COLLECTIVELY STAGING BUSINESS MODELS

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ABSTRACT

Most current methods to visualize business models employ inanimate objects as representations of specific business model elements. Using people as representatives and staging collectively how an organization creates, delivers and captures value, one can produce a unifying picture of the business as well as fresh insights. Building on work by Osterwalder and Pigneur, this paper suggests the Butterfly Model as an alternative template for visualizing business models in up to six stages of construction: (1) basic staging to ensure a general picture, (2) the value chain and (3) the revenue model, (4) the business environment and (5) competitors to complete the view of an organization`s environment. In addition (6) a SWOT can be incorporated as well.

INTRODUCTION

In corporate innovation processes the value of user participation is generally realized. This potential however has not yet been fully exploited for the design and invention of business models - the rational of how an organization creates, delivers and captures value. While understanding that the business model of an organization is its core; there is need for new methods helping to seize the treasures of collecting and integrating the explicit and implicit collective wisdom into business modeling. By moving beyond plain text and spreadsheets visualizations, new methods could not only include people without formal business education, but also to provide room for reciprocal inspiration. Interactive stagings of business models allow seeing the whole business model from many angles – literally.

LITERATURE AND THEORY

Building on Scandinavian legacy of Participatory Design (PD), originating out of Kristen Nygaard's work (Ehn and Kyng 1987, Schuler and Namioka 1993), there are already some examples of visual and even tangible business models building on Participatory Innovation (Mitchell and Buur 2010). Those works have already contributed a considerable amount to both the understanding of innovating business models as well as to the practice of business modeling by animating business model concepts in three dimensional space with various objects.

However, most of the tangible business model sketches use inanimate objects to visualize a business model. By replacing them with human beings the business modeling would become even more interactive. Through collectively staging, interactive business models can be created allowing to collaboratively (re-) design business models.

To identify the core elements of business models, one can build on the work of Alex Osterwalder and Yves Pigneur in the area of business model innovation (see Osterwalder and Pigneur 2010). According to their working hypothesis every business model can be described through nine basic building blocks that show how an organization creates, delivers and captures value (see Osterwalder and Pigneur 2010, pp. 16):

An organization serves one or several *Customer Segments (1)* and seeks to solve customer problems and to satisfy customer needs with its *Value Propositions (2)*, which are delivered to customers through communication, distribution, and sales *Channels (3)*. Thereby *Customer Relationships (4)* are established and maintained with each Customer Segment. The generated *Revenue Streams (5)* result from value propositions successfully offered to the organization customers. *Key Resources (6)* are required to offer and deliver the previously described elements by performing a number of *Key Activities (7)*. Some activities are outsourced and some resources are acquired outside the

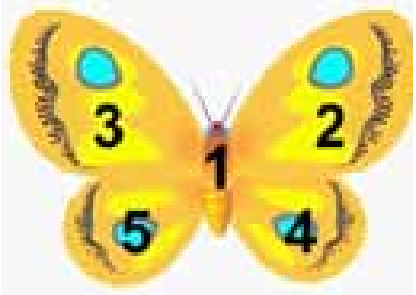

Figure 1 The five components of "The Business Model Butterfly"

enterprise through *Key Partnerships (8)*. All those activities result in a *Cost Structure (9)*.

THE BUTTERFLY MODEL

As collective business model stagings need to work both with academics and non-academics as well business people and consumers, the business model canvas developed by Osterwalder and Pigneur proved to be too complex to start with. Therefore an alternative template for visualizing business models was developed: the butterfly model. It starts with only five elements: The center of the butterfly – the thorax - represents the *Value Proposition (1)*, while the right forewing the *Customer Segments (2)* and the left forewing the *Key Resources (3)*. The right hindwing stands for the *Revenue Streams (4)* and the left hind-wing on the opposite side *for the Cost Structures (5)*.

If the organization has not only one value proposition to all customer segments, but differentiated into several different value propositions, then the thorax of the butterfly is divided horizontally by the according number.

The butterfly model with its five building blocks provides a solid and easy to understand groundwork for a basic understanding of an organization`s business. Based on the template of "The Business Model Butterfly" this paper suggests the following six stages of construction for an interactive business model staging.

THE BASIC STAGING

Osterwalder und Pigneur suggest a painter´s canvas, preformatted with the nine blocks, on which new or existing business models can be painted (Osterwalder and Pigneur 2010, pp. 42). If printed out on a large surface, groups can jointly sketch and discuss business model elements. Those elements drawn on Post-it® notes however do not respond – people do. These notes are inanimate objects that are modified and moved around solely by the participants.

