# Business Model Design

## Networking, Innovating and Globalizing

Christian Nielsen; Morten Lund (Eds.)

Christian Nielsen and Morten Lund

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Business Model Design: Networking, Innovating and Globalizing
2nd edition

ISBN 978-87-403-0639-2

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Sune Gudiksen is PhD fellow at Aalborg University and holds a master degree in experience design. He is an experienced design workshop planner and facilitator with the stated aim of running workshops every month to keep facilitating and tool development techniques sharp. He uses most of his time to develop methods, tools, techniques and processes, followed by deeper analysis of the effects they have on different product, service or business model cases. Among the publications are the benefits of the using design materials be that visual, tangible or embodied approaches, to unfold future scenario perspectives, while he has a specific interest in the use of concept design games to provide an improvisational mode of thinking. He is the owner of the new blog initiative on www.businessmodeldesign.org where he posts regularly about design, tools, cases and business model issues from a design and innovation point of view.

# 1 Network-based business models

(Written by Morten Lund, MSc., PhD-fellow)

[Please quote this chapter as: Lund, M. (2014), Network-based business models, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

For several decades the success and ultimately also the sustainability of businesses has been problematized in the light of societal and industrial developments. Among other issues the rise of the importance of intangibles and sustainability issues has put pressures on the profitability of businesses, as well as the actions of policy-makers and professional bodies alike. Numerous examples of how new business values are gaining momentum in relation to the value proposition of organizations surface, pressuring organizations to surrender profits for ethical reasons, and in this sense how the market may endure greater power than policy-makers. We need to start accounting for value creating; not value creation.

As such, the rise of new business models, e.g. based on loosely coupled networks and multisided platforms of value creation, potentially pose a large threat to the stability and structure of organization and value-realization as we know it. Perhaps it can even be argued that e.g. accounting and jurisdiction as we know it, will become obsolete in a world of network organizations and social-community based business models, thus posing new conceptions of accountability and creating new sets of stakeholder tensions.

Despite such developments in business, i.e. communities, knowledge, collaboration, networks, innovation, professions such as accounting, finance and law have not kept pace. Not to mention policy-making. Thus from a management perspective we may need to ask: "How do we produce decision-relevant information?" and "How do we capture value creation and value realizing transactions?" Furthermore, we may need to ask: "How do we validate information across structures that do not exist per se"? Finally, implications for policy-making and accounting bodies need to be evaluated.

The ventures of the network economy are different than those of past decades. Hence, we need to go beyond business combination-based joint venture thinking and even beyond network-accounting. Here we are concerned with virtual companies constituted by mutually beneficial business partners. Here notions of virtual value and connectivity capital become cornerstones of understanding value creation.

In this book we describe different views on business models, how to understand them, analyze and describe them. We can either focus on business models as the business model for the company or as individual elements of it, but this is limited to the company focus, e.g. as is evident in the Osterwalder business model canvas he includes partners complimenting the key activity and resources that are in the company, allowing business modelling to include partners – but partners can be an inevitable part of a business model – In this chapter we introduces examples of different types of network-based business models.

## 1.1 What defines a network based business model?

A network based business model is a model including two or several stakeholders creating a joint value proposition based on the stakeholders key activities and resources. This can be done as open business models or Business Network Business Models (BNBM) where local or even global network partners gain significant competitive advantage and growth through creating network based business models. Companies will in future need to understand that they have entered a new era – one that is based on new principles, worldviews – new business network business models – where the business model playing rules are significantly changed compared to what we have known until today.

We already know that collective knowledge; in some instances called "intellectual capital" or knowledge resources put into broad horizontal networks of participants can be mobilized to create far more value than a single company can do alone.

The financial crises showed that companies cut their cost to a minimum reducing key resources and activities in their business model, some resulting in limiting the value proposition to customer – It is almost inherent that when a company needs to cut costs, e.g. Scandinavian Airlines, it will have an impact on the service provided to the customers. Evidence suggests that new business models in the future be based on openness, peering, sharing, and global positioning, will enable the possibility to reduce cost by partnering instead of thinking the business model as a single levelled model.

The speed with which changes and the ever increasing demand for new business models and processes are challenging companies, many are well aware that they can no longer rely on their own internal capabilities and competencies to survive. Nor can they rely on tight, rigid and inflexible relationships with only a few business partners – for a keep pace with customers' increasing desire for speed, innovation and control. Companies must in the future engage, and build a development area with many people – partners, competitors, stakeholders, and not least – customers. "Mass Collaboration" is a necessary part of any company's innovation strategy.

A company's ability to connect and disconnect to these networks, business models and processes and its ability to innovate across the network capabilities represent themselves to be one – must.

## 1.2 Barriers and challenges

The development of new interdisciplinary network, however, contains a number of new barriers and challenges for both businesses and researchers. Although it will be the central hub for innovation and development of global business models, they are very few companies "leveraged" to practice the innovation of business models in the network. It goes without saying that companies are "handicapped" by their creation of a corporate culture and learning culture which was characterized by hierarchy, "single business model thinking," Planning and push and pull economy.

It requires an entirely new knowledge, research and new businesses to cope with "mass collaboration" and "multi-business model" economy. However, it is not enough to be able to get the ideas and concepts for new business models "merged" together – but it is also necessary to act on them commercialize them quickly, globally – and thus to different markets.

This must necessarily be on the research side be based on a structured innovation research strategy developed in close collaboration with researchers from all interested innovation communities, companies and knowledge competencies (GTS, Knowledge Consultants, etc.) as well as professional development and service operators who have an interest in developing the area.

**Sum-up questions for chapter 1**

- Why have network-based business models gained so much momentum in recent years
- Define a network-based business model
- Give your own example of a network-based business model

# 2 Value creation maps

(Written by Marco Montemari, Assistant Professor, PhD and Christian Nielsen, Professor, PhD)

[Please quote this chapter as: Montemari, M. & C. Nielsen (2014), Value creation maps, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

The problem – as well as the prospect – with business models is that they are concerned with being different; the business needs a unique selling point. So the bundle of indicators on strategy, intellectual capital, and so on that will be relevant to analysis or disclosure will differ from firm to firm. The information needs to be communicated – in the strategic context of the firm, as this would show its relevance to the value creation process in the company. It does not make sense to insert such information into a standardized accounting regime. We would point out that if it is difficult for the company itself to conceptualize the business model, then it will probably be even more difficult for external parties to analyze it. At present there exists very little literature on the different aspects of analyzing business models.

When we perceive relationships and linkages, they more often than not reflect some kind of tangible transactions, i.e. the flow of products, services or money. When perceiving and analyzing the value transactions going on inside an organization, or between an organization and its partners, there is a marked tendency to neglect or forget the often parallel intangible transactions and interrelations that are also involved.

So, to create a more meaningful analysis and understanding of a business model, we need to assemble a new cocktail of tools including, as essential ingredients, intangible transactions and relationships. Although our work has so far been primarily focused on network-based business models, the conclusions seem easily generalizable to other settings.

We have found it useful to integrate the generic tangible and intangible transactions from the value network mapping perspective of Verna Allee (2011) with the notions of cognitive maps, and finally to place these aspects in the strategic notions of the Intellectual Capital Guideline (Mouritsen *et al.* 2003a) and the Analytical Model (Mouritsen *et al.* 2003b). In union, these ideas materialize into the value creation map!

## 2.1 What is the value creation process?

Value creation is now the main aim of any company. Creating value means to generate economic wealth, that is, to obtain a performance improvement in terms of increased sales or decreased costs.The value creation process depends on the combination of value drivers considered important by the company. A value driver can take two forms. It can be a tangible resource (e.g. machinery) or an intangible resource (e.g. trademarks, employees' competences) available to the company. It can also be a critical success factor considered important by customers and that the company can influence (e.g. product quality, customer satisfaction, product innovation). It is this specific combination of resources and critical success factors that leads to the generation of value. However, companies do not create value in the same fashion. Different companies create value in different ways.

This process, in fact, is strongly firm-specific as it is intrinsically linked to the features of the company in which it takes place. It strictly depends on the contingent factors that affect the business context: the vision, the mission, the strategic priorities, the relationships between managers and employees as well as all those factors that make the way in which the company operates unique and unrepeatable. For example, the managers' knowledge about the competitive dynamics of a particular sector can contribute to the creation of value only if the company plans to compete in that sector.

