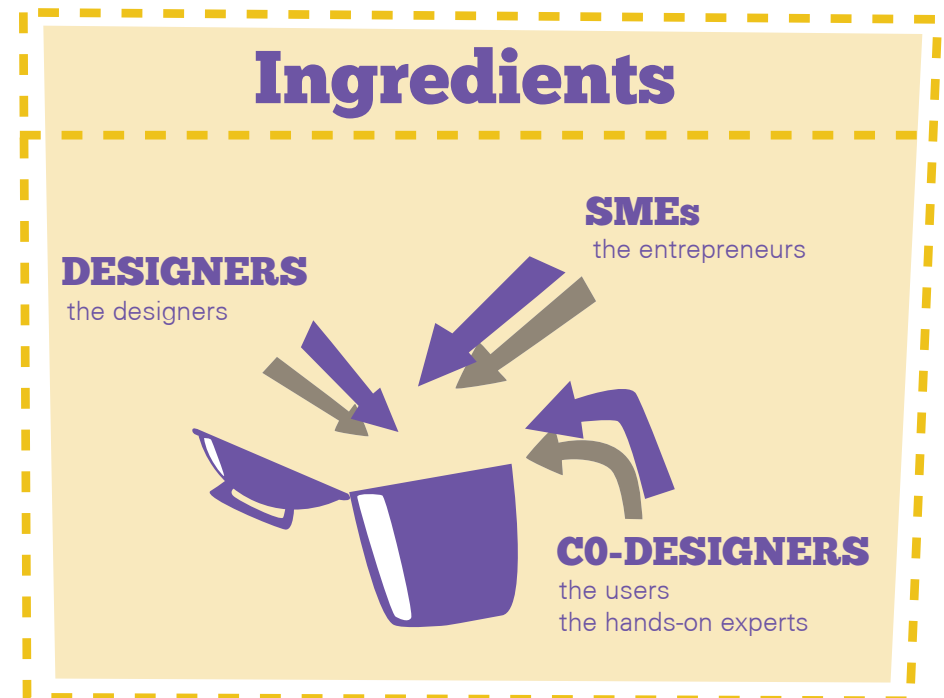
### Objective of The Co-Design Pressure Cooker

A main objective of the initiators of the Co-design Pressure Cooker was to let SME entrepreneurs experience co-design. After all Small and Medium Enterprises (SMEs) do recognize the need of user studies although in practice these are adopted only to a lesser frequency compared with large companies. The reason is lack of time, man power and budget. During the Co-design Pressure Cooker kick-off meeting the SMEs were informed of the various methods and approaches. The Pressure Cooker was an investigation into the ways that also SMEs could make use of co-design. The learning experiences during the course are registered to enable sharing these with SME entrepreneurs, co-designers and designers.



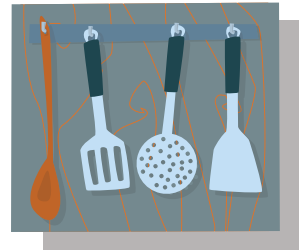
Syntens and Utrecht University of Applied Sciences selected the SME, the co-design expert and the designer for every case. The teams were allowed to use a personal approach but for two restrictions: time and money, in order to make sure that the cases could be compared with regard to size and turnaround time. Moreover in this way the cases would optimally concur with reality.

Each co-design team was supported by a researcher who observed the course from a distance. The researchers' backgrounds ranged from designer to researcher. In order to safeguard the enquiry's consistent nature each researcher used a diary with thematic assignments. Afterwards these logbooks were analyzed and discussed collectively. Moreover additional in-depth interviews were held with the various co-design experts. The collected data was used in Christine de Lille's doctoral research and the initial conclusions can be read in this booklet.



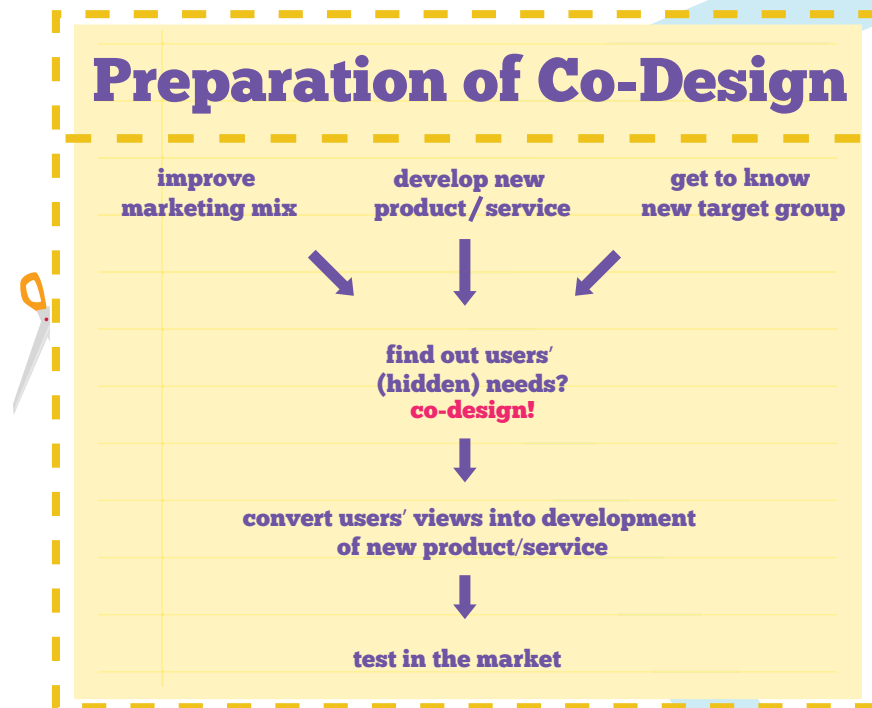
## 2 | Applicability of Co-Design in The SME

### Added value and applicability for enterprises



*Co-design implicates the user when new products are developed. What is the profit of co-design for enterprises? In which situations is co-design useful? Which is an efficient approach? The fact that user participation is of benefit, is shown in the way that large companies deal with it. Also smaller enterprises can take advantage with it.*

Involving users in the initial stage of the design process is an ever more important aspect with New Product Development. Large international companies take the lead regarding the development and applicability of user participation. Consider Philips' Sense and Simplicity campaign and Microsoft's use of ethnography. It is by investing in user studies already early in the design process that enterprises like these and others will increase the pass rate of products.



Co-design really differs from market research. A company doing market research sends out marketers or sales representatives in order to have an – already completed – company's product concept tested by existing or new customers. Co-design courses on the other hand have a reverse process: it is the customer – and not the company – that gives input for product concepts. The user (not the company) is leading in the innovation process. The company will ask the user's opinion before devising new ideas.

#### Expand customer contacts

The bigger the distance to the end users the more difficult it will be for enterprises to really know the customer's needs. Enterprises benefit from co-design if they don't have direct contacts with end users. Think of companies that supply the consumer markets by means of multiple channels such as Alpine Nederland B.V., one of the Co-design Pressure Cooker participants. Alpine delivers hearing aids to music stores through store chains. In this case co-design is a method to broaden the contacts with customers. The entrepreneur so to speak puts himself in a (potential) customer's shoes in order to see into his perception of the environment. The findings supply clues for innovative new products and services.

#### Anticipate needs

Moreover co-design can be applied in the contact with semiprofessional users. A manufacturer of specialist professional equipment for example may think that he's well aware of the customer's needs: after all the customers' issues are raised directly to his company. Yet there is a risk that this company will not act other than reactively anymore. Co-design may make visible the perception of customers' hidden needs; needs and desires which the user isn't even aware of. Co-design will bring these to the surface. The producer may anticipate these needs by offering new products or services, and this offers opportunities to be a trendsetter in the market.

## Market opportunities

Co-design helps companies to shift from a reactive to a proactive approach. This will provide market opportunities. Large companies are aware of this – they have fairly well adopted co-design. They use diverging co-design methods to explore product opportunities together with (potential) users. Think of Google, a company almost all innovations of which are based on perceptions in the user's living environment.

## Put in the user's position

Co-design starts with exploring the user's living environment. The objective is to get to know their view of their environment and to get a perception in habits, problems and needs. The entrepreneur – based on this – can put himself in the user's position in order to read the user's mind. Conversion into possible business opportunities is done only when the user's world has been analyzed.

For many SMEs it is a huge shift from posterior testing of ideas to anterior assessing of needs, as the following examples will demonstrate.

*Koninklijke Bammens B.V. in Utrecht develops, manufactures and sells refuse containers. The company wanted to direct towards a new market – the event market. In the normal course of events the company would have investigated whether the existing products could be positioned in this new market, by means of user research or by presenting plans. In the Co-design Pressure Cooker Bammens decided to first examine the issues and needs of festival visitors, event organizations and refuse collection services when collecting refuse at temporary events.*

*A second example is Difrax B.V. Difrax B.V. in Bilthoven develops and sells synthetic nursing products for babies. The company hesitated whether to develop a product to hygienically clean the rubber teats and toys. Yet Difrax decided to use co-design instead of presenting the personal concepts to the target group. The company has used the Co-design Pressure Cooker to get a better comprehension of the customers' needs and to get a better view on how customers currently deal with baby products' hygiene.*

## Toward a phrasing of the question regarding co-design

When formulating an intelligent issue for the co-design course most of the companies had to become familiar with the new way of thinking. The intention was to present an open question to one or more user groups and consequently not to seek confirmation for the personal ideas or views. Co-design asks for an open attitude. The trick is to keep the issue within specific limits, otherwise the input could not be used anymore by the company.

The following cases allow co-design courses:

- The SME wants to expand the contacts with an existing target group with regard to a specific theme. An example of this is the Difrax B.V. case.
- The SME wants to contact another group, in a specific context and with a specific theme. An example of this is the Koninklijke Bammens B.V. case.

## Four reasons to use co-design

### Your company:

- 1 Appears to be miles away from the ultimate user
- 2 Wants pro actively to explore opportunities for a new product, service or renewed marketing
- 3 Wants to serve an unknown user group regarding a new theme
- 4 Wants to gain insight about a new, still unknown target group



# 3 | Backgrounds to Co-Design

## Co-evolution, users' roles, design stages and methods

*In order to have a successful innovation it is required that new ideas for products and services could take root in the user's world. To this end innovative technology alone often is not enough, as is shown by recently launched products that have faded out because they didn't fit in the environment perception of the people who were supposed to use these products.*

Take the e-readers that shoot up like mushrooms. The impartial advantage for the user – your complete library fits into your pocket – appears to be nothing compared to how people (want to) experience a book. The pleasure of opening a book, to see it get a personal nature by using it, to be able to scribe in the margins: to a reader a book is more than a means to obtain information. A book facilitates a reading experience and none of the existing e-readers go along with it in an adequate way.