To start an interactive staging of the current business model of an organization each of the five building blocks from the business model butterfly is represented by one or more people. If for example three different customer segments are served, then three participants should represent each customer segment separately. By the way: a *group moderator* could bring a little efficiency in this process.

In order to be easily identifiable the representatives of each business block could wear for example a *painter`s overall* on which the customer segment is written in large letters. The painter`s overalls have several distinctive advantages: first one can easily write on them – without destroying the participants clothes. Secondly the participants are much more immerged in their current role. They are not anymore for example employee XYZ or consultant XYZ but now they are speaking as customer segment ABC.

After having assigned representatives for all five elements, the group can start to describe each of them in detail. It is now the job of each representative to ensure a detailed documentation of the detailed description of his or her element, for example on a pin board behind them. (See section "Documentation" for details).

The thorax of the butterfly – the *value proposition (1)* - describes which customer needs the organization is satisfying and what products the organization is offering to each customer segment. Some of the following elements might be helpful when identifying the value created for customers: price, cost reduction, risk reduction, accessibility, convenience, usability, quality, warranty, newness, performance, customization, exclusivity, brand, design, etc.

To characterize the *customer segments (2)*, it helps to clarify first what type of customer segmentation the organization faces: is the value proposition targeted to the mass market, one or several niche markets, segmented or diversified markets or does the organization provide a multi-sided platform. For an exhaustive view of each customer segment not only oral description of the customer segments but also pictures, photographs or paintings help.

The left forewing of the butterfly – *the key resources (3)* – includes the most important assets and activities required to make a business model work. At this point of the visualization only a high level view is necessary. When later on the value chain is, we will map out the details.

The same applies to *revenue streams (4)* represented by one or more participants

Figure 2 International Business Students of the Karlshochschule during a class on business model innovation

positing in the right hindwing. At this level it is enough to clarify for what value each customer segment is willing to pay and how they are currently paying.
When it comes to the last element of the business model butterfly – the *cost structure (5)* – the group works out what are the most important costs inherent in the business model and which key resources are most expensive.
During this initial staging the position of some building block representatives might need to be corrected to come up with a suitable arrangement of all nine building blocks. It could be possible that during this phase insights into the current business model will be evoked as participants have to find a consensus on the "correct" position and line of sight of each building block. The arrangement of the building blocks in the three dimensional space will support a deeper understanding. And the representatives will see the business model of the organization from their building block point of view and provide interactive feedback. This could generate new insights. For example the one customer segment representative might state that he or she does not see the value proposition because he or she is looking in a different direction. Or the key activities representative could be out of sight of the cost structure representative. This way hidden weaknesses or threads are identified. By rearranging the representatives the participants could find alternatives to the current state.
Even though this process can be engaging, it is important to remember that at this phase only the status quo is staged. When it later comes to innovate the current business model, new customer segments or new value propositions for example can be staged.

THE VALUE CHAIN

To produce the value propositions for the customer segments an organization is serving, it needs to perform some key activities utilizing its key resources. Those activities make up what is called the *value chain*. The German term – "*Wertschöpfungskette*" – even better emphasizes the constructive perspective: literately translated it is the value creation chain.
Mapping out the value chain for each value proposition generates the second visualization level. A tangible chain connecting the five core elements is hereby of great help. Depending on the number of participants available for representing the different elements, one could work here with only few representatives or several. If only few people are available, the specific steps of the value chain could also be visualized with objects. An easy to implement option is to write the name of the resources or activity on board cards or post-it-notes and attach it to the value chain. A more refined approach would be to use the actual resources, like for example the advertising used to create awareness or print-outs of the web shop interface for the purchase phase. Each value chain has two ends: starting with the customer segment`s needs and ending with the delivery of the value proposition. In between there are steps like creating awareness through different *communication channels* and allowing opportunities for evaluating the value proposition offered by the organization. Depending on the particular type of business model visualized, the rest of the value chain consists of a sequence of *key activities* required to create and offer its value proposition. Those activities could be for example to produce a good or service, solve problems or provide a network or platform. To perform those activities and to help to create the value proposition certain *key resources* are vital. Not all of them have to be owned; they could also be leased or provided by *key partners* - sometimes even by the customers themselves.
Part of the value chain visualization is also the description of what *type of relationship* each of the customer segments expect the organization to establish and maintain with. This is especially important when analyzing how new customers are acquired and existing customers are retained. The relationship could be for example characterized either by personal assistance, self-service, automated services or co-creation.

THE REVENUE MODEL

All steps of the value chain described above generate costs. Together with the revenue streams generated by providing the value proposition to its customers segments, each organization has a distinctive revenue model. Visualizing it with red board cards representing cost and green for revenue streams produces the third visualization level.
The *revenue streams* are the cash a company generates from each customer segment. There are several ways for an organization to generate revenue streams. The most common way is to sell assets.

Figure 3 Seminar participants at the Karlshochschule, Germany, during a short workshop testing interactive visualization methods of business models.

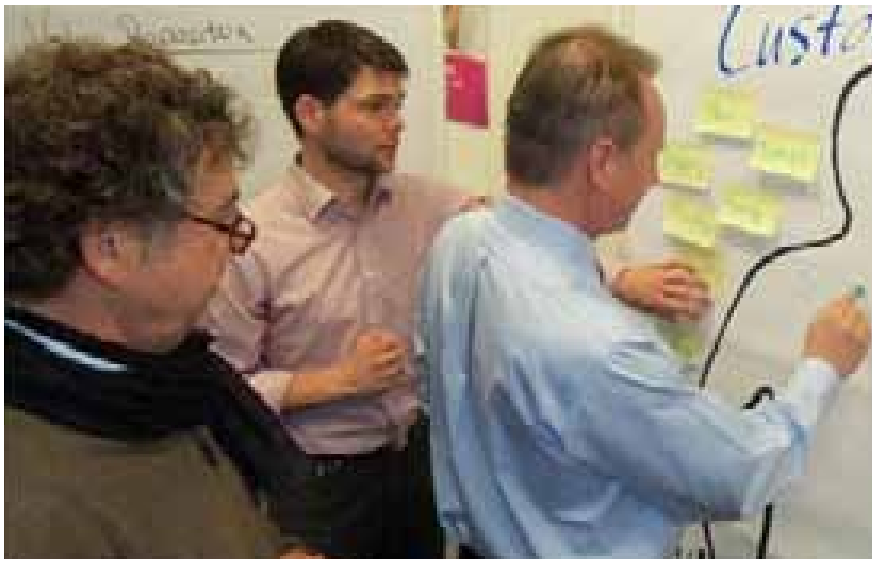

Figure 4 Discussion among seminar participants during a short workshop testing interactive visualization methods of business models.

Alternatively an organization could charge a usage fee, like for example seen in the logistics industry, or subscription fee, frequently used by gyms. Also lending, renting, leasing or licensing is possible. Among media companies advertising is a common way to generate revenue streams, whereas in the real estate business brokerage fees are frequently used. Each of those revenue streams can have a different pricing mechanism, such as fixed list prices, bargaining, auctioning, market dependent, volume dependent, or yield management.

Cost are generated by performing the key activities of the organization`s value chains and – what Michael Porter refers to as – support activities, such as administrative infrastructure management, human resource management, research and development, and procurement. The **cost structures** can have the following characteristics or a combination of them: fixed costs, variable costs, economies of scale and/or economies of scope. While all business models have cost components, some are more cost-driven than others. For example so-called "no frills" airlines have built business models around low cost structures.

THE BUSINESS ENVIRONMENT

Having up staged the business model and the value chain kind of like something floating in space, the next logical step is to examine the environment in which the business model is embedded. A structured approach to analyze the business environment is to use a PESTEL analysis.

This way the political, economic, social, technological, environmental and legal factors influencing this specific business model are identified. Building on the visualization of the business model, it can now be clearly shown where and how each factor will affect the business model. Participants, objects or post-it-notes representing the factors are linked to the element of the business model they affect. For example demographic factors shaping the customer segment or changing legal requirements determining certain additional production steps.

THE COMPETITORS

An additional level of analysis would be to focus now on the competitive environment. Building on the visualization of the business model, the value chain and the organization`s business environment, the competitors can be identified and positioned. This offers the opportunity to understand, where and how the influence of competitor will affect the organization.

SWOT ANALYSIS

When the participants have mapped out the whole business model – including the business model butterfly, the value chain and its business environment - they can start assessing its strength and weaknesses as well as opportunities and threads. Bright green board cards could be used to represent strengths, while orange card symbolize weaknesses; opportunities could be blue cards and threads yellow ones.

The criteria suggested by Osterwalder and Pigneur might be of help (Osterwalder and Pigneur 2010, pp. 216).

TIME REQUIREMENTS AND SCOPE

Before starting the business model staging process, the group needs to agree on the available time frame and scope of the staging. Such an exercise can last from one hour to several days. Within one hour the basic business model butterfly including the top-level value chain and the basic revenue model can reasonably be visualized. If the group wants to further explore details of the value chain – or even the different value chains serving each customer segment - significantly more time is required. Even longer time should be planed for if the business environment and competitors are mapped out in detail.

DOCUMENTATION

During the different levels of visualization, an extensive documentation should capture insights from various perspectives: In addition to the detailed descriptions of each business model element and the findings from the SWOT analysis, all pictures, notes, movements and dialogues should be recorded by several photo- and video-cameras for later analysis. For example the various distances between the building blocks and their territorial arrangement during the different stages can be measured. Moreover the narratives and discussions could be the subject of later interaction analysis.

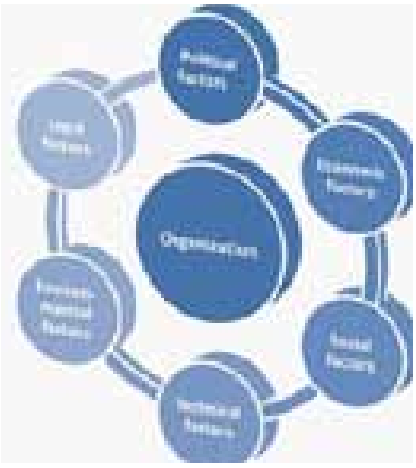

Figure 5 Elements of a PESTEL analysis to consider the business environment in which a business model is embedded

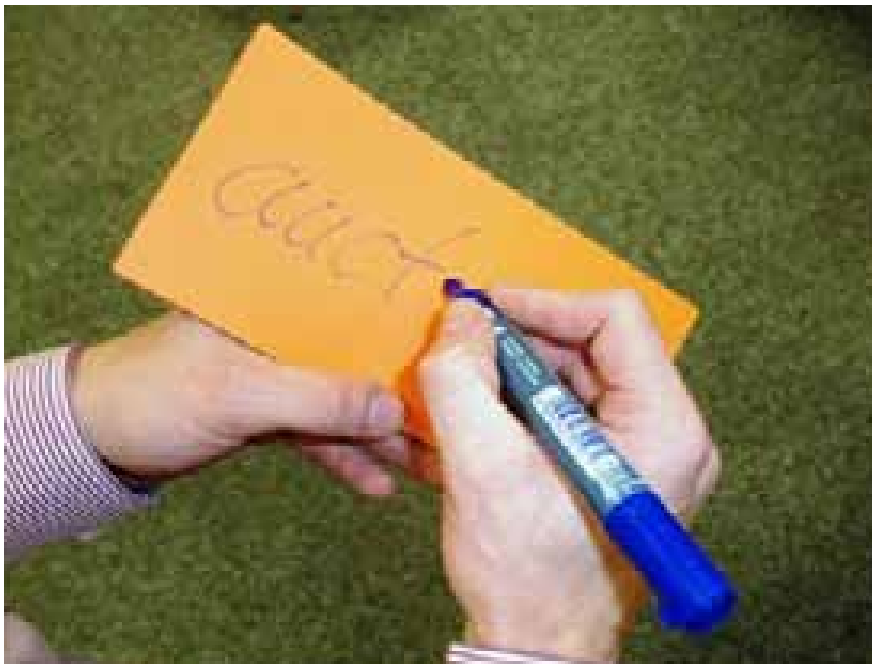

Figure 6 Close-up view during a class on business model innovation

FUTURE RESEARCH

These six stages of construction in order to collectively stage business models have been applied and tested during various classes and workshops in the fall of 2010. The participants of these "trail-stagings" were mainly students and academics from the Karlshochschule in Karlsruhe, Germany. Currently both the methods and processes are being re-evaluated, before they will be applied again in workshops with small and medium sized companies in Germany in the spring of 2011.

ACKNOWLEDGMENTS

Interactive business model stagings are engaging experiments depending to a very large extend on the involvement of the participants. Therefore I would like to thank all participants so far – students and colleagues from the Karlshochschule and business people and customers – for their proactive engagement sharing their insights and curiosity with the group.

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