Since the 1980s, increased competition and the advent of information and communication technologies have turned the value creation process of companies into something that has become more and more dynamic and complex. In fact, value creation does not depend only on individual value drivers, but rather, on the relationships among them. Therefore, the value drivers are not rigidly separated and each of them does not develop in its own way, independently of the others, following its own logic. It is impossible to identify *a priori* the features and functions of the resources in a company because they depend on the original combination that is set up in the specific company context. Moreover, the relationships among the value drivers are not stable; they do not always display the same features and they may even cease to exist or change intensity, direction and nature.

Managers' actions that are expected to affect a specific business asset may, however, also be relevant to other resources. This is the reason why the relationships among value drivers are often fragile, ambiguous and potential. Relationships among the resources of a company can be non-linear: this is the case when key employees decide to switch to the competitors, for example. This change can destabilize the entire business system with negative impacts on the value creation process. For these reasons, it is becoming more and more important for companies to be able to manage the value creation process. This is possible through the visualization of the value drivers involved in the value creation process and, above all, through the representation of the relationship network that links resources and critical success factors and leads to value creation. The awareness of the causal relationships, of their strength and of their nature allows the company to effectively and efficiently manage the value drivers. In this way, in fact, companies can take appropriate decisions in order to influence the situation in the desired direction and to increase the creation of value.

## 2.2 Why might the value creation process be difficult to discover?

Managing the value creation process can be a very difficult task. The knowledge of the value drivers involved, of the way in which they combine with each other, of the nature and the intensity of the relationships are rarely formalized and shared in the company. This knowledge, in fact, belongs to the managers who work within the company. They manage, on a daily basis, the value drivers and the causal links in order to increase the value created for the company. Their awareness of the contribution that each value driver provides to the value creation process drives their actions and their decisions.
For example, a manager may find a strong and positive relationship between the value driver "employee competences" and the value driver "product quality". This belief is going to lead the manager to make decisions in order to:

1. Raise the skills level of employees through training, for example
2. Encourage employees to provide as many suggestions as possible

If the manager's perception is correct, these two types of actions should have a positive effect on the product quality and, consequently, on the creation of value.

However, the knowledge of the value drivers and their relationships is tacit and therefore, difficult to access and to visualize. Managers themselves find this kind of knowledge hard to elicit and to manage. Even when an analysis is made through written reports, these do not always contain a clear description of the assumptions made on the dynamic relationships among the value drivers that underpin the creation of value. This is because the need to rapidly solve the day-to-day problems leaves little room for conceptualization and reflective activities.

In this perspective, managers are considered to be information workers because they spend a lot of their time absorbing and processing information on problems and opportunities. One of the fundamental challenges that managers face is that their environments are extremely complex, from an information point of view. In order to understand managers' actions, it is necessary to build and analyze the content (value drivers) and structure (relationships among value drivers) of the mental models through which they filter information, structure knowledge and make decisions. Therefore, it is necessary to use a tool which can facilitate this operation, by making explicit managers' knowledge of the way in which the company generates value.

## 2.3 What is a value creation map?

A value creation map is a tool that makes it possible to visualize and to explain the managers' mental models, reproducing the specific ways in which a company creates value. A value creation map is made up of two elements: nodes and arrows. The nodes of the map are the value drivers which the management considers important to value creation. The arrows, instead, identify the relationships among the value drivers. The thickness of the arrow indicates the strength of the relationship. The relationships among the value drivers can be of different natures:

1. Positive, when one value driver positively affects another one. In this case, the arrow is matched with a plus sign
2. Negative, when one value driver negatively affects another one. In this case, the arrow is matched with a minus sign
3. Doubtful, when the influence of one value driver on another one is uncertain.

The value creation map enables us to understand the ways in which managers perceive the succession of events, give meaning to the relationships between the events themselves and evaluate alternative courses of action.

As with the use of geographical maps, with value creation maps, too, we can assume that a certain "path", made up of decisions and actions, is going to lead to a particular "destination", that is, the creation of value.This tool makes it possible to identify the most important value drivers and to visualize the relationship network among them, representing the peculiar way in which value is generated in a given company context.

## 2.4 The building process: A two-step method

The building process of a value creation map aims to elicit the mental models that are triggered in managers, in certain situations. As mentioned before, these models have a largely tacit nature because they are deeply embedded in individuals and they are rarely made explicit. This conversion is a very hard task because the value drivers and the relationships among them are difficult to explain and communicate so that managers themselves consider the interpretation of the decision rules that drive their actions very critical.

The building process of a value creation map consists of two steps: firstly, the elicitation of the value drivers considered important by the managers and secondly, the identification of relationships among the value drivers. Before analyzing each step, it is relevant to clarify what kind of managers and how many managers should be involved in the building process of the value creation map.

### 2.4.1 What kind of managers? How many managers?

A critical aspect, already in the design stage of the map, relates to the identification of what kind of managers and how many managers should be involved in the development of the value creation map. Obviously, these choices are linked to the size and the features of the company to be analyzed, so the following should be considered general considerations.

Unanimous opinions in the field argue that the identification of the value drivers and the relationships among them is up to the top managers, because they are the ones who are going to use the map and they have the skills needed to support its building. However, a purely strategic vision does not seem enough when the aim is to identify the links between individual actions and effects. The operative knowledge possessed by middle management helps to better identify the nature and intensity of the relationships and to consider the potential impact of the value drivers that top managers may not be able to assess. Therefore, before proceeding to the map building, it is particularly important to identify the management levels to be involved, according to their skills and their expertise.

Concerning the number of managers to involve, previous studies on value mapping show that involving three to five individuals is sufficient to obtain adequate knowledge of the value creation process and avoids making the map building process too complex.

### 2.4.2 First step: Identifying the value drivers

The aim of the first step is to identify the value drivers considered relevant by the managers for the purpose of creating value. The tools that appear to be the most suitable for this purpose are the semi-structured and the unstructured interview. The questionnaire and the structured interview, instead, are not very flexible or adaptable to specific situations and this makes them inappropriate for explaining the contents of the mental model created by a manager in a given situation. Both the semi-structured interview as well as the unstructured one, in contrast, has an high degree of flexibility. They allow deep access to the conceptual categories used by the manager, by identifying his/her interpretations of reality and the motivations that drive his/her decisions.

These interviews should be conducted at the individual level as tacit knowledge is personal and not always shared within a team of managers, even though they may work closely together for a long time. Interviewing managers allows them to reflect on the actions that they usually put in place. In this way, the researcher can discover aspects of behavior which were tacit until that moment. The first question to ask should be a general one, such as: "What are the factors that lead to the success of the company?". The aim is to gradually uncover deeper and deeper layers of the managers' knowledge. In order to identify the causes that affect the value drivers, it is important to ask managers to tell anecdotes and give examples, some positive and others negative, regarding factors that have generated success or failure in the company. Asking them for anecdotes and examples is particularly powerful because it forces managers to explain what really happens, it stimulates them to provide details and triggers, in turn, other thoughts and stories. Through story and language, in fact, managers give meaning to events that occur and to their actions and they can organize their experience. In this way, it is possible to discover how the value drivers come "into action" in the company under analysis. After finishing the interviews, the researcher analyzes the transcripts in order to prepare a list containing the value drivers considered critical by the managers interviewed.

### 2.4.3 Second step: Identifying the relationships among value drivers

The second step aims to identify the causal relationships among the value drivers in the list. In particular, there are two methods that can be employed for this purpose. In the first method, the researcher interprets and identifies the relationships among the value drivers in the list. In particular, he/she is responsible for identifying the strength and the direction of causal links through his/her understanding of the company context (resulting from past and present experience) and the interpretation of the managers' perceptions. The second method, however, requires the managers previously interviewed to identify the relationships among the value drivers in the list. This can be done through the creation of a focus group. This second option is preferable for several reasons.

Through interaction and discussion, the members of the focus group can reflect on their behaviors and on those of others, bringing into question the meaning of the value drivers and the relationships that are activated in specific situations. At this stage, managers are also called upon to express their opinion on the intensity and the sign of the relationships, while the researcher has to provide them with the greatest possible support, but should avoid leading them to pre-determined results.

The meaning of the value drivers comes from language. In particular, the meanings are developed and refined during the interaction and discussion in the focus groups: the meaning of the value drivers becomes clear to a manager from the reactions that their use provokes in other managers. Therefore, the value drivers and the relationships among them which are contained in a value creation map are formed through interaction and discussion.

Managers are encouraged by the researcher to modify and enrich the map, by adding, removing or moving value drivers and relationships. This process allows them, on the one hand, to analyze the evolution process of the map and, on the other hand, to understand the perspectives of others.