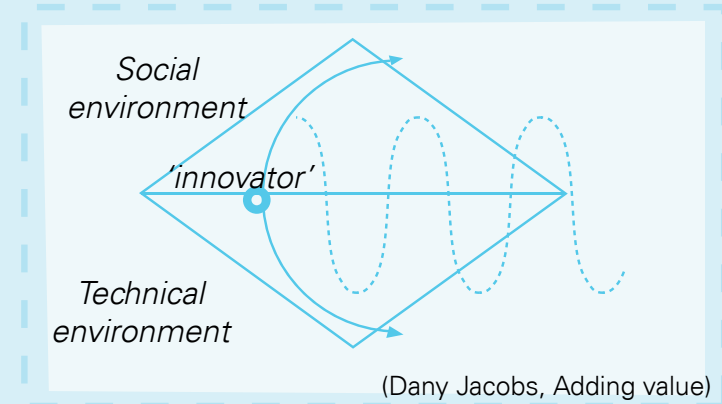
### Match between technical and social environment

Innovation covers more than a smart application of technique, it also deals with the match between the world of technical products and the social world of humans. A new product should concur with the user's environment: besides performing an isolated task it should go with other implements and with the user's thoughts and experiences.

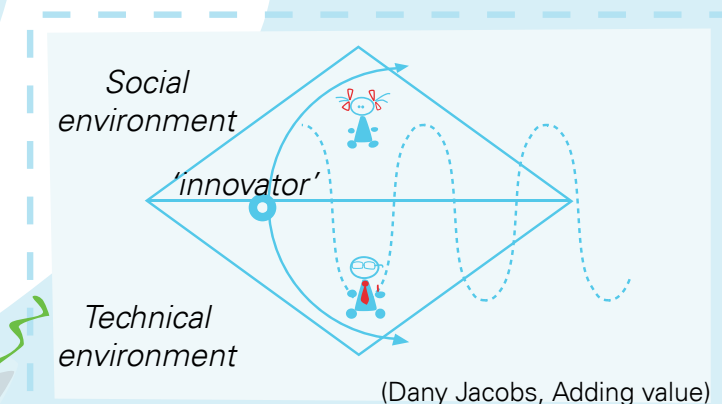
Sometimes the human world needs to innovate for a new product or service to succeed. An example of this is the shift in the music industry where the relationship between the music playing device and the music itself completely has disappeared.

In this respect the French philosopher and sociologist Bruno Latour (1987) mentions co-evolution of the technical and social environment. An innovator on the borderline of technical and social environment can perfectly put this fine-tuning on the right lines.

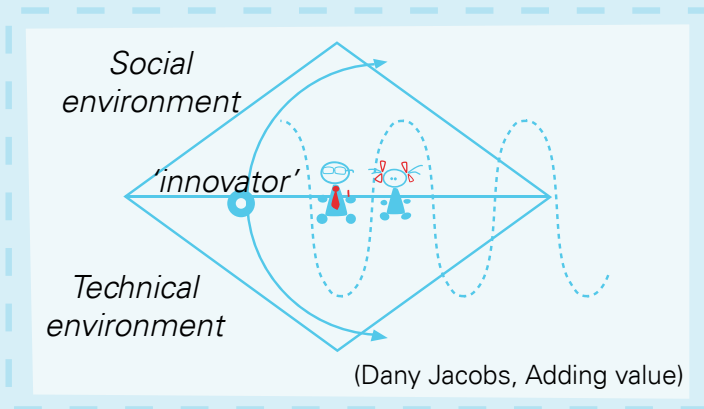
Professor Dany Jacobs schematically draws the following co-evolution process:



Technological developments are usually a component of the Research & Development department of a company, indicated here as 'technical environment'. In cases like this there is a substantial distance between the designer and the end user in his social environment; the fact is that in many companies there is also a marketing department or an external agency in between those two parties. The user's role often is limited to assessments and testing: the designer presents an idea or concept and the user is supposed to tell his experiences with it. Hence it's no surprise that the innovation process will not be a smooth one.



There is an ever increasing need of a constructive dialogue between designer and user. In the past decades many new ways of innovation processes have become in use that narrow the gap between the end user and the designer. The designer puts himself within the user's world or invites the user to think along about possible renewals of a product or service. This results in a much smoother fine-tuning between technology and humans. These forms are indicated with the term 'co-design': inviting the user to participate in the design process. The user's role extends that of the evaluator: he brings along knowledge and perceptions of his world and uses them in the innovation process.

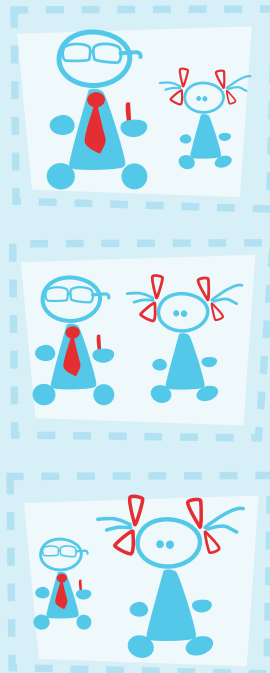


Leading institutions (Wakeford, 2004; Chaaron & Favier, 2006) acknowledge opportunities in the current market for the SME by highlighting the end user's environment perception – instead of technology – in the product development. Co-design methods in which the end user is being involved as a party in the innovation processes offer a significant new direction for innovation.

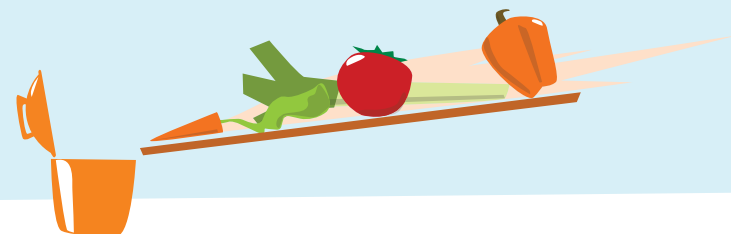
## User participation and the role of the designer

The user can participate in the design process in the following ways:

- The user as an informer***  
 The designer infiltrates in the user's world to become acquainted with the context within which he needs to design. The user assumes a comparatively passive position. He gives answers to questions or shows the designer around. It is up to the designer to take initiative for such an enquiry.
- The user as an expert***  
 Within the design team the user assumes the role of an expert of his own experiences. Interaction between designer and user takes place based on parity.
- The user as a creator***  
 As a creator the user will bring along personal ideas and solutions whether or not in cooperation with the professional design team. The designer assumes a facilitating position: he is supposed to visualize and crystallize the user's ideas.



The user can take ever more initiative in the subsequent roles of informer, expert and creator while the designer will increasingly play a more facilitating role. It's understood that there will be consequences for the choice and the applicability of co-design methods. When a user displays a sound knowledge and feels motivated to think along at a high level then he may assume the role of creator or expert. If there's no knowledge and motivation shown then it would probably more appropriate to involve the end user as an informer. Alternatively the user could be trained to become an expert by making him aware of his environment during a longer time, and by using tools such as a diary.



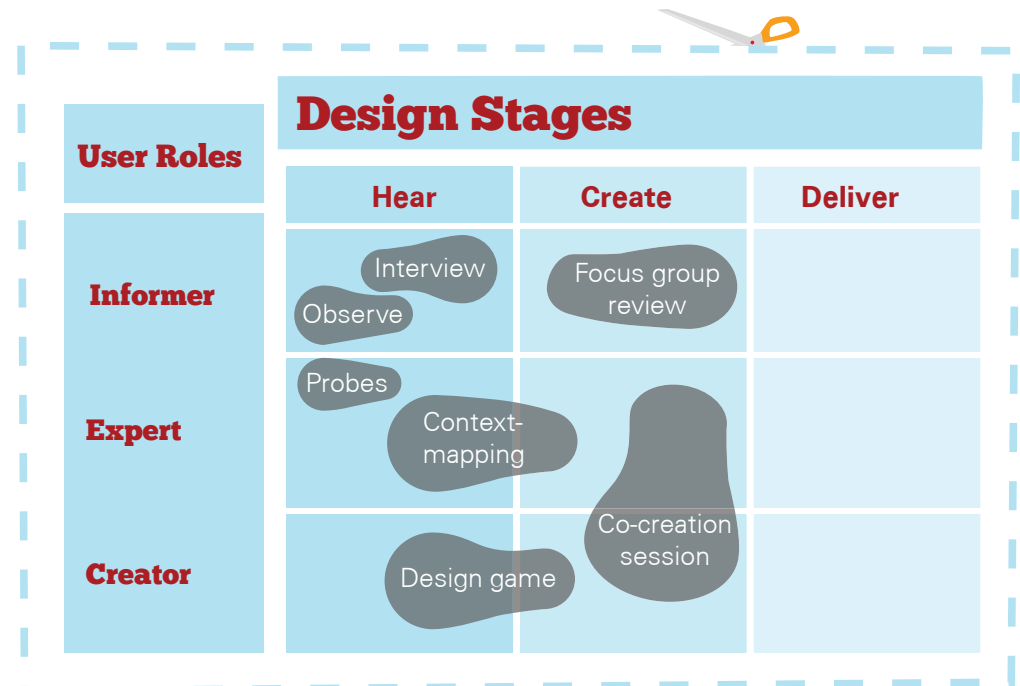
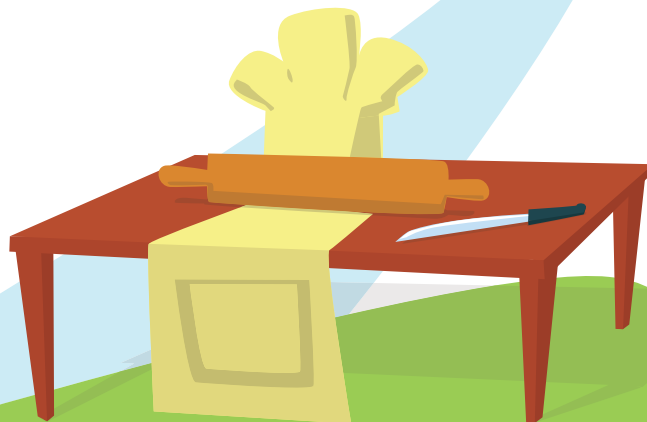


## Co-design in several design stages

In its *open source human centered design* toolkit (2009) the renowned design agency IDEO describes a three-stage design process where the user plays an important role in all stages.

- **Hear**  
Aimed at the actual hearing and comprehending what goes on in the user's world. Focus is on a good understanding as well as to bring the knowledge basis beyond the personal experiences. This stage will eventually result in a lot of views from the user's world.
- **Create**  
Aimed at handling these views as well as to use them as a basis for generating ideas and prototypes.
- **Deliver**  
Putting the new product on the market. Apart from the development and production aspects such as market introduction will be dealt with.

Contacts with the end user is also fairly important in the third stage – the development and implementation of concepts. This process often requires a lot of time, money and effort. In this stage many decisions still need to be taken. It so happens that a concept that really anticipates an actual need, evolves into a monster with which the customer cannot identify anymore. *Prototyping* is a significant tool to reduce that risk. This is the various ways to present a product in order to assess its interaction and perception.



In *Sketching user experiences* (2007) Bill Buxton, Senior Designer at Microsoft, stresses the importance of prototypes. He explains how prototypes – irrespective of their poor and coarse nature – can be used already from the initial concept forming to acquire and retain a 'fit' between the product and the various users.

Co-design hence involves more than investigating and generating new concepts; the development of concepts and prototypes is inextricably bound up with it. With the Co-design Pressure Cooker the focus was on the first and in part on the second stages: *hear* and *create*. It was the intention to generate new concepts based on identified needs in the user's world while the actual developing and assessing of the products fell outside the scope of the project.

## Methods for co-design

For co-design there's no optimum method. Deviating issues, different end users and various views from the company and the designers on the innovation process result in a personal interpretation for each co-design project. The customer, designers and users will always pursue the most efficient working method.

Among other the following co-design methods can be distinguished:

- 1 Safari
- 2 Observation
- 3 Mini work placement
- 4 Interview on site
- 5 Expert interview
- 6 Probes
- 7 Context mapping
- 8 Co-creation session
- 9 Design game

### 1 | Safari

*(adopted by the BAT Continental B.V. co-design team)*

Safari is a method to immerse in the user's world fast. Armed with a picture camera and a video camera and with a candid look the co-designer enters the world of the user where he tries to gather appropriate materials as much as possible. Interaction with users is based on coincidental encounters. Within a few hours the co-designer can gather a lot of useful insights. It is important to realize the impossibility of the co-design expert to acquire a thorough perception of what is really going on in this short time frame. These views will always be influenced by personal experiences and interpretations.

### 2 | Observation

*(applied by the Jansen Medicars co-design team)*

Observation is a means to help get a better view of what people do in their environment. The co-designer can select two options. As a 'wallflower' he will assume an inconspicuous attitude and try not to influence the natural course of events. Depending on the design assignment such an attitude could take a lot of time to collect a sufficient amount of data. Think of the design for a distant bus shelter. Another option would be to act as a producer of a documentary film, in which case the co-designer only upon interaction with the user will get a picture of his conduct. The use of a camera will stimulate people to pay attention to bottlenecks and points of interest.

### 3 | Mini work placement

*(not applied in the Co-design Pressure Cooker)*

During a short work placement the co-designer will literally get into the user's shoes. He will put on the doctor's coat himself to make his round in the hospital or he will work one day as a tramcar conductor. In this way the co-design expert will develop a feeling for the end user's world. Yet there's a pitfall that the co-designer looks upon his experiences as the one and only reality and that he relies on the experiences of that particular day.

## 4 | Interview on site

*(adopted by the Schilte B.V. co-design team)*

A (semi structured) interview is meant to find out what a user can or want to tell about a subject. It is a convenient factor to distinguish a number of points of interest prior to the conversation. Continuing to ask questions results in good perceptions. By holding the interview on the user's premises, apart from sensing the user's context the designer can also include it in the conversation. The designer adopts an attitude of an uninformed student.

## 5 | Expert interview

*(applied by the Verheul Trappen B.V. co-design team)*

Interviewing hands-on experts or people who professionally have a profound knowledge of a subject may yield a lot of information. It is advisable to substantiate the theory by elements from the world of the 'real user'.

## 7 | Context mapping

*(applied by the co-design teams of Prémaxx B.V. and Alpine Nederland B.V.)*

Context mapping involves users as experts of their own experiences. Creation activities such as collages, pattern making and drawing enable users to better delve into their experiences to surface hidden knowledge and dormant needs. Participants usually get a week before the session a probe packet to make them aware of their behavior and environment. In a group session with several creative assignments the participants will make visual renderings of their perceptions as well as explain and discuss them. Particularly what users say when discussing their creations is often a source of new perceptions.

## 6 | Probes

*(applied by the co-design teams of Prémaxx B.V., Alpine Nederland B.V., Difrax B.V. and Al-rec Sign & Display B.V.)*

A *probe* is a stimulating tool enabling the end user to investigate and report on his own environment and behavior. Such a tool often is a diary with different kinds of assignments, ranging from completing a time line and mapping the environment to answering questions. Moreover this method makes use of instant or digital cameras as well as voice recorders.

A *design probe* is not a survey put in a nice packing but a deliberate composition of several exercises and media. The intention is to hold the user's attention for a longer time, say a week, and to enable him to communicate his experiences to the design team in as much detail as possible. Probes often are applied prior to interviews or other ways of user investigation.



## 8 | Co-creation session

*(applied by the Uitgeverij Scala B.V. co-design team)*

In a co-creation session users will brainstorm on new ideas, often in cooperation with the design team. Von Hippel (2005) indicates that *lead users* are a strong source of new ideas, hence co-creation is frequently used as a co-design method with professional products.

The ideas generated by users often follow from earlier experiences. It may be difficult for users to bring ideas for a new future user environment and so it's up to the designer to incorporate the often conflicting ideas into an integrated product.

## 9 | Design game

*(adopted by the Koninklijke Bammens B.V. co-design team)*

The game is a special form of co-creation. Here the group process is conducted by means of a (board) game. The game brings along excitement and dynamism. Furthermore it offers users the possibility to speak freely; whatever happens within the framework of the game is being experienced as 'different' from the actual world. In the FLEX/ the INNOVATIONLAB Design Game® two teams of designers and users were opposed and questions were raised that dealt with the *hear* stage as well as with the *create* and the *deliver* stages.

Apart from the applied – and previously described – co-design methods there's plenty of other possibilities. Think of the multiple choice questionnaire and online co-design tools ranging from online panel discussions to carefully developed tools covering all stages. Online tools such as discussions and blogs enable having contact with a broad audience although this remains a superficial one. Specific online co-design tools require a lot of development and hence these are expensive. Actually questionnaires and online tools cannot be compared with the live co-design methods. Questionnaires and online tools offer a clear understanding of what is happening while the co-design methods uncover the underlying 'why'.



# 4 | Ten co-design courses spotlighted

## Findings of the co-design teams

*Within the Co-design Pressure Cooker ten SMEs together with a designer and co-designer have elaborated a phrasing of a question originated by the SME. The teams were allowed to use a personal approach yet there was a stringent deadline. The complete course had to be completed in ten weeks (from the end of March through mid-June 2009). The Pressure Cooker gives exciting perceptions, both for SMEs and co-designers and designers.*



### Outline of the ten co-design courses

A description of the ten co-design courses including a concise question phrasing, the name of the SME and the course's outcome is given hereafter.

#### 1 | Hearing protection for amateur musicians Page 20

##### Alpine Nederland B.V.

Alpine brought together seven amateur musicians to form an occasional band. Among other things for each band member a personalized set of hearing protection tools was designed.

#### 2 | A shop-in-shop system for Bosch Page 22

##### Alrec Sign & Display B.V.

DIY enthusiasts learned designers that odd-jobbers require information and advice when buying material and tools, and hence this impetus encouraged Alrec Sign & Display to develop an informative display.

#### 3 | Refuse collection on events Page 24

##### Koninklijke Bammens B.V.

*Design games* event organizers and visitors let Koninklijke Bammens B.V. see how the refuse collection could be improved.

#### 4 | Construction-related solutions in the renovation market Page 26

##### BAT Continental B.V.

Architects and design engineers were called in to brainstorm along over opportunities and product ideas in the renovation market and building repurposing. Intruding into this world requires time, an appropriate timing and stamina.

## 5 | Hygiene with synthetic baby products Page 28

### **Difrax B.V.**

What experiences do caretakers have regarding the hygiene of synthetic baby products? Answers to this question were gathered by Difrax who developed a complete idea.

## 6 | Furniture for endoscopy in an operating theatre Page 30

### **Jansen Medicars**

How does theatre staff handle endoscopy trolleys and lamps? On-the-spot observations resulted in new product concepts.

## 7 | A sleeping tool for babies and parents Page 32

### **Premaxx B.V.**

How can a product be of help to parents when a baby does not want to sleep? An insight in the living environment of young parents resulted in developing a new baby cradle.

## 8 | Cross medial approach for a magazine on doll's houses Page 34

### **Uitgeverij Scala B.V.**

An enthusiast group of readers of a magazine on doll's houses confirmed long-standing views and gave new ideas to develop the magazine's service both cross medially and print-related.

## 9 | School furniture for a wide-range school Page 36

### **Schilte B.V.**

The confrontation with the actual situation on a wide-range school and with the users resulted in developing modernizing school furniture.

## 10 | Safety on stairs Page 38

### **Verheul Trappen B.V.**

Elder people, young parents, and a hands-on expert gave modernizing perceptions regarding issues with using the stairs. A videotape helped to convert these views into a patentable product.



# Hearing protection for amateur musicians

## Alpine Nederland B.V.

User-centered design agency:

Muzus

Design agency:

Koen&Co

Syntens adviser:

Ruben van der Horst

How do amateur musicians handle hearing protection tools?

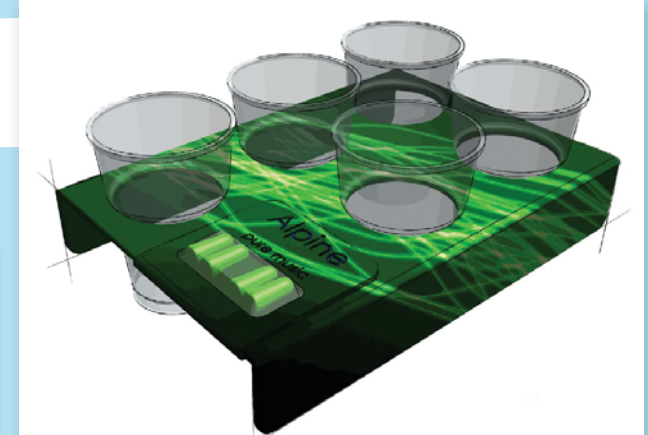
This question, raised by Alpine Nederland B.V., was the starting point for a co-design course with *user-centered* design agency Muzus and design agency Koen&Co. Alpine Nederland develops, produces and sells a variety of Universal hearing protection tools for end users. Examples of these are MusicSafe, FlyFit and WorkSafe. Furthermore by means of opticians Alpine sells so-called 'otoplastics': hearing protection tools made to size. As such Alpine MusicSafe Pro aims to protect the hearing of professional musicians and the PartyPlug aims to give visitors of events and gigs an optimum musical perception.

Muzus brought together seven band members from varying musical flavors for a user session. In preparation these amateur musicians had mapped their working and rehearsal environment. Music plays an important role in their lives. "Music is oxygen," one of them had described. This opinion was shared by the musicians: music is an essential part of their lives, and certainly not something that is done between times.

During the user session there was that dilemma of the desire to make music and the hearing protection – a contradiction in terms. As one band member said: "You really want to hear a nice sound, not muffle it. You want to experience it at the fullest." It appeared that the band members didn't know the noise level at which music is too loud and causes hearing loss. They overrate the decibel level that is tolerable, however they agree that from the moment that one band member uses hearing protection, actually this should be done by all member of the band.



Work tools for users



*"Gearing your marketing to your target audience is at least as important as the very product itself." [Alpine]*

### Muzus

*User-centered* design agency Muzus has invited amateur musicians from different musical styles for a user session. These musicians have elaborated on their living environment, perception and experience with regard to making music and the role of hearing protection.

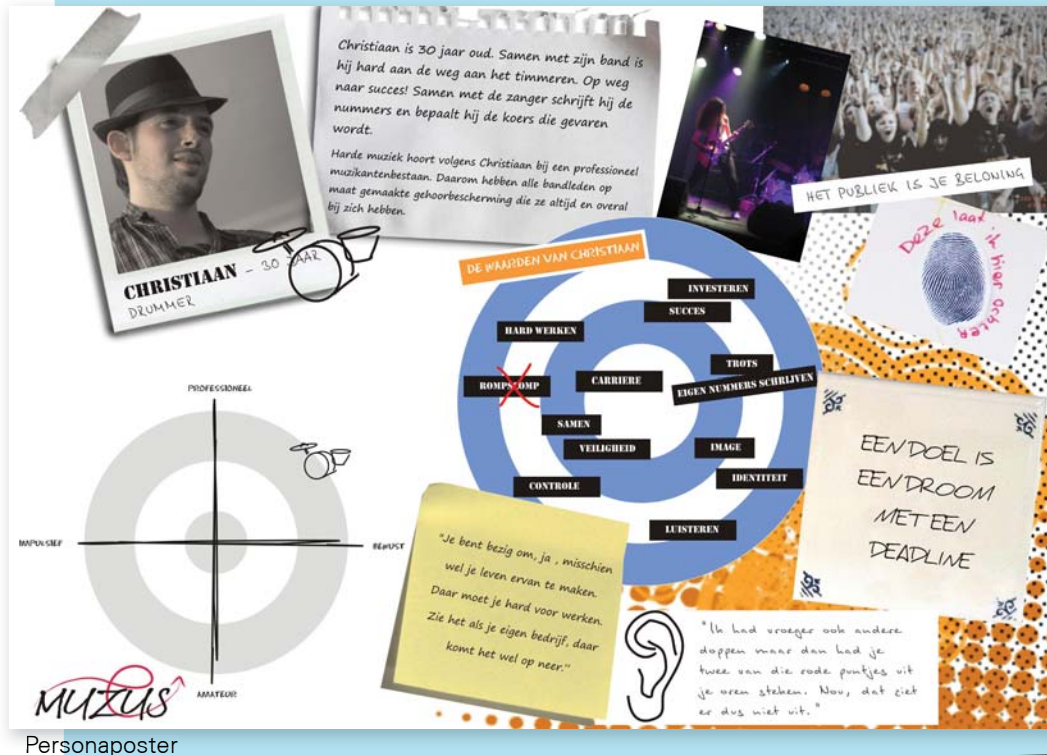
To abridge the co-design process a more standardized process has been used with matching material that was developed by Muzus. In addition and unlike the normal procedure Muzus didn't write out the videotapes but wrote down the main perceptions while the videotape was played. This didn't reduce the process' quality while the perceptions were the basis for the final design.



Muzus converted the users' perceptions into personas: fictitious characters in which rough data is summarized. In a co-design session with all parties involved a number of concepts have been considered on different levels for all personas. Koen&Co elaborated some ideas and added new concepts. Among other things Koen&Co developed a new pay-off: 'Pure Sound.' Such a name is more positive than 'Hearing Protection' and for Alpine it is an opening to new markets. Besides a set of hearing protection tools was developed for all members of the band and including the possibility for each member to give it a personal touch by means of a particular color or cover.

## Result

Alpine has gained a more substantial idea of the way in which amateur musicians handle hearing protection tools. The company uses these views in its marketing and to gear the product offering to the target audience.



Personaposter

## Koen&Co

For Koen&Co it was quite a challenge to convert these lots of information chunks from the brainstorming session to a few concepts within two weeks time. As agreed Koen&Co was not involved in the user session, however there has been a brainstorming session in which many more ideas have been arisen than could possibly be worked out. Koen&Co converted Muzus' new way of thinking into the new Alpine pay-off: 'Pure Sound', which has been used as a stepping-stone to plot a distinct course.



"It's worth while to keep in touch with enthusiastic participants so in a later stage it would be possible to assess the developed concepts with the target audience." [Muzus]

## Alpine Nederland B.V.

"We know how professional musicians handle hearing protection tools and we would like to expand our knowledge on amateur musicians' perception and experiences with these tools. This knowledge is required to better gear our supply and marketing to the target audience."

# A shop-in-shop system for Bosch

## Alrec Sign & Display B.V.

Co-designer:  
Design agency:  
Syntens adviser:

P5 consultants  
Vormers  
Mechteld Bakkeren

Alrec Sign & Display B.V. designs and produces displays for trademark manufacturers. Alrec wants to position itself in the market of durable displays by means of a distinct styling and by actually passing on the trademark manufacturers' message to the potential buyers. To this end the company needs to have a sound perception of the potential buyers' (hidden) needs whenever they see a new product on a display in a shop.

During the Co-design Pressure Cooker course P5 consultants, a co-designer, asked twelve experienced and less experienced do-it-yourselfers to visit a builder's merchant and to register the experiences. Furthermore the co-design team had a conversation with shopkeepers. The findings of shoppers and retailers acted as input for a workshop with buyers. This yielded interesting consumer insights – customers for example seem to appreciate gaining an overview and rest. They want information and advice and like testing products.

The design process passed off in stages, just like a relay race: the user enquiry was done by P5 consultants together with Alrec Sign & Display B.V.. In a creative session together with one of the workshop users they passed on their insights to the design team that existed of Alrec 3D designers and designers from Vormers design agency. During this co-design session the Bosch academy concept was devised: a concept of a display that is erected on the shop floor and that is suitable for sale and education.



*"We have coached Alrec Sign & Display to personally hold the interviews, which saved us a lot of time." [P5 consultants]*

### P5 consultants

For the most part P5 consultants has completed the Pressure Cooker like it usually does, and as opposed to coaching Alrec Sign & Display to personally hold interviews with retailers and contact participants for the session with Alrec Sign & Display. P5 consultants has saved a lot of time thanks to Alrec's close involvement during the process.



Vormers design agency converted the acquired insights into other 'activation methods': different expressions in various media to activate potential buyers and to show them the way to the InStore Bosch Academy. Besides Vormers design agency gave the impetus for a graphic design of the Bosch Academy.

Alrec subsequently elaborated the graphic concept and the ideas of the co-design session in a 3-D design that was received enthusiastically by Bosch.

## Result

Alrec Sign & Display will be coached by a co-design expert when it starts an enquiry of shoppers on behalf of customers.



## Vormers

Vormers usually makes an extensive preliminary study of the design style of the company in order to work out a concept. Working with only user insights was a new factor to them. For a next time Vormers again would like to combine the user insights with a preliminary study.



"Saving on the analysis is impossible since this is a mandatory component" [P5 consultants]



## Alrec Sign & Display B.V.

"We want to develop displays based on knowledge and needs of retailers and shoppers. The cooperation with P5 consultants has indicated how we could continue to professionalize trying to discover their needs. Furthermore the course has given a perception of the opportunities to further extend our already comprehensive full-service packet for A-brand customers in cooperation with external agencies."

# Refuse collection on events

## Koninklijke Bammens B.V.

Researcher: Blauw Research  
Design agency and co-designer: FLEX/the INNOVATIONLAB  
Syntens adviser: Ruben van der Horst

Koninklijke Bammens B.V. develops, produces and sells durable refuse collection systems. The company sees market opportunities in collecting refuse at events. Events such as village festivities, sports games and gigs generate a substantial amount of refuse. Bammens wants to get a better insight on how collection concepts are geared to one another and wants to know whether the refuse collection systems such as movable containers or recipients that are frequently used nowadays, actually are adequate. In addition the cooperation between producers of refuse containers, refuse collectors, other suppliers such as letters of temporary public conveniences and event organizers currently seems quite limited.

How can the huge amounts of refuse on festivals or events be better handled. This issue was the starting point for two *design games* organized by FLEX/the INNOVATIONLAB: one for the event organizers and one for visitors.

With regard to playing the game one festival visitor says: *"Intensive, exacting and nice to hear and see how other festival visitors think. We threw caution to the winds when ideas were unloaded and at some point in time there was no stopping us. In the end I was dead tired."*

What were the highlights and nadirs? Bammens: *"The design game offered an excellent opportunity to hear a large and varied group. Pity that we failed to find all parties prepared within the short time period. It remains to be difficult to mobilize stakeholders when personally they don't see the benefit of their contribution."*



*"We have gained many new insights and now we're going to have an even more scrutinized investigation on how our products and services could complement each other." [Koninklijke Bammens B.V.]*

### FLEX/the INNOVATIONLAB

Usually FLEX/the INNOVATIONLAB plays the Design Game® at least four times. Now it was played only twice based on the Pressure Cooker. However according to FLEX it is no option to save time when the preparation and the analysis is concerned, because this would significantly affect the quality.

The Design Game® is developed by FLEX/the INNOVATIONLAB. FLEX also supplies the designers to play the game with users. The research part of the game is consigned to Blauw Research. The cooperation pleases both parties: *"We all do the things we are good at and this is certainly manifested in the result."*



The festival visitor: *"It's pretty cool to see a trace of some ideas that I've invented on a festival. On the other hand it wasn't fun at all that I couldn't win the game."*

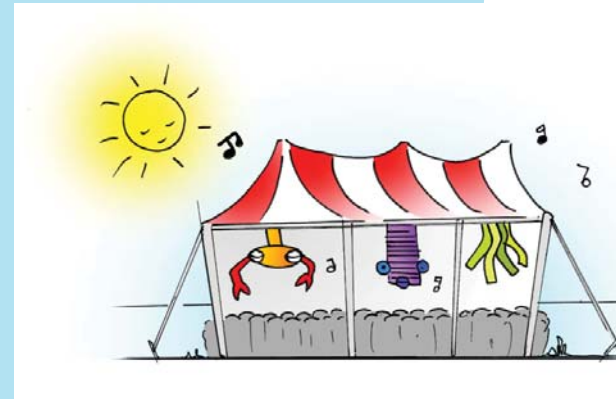
Were the expectations of Koninklijke Bammens B.V. realized? Bammens: *"It was a nice and instructive process. We have received a lot of new ideas and information on a user group that usually we don't consult. Hence indeed our expectations were realized."*

## Result

Koninklijke Bammens B.V. was introduced to co-design methods, the application of which gave the company an insight in the perception and the conduct of event visitors and event organizers regarding the collection and removal of refuse.



*"We didn't save on the preparation or the analysis during this project. The fact is that this cannot be done without seriously affecting the quality" [FLEX/the INNOVATIONLAB]*



## Koninklijke Bammens B.V.

*"We know that it's risky to invent smart solutions sitting on our desks for new unknown target groups. Co-design offers an opportunity to gain new knowledge and insights"*

# Construction-related solutions in the renovation market

## BAT Continental B.V.

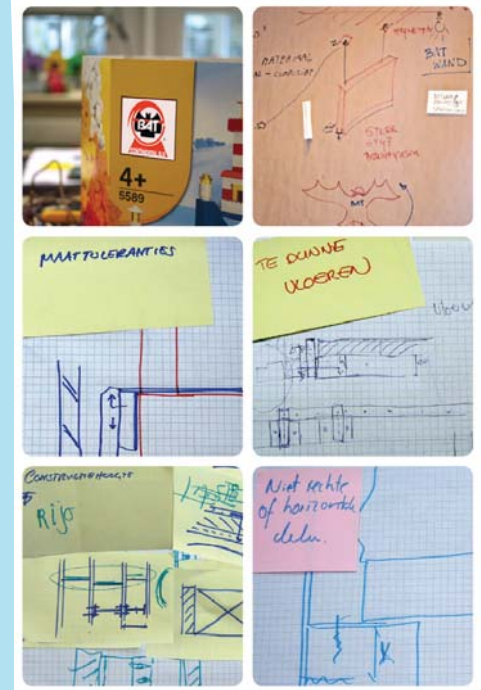
Co-designer: P5 consultants  
Design agency: Aldus Bouwinnovatie  
Syntens adviser: Mariëlle Vermunt

BAT Continental B.V. develops, produces and sells standard steel brickwork tools such as lintels, cramp irons and reinforcement. Furthermore the company provides made-to-measure solutions. The standard products are supplied to the specialized construction firms while the made-to-measure goes directly to constructors. The products are mainly applied in newly-built houses. Partly due to the building industry's crisis BAT Continental is looking for new markets for its products. During the Co-design Pressure Cooker BAT Continental wanted to scrutinize the opportunities within the renovation market.

*"Add building and co-design and you get a marvelous combination. If you do the same with building and Pressure Cooker and a restricted (time) budget and then the result cannot be guaranteed", in this way summarizes Matthijs Netten from Aldus Bouwinnovatie the experiences of two and a half months Co-design Pressure Cooker project. The main obstacle for the BAT Continental co-design team was to persuade the busy building industry employees to attend a workshop, which wasn't completely succeeded.*



*"The building sector is a very complex World with a lot of parties. This was a surprise to us." [P5 consultants]*



*"The difficult reaching of users was vital to the results lagging behind." [P5 consultants]*



### P5 consultants

Looking back on the co-design course with BAT Continental P5 consultants assessed it difficult to find the right people within the short time period. To achieve good results from the sessions it is vital to have a thorough substantive knowledge – and this was made possible by the intensive cooperation with Aldus Bouwinnovatie.



A first obstacle for Aldus Bouwinnovatie and P5 consultants could already be found at the start of the course: delimiting the target group. Aldus: *"The building industry handles as much as five definitions for end users."* As a starting point for the session the team visited some renovation building sites. It was the intention to get in contact with architects, constructors and builders and to find out in what ways new products could accelerate or simplify the building process. The experience showed that people in the building industry love to talk about work-related improvements but that in the short run they cannot or want not to make time for it. Hence unfortunately the planned session with constructors and work planners could not take place, although there has been a worthwhile session with architects and constructors.

## Result

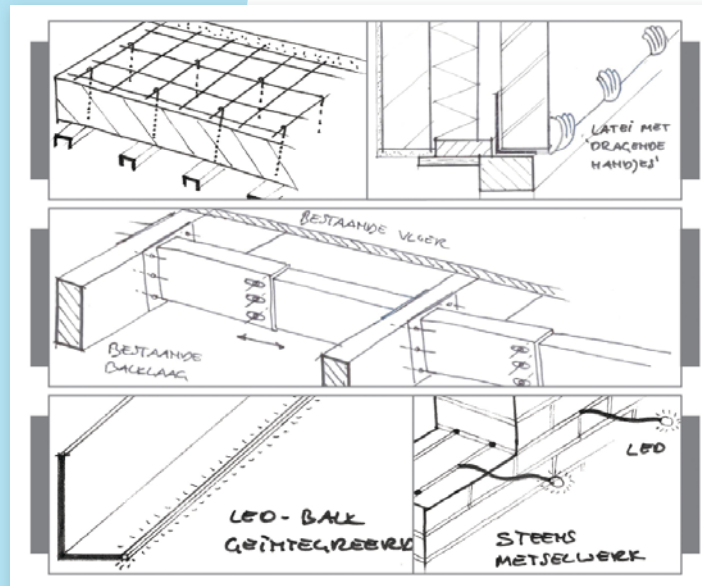
Although the course experienced some setbacks in for example finding users within the limited time period BAT Continental assesses co-design to be an interesting way to build new contacts with target groups that still aren't known. The Co-design Pressure Cooker provided the company useful ideas for its marketing.



*"Co-design is for sure something that we will make use of again in the future."* [Aldus Bouwinnovatie]

## Aldus Bouwinnovatie

According to Aldus Bouwinnovatie co-design is an interesting approach for the building industry, certainly in view of the positive reactions and experiences of all session's participants. However if the project needs to be done in a Pressure Cooker with limited means then this is an obstruction for the building industry.



## BAT Continental B.V.

*"We want to gain an insight on opportunities for our company in a new market, that of renovation or building repurposing. Where exactly is the building process ineffective? Which building-technical solutions are needed? What can simplify, accelerate or improve the building process? Usually we only have contacts with constructors. In this course we also like to get input from architects and constructors."*

# Hygiene with synthetic baby products

## Difrax B.V.

Co-designer and design agency: WeLL Design  
Syntens adviser: Mechteld Bakkeren

Difrax B.V. develops, produces and sells a wide variety of innovative and stylish baby products and toys. The company wants to make life as pleasant as possible for parents/caretakers and babies by developing products that banish cares. Examples are dummy teats, bottles and bottle teats that can be sterilized in the microwave. Difrax' question for the Co-Design Pressure Cooker: what keeps consumers occupied regarding hygiene with baby products?

Difrax B.V.: *"To us, the way that caretakers experience the hygiene of synthetic baby products was kind of an obscure area in which the Co-design Pressure Cooker has shed light for sure. We have gained more insight in what people do with synthetic baby products and how they do it. Clear needs have been demonstrated that gave us new ideas. One of these has been worked out in schemes that we will feed back to our consumer panel. For sure this is to be continued."*

During the co-design course co-designer WeLL Design instructed people from the actual Difrax consumer panel to fill out a survey and to keep a diary. Some handed in the diary together with lay-out pictures of the dishwasher. WeLL Design: *"The diaries yielded interesting data, for example sterilization of products during the first two months after birth seems to be a major issue for caretakers, much more than during the rest of the first year."*

Difrax already cooperates with a personal consumer panel and with the part-time maternity assistant that was taken on. The company is enthusiastically looking for other methods to actively involve users.



*"We have gained more insight in what people do with synthetic baby products and how they do this." [Difrax B.V.]*

### WeLL Design

During the Co-design Pressure Cooker WeLL Design has made use of diaries, in which method the company didn't have much experience. The combination with a survey was well assessed. Within the course of the Pressure Cooker time was lacking to discuss the results with the users yet this has been done later on and this yielded much useful information.

The Co-design Pressure Cooker gave the team a sufficient amount of time for investigation, analysis and generating ideas. However the co-design course time period has been too short to give feedback to the consumer panel and so feedback on the idea schemes has been given to a panel of ten mothers upon completion of the Pressure Cooker. This proved to be very useful and immediately gave an insight on the force of the ideas: some were put aside immediately, others were enthusiastically welcomed by the entire panel.

## Result

By keeping user diaries and supplying cameras Difrax has found a new method to apply with the personal consumer panel. The company intends to make use of co-design experts more often.



*"We have given feedback on the generated ideas to the users, which yielded very useful information: it was clear right from the start which ideas could be retained and which not." [WeLL Design]*



## Difrax B.V.

*"We already have a consumer panel and a medical panel to test our ideas. Co-design offers a new approach that we would like to explore."*



# Furniture for endoscopy in an operating theatre

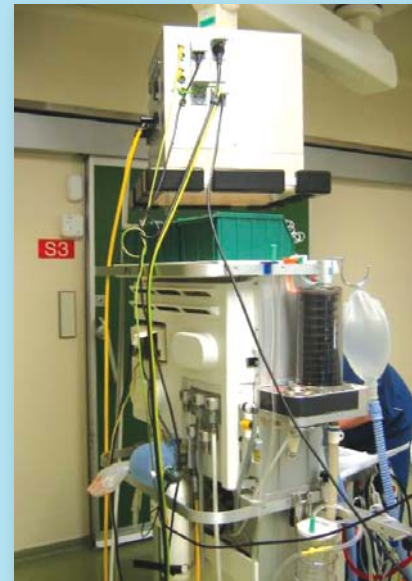
## Jansen Medicars

Co-designer and design agency: WeLL Design  
Syntens adviser: Sjoerd Keijser

Jansen Medicars develops, produces and supplies mobile furniture for medical equipment. The company supplies these products to furnishers of medical equipment or directly to the end user: the hospital. To Jansen Medicars co-design is not new. Already for some time the company involves designers and Utrecht University of Applied Sciences students when developing product concepts. Jansen Medicars' question for the Co-design Pressure Cooker project was to observe how operating theatre staff uses endoscopy trolleys and lamps prior to, during and after surgery.

Doctors ever more apply endoscopy to do surgery. The endoscopic equipment differs depending on the severity of the surgery. In an endoscopic operation theatre the equipment needs to be changed quite a lot. Quickly deploying other devices means a substantial effectiveness improvement. Apart from the specific survey question, in the Co-design Pressure Cooker project Jansen Medicars wanted to test the opportunities on a product that the company already was working out. For that reason prior to starting off the co-design team had to sign a pledge of secrecy.

The co-design team attended two surgery operations in two hospitals, one in a modern endoscopic theatre and the other in a somewhat out-of-date hospital. The staff worked like a well-oiled machine yet many suboptimal decisions were come across.



*"In this project the theatre room environment played an important role." [WeLL Design]*

### WeLL Design

Making plans beforehand is difficult since visiting a theatre room isn't that evident. The theatre staff is very busy and when eventually you get the chance to pay a visit, you simply match your agenda to this situation!

The observations yielded useful information in this respect. Jansen Medicars: *"It was conspicuous to notice the extreme sincerity of the theatre staff. The willingness to share experiences was present in both hospitals. Still the employees in the out-of-date hospital even were more willing to professionalize their work processes – which wasn't that big of a surprise since the interest there also was more profound."*

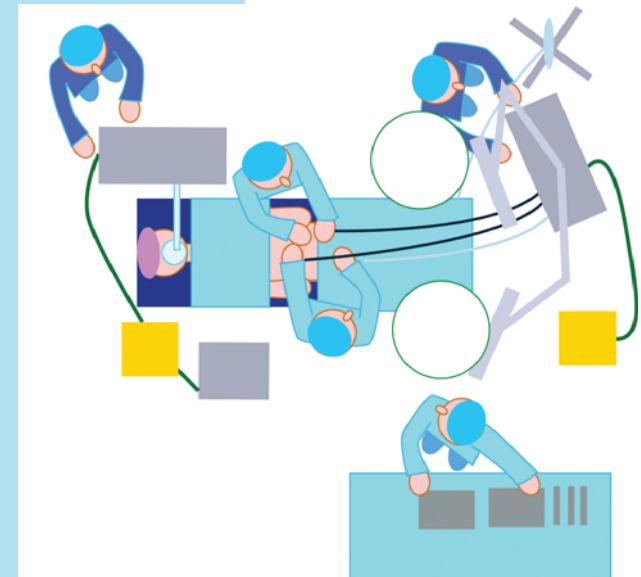
The theatre staff input was used for a brainstorming session within the co-design team out of which came the new product concepts. Co-designer WeLL Design: : *"Jansen Medicars can return to the hospitals with the visualizations of the new product concepts." Furthermore the course gave Jansen Medicars the aspired confirmation for the product it had in mind: "The design is already partly completed. Now we have the stage of the product engineering and further market exploration. It's possible to get going with it."*

The process confirmed that the company already had a good approach to innovation. WeLL Design learned Jansen Medicars to ask more specific questions about the subject as well as to give the users feedback on the suggested designs and remarks. The company found out that this way of working also resulted in improved customer relations.

### Result

Jansen Medicars has received the confirmation that its personal ideas for a new theatre equipment trolley fit perfectly well with the users' needs and it is determined to continue its personal development.

*"It wasn't easy to get contacts in a hospital. Everyone is busy all the time and you also need the institution's approval. So it's impossible to invite people for a session just like that." [WeLL Design]*



## Jansen Medicars

*"As a small enterprise you are in close contact with your customers, still often there's no time to have structural talks with the customer about a specific subject. Co-design offers us handles to hold that conversation."*

# A sleeping tool for babies and parents

## Prémaxx B.V.

User-centered design agency:

Muzus

Design agency:

Pilots Product Design

Syntens adviser:

Mechteld Bakkeren

Prémaxx B.V. develops, produces and supplies multifunctional, safe and comfortable baby products. One of its best sellers is the Baby-Bag, a sling to carry babies. With every product design the child is the central factor as well as the question how parents and caretakers could give warmth and trust to babies and children. The company wants to develop a product that helps to sleep both children and parents. Especially in the first 18 months there are many reasons for a child to sleep uneasily or not at all, yet sleep is of major importance to both child and parents who are better prepared for a new day after a good night's rest.

How do parents and caretakers experience their night's sleep now that they have a baby? What causes and solutions for baby's dozing off and sleeping on have the parents/caretakers discovered? Prémaxx started the Co-design Pressure Cooker with this very question. Prémaxx: *"During the user session with six young parents soon it became clear that they did not see the fact of the baby's not dozing off or sleeping on as an actual issue. To them this was something that goes along with having young kids."* This finding didn't mean the end of the team's activities. Prémaxx: *"We have an extremely nice and smart solution for the hidden needs about baby's sleeping."*

The user session was an important tool in this co-design course. In preparation of this session Muzus, a *user-centered* design agency, asked the parents back home to register the rituals and events around sleeping. This preparation was useful to achieve an appropriate focus during the session. During the discussions it appeared that parents – although they were united in their desire to be a good parent – had



work kit for the user

*"The users who participated in the session were so enthusiastic that they'd love to do this more often" [Muzus]*

### Muzus

Prémaxx already makes use of a personal network to gather perceptions. Hence Muzus specifically has tried to find other parents without this network on behalf of the Co-design Pressure Cooker. Some parents also would like to be involved in Prémaxx activities in the future. The user session, the subsequent set of insights and personas as well as the creative session with all parties offered a rich playground for both designers and the company.



a quite diverging approach. Muzus worked out these findings in three personas: fictitious characters in which the raw information from the user session is summarized. This was used as input for the creative session.

The user session exposed many causes for baby's waking up or being not asleep. Eventually there appeared to be a link with three important factors: the baby has lost something, it is unable to make the transition from day to night or it longs for attention. These insights and the developed personas are used in a creative session with Prémaxx, Muzus and Pilots Product Design to define design directions.

The results of this session inspired Pilots Product Design, a design agency, to bring a new product design: a cross between a cradle and a sling with which parents walk along and in which the baby can be put if asleep. Prémaxx: *"We are glad with this. The course has yielded a much wider variety of perceptions and ideas than we could ever have invented ourselves sitting on our desk."*

### Result

Prémaxx has gained a better view on the user environment. The company has heard interesting ideas to resolve problems resulting from having young children. They will further elaborate them in cooperation with the design agency.



## Pilots Product Design

Pilots Product Design was actively involved in the entire design process. The designers found it instructive to participate in a co-design project. In the future they'd like to make use of it during the personal design projects.



## Prémaxx B.V.

*"We want to produce really novel problem solutions. Co-design seems to yield useful perceptions for hidden problems with which our target group is being confronted."*

# Cross medial approach for a magazine on doll's houses

## Uitgeverij Scala B.V.

Co-designer: 31Volts  
Communication agency: Crown Communication B.V.  
Syntens adviser: Ruud Meijvogel

Uitgeverij Scala B.V. publishes a number of magazines that are market leader within the segment. Examples are Railhobby (a hobby magazine on model railways), Digital Movie (camera, LCD and home cinema) and Luister (a magazine on classical music). The magazines are published both on paper and online on the Internet. Uitgeverij Scala wants to continue developing cross medial activities for Poppenhuizen & Miniaturen.

Recently Scala has taken over the Poppenhuizen & Miniaturen magazine, an issue having active and involved readers. In no time an appeal to the readers to give ideas on new services resulted in 18 enthusiastic responses. All readers who reacted was given a diary in preparation of a meeting day. The users came from all over the country and gave input all day long.

The meeting was a good start for the co-design course and gave a boost to the continuation course. 31Volts: *"Uitgeverij Scala has access to a group of people who is extremely passionate and involved, a group who wants to think along and who is easily available to test or discuss ideas."*

According to 31Volts it's a benefit to Scala that the publishing house has a better perception of what readers want. 31Volts: *"Not all perceptions are new. The findings partly confirm already existing ideas and partly they add something to them. Yet they are so definite that it wouldn't take long for Scala to make use of them."*



*"Beforehand we had an image of the target group but the readers have surpassed our expectations." [31Volts]*

### 31Volts

31Volts has taken the challenge to complete the project in a turnaround that was as short as possible. The final presentation was finished already in a good month's time after the start. The diaries that 31Volts sent to the participants are an encouragement to make something 'personal' of it. On the day of the meeting 31Volts received some pure masterpieces.

31Volts considers the international attention it got on the *service design* community for using *generative probes*, the diaries it sent to users, to be a personal benefit and this was indeed a nice boost. Another insight: the instruction video tapes on the Internet that 31Volts used to instruct users, missed their target since people simply didn't consult them. 31Volts finds this a useful lesson for the coming courses.

## Result

Scala has gained insights in the subscribers' needs regarding new possibilities and functions. The input of the co-design sessions is translated into a campaign with cross medial communication expressions oriented towards the target group.



Diary that was sent to the users



Online video instructions

<http://www.31v.nl/projecten/cross-mediaal-uitgeven/dag1/>

*"We have used panels of enthusiasts to find users and we immediately saw a keen response!"*  
[31Volts]

## Crown Communication B.V.

How do you tell the target group what Scala can and will offer regarding cross medial activities? How do you acquire e-mail contacts with magazine subscribers? Based on the survey findings Crown Communication B.V. could translate the communication message into a concept for a mailing, a banner and an online game.



## Uitgeverij Scala B.V.

*"We see opportunities for offering the target group something more comprehensive than a magazine. Think of online services, events or a community. Co-design offers the possibility to let readers think along on what they want and how they want to be handled."*

# School furniture for a wide-range school

## Schilte B.V.

Co-designer: Barry Koperberg  
Design agency: Scope Design Strategy  
Syntens adviser: Mariëlle Vermunt

Schilte B.V. produces and sells durable wooden quality furniture and playground equipment for nurseries and primary schools. The company presents itself as a wholesaler with a huge variety of personal and commercial products for the education.

The use of space and the organization of schools do change and evolve. Schools for example evolve to wide-range schools that offer before and after school care and care at lunch time. The education shifts from a classical approach to more small-scale instruction forms and workgroups. Schilte wanted to gain a better view in the education developments in order to design new products. On behalf of the Co-design Pressure Cooker Schilte went deeply into furniture that can be used flexibly in the multifunctional rooms of wide-range schools.

The co-design team started an enquiry to get a perception of the needs and desires of wide-range schools. By means of desk research, expert interviews and fieldwork the team tried to uncover the basic principle of wide-range schools. It so happened that this idea theoretically is inspiring yet hard to perform in practice. The conclusion upon seeing all users: *"We were not allowed to touch the building but the furniture only. And so we have been looking for a piece of furniture that could be used flexibly. We have found this in the Supernova module, which could easily be transformed from a closet to a small or large platform depending on the user's desires."*



*"Unexpected talks during our visit to the school yielded a lot of information." [Schilte]*

### Barry Koperberg

With the intention to achieve results quickly co-designer Barry Koperberg has discussed the views resulting from the visit to the wide-range school together with the others. Based on this discussion a number of combined ideas have been generated. The contact with the wide-range school was done by means of Schilte.

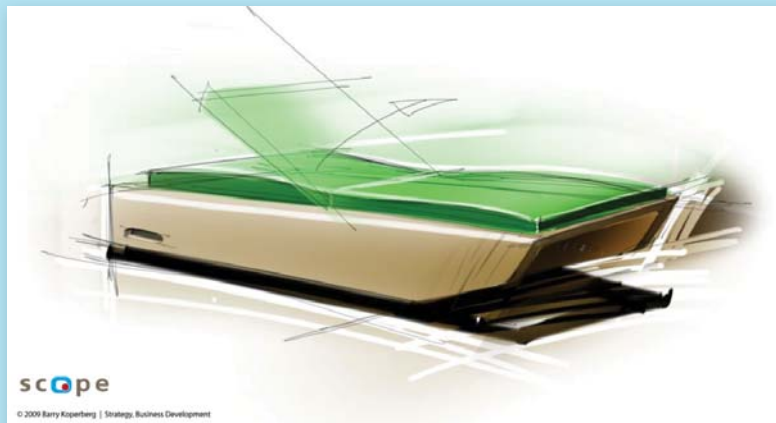


The co-design team formulated two interesting directions for Schilte's future company strategy and elaborated concepts that the company could apply in the future. A feedback moment with the users remains to be required to test in what way the concepts really links up with the desire.

Co-design was new to Schilte. The company considered the users' major involvement to be refreshing and useful: now Schilte has more knowledge on the co-design possibilities and has more experience with schools.

### Result

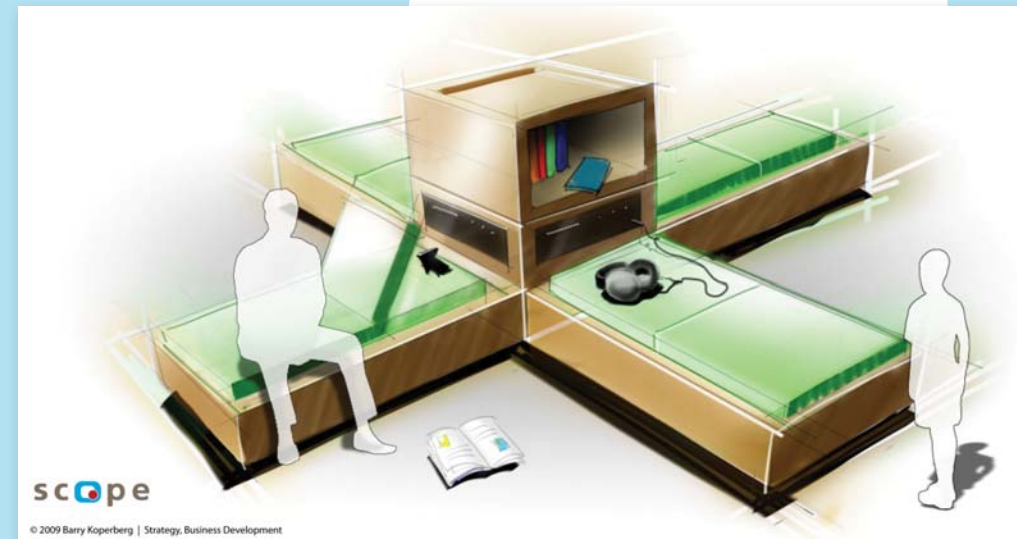
Schilte is charmed by the way in which the Scope Design Strategy design agency the survey findings translated into a piece of furniture for wide-range schools. The company believes in the design agency and wants to continue the cooperation in the future.



*"I noticed that the interviews were not held on a general level but that in-depth questions were asked."*  
[researcher]

### Scope Design Strategy

During the entire process Scope Design Strategy has been an involved party. This pragmatic approach gave the designers an immediate insight in user situations. By working together the individual roles appeared to overlap from time to time. Sometimes this lead to confusion about responsibilities but still it encouraged the creativity.



### Schilte B.V.

*"The learning environment within schools is changing and schools are given more functions. We want to know how to discover (hidden) needs of users. It so appears that investigation is the source for new products."*

# Safety on stairs

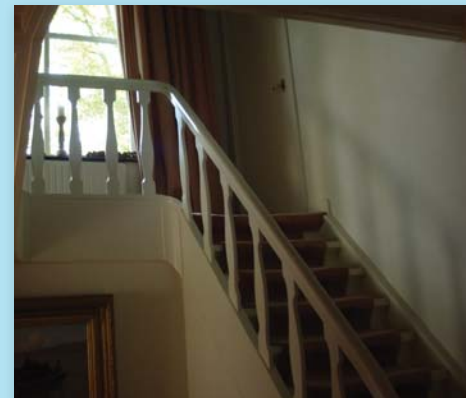
## Verheul Trappen B.V.

Co-designer: 31Volts  
Design agency: Koen&Co  
Syntens adviser: Sjoerd Keijser

Develop a tool to help taking stairs as a Verheul Trappen B.V. new product or service – the co-design team started the Co-design Pressure Cooker project with this assignment. After two and a half months there was a patentable product concept and a proposal for a product-service combination. Designer Koen&Co considered this “a huge kick”.

Verheul Trappen develops, produces and assembles ready-made staircases for the higher market segment. The company supplies to end users, whether or not by means of constructors. Because the Dutch people is ageing and people nowadays live longer in their own houses the staircases are ever more an obstacle. Verheul Trappen senses market opportunities in staircases with optimum safety. Such a staircase could prevent a fall or restrict the consequences. This kind of staircase stigmatizes the target group less than for example a chair lift and furthermore it offers the opportunity to render a service on top of the product.

To get an insight in perceptions, desires and experiences regarding safety, self-reliance, responsibility and the ability to cope for oneself, 31Volts has done six in-depth interviews with both older and younger parents all over the country. The findings were completed with those of a *heavy user*: an Utrecht's Domtoren guide who takes 465 steps up and down every day.



### 31Volts

This project focused on issues such as safety, self-reliance and responsibility. Video interviews were selected as the working method since not all staircase users had the same level of mobility. This video served as input for a co-creation session with experts.

Because the users could not be present at the brainstorm, 31Volts taped the interviews and compressed them into a movie. That was input for a creative session in which the team members and a psycho-motor practitioner Together worked towards solutions. The end result is up for patentability.

### Result

Verheul Trappen started research concerning the patentability of a product-service combination.



*"Besides inviting users we also had a motion study scientist and a Domtoren guide who needs to go up and down an awful lot of stairs every day with several tourist groups. He let us know interesting things about staircases and safety." [31Volts]*

### Koen&Co

*To Koen&Co the creative session was a source of perceptions: "The session's structure provided many interesting handles for a design."*



### Verheul Trappen B.V.

*"We are looking for a new business opportunity and want to do something around safety on stairs. How does the target group take this?"*

# 5 | Lessons of the Co-design Pressure Cooker

## Observations, tips en tricks

### Observations

#### Involvement accelerates

All ten co-design courses demonstrated a deviating size of involvement of designers, researchers and companies. Both the motivation to come to perceptions and solutions, and the project type differ substantially. On the one side there is the classical model with clearly defined tasks for the different parties: the company assigns a task, the design agency performs a user enquiry and generates views on which basis the designer is informed to generate ideas. This type was applied by none of the Pressure Cooker projects. On the opposite side the different parties cooperate as a development team: both the company, researchers and designers jointly complete all stages as a team. This type of project was applied most closely by the Verheul Trappen B.V. and Prémamaxx B.V. cases.

It is understood that in practice there are plenty of variants of the aforementioned project types. Large companies pay a lot of attention to the formal transfer of responsibilities – something that occupies SMEs to a much lesser extent. The involvement is extensive and the responsibilities are more shared, hence the team approach offers opportunities for SMEs. The different parties can work efficiently because there's a clear conception of the task and several communication stages can be skipped. In this way a official report on the survey results isn't required in all cases since the company and the designers already are aware of the survey's ins and outs.

From the SME network several internal and external stakeholders were involved smoothly in the co-design course. In some courses the general manager participated in the co-design team, which enabled quick handling and taking prompt decisions.



#### Direct contact pays a profit

Direct contact with the end user is vital to both the company and the designer. The empathy that is created in this way is unequalled by other methods such as personas or video collages, no matter how ingenious and rich they are in themselves. Time investment in the survey method, albeit short, pays a profit for the further project progress.

Several co-design experts already had a personal design background. This sometimes resulted in discussions on the assignment of tasks: some were convinced it would have been more efficient if they had been given the opportunity to perform the draft. The advantage was that these co-designers yielded results that link up with the desires of the designers in the initial design stage. The focus was on laying down rich images of the users, not on drawing general conclusions. Those perceptions encourage to bring on new ideas. Some co-design experts felt such an extent of responsibility that they voluntarily remained to be involved in the design process. Practical reasons sometimes hindered a team approach regarding the Alpine case. The co-designer voluntarily checked whether the concepts linked up with the users' perceptions.



### Investing in preparation and analysis pays a profit

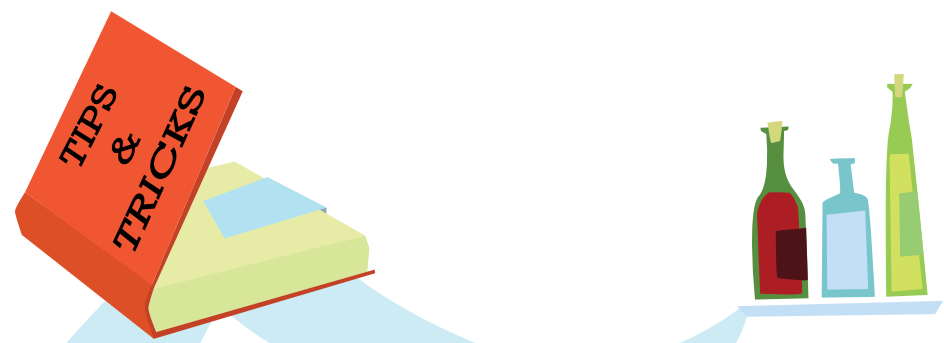
A crucial question of the Co-design Pressure Cooker was how the co-designer could lead to results within a limited time without losing quality. Each time was given 38 hours for the user survey, which is considerably less than normal courses where a more in-depth, broader and more accurate enquiry can take place.

When we look at the ten co-design courses it becomes clear that preparation and analysis of the survey results are required to guarantee quality. For the parties concerned a good preparation gets a handle on the target and the use of different survey and design methods. Thorough analysis is mandatory to discover hidden treasures. Yet when this happens too hasty than the analysis easily leads to superficial and most obvious answers. Deeper insights often are concealed and in many cases only come to the surface after an incubation period.

### Shortcuts are possible from time to time

As opposed to scientific surveys where survey data often are written out some co-design teams have made a shortcut. They have registered relevant remarks during the user survey while everything was being videotaped, which saved a lot of time.

In addition time is saved in recruiting volunteers for the user survey by means of existing, often informal relationships of the company with the user. Usually this time-consuming task is done by the co-designer, sometimes directly, sometimes through the agency of a recruitment office. Although most co-designers prefer personal recruitment of volunteers because of the strength of first personal contacts, this time some have used another method. End users were approached by stakeholders, through the company's network, informal contacts or consumer panels, which proved to be a quick and efficient method. A pitfall of this approach is that the selected users are concentrated on the company too much as a result of which they cannot or don't want to look candidly at the personal perception of the environment.



A third timesaving means is deploying the same users in several stages such as when generating insights and when testing ideas, as opposed to time and again using other users for each stage. Except that end users need to be recruited only once, 'reuse' has the advantage that the users already are aware of their use and user environment. They have the ability to assess a new concept as an experience expert.

Finally time can also be saved by restricting official communications. Transfer by means of informal channels such as workshops and persona posters appeared to be a good alternative for official communication ways.

### Co-design methods are picked up quickly

The companies and designers in the Co-design Pressure Cooker specifically were aware of the more traditional user survey methods in which the user acts as an informer. Older, experienced designers often still have little knowledge of the oncoming methods that involve the user as an expert or co-creator. During the Co-design Pressure Cooker these designers happened to smoothly pick up and use these new ways of thinking.

### Assignment of tasks limits time investment

During the Co-design Pressure Cooker the co-designers and designers received an allowance for 38 and 19 hours respectively. This time appeared to be hardly sufficient: the time excess reported ranged from 0% to 130%. As a cautious indication we could say that a balanced task assignment would require 80 to 100 hours to be successful.

# Tips and tricks

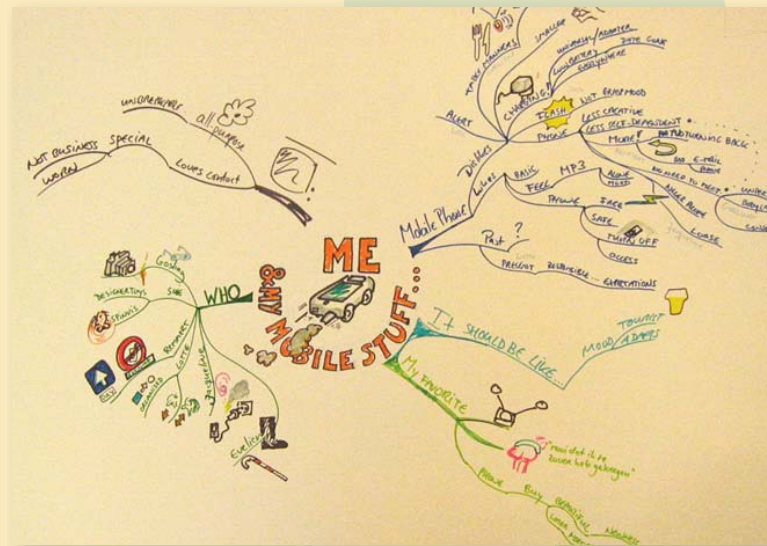
## Take care of inappropriate use of methods

Both designers and co-design experts (the researchers) have a personal range of methods but when these aren't automatically fit for the project and the user, in practice they sometimes are made fit artificially. At times this results in surprising perceptions but often the quality of the results falls short of expectations. Hence it is important for designers and co-designers to maintain an open approach to the project and that they are aware that theirs probably isn't the best method. In this matter the co-design community is more than willing to give advice.

## Explicitize prejudices

The objective of co-design is to be receptive to the world of the end user. Designers and co-designers better be aware of the own prejudices and expectations. Mapping the personal prejudices, for example with a mind map, could be an aid. Such a mind map clearly shows the aspects in which the designer is not in accord with the users' image. And it is precisely in these components that often interesting perceptions can be found.

## Mind map



Presuppositions about mobile devices

## Provide for diversity

When trying to find users for co-design courses it is worthwhile to have a group with a wide diversity. The intention is primarily to achieve a broad image of the user's world. This wide-diversity user group yields interesting discussions. A pitfall is that the users are too remote from each other, in which case there's a risk that they cannot or don't want to keep up with each other. Hence it is crucial to have variety in perceptions.

## Don't proceed to a next stage too fast

A co-design process invests in establishing a broad image of the end user. In the case that the analysis is being reduced because of time pressure than there's the risk of selective perception: the co-designer only sees whatever he wants to see and sticks to his personal assumptions.

The same risk occurs in the shift from user perceptions to design. In the case this transfer is done too fast then the built conception fades and the designer will easily fall back on the personal world of experience.

User experiences often cannot be converted into a one-on-one idea. Underlying motivations and needs have much more value. Hence it's a matter of broadening the individual experiences into substantial perceptions. In the Co-design Pressure Cooker this was often done by means of workshops in which the results of the user survey were communicated and interpreted.

## Cooperate

For SMEs it may be a smart thing to absorb co-design in a cluster of concurring companies. As such related companies can broaden a same user group or context in order to subsequently link innovation initiatives to it in individual courses per company.

## Tips for The Designer

- 1** Step into the world of the end user: provide for moments of personal contact.
- 2** Pursue to really see into and internalize the insights from the user survey.
- 3** Try to get a survey of the data by finding connections but never lose track of the rich, personal aspects.
- 4** Assess concepts and ideas in an early stage with end users, if needed use *low-fidelity prototypes*.
- 5** Involve the target group in the entire design course as early as possible.
- 6** Keep in mind the end user during the entire design course.
- 7** Experiment and ask advice from knowledge institutions.

## Tips for The SME

- 1** Participate in the co-design process, not as a client but as a member of the team. Adopting an active role will save time and money.
- 2** Observing what people do and what motivates them is often more interesting than asking what they think of something, which for many people is hard to put into words.
- 3** Make sure not to think in stereotypes but in real people. To this matter it's required to actually talk with people.
- 4** Do you want to increase the knowledge of existing target groups? Involve your own customers in the process without indulging in navel gazing.
- 5** Do you want to reach new target groups? Then spend time making contacts with new (professional) users.
- 6** Consider to invest with other SMEs as a cluster in co-design to share the costs. Advice on this matter can be obtained from Syn- tens or knowledge institutions.



# 6 | Surplus value of co-design

## Results of the Co-design Pressure Cooker



### General results

- The SME and the design agencies have got to know new co-design methods to apply both themselves and together with co-design experts.
- The SME and the design agencies have got to know new specialized co-design agencies.
- Co-designers and design agencies have demonstrated their surplus value in the analysis of the co-design results and in converting these findings into visualized concepts.
- Syntens advisers have realized by their involvement in this project how co-design can be of help to the SME. They have become ambassadors of this approach and the findings will be handled in their advice to the SME.
- Lecturers and students of Utrecht University of Applied Sciences have gained an insight in co-design methods and the practical applicability of them.

### Results per company

- *Alrec Sign & Display B.V.* has indicated to be coached by a co-design expert in the personal starting a shopping survey on behalf of its customers.
- *Schilte B.V.* was quite charmed by the conversion by the design agency of the user perceptions into the furniture for wide-range schools. The company has gained confidence in the design agency and in the future it wants to begin projects together more often.
- *Verheul Trappen B.V.* has started an enquiry into the patentability of an idea.
- *Uitgeverij Scala B.V.* has gained an insight in the diverging subscribers' needs and already has converted the input from the co-design sessions in a campaign with cross medial communication methods to its target group.
- *Jansen Medicars* has received a confirmation that its own ideas for a new equipment trolley for surgery theatres fit well with the users' needs and the company will continue this development.
- *Difrax B.V.* By applying diaries and the use of cameras by users regarding a specific theme *Difrax B.V.* has found an excellent method to apply in its consumer panel. The company is determined to make use of co-design experts more frequently.
- *Prémaxx B.V.* has gained a better perception in the user perception and has obtained a lot of interesting new knowledge about the real problems of parents with young children. These ideas will be further elaborated by the company in cooperation with the design agency.
- *BAT Continental B.V.* thinks that co-design is an interesting way to build new contacts with target groups they are insufficiently acquainted with. This immediately resulted in useful marketing ideas.
- *Alpine Nederland B.V.* has gained a better view on the perception and issues regarding hearing protection for amateur musicians and can use it in its marketing and gearing its supply of products to this target group.
- *Koninklijke Bammens B.V.* became familiar with co-design methods and by applying them has gained an insight in the perception and the conduct of visitors and organizers of events as well as relevant municipal instances regarding the collection and transport of refuse.



# Agencies with co-design expertise

## WeLL Design

WeLL Design is an industrial design agency that focuses on Food, Health and Living. The agency works with customers on the successful introduction of new products. Apart from tendencies, market views and durability, the company's starting point is strategy, trademark values and user target groups. Methods used by WeLL Design include among others: playground, ideation (innovation scan), visualization, user test, tendency investigation and model making.

*Want to know more? Visit [www.welldesign.com](http://www.welldesign.com).*

## P5 consultants

Consumer's counsel and designer's assistant – that's how P5 consultants describes its role. P5 consultants is specialized in investigation that is the starting point for design, product management and marketing. The agency helps clients to take decisions by visualizing the interaction between human and (new) product. P5 consultants applies a human-oriented approach with two central issues: Do we work out the appropriate product? & Do we design the product?

*Want to know more? Visit [www.p5consultants.com](http://www.p5consultants.com).*

## Muzus

Muzus designs for, with and from user perceptions. To Muzus conversion of users' hidden needs and desires into concepts is the key to successful innovation. The agency wants to reduce the gap between companies and end users starting with user survey by means of context mapping, cultural probing and creative sessions. The generated perceptions are elaborated in both context, interaction and design visions that in turn are input for innovative designs. In the co-designing stage users are actively deployed to assess and fine-tune concepts such that the completed concept fits perfectly well with the social environment of the people who eventually will have to use it. Muzus performs projects on four areas: product design, user-oriented services, public projects and organizational issues with a focus on the user.

*Want to know more? Visit [www.muzus.nl](http://www.muzus.nl).*

## FLEX/the INNOVATIONLAB

FLEX/the INNOVATIONLAB is specialized in product design. Each FLEX design process includes five stages: vision development, concept development, concept refinement, technical design and implementation. Among other things the agency uses the DesignGame®, a board game developed in-house that client and designer jointly play to get a clear outline view of products that are to be developed.

*Want to know more? Visit [www.flex.nl](http://www.flex.nl).*

## 31Volts

A Service Design agency specialized in design-based innovation. In this way 31Volts presents itself on its website. The agency works out a new generation of services that distinguish themselves for being worthwhile, valuable and uncomplicated. The path to this follows design research, service innovation, service creation, business transformation, adding value, future scenario exploration and empowering innovation. Furthermore 31Volts works with service design to get to valuable services.

*Want to know more? Visit [www.31v.nl](http://www.31v.nl).*

## Barry Koperberg

Presenting no ready-made solutions but looking for the power and ambition of the enterprise and the corresponding strategy in cooperation with the client – that is Barry Koperberg's way of working. The conversation is the most important method. Open, constructive, expressive and prepared. Koperberg frequently works with LEGO products to organize, manipulate and appreciate the everyday reality. During group processes customers build real models individually or in group, playfully and creative and at the same time confronting and constructive.

*Want to know more? Visit [www.barrykoperberg.nl](http://www.barrykoperberg.nl).*



# Co-design Pressure Cooker Participants

## Co-designers

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- Muzus, [www.muzus.nl](http://www.muzus.nl)
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- P5 consultants, [www.p5consultants.com](http://www.p5consultants.com)
- WeLL Design, [www.welldesign.com](http://www.welldesign.com)

## Designers

- Aldus Bouwinnovatie, [www.aldus.nl](http://www.aldus.nl)
- Crown Communication B.V., [www.crowncommunication.nl](http://www.crowncommunication.nl)
- FLEX/the INNOVATIONLAB, [www.flex.nl](http://www.flex.nl)
- Koen&Co, [www.koenco.nl](http://www.koenco.nl)
- Pilots Product Design, [www.pilotsdesign.nl](http://www.pilotsdesign.nl)
- Scope Design & Strategy B.V., [www.scopedesignstrategy.nl](http://www.scopedesignstrategy.nl)
- Vormers, [www.vormers.nl](http://www.vormers.nl)
- WeLL Design B.V., [www.welldesign.com](http://www.welldesign.com)

## SMEs

- Alrec Sign & Display B.V., [www.alrec.info](http://www.alrec.info)
- Alpine Nederland B.V., [www.alpine.nl](http://www.alpine.nl)
- Koninklijke Bammens B.V., [www.bammens.nl](http://www.bammens.nl)
- BAT Continental B.V., [www.batcontinental.nl](http://www.batcontinental.nl)
- Difrax B.V., [www.difrax.com](http://www.difrax.com)
- Jansen Medicars, [www.medicars.com](http://www.medicars.com)
- Prémaxx B.V., [www.premaxx.com](http://www.premaxx.com)
- Schilte B.V., [www.schilte.nl](http://www.schilte.nl)
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