

# BUSINESS CASE: DAYLIGHT SYSTEMS OF SERVODAN

BARTOSZ WOZNIAK  
MCI, University of Southern Denmark  
wozniak@mci.sdu.dk

## ABSTRACT

This paper presents the case of a Danish company- Servodan and the challenges that the company is to face with its new product called 'daylight'. The case is based on the cooperative project between the company and University of Southern Denmark. The paper provides a general introduction to the company activity and product characteristic. Next, the background of the project and data gathering processes is briefly described. The evaluative part of the case opens with indicating the Servodan's contingency and the core of the challenge that company faces. Subsequently, the base for an analysis framework is developed and ideas for value offer proposed. The case ends with a concluding questions and the invitation for further analysis for conference participants.

## INTRODUCTION

Servodan is a local Sønderborg company, established in 1958 (<http://www.servodan.dk>). The company manufactures intelligent lighting control equipment for office buildings and business environments, e.g. movement sensors, day night switches and light controls. In 1983 the founder's three sons took over, and in 2008 Servodan became part of the larger Niko Group based in Belgium. Recently the company has developed a new product system based on LED lights. The lighting modules can be digitally controlled to provide light in the tone of daylight, and they can be programmed to change colour balance in the course of the day – say, from reddish light in the morning to more bluish in the middle of the day. Accord-

ingly, this product has been given the name 'daylight'. At this moment, Servodan manufactures a ceiling mounted light (with a 3D image of the sky) and an artificial window (with a countryside image), both of which provide rooms with a near-natural lighting experience. LED luminaries and 0-10V ballasts are used for daylight control. The sense of reality is achieved through a process that combines filter boosting 3D effects, real window frames, flat multi-channel light sources and specific lighting scenarios and effects. The system includes wireless switches, sensors and computer control for easy installation. The main sales points are to offer increased wellbeing even in window-less rooms, and electricity savings through the LED technology and sophisticated control.

The system is relatively new to the market, and although Servodan has been in the lighting business for many years, those are the first modules they manufacture. As the primary markets, Servodan wants to focus on five areas: hospitals, banks, hotels, schools and lighting OEM (original equipment manufacturers).

It was clear to Servodan that this new technology requires a new way of thinking about their business. Some of the initial questions for the manufacturer were: Which market and how? How can a component manufacturer switch to systems sale?

There are two challenges in need of attention: (1) The business model for the new market(s) in terms of target customers, distribution channels etc. and (2) the use scenarios and the product service concept. The goal of this project is to study market, users, and company, and to develop proposals for both challenges simultaneously.

## COOPERATION WITH UNIVERSITY OF SOUTHERN DENMARK

Some initial steps, on the way to the project goals, were taken already. At the outset of the 'daylight' challenge Servodan contacted Mad Clausen Institute (MCI) at University of Southern Denmark (<http://www.sdu.dk/mci>) to assist them in developing the idea of the new product and the process of exposing it to the market. The cooperation was carried on within the



Figure 1: The vision of a daylight office, as the company shows it in its sales brochure. An office environment with skylight illuminaires in the ceiling and an artificial window in the darker corner.

'Business of Design' interdisciplinary class which merged graduate students of 'IT Product Design' and 'Innovation and Business' into the research group. It encompassed intense three weeks of work on the company project.

Activity was organized in the matrix design (Galbraith, 1971) so each member of the student research group was in both functional and project teams. Functions were design oriented: user research, lighting design, service design; as well as business oriented: business research and business modeling. Teams were divided based on assigned markets that Servodan concluded as possibilities (hospitals, banks, hotels, schools and OEMs). This set up ensured market focus as well as the objectives concentration around the project goals. The initial work of the teams consisted of gathering the data and analysis for the project. That involved brief field interviews, contacting potential users and customers, study company position etc. This was accompanied by Servodan coaching sessions, where necessary information was exchanged between the research group and company's representative. The meetings helped to assess the company situation and also ensured that the groups know what company knew already.

After three weeks of a limited study of the company, industry and product's aspects, there was an official presentation of the results to the company. This included the sketches, drawings, results of the surveys and interviews, and scenarios ways of presenting users and

ideas, drafts of business models and the discussions around business model options. The CEO and three managers were quite enthusiastic about the demonstration and therefore students were asked to come and present the outcomes at a meeting with the board of directors two weeks later.

Naturally, this cooperation did not provide very extensive analysis, nor fully grounded recommendations. However, it delivered considerable material for the project and numerous ideas for the value offer of the product. Most importantly, it enabled to assess the Servodan's situation, and identify the main challenges. As it exposed the questions about company strategy and business model, what allowed preparing a thorough analysis framework. Fundamentally, the data gathered worked as a base for the following sections of the case.

#### **ESTABLISHED BUSINESS VS. EMERGING OPPORTUNITY**

The core of the case considerations could be the fact that Servodan has the established business in lighting control systems and their proven business formula to act as a supplier to OEMs. Accordingly, it could be difficult for them to adopt new way of looking at the business within their conventional business perspective. Furthermore, and very importantly the resources that they have today will not be enough for the new business model. There exists a certain organisation inertia that might possibly make it more difficult

for the company to look on the new opportunity that does not directly follow current company logic.

Essentially, the 'daylight' product is totally new to the company. The invention itself happened rather accidentally, while R&D group were playing with control of light scope. In a way, it surprised and challenged the company's management. If Servodan decides to follow up on the 'daylight' product they stand in front of the core decision- what is to happen next? One way could be creating a kind of corporate venture that deals separately with daylight product. On the other hand, they might embed the 'daylight' in the existing organisational framework. Either scenario is most likely to involve rethinking the strategy, redesigning business model and subsequently business processes.

How can they think about the day light solution as a business model innovation? How can they coin this strategic puzzle of what to do with the spinoff that does not completely fit with what they do today? These are some of the core questions and dilemmas that company in all likelihood will have to face.

Therefore, one should take into account the challenges exhibited in the following section - a few of many that the company needs to deal with at the outset of the further business analysis.

#### **CHALLENGES - A BASE FOR ANALYSIS FRAMEWORK**

Servodan has several strategic and business model related challenges to resolve. The very first generic challenge on the strategic level is the portfolio match; and the question- is 'daylight' something that they would really like to do and how does it fit to their current business? Accordingly, how can this enhance their company productivity and profitability by any potential synergies that could emerge?

Consequently, business model elements (e.g. Osterwalder and Pigneur, 2009) need to be considered. A starting point is to be the value proposition. At the outset it might follow one of standard Drucker's questions: who are the customers and what are their needs? Even though Servodan has pre-chosen the few markets as their priority (hospitals, banks, hotels, schools

and lighting OEM), the implications of those choices are more important. So far, the company has worked mainly with OEMs and now most of their pre-chosen markets involves end customer, however they have a little experience in dealing with this type of the client. Furthermore, their value offer and product scenarios have to be clarified- what problems do they exactly solve and what needs the product responds to? Is it the energy saving; solution for windowless rooms; well-being or the unique experience that 'daylight' provides? It might also relate to Servodan's focus- either on the product development or service design. Do they invest most in product development in direction of scientific argument towards well being or towards design and convenience of the solution? (A few general ideas around the quality of the value offer are described in the next section of the case.) Subsequently, how far the company would like to diversify their offer to different segments or rather focus on particular niche at the outset- is another challenge. The last part of value proposition is the question what is the most suitable way of generating the revenue streams. From Servodan experience with OEM market they are used to sell the product as commodity within the pricing mechanisms. However, the other options as usage fee, leasing or even licensing might be considered for a specific character of the offer and segments they approach.

On the other hand the evaluation of the competence base and resources to deliver the value is the vital factor. What core assets, knowhow and expertise that Servodan already possesses could be used for the 'daylight' and what is missing? For instance, the more in house marketing and sales force might be needed for promotion and acquiring new customers. In general, the extension of staff might be necessary. For example, additional technicians who have to set up the 'daylight' might be a critical choice for external image of the company and the final success of the product. In contrast, some of the activities might be outsourced to the existing or potential partners. Consequently, the assessment of the value network that can support Servodan's business is necessary - both in horizontal and vertical value chain.

Finally, from strategic perspective the competitive market environment (e.g. Porter, 1996) is vital for Servodan. As the product is new to the market the competition is relatively small and there were only two big players found on the global market. It creates a great opportunity for Servodan on the Danish market where the competition is not established, yet. However, the volume of the national market and the perspectives of the expansion have to be considered. At last the new entrants and the dynamics of the competitive environment might become a challenge in the near future.

In very general, the challenges could be summarised as the strategic issues of portfolio match and competitive environment, while on the business model level the matters of value proposition, resource base and value network.

#### **THEMES FOR THE VALUE OFFER**

One of the starting points of further analysis might be the assumption of the certain strategic choices and clear articulation of the value that the product offers. There are numerous ways to approach this issue- as touched on in the analysis framework. Here, there are exhibited several value offer themes that one could use for either inspiration, or consideration for further development of the analysis or design.

The technical characteristic of the product, having high light quality and energy saving already articulates the value. However, in order to focus and develop specific value proposition around it, one could consider certain value qualities, types to add on and expose.

First, further development of 'daylight' can result in the fact that product will give the healing effects, the same as the natural light. This means that it could, for instance, help patients in the recovery process, assist in a fight with a depression symptoms or in general influence the state of the user in a medical sense. However, this would involve a thorough research and medical evidence. Therefore, one could define it as a quantitative type of the value offer, where numbers and strong evidence matter.

On the other hand, the strong qualitative type of value offer might be expressed with the unique experience while using 'daylight'. That would

involve more artistic and design approach to the product. The attributes, then could be articulated by colours, different shapes, customized installations etc. Additionally, the blend between the visual and audio experiences can be offered. In general, various product scenarios that ennoble the product with a unique touch and intangible quality of experience might be considered. Yet, this again would have to involve an additional development of the product- not technologically or scientifically, but more design-wise.

Finally, the offer could focus on the qualities of convenience, comfort and wellbeing. Here, the embedded feature of high light quality and energy saving might have been almost enough if the company offered a value that emphasize a practical use. That could involve set ups for windowless room, but also enhancing the quality and comfort of being in any room of the building including working offices. This idea is directly related to improving the so called 'building ecology' and working environment. The range of factors influencing office wellbeing relate to: adding the plants to the office, monitoring the air condition- temperature humidity; design of furniture etc. 'Daylight' product could be undoubtedly the vital ground for the improved work place environment. This theme adds intangible value of convenience and wellbeing, while explicitly articulating the embedded technical characteristic of the product. This value offer would be positioned in between the strong qualitative and quantitative types mentioned earlier.

The above examples are to work more as ideas and stimulation for further analysis, leaving the heart issue open- What value offer could be the one of Servodan's 'daylight'?

#### **CONCLUSION**

This paper attempts to introduce the case of Servodan and the challenge of dealing with the innovative product of 'daylight', the company accidentally came up with. Sketching the background of the Servodan and the product characteristic through analysis framework and some brief ideas on value offer, the ultimate intention was to evoke the sense of interest to look into it further. It is specially addressed

for potential business analysis as well as design intents.

Certainly, Servodan is in the difficult position with numerous options to choose between. If one was to boil down all the questions to one issue it would be the Servodan's strategy and business model in very general sense. Therefore, it leaves a great space for further business analysis to investigate contingencies and coming up with recommendations. Furthermore, because of the high variety of challenges and vivid product character it gives an immense chance for designers' contribution. Thus, it might involve visualising

certain specific dilemmas, expressing the value offer or proposing product scenarios- just to mention a few possibilities. Accordingly, business analysts as well as designers should find the comfortable space for a contribution. Ultimately, this work aims to contribute to the discussion on innovative business models in a cross-disciplinary environment of PINC conference, 2011.

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