The above mentioned process leads to a map which is "owned" by the focus group members. It allows them to achieve a deeper sharing of the meanings given to the previously identified value drivers in the list. Furthermore, during this step, the creativity of managers is greatly stimulated, so new value drivers, not originally identified in the list, may emerge from the group discussion.One of the main challenges in the building process of value creation maps concerns the study of social processes that enable the group to acquire and shape information and to make shared decisions. Regardless of the method chosen to identify the relationships among the value drivers, the aim of the building process is to create a map similar to that represented below.

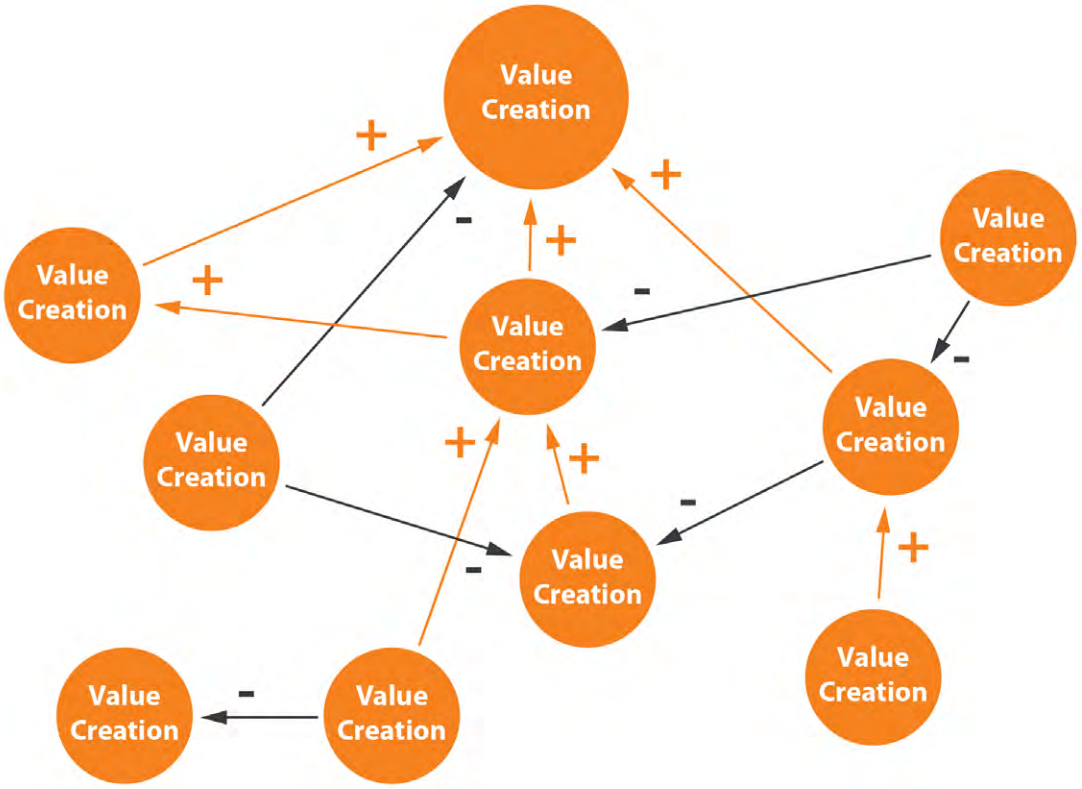


**Figure 1:** The value creation map

## 2.5 Refining the value creation map

As it should be clear from the previous paragraph, the value creation map created at the end of the building process cannot be considered definitive. The intrinsic instability of the value drivers, but above all of the relationships identified, determines the need for updating and refining the map previously developed. This need can be felt as a result of a change in the conditions inside or outside the company. This can affect the relationships identified before or can create new links. The awareness of these changes, in fact, alters the managers' perceptions and assumptions which led to the building of the "initial" value creation map.

Furthermore, the need to update the map can emerge from the actual deployment of business processes. This can reveal the real effects of managerial actions on the value drivers and the value creation process. So, it is only natural that there can be differences between the "initial" map, developed on the basis of the assumptions expressed by managers, and "in progress" maps, progressively updated in order to take into due consideration the changing internal and external conditions.

Even when an "initial" map is substantially different from the "updated" maps, the tool does not lose its effectiveness. The value creation map, in fact, is dynamic in nature. The differences should serve as a boost for managers to reflect on what relationships have actually occurred, to understand the reasons why the "initial" relationships have not taken place and, therefore, to understand how to set them up again. Thus, the instability of the content of the value creation map is a "technical" feature that enhances the role of this tool in supporting management's learning process.

## 2.6 Value creation maps and indicators

The building of the value creation map can be considered the basis for setting up a measurement system. In particular, the map can be considered the skeleton on which to build an appropriate set of indicators (I). These indicators should be coupled to the nodes of the map.

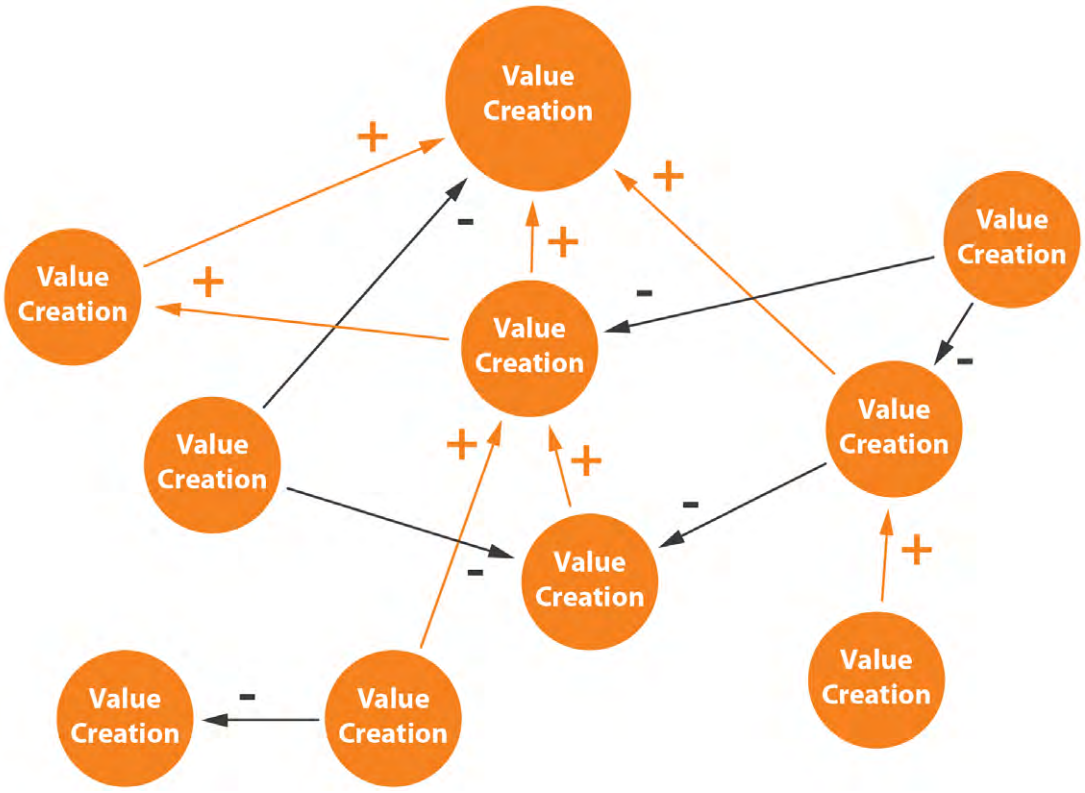


**Figure 2:** The value creation map with indicators

The use of a value creation map as the foundation upon which to build a specific set of indicators can improve the selectiveness of the measurement system. The focus on critical aspects of the value creation process avoids the risk of squandering management's attention by providing an excessive number of indicators. Moreover, a measurement system built on the basis of a value creation map allows an appropriate balance between lagging indicators, mainly financial, and leading indicators, typically quantitative-physical and qualitative. This is because the development of a value creation map makes it possible to identify the drivers of the value creation and to trace the causes that affect it.

The conciseness, accuracy and reliability of lagging indicators is useful for nodes downstream of the value creation map, that is, those associated with the value drivers directly linked to the value creation. These indicators are not so difficult to design and to build, but they are oriented to the past, so they do not have the ability to reflect the current activities. The inclusion of leading indicators, built on a specific node and a specific relationship, are able to provide prompt signals and to monitor and govern the deep causes of value creation. In this way, these indicators can anticipate the final results and drive the performance of lagging measures.

Furthermore, the correspondence between the value creation map and indicators provides the management with relevant information on the timing of actions on the value drivers. In particular, monitoring the trend of indicators over time can help to "capture" the length of the lag, i.e. the time it takes for an indicator of a value driver to begin to influence the indicators of related value drivers, first, and influence the financial performance, later. For example, a measure that "captures" the effectiveness of research and development activities (e.g. number of patents) is not likely to affect the financial performance in the short-term.

It probably needs a temporal lag of several years. In contrast, leading indicators related to product quality (e.g.: defect rates and on-time deliveries) can influence the economic and financial indicators with a shorter lag. Managers should pay attention to this aspect because the lack of an immediate effect on financial performance may simply mean that actions take time before generating an economic benefit. Therefore, management actions that may be deleted or changed because they generate no immediate effects, might instead be "reconsidered" when managers become aware of their potential effects in the medium and long term.

The "matching" between value creation and map indicators, moreover, can provide useful information on the persistence of the effect of a particular action on value drivers, i.e. how long the effect persists once it is started. In fact, the effect may be only temporary and affect the indicator trend of the value driver to which the action is directed only for a short period of time. Or, the effect may persist and influence the indicator trend for longer periods of time.

Finally, indicators can play a leading role in the refining and updating process of the map. The relationships among the value drivers are, by their nature, unstable. In this sense, the dynamics of the indicator is of primary importance in order to test the existence of the relationship and to verify its trend over time, since the intensity of the links may not be unvaried. In other words, indicators may signal effects on the value drivers that are not manifesting themselves with the timing or the intensity which had been considered in the "initial" map. This can provide useful information on possible changes to be made in order to refine and update the map over time. This gives the system a high degree of flexibility and adaptability which is consistent with the dynamics of the value creation process.

## 2.7 Pros and cons

The building and the use of a value creation map can be very useful for managers. The advantages are mainly related to the effects that this tool can have on their management and learning skills. The visualization of the value drivers and the relationships among them allows managers to understand the strengths and weaknesses of the value creation process. This provides them with the opportunity to maximize the former and lessen the latter, through a more aware management of the individual value drivers and the relationships among them. In this way managers can make the value creation process in the company less fragile and vulnerable because they can avoid the risk that some value drivers remain unmanaged.

Managers' awareness of the creation of value increases not only during the map building process, but especially during the refining and updating process. It must be highlighted that the most important benefit of this stage, in fact, consists in management learning: the refinement of the managers' perceptions and assumptions improves their ability to interpret and manage the dynamics of value drivers and the direct and indirect effects of same on value creation.

The matching between map and indicators further enhances this aspect. Such a measurement system makes it possible to understand the impact of a managerial action on a specific value driver through the analysis of the change of the indicator. From this essentially static perspective, the map allows the switch to a dynamic view by examining, first, the direct impact also on indicators of other related value drivers and, where possible, the indirect impact on value creation. For example, the map could highlight a positive relationship between the value driver "collaboration with employees", matched to the indicator "number of suggestions for each employee", and the value driver "product quality", associated to the measure "defect rate".

This matching permits the measurement not only of the individual value drivers, but also of the relationships among them, providing the opportunity to manage that link and to increase the positive impact of a value driver on the related ones. Such a measurement system is strongly oriented to action as it can provide relevant and timely information to support the managers' decision making. The identification of indicators from the mental model of managers who manage the value creation process daily increases the overall quality as well as the signaling ability of the measures system. This can progressively lead to an increased likelihood that decisions cause a series of multiple effects consistent with the expected results.

Therefore, the map represents an important tool to improve decision making when managers are faced with complex and ambiguous situations. The simplified representation of reality perceived by managers can help to identify and to consider alternative courses of action, as well as to choose the option considered appropriate in order to increase the value creation.

However, it must also be noted that there is a drawback linked to the use of value creation maps. It consists in the potential attitudes of resistance or rejection of the tool. The development of value creation map requires, in fact, the willingness to explain and bring into question the interpretative models of managers. This demands a significant time investment in reflection and conceptualization activities. Not all managers may be available or willing to devote time to eliciting their knowledge about the value creation process in the specific company. Therefore, the possibility that the use of value creation maps can generate the effects previously described is also affected by these considerations.

**Sum-up questions for chapter 2**

- Why might the value creation process be difficult to discover?
- What is a value creation map?
- How can a value creation map be built and refined?
- Why can matching a value creation map to indicators be useful for managers?
- What are the pros and the cons of building and using a value creation map?

# 3 Strategic innovation – the context of business models and business development

(Written by Anders Drejer, Professor, Ph.D.)

[Please quote this chapter as: Drejer, A. (2014), Strategic innovation – the context of business models and business development, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1 Copenhagen: BookBoon.com/Ventus Publishing Aps]

**Abstract.** Strategic innovation – understood both as a proactive repositioning of an organisation and as the creative thinking process leading to such repositioning – has risen to the top of the agenda of top managers and academia in recent years. In this chapter, we will define and outline the concept

## 3.1 Introduction: a new competitive landscape

The concept of strategic innovation has risen to fame among management and academia – and it is still rising. And for plenty of good reasons too. The conditions for businesses worldwide are about to change for good.

Many different authors seem to agree that the external dynamics of industrial firms have increased over the last decade or so. Some speak of increased competition and the need for more market-focused organisations, whereas others discuss technological pressures on firms. Regarding the former idea, it seems to have become an accepted idea that whereas firms in the 1960s and prior could rely on stable (expanding) market conditions and customer-emphasis on price alone, today markets are less than stable and emphasis is on price, quality, delivery, innovation, and so on, (Womack et al, 1990), (Ansoff & McDonell, 1990). Ansoff writes: "… *From the mid-1950s accelerating and cumulating events began to change the boundaries, the structure, and the dynamics of the business environment. Firms were increasingly confronted with novel and unexpected challenges which were so far reaching that Peter Drucker called the new era an 'age of discontinuity*'…", (Ansoff & McDonell, 1990, p. 5). Hammer and Champy, in the 1993 book on BPR, writes of a crisis that will not go away: "… *In short, in place of the expanding mass markets of the 1950s, 1960s, and 1970s, companies today has customers…who know what they want, what they want to pay for, and how to get it on the terms they demand…*", (Hammer & Champy, 1993, p. 21). Furthermore, others place emphasis on the increased global competition from first Japanese firms, later Korean and other so-called Tiger economies, and their possible replacements in China and the old eastern Europe, (Quinn, 1992), (Kiernan, 1995).

In general, there seems to be agreement that an entirely new competitive situation has arisen. This is nicely summarised by D'Aveni under the concept of "hyper-competition", (D'Aveni, 1994). Hyper-competition, according to D'Aveni, is a competitive situation where the key competitive success factor is the ability to constantly develop new products, processes or services providing the customer with increased functionality and performance, (D'Aveni, 1994). In a hypercompetitive environment, firms cannot count on a sustainable competitive advantage, but must continuously develop itself in new directions.

Furthermore, there are also increased technological pressures to firms. It has become accepted that technological life cycles in some industries seem to be decreasing compared to earlier, (Foster, 1986), thereby putting pressure on firms to constantly innovate, (Kiernan, 1995). Much of this thinking stems from the electronics industry – for instance, the new generation of SEGA video games that your six-year-old plays with contains as much computing power as the Cray supercomputers of the mid. '70s, (Kiernan, 1995). Even though this situation does not have to be equally dynamic in other industries – and, indeed, some questions have been raised concerning that issue, (Bayus, 1994) – it seems as if the belief in the technology dynamics creed is so strong that firms simply will follow that creed and, thereby, inflect the dynamics on themselves un-necessarily. Either way, many authors agree on the need for firms to move technology up on the corporate agenda, (Drejer, 2000) and make it a strategic issue, (Bhalla, 1987), (Jones & Smith, 1997), (Drejer, 2000. Further on the technological side, new technologies seem to arise that make entirely new ways of working and organising possible. For instance, Savage speaks of the possibility of "Fifth Generation Organisation", (Savage, 1995), based on ideas of networking, virtuality, and so on. Using the same ideas, Martin discusses the notion of "cybercorp", (Martin, 1996), as an entirely new way of managing and organising firms.

The trends discussed above, of course, cannot be kept separate. New technologies have a strong competitive impact in general, (Tushman & Anderson, 1986), and hence the technological dynamics will also influence the competitive dynamics of firms. Bettis and Hitt writes on this issue that: "…*technology is rapidly altering the nature of competition in the late twentieth century*…", (Bettis & Hitt, 1995) and, in fact, guest-edit an issue of the Strategic Management Journal entirely devoted to discussing how technology will change the nature of competition and strategy in the years to come. Bettis & Hitt refers to the situation as "the new competitive landscape", (Bettis & Hitt, 1995), and it is this new competitive landscape that is creating a trend in management theory that creates the need for theory-building on the selection and evaluation of sub-suppliers, and the establishment of proper integrative measures to work with suppliers along a firm's value chain.

## 3.2 Strategic innovation: the background

Evidently, organisations need to be more innovative and think proactively in their strategic management. At least, this has rapidly become the mantra of the new decade both among managers and in academia. The well-known work on innovation management and technology management has gained newfound – or perhaps re-found – respectability and has begun to influence the way we think about strategic management as a discipline (Drejer, 2002).

On top of that a new set of publications have begun to emerge. These publications take their starting-point in the strategic realm rather than the innovation realm and, hence, focus on strategy and innovation or strategic innovation. A recent example of such a fashionable publication is Robert E. Johnston and J. Douglas Bate's recent "The power of strategy and innovation" (Johnston & Bate, 2003)

This and other similar books – and the thinking behind strategic innovation as a concept – is based on three pillars (Drejer & Printz, 2004). First is the recognition by many that strategic managers need to consider both strategy for tomorrow and strategy for today in order to stay successful over time. This is now state-of-the-art knowledge within the field of strategic management – following the work of people such as Hamel & Prahalad (1994) and the 1996 acknowledgement by Michael E. Porter that strategy needs to consider both operational effectiveness and differentiation (Porter, 1996). Of course, Jim March told us about management as both exploitation and exploration in 1991, but let us not get into petty details about that. Secondly, the thinking is based on the well-known theory that innovation and effectiveness need to different kinds of organisation to succeed – from Burns & Stalker and onwards, we have come to accept this – and that this is because creative thinking per se is different from conventional analytical thinking as De Bono and many others have taught us. Finally, the thinking is based on the latest recognition that competition these days is less on product-markets or even on technology than on concepts and business models that change the rules of the competitive game, as, e.g., Gary Hamel observed at the threshold of the new millennium (Hamel, 1999).

In short, companies need to be able to manage their current set of businesses effectively while at the same time finding and developing new business ideas and models – this is defined as *Strategic Innovation***.** Based on this foundation, Johnston & Bate (2003) assert that what is needed is a process to supplement the conventional strategic planning process – a supplement that they choose to call a Discovery process. The discovery process is creative and divergent and proceed the analytical and convergent strategic planning process in the understanding of the authors.

In short, we have a new concept that both encompass a desirable result to deal with the new competitive landscape – proactive repositioning of the organisation and development of new businesses – as well as the process by which the result is reached – a managerial process that is an alternative to the traditional, analytical process of strategic planning.

## 3.3 Defining strategic innovation

Early on Peter Drucker – and probably even someone before him – distinguished between doing the right things and doing things right (Drucker, 1958). When it comes to strategic management, we can reformulate this distinction to, on the one hand, market the right products/services on the right markets and, on the other hand, develop, produce, and distribute the products/services in the right way. It is intuitively clear that a company needs to focus on both issues in the long run while at the same time maintaining a dual focus on business development and operational effectiveness. The foundation for our work on strategic innovation, is that we think of strategy as:

- Change of the position of the company in the market place at the same time as exploiting the current position.
- The environment consists of both present and potential customers as well as a large number of different players, i.e. it is the entire environment of the company that needs to be taken into account in strategic management.
- The company itself should be seen as a holistic entity consisting of business and resources. This means that the strengths and weaknesses of the company should be described in the language of "bundles of resources" or competencies rather than departments or functional units.

In consequence, the potential of the existing resources to create value end different market places than the current one (while still creating value in the current situation!) becomes an important consideration in strategic management. One may speak of a competence readiness that the company possesses and is able to apply by reorienting its business foundation towards new market places, i.e. strategic innovation.

As argued before, e.g. by Theodore Levitt in his seminal paper "Marketing Myopia" (Levitt, 1960), companies should define their business in a much broader sense than by simply looking at current products. Any business fulfills a number of needs and wants of its customers and can act strategically with much more than its current products. Hence, we may define a *business* as the combination of a business idea, a business concept, and a business system. An operational *business idea* is expressed in one or more products/services that are able to fulfill the needs and wants of a group of customers. The *business concept* is expressed in the value creation process – or competencies – that are the foundation for how the products/services are designed, developed, produced, distributed and marketed. The *business system* is expressed as the basic principles and procedures by which the persons and/or functions involved in value creation actually work. This is a much broader perception of a business than the traditional SBU definition that is used in traditional portfolio management, mainly in the sense that a business here is able to respond strategically on its own.

We can now define strategic innovation as: "*Strategic innovation is the ability to create and revitalise the business idea and concept of the company by changing both the market of the company and the competencies and business system of the company. In this way, strategic innovation is concerned with developing the entire company*".

## 3.4 Defining business concepts

The idea of a business concept was introduced by Peter Drucker as early as 1994 (Drucker, 1994) as "Theory of the business" model as a way of formulating the important issue of what kind of organization we have. This may be labeled a business concept and is a necessary starting-point for the strategic manager who wants to change his business concept.

Further, as argued before, e.g. by Theodore Levitt (1960) in his seminal paper "Marketing Myopia", companies should define their business in a much broader sense than by simply looking at current products. Any business fulfils a number of needs and wants of its customers and can act strategically with much more than its current products. This has been detailed further by such authors as Abell (1993), Markides (2000), and Drejer (2007), who have suggested a number of key concepts related to strategic innovation and business development. For instance, we find it important to distinguish between business concept and business model, which we shall see below.

### 3.4.1 What is a business concept?

Based on prior work (Drejer, 2005; Drejer & Printz, 2004), we can define the components of a business concept. As we saw earlier, a business concept expresses the value creation processes, which are the foundation for how products/services are designed, developed, produced, distributed and marketed. The business concept is a somewhat super conceptualization, or meta-view, which permeate how inspiration is sought outside the current core organization and its businesses.

The purpose of strategic innovation is to develop new business concepts. Business concepts, in turn, may be formulated by answering a few basic questions:

1. Who? The first part of the business idea of a business concept is choosing who the business wants as its customers and, therefore, also who the major shareholders of the business are.
2. What? This is the second part of the business idea and involves answering what products and services the business will offer, and what customer demands and wishes the products are designed to cater for. Finally, the what part of a business idea will increasingly come to deal with determining how customers and other stakeholders are going to pay for the services/ products of the business.
3. How? This is the next basic question and involves formulating a business organisation, i.e. a choice of the competencies that the business is based on and a business model that determines the business' location in the value chain.
4. Why? Finally, there is the question of the strategic assumptions of the business. Is the business based mainly on a group of customers, on certain services or even on certain competencies and why? This determines a lot of things about the business besides the other issues of the business concept.

Note that what is outlined above is a much broader perception of a business than the traditional SBU definition that is used in traditional portfolio management, mainly in the sense that a business here is able to respond strategically on its ow

### 3.4.2 What are the characteristics of successful business concepts?

So far, we may summarize three things about a successful business concept.

First, a business concept implies a coherent and logical flow of answers to the basic questions of the concept that lead to a competitive strategic position for the organization in question.

Second, involving customers directly is notoriously difficult in strategic innovation. Customers very rarely know what their present needs are, so how should they know what their future needs are? This is the very key argument behind concepts such as "lead users" and "user-oriented innovation", where customer needs are understood indirectly (often through anthropological methods) rather than analyzed by traditional means. It has been attempted to analyze what readers want from newspapers many times and the result is usually the same – we long for the kind of newspaper that we have always had, but we do not want to pay for it, perhaps because we do not have the time to actually read it? So perhaps what MetroXpress and other free newspapers offer us as readers is the chance to feel up to date in current affairs – even if we are not really so?

Third, and finally, we may stress the importance of a unique and often groundbreaking business model in the success of new business concepts.

### 3.4.3 State of the art examples of modern business concepts

The next logical issue of strategic innovation or business development is to seek inspiration outside of the current business concept and organization. In order to inspire the reader on this issue, let is consider a few more examples of successful innovative business concepts and their corresponding business models, and mobile organizations.

The purpose of this exercise is, of course, to induce some knowledge from a number of new yet both well known and well researched business concepts and business models and may be compared to desk research as opposed to the detailed case study of the telecommunications industry which appears later in this paper.

#### 3.4.3.1 Business concepts based on a new value proposition

In the newspaper and/or media industry, it is natural consider the Danish media company, Nordjyske Medier. Nordjyske Medier has sought genuine innovation in an industry where few others have dared to challenge the existing mental models. We have documented this case elsewhere in great detail (Drejer & Printz, 2004) and will summarize it quickly within this context. Nordjyske Medier has transformed itself from a local – and admittedly low quality – newspaper to a media corporation, with radio, telecommunications, the internet, a free newspaper a la MetroXpress (named "10 Minutes", of course), as well as an old-fashioned newspaper.

The key behind this transformation has been a rethinking of Nordjyske Medier's value proposition that led to the realization that customers are less interested in a newspaper as a product than in the information that is in the newspaper. So instead of seeing itself as a part of the newspaper industry, Nordjyske Medier has defined itself as part of an industry that brings stories to its customers.

In order to do that, Nordjyske Medier has had to redefine its business model and organization to have many more channels of distribution to its customers than just the newspaper. This has also implied developing new competencies in radio, television and internet distribution, as well as how to coordinate how stories are distributed across media channels. On the other hand, the basic competence of journalism has remained virtually unchanged by the transformation.

Nordjyske Medier has but one challenge. The corporation is still highly local and may lack economics of scale to create any real value in the business concept.

#### 3.4.3.2 Business concepts based on changing business in the value chain

Is it possible to do something similar to Nordjyske Medier but without the limitations of existing competencies and geography? By all means. Googlezon – the amalgamation of Google and Amazon in our opening scenario in this chapter – could combine Amazon's competencies in customer relationships via IT with Google's competencies in information search by offering customers exactly whatever content is wanted, when and where it is required. In order to achieve this end, it will be impossible to maintain the same location in the value chain as a traditional newspaper or even modern media corporation. Obviously, Googlezon cannot generate content enough to cover all the desires of everyone on the planet. It seems as if the more the emphasis on the customer, the higher the complexity of generating content for individual customers. For instance, Nordjyske Medier, which is among the smallest players in the Danish newspaper industry, still has to have a staff of journalists etc. in order to generate enough content. One can only imagine the kind of organization needed for a truly global media corporation catering for the needs of everyone…

Instead of attempting that, Googlezon will relocate in the value chain compared to media corporations today. The key to doing that is to let others generate content and focus on serving customers only. In order to do that, once again, the value proposition of the business concept needs to be redefined. How will Googlezon make money and distribute income down into the value chain? Will we pay per click? Per time spent on Googlezon's website? How does Googlezon pay for access from telecommunications companies and others providing the infrastructure? And how is content being paid for? Not to mention the largest stumbling block – money from advertisements, the big source of income in media today.

In other words, it is not trivial to change position in the value chain. It becomes necessary to define new organizational roles for the players in the value chain and make sure that everyone gets their fair share of income. Also the overall economy of the value chain may change dramatically. Consider what Dell did when reconfiguring the value chain of computers by "cutting out the middle man" and pioneering their direct selling model. All of a sudden the overall economy of the value chain changed.

#### 3.4.3.3 Business concept based on lead users implementing new technology

Getting new technology into the market place is notoriously difficult. Often technology push fails to deliver on its promise, whereas market pull is too slow and inefficient. But there is hope if one focuses on the right kind of customers. One way is to focus on the lead users that will pull the rest of the market along. The recent example of Skype show how extremely profitable such an approach may be. Skype was sold to Ebay for an estimated €4 billion in 2006 making it an interesting case of a successful business concept.

And what did the people behind Skype do? They did not, for one thing, invent new technology. IP technology had been around for some time and achieved little success, which was probably due to its low quality of telephone transmissions compared to conventional technology. So how did Skype commercialized the technology successfully? The answer is that the Skype people identified the right group of lead users for whom an internet-based telephone service was cheap and extremely welcome. This group of customers is business travellers on long distance flights. Skype jumped on the bandwagon, when airlines started to offer Internet access on transcontinental flights and so offered its services on the same flights. The quality was low here, but remember that the alternative for the business traveller was no phone calls for many hours (and being forced to watch the latest blockbuster film instead of working). So who cared that quality was low, the alternative was nil communication.

So business travellers jumped at the opportunity to answer e-mails and use a phone, i.e. work, while travelling. Furthermore, at the end of the journey they took the idea with them to their hotel (hotels are also offering cheap internet access these days) and the market has started to evolve. Upon returning home, the business travellers told their friends, fellow travellers and even started implementing the new service in their organizations worldwide. A worldwide success had started to evolve on its own – all because Skype had identified the right lead users.

It was, however, probably a good thing for Skype that Ebay came along with some money, as the continuous implementation of IP services will require an enormous amount of resources in order to succeed. So, €4 billion was probably a very nice way of unloading Skype to the next part of the "food-chain".

#### 3.4.3.4 Business concept based on Blue Oceans

These days we also find a number of business concepts based on the notion of "blue oceans" (Kim & Mauborgne, 2005), so let us offer an example of this interesting way of thinking. Car rental is a big business and one would think that the biggest names in car rentals – Hertz, Avis, Budget and the likes – would be making the biggest money. Not so. These companies compete for the same customers in similar ways, i.e. price, in a so-called "red ocean" (Kim & Mauborgne, 2007). Think about it. We only see these names in airports, admittedly all over the world, but still limited. The car rental company that makes the most money is not found among the well-known names and sizable organisations mentioned. It is a major surprise. Even though it is not (yet) Rent a Wreck, we are getting there. It is Enterprise from the US. And what have they done? We think that the founders of Enterprise might well have looked at the industry and its big players and asked themselves the question – do we want to be in the line of car rental companies in airports? And probably answered – NO! If we do that, we can only compete on equal or lower prices than the big names. Should we manage to do that we would still have to accept higher costs due to lack of scale or, worse, from having to lure employees from the competition to join us if demand rises. In other words, we will enter competition in a red ocean with the inherent disadvantages of lower prices and higher costs than the competition – and who wants to do that.

So, maybe the founders of Enterprise went looking for something completely different, a blue ocean. Maybe they found this by looking at the customers of rented cars. Sure many customers, perhaps even the greatest proportion, are travellers to be found in airports. But what about the customers who are not travelling but are at home? Enterprise is based on these customers. This customer segment is located in the big US cities and they have a number of needs for car rental, where price is not terribly important. When your car breaks down and has to be replaced, you need an in-between car in order to go to work and so on. The cost might be covered by the insurance company or is just not very important. And so on. Enterprise has managed to identity a number of customer needs and requirements from a customer segment that no-one was interested in and based its business concept on these customers. As for a business model, this is also quite different from the models of the competition. Enterprise needs to be located in the big cities, where office space – and often even wages – are lower than in airports, and needs to master a set of competencies slightly different from the competition.

This business model has yet to be copied by others, so for now Enterprise competes in a nice peaceful blue ocean. And should anyone try to copy the business concept, then they would fall into the same trap that Enterprise has avoided falling into – the Red Ocean of car rental, the one with cut-throat competition, higher costs, and lower prices.

#### 3.4.3.5 Business concepts based on value-added services

Let us revisit Apple as a case. Whether this example is, in fact, also an example of finding a 'blue ocean' may be debated. No matter what, it is an interesting example of a business concept and business model, based on the Apple iPod. Apple enters a market that has stabilized in a fierce red ocean competition on cheap and very similar products and managed to take control of the market with a much more expensive and functional product. Not to mention a user friendly and cool product, but these things, we will argue, are of less importance to the business concept than the idea of value-added services. Of course designers seem to take credit for the success of the iPod, as do engineering people, marketing people, and so on. Everyone loves a success. We believe that the success of the iPod is a combination of an intelligent business concept that manages to combine the creation of a blue ocean position in the market with the opportunities for continuous innovation (as a means to protect that position).

If we attempt to formulate the business concept in words, we may end up with something along the following lines.

1. Who? Users of MP3 sound, who are ready to let the iPod play an important role in their lives and, hence, are ready to pay a premium price for the core product itself as well as apply to the value added services of the iPod business concept.
2. What? The iPod is a well conceived, well designed, user friendly product with a large memory and a number of other features, but it is also iTunes (buying music in the proper format on the internet) and access to the large community of iPod users who exchange Podcasts, music, movies, ideas and trivia through the net.
3. How? This is a complicated matter because there are property rights involved. As such, a truly digital business model – and iPod is based on such a model – is usually relatively easy to conceive and very complicated to execute. It is obvious that Apple have had to acquire a lot of competencies in IPR in order to get to a point where they can actually sell music digitally. Furthermore, a number of competencies in marketing via the net have had to be developed.
4. Why? As always this is a complicated matter to answer from the outside. However, we believe that the iPod is based on a strategic core ideology that is very aggressive and aimed at expanding the value added services of iTunes from music to, say movies. This will enable Apple to make a lot of money out of value added services, which is very nice, but might also just enable Apple to, finally, place an Apple computer in every home to deal with music and movies.

### 3.4.4 What can we learn from the examples?

If we are to infer something from these examples, there are three main conclusions. First, the concepts are all based on an outside-in perspective. Customer needs have to be the starting-point of business concepts and strategy these days. Often it is the future needs and wants of customers that enable the formulation of innovative business concepts. It is one of the main developments of modern strategy thinking that we have managed to get the customer as the starting point for strategic management again. Second, at the same time, however, it is crucial to rethink the aspect of the business model in contemporary business concepts. As much as we argue that the customer should be important to strategy, it seems clear from the examples above that contemporary business concepts are to some extent all deeply dependent on new competencies, new organizational forms and new ways of thinking about the business model of the organization. Finally, the success of new business models is closely linked to the design and implementation of mobile organizations and new forms of collaboration across traditional geographical, organizational, and technological boundaries.

## 3.5 Discussions

Now, finally, what may these discussions enable us to say about strategic innovation and strategic management?

### 3.5.1 Strategy theory has lost its way

We will assert that a large proportion of the recent and fashionable work claiming to be *strategic* in fact represent tactical areas and means to secure operational effectiveness – rather than the differentiating and innovative business development that we have identified the need for. Consider the contributions on Business Process Reengineering, Business Excellence, Balanced Scorecard, quality strategy, strategic technology planning, and many others. Even according to what Michael Porter relatively recently has written on "what a strategy is", these are contributions that are means to create operational effectiveness. Therefore, we must consider them tactical and precisely not strategic!

Based on this statement, we will argue that strategy theory has gotten lost after the seminal work on strategy as the development of products on appropriate markets (e.g. Ansoff, 1965; Levitt, 1960) combined with consideration of the internal strengths and weaknesses of the company (Andrews, 1960; Penrose, 1957). We feel that there is a need to take a step back and reconsider what strategy is about compared to what strategy is sometimes said to be about in its more modern manifestations. We find it particular useful to take a closer look at some of the seminal contributions compared to some recent ones and investigate if there is anything that justifies the differences. Consider a classical definition of strategy from Ackoff (1979):

- Strategy deals with concerns that are central to the livelihood and survival of the entire corporation, and usually involve a large portion of the organization's resources.
- Strategy represents new activities or areas of concern, and typically addresses issues that are unusual for the organization rather than issues that lend themselves to routine decision-making.
- Strategy has repercussions for the way other, lower-level, decisions in the organization are made.

From Ackoff, we see that strategic management has "always" been perceived as a continuous management activity – of course supplemented with formal activities dealing with tactics and operations (or implementation). However, such supplements clearly were never meant to be part of strategic management or thinking but something else.

Since then, the planning and programming of the supplementary activities seems to have become "the whole" of strategy as argued forcefully by Mintzberg (1994). In fact, the debate of recent times on strategic thinking versus strategic planning shows how much we have come to miss the point. There is not dilemma and there never was a dilemma – of course we need both planning and strategic thinking (Drejer, 2002) – but that is besides the point. From the outside, strategy was about strategic thinking and planning/programming were other, separate activities (at least according to Ackoff) belonging on the tactical level. At the same time, a vast number of new "strategic" contributions have washed up on the shore of the strategy discipline in recent years including quality strategy, IT strategy, branding strategy, manufacturing strategy, product strategy and many, many others. These contributions are clearly directed at different parts of a company, different organizational levels, and have fundamentally different purposes between them (Drejer, 2002). In that light, the solutions seems to be to go back to the very core of strategy theory while at the same time apply the thinking that we have introduced in this paper.

This gives us the following definitions:

- Strategic thinking represents innovative thinking about new activities and relationships at the organisational level. The key activity here should be business development understood as the development of products and competencies at the same time. The purpose of the change of the strategic foundation of the company and the unit of analysis is at the level of competencies and product-markets.
- Strategic planning represents the analysis and formulation of action plans. The key activity here should be the translation of business ideas and scenarios to consequences for the market, resources, structure, etc. of the company in order to find the opportunities for developing the company fast and correctly to the realization of the strategic thoughts.
- Operations mean the operation of the existing activities within the boundaries defined by the current environment, strategy and resources available. The key activity is small improvements, the unit of analysis is organizational units and the purpose is productivity.

Evidently, strategic management should be closely linked to (productive) operations, but managerially the two represent quite different tasks. Furthermore, we find that there are a number of research challenges related to the strategic managerial task that are unique compared to the challenges of the operations task.

### 3.5.2 Managers may not have…

It would be all to easy to make the assertion that top management teams in general are not "creative enough" and do not "think out of the box" when writing about strategic innovation. It is probably true, but often leads to the misconception that strategic top managers should only be concerned with creative thinking and innovation. Not so. Even the literature on strategic innovation is careful to propose a creative, business creation process as a supplement to the traditional (business administrating) process of strategic planning. And now, we can be even more specific. By applying a learning perspective, we can say that the top management group should be good at single loop learning, double loop learning and deutero learning in order to solve its task of strategic planning and strategic innovation.

Having said that it would be natural to assume to many top management groups are less skilled at double loop learning and deutero learning than at singled loop learning. The latter we would relate to strategic planning and budgeting, whereas the former we would relate to strategic innovation (double loop learning) and the balancing of strategic planning and strategic innovation (deutero learning). So how does a management team improve its skills at double loop learning and deutero learning? The two will be connected, of course. Double loop learning may be improved by applying new cognitive schemes in order to see the consequences of strategic action a new and breaking old mental models in order to think up new plans for future actions. This will then render it necessary to interpret knowledge and experience in new ways and create a whole new set of barriers to organisational change that should be dealt with subsequently, but the key to double loop learning – we believe – is elsewhere. As for deutero learning, this is improved by making explicit the mental models, cognitive schemes, experiences and knowledge and barriers to change and deciding when to adhere to them and when to break away from them. As such this is the very balancing between strategic planning and strategic innovation – or single loop learning and double loop learning – that we have defined deutero learning as in this context. And it should be noted that a making the thresholds of the team learning process explicit will, per se, make double loop learning easier.

This is not the end. In this paper, we have managed to link the (useful) theories of learning to the field of strategic innovation. However, a lot of work needs to be done in terms of formulating the managerial issues of strategic innovation in terms of organisational learning, formulating hypotheses and research questions of this managerial work in practice, and testing the latter. We are in the process of doing this and look forward to presenting some of the results soon.

**Sum-up questions for chapter 3**

- Discuss the definition and outline the concept of strategic innovation
- Give examples of how Strategic innovation can be understood as a proactive repositioning of an organisation
- Give examples of how Strategic innovation can be understood as the creative thinking process leading to a proactive repositioning
- Why has Strategic innovation risen to the top of the agenda of top managers and academia in recent years?
- What is the link between Strategic innovation, business concepts and business models?

# 4 Business model innovation

(Written by Yariv Taran, Assistant Professor, PhD)

[Please quote this chapter as: Taran, Y. (2014), Business model innovation, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

Due to today's 'hypercompetition' (D'Aveni 1994) in a globalizing world, companies in all industries worldwide find themselves competing in ever changing environments. Those changes force companies to rethink their operational business models more frequently and more fundamentally, as innovation based solely on new products and aimed towards local markets is no longer sufficient to sustain their competitiveness and survival. Competitors can relatively easily copy products, and local market segments today are often quickly captured by global rivals located elsewhere.

The IBM global CEO study 2006 held among 765 top CEOs is also in favor of that claim – business model innovation matters. Competitive pressures have pushed business model (BM) innovation much higher than expected on industrial priority lists. According to that study, approx. 30 percent of CEOs are pursuing business model innovation initiatives and quite rightly so.

However in most cases, managers' strategic preference typically involves "more of the same" (mostly product) innovations that keep their company fixed on the same line of value propositions, using the same, or somewhat similar, technologies, aimed at the same target customer (e.g. Christensen, 1997). Consequently, the business model in many of those cases is accepted to be fixed on a certain way of doing business, and for that reason it has hardly ever been questioned or changed significantly.

Unfortunately, business models and their innovation are a huge challenge, both theoretically and practically. Much is known about innovation – especially radical product innovation, much less specific business model innovation theory has been developed. And although many managers are very eager to consider more disruptive changes to their business model, they do not usually quite know how to articulate their existing or desired business model, or, even less so, understand the possibilities, or rather the processes, available for innovating it.

The objective of this chapter is therefore to propose several processes that are available for companies for innovating their business models.

## 4.1 Method

Ten retrospective case studies of BM innovation processes undertaken by two industrial companies (see Table 1) provide the empirical basis for this paper. We selected these companies based on their (relatively) successful, yet somewhat different, BM innovation experiences over the years. The study started early 2009 and is still in progress.

| | Company Alpha | Company Beta |
|---|---|---|
| Description | Large, global company specialized in developing, manufacturing and marketing (mostly) professional audio products. | Large, global company specialized in developing, manufacturing and marketing flexible electrical/ electronic control and instrumentation solutions within power production, marine and offshore. |

**Table 1:** Case company descriptions and interviews taken

To ensure the validity and reliability of the overall research, multiple qualitative methods were used to collect the data. The data collection was done through desk and field research. The desk research involved collecting of information through books, articles, websites, as well as documents received from the two companies. The field research consisted of face-to-face interviews with managers who had actively participated in, or had been in charge of, the new business development initiative, along with e-mail correspondence, company visits, and questionnaires.

Given the mostly explorative nature of the research we used a semi-structured (standard) questionnaire, which allowed the individual respondents maximum freedom to explain their views on the new business model and their understanding of the innovation process, and enabled us to collect the data we felt we needed for the purpose of our research at the same time. Since the case studies were analyzed retrospectively, the data could not be acquired through observations. Table 2 summarizes the case study data collected.

| | Company Alpha | Company Beta |
|---|---|---|
| The ten business model innovation cases and their success rates. | • **Case A** – New business unit offering existing and new technology-based products to a new market (automotive) – very successful<br>• **Case B** – New business unit offering existing technology-based products to a new market (mobile phones) – partly successful<br>• **Case C** – New business unit offering existing technology-based products to a new market (studios), plus outsourcing of marketing and sales to a partner – failure<br>• **Case D** – Joint venture, a new technology-based product that can be used in many industries – very successful<br>• **Case E** – Joint venture with a venture fund. The core business is IP and R&D of products based on (mostly) existing technologies for the biomedical industry – very successful<br>• **Case F** – Joint venture offering new technology-based products to a new market (telephone infrastructure), planned to be sold (divested) to a European company – very successful<br>• **Case G** – Outsourcing the manufacturing of one of the products – failure<br>All in all, roughly 60% success in business model innovations. | • **Case 1** – Penetration of the marine industry based on existing and new technological competences. Required internal re-engineering to insure higher quality control and work efficiency (e.g. lean, new business intelligence department) – very successful<br>• **Case 2** – Acquisition of a small company operating in a different industry (wind power). That company currently continues to develop the business internally. Soon to be spun off again as a new independent company – very successful<br>• **Case 3** – New technology-based product, aimed at serving existing and potential new customer segments – failure: after one year of heavy investment in the product, the project was terminated due to incongruity with customer demands (product shape and size; price – too expensive)<br>All in all, roughly 66% success in business model innovations. |
| Rationality in choice under uncertainty and complexity | **Search processes** – No search process in any of the cases. "*It was just something that came up along the way*". One project was managed proactively in search of a radically new business model (Case F). Otherwise, it was internal competences chosen to be used elsewhere.<br><br>**Selection and implementation processes** – Following a stage-gate model, radical innovation ideas are handled with extra awareness. A slower process, which always starts with small steps and then grows slowly. Radical ideas follow gates similar to those of incremental ideas. The difference is, though, that it takes more time to move from gate to gate. | **Search processes** – Recognized as one of the weaknesses of the company. They do not really have any systematic processes to manage radical, or even incremental, innovation ideas. It is something that usually just "pops up". They give more attention to ideas that come from their main customers.<br><br>**Selection and implementation processes** – A stage-gate model is used to move the business concept idea through a maturity roadmap and development process. Many complaints about the fact that there is not enough market research behind ideas proposed. In effect, lacking understanding of the potential market and sales volume. |

**Table 2:** Summary of the case data

## 4.2 Analysis

### 4.2.1 Characteristics of the Business Model Innovation and Success Rate

**Company Alpha**: Throughout the years, company Alpha engaged in seven business model innovations. Four cases (A, D, E and F) were very successful. In three cases, the company either partly succeeded (case B), or failed to succeed (cases C and G). All successful cases involved the exploitation of existing technology (case B, C, and E), or the development and exploitation of new technology-based products, together with a partner (cases A, D and F), in a market segment new to company Alpha. Case A resulted in a new internal manufacturing unit; the other success cases in a joint venture. The two failure cases were attempts to outsource the production (case G) or marketing and sales function (case C) to a third party.

Two factors caused their failure. First, the partner did not match the company's high quality standards. Second, they realized in a later phase (particularly case C) that the market was too small to play a significant part in the company's turnover. In case B, company Alpha and a partner company combined some of their competences and developed two mobile phone types. One product was a partial success while the other type did not succeed. Nonetheless, this project would have been continued if it were not for the financial crisis, which forced the company to become more focused in response to the 34 percent turnover loss.

**Company Beta**: This company engaged in three business model innovations, two of which became a success (case 1 and 2), while one attempt failed (case 3). Case 1 involved the application of existing, and the development of new, competences and technologies in a new market segment. Case 2, an acquisition, was much more risky for the company, both in terms of investment as well as time constraints, and involved the development and exploitation of new technology in a new market segment. In case 3, a failure, the company "pushed" a radically new product into the market in an attempt to exploit a new emerging technology, without any idea of how customers would respond. Cases 1 and 3 were implemented using the company's existing organization. As said, case 2 was an acquisition.

| Case | Result | Key content | Organization |
|---|---|---|---|
| A | Successful | Existing and new technology for new market segment | New BU |
| B | Partly successful | Existing technology for new market segment | New BU |
| C | Failure | Existing technology for new market segment<br>Outsourced M&S | New BU<br>Partner |
| D | Successful | New technology for new market segment | Joint venture |
| E | Successful | (mostly) Existing technology for new market segment | Joint venture |
| F | Successful | New technology for new market segment | Joint venture: planned to be divested soon |
| G | Failure | Outsourced manufacturing | Supplier |
| 1 | Successful | Existing and new technology for new market segment | Existing core business, improved through BPR |
| 2 | Successful | New technology for new market segment | Acquisition; planned to be spun off soon |
| 3 | Failure | New technology for existing and new market segments | Existing core business |

**Table 3:** Key characteristics of the ten business model innovations

### 4.2.2 Rationality in Choice under Uncertainty and Complexity

**Company Alpha**: In most cases (except case F), there was never a search process for new business models. Rather, ideas were slowly developed along the way based on their existing core competences (e.g. technologies, know-how). The company simply considered it obvious that existing competences would give them relatively easy access to other industrial settings. These competences include the ability to:

1. Outsource existing products and processes to a new partner (case G).
2. Transfer existing technologies and processes to another industrial setting (cases B, C and E).
3. Develop, in-house or together with a partner, and then transfer, new technologies and processes (cases A, D and F).

The challenge, in cases D, E, F and G, was to find the right partner to work with. The search for a partner, rather than the search for an idea, seemed to be the main challenge in these cases. Furthermore, in all cases except E and F, the company preferred to generate the idea and test it first internally, starting with a low scale production process, and to consider growth in due course (e.g. through a joint venture, or a new business unit). This replication of previous business model innovation processes seems to be a winning formula for the company, and is expected to be followed relatively similarly in future business model innovations.

All new ideas have to pass through three strategically oriented gates before they are allowed to continue further to implementation. At the first gate, the idea is presented to the concept manager. The second gate involves a presentation of the so-called initial proposition to the top management. At the third gate, the top management decides whether or not to commit to the concept that has been worked out, and to the detailed business plan that was developed. With every approval, the budget available for developing the innovation increases until, after the third gate, all the funding needed to develop, produce and commercialize the innovation is available to the innovation team. Further downstream, the gates are managed by a cross functional team (idea factory, R&D, production, marketing and sales), which provides the innovation team with the flexibility to manage the stage-gate process from gate to gate as they see fit. At each gate, the team receives a checklist that must be completed before the next gate meeting.

**Company Beta**: As was the case with company Alpha, there was never a formal search process for new business models. Radically new ideas emerged over the course of time, either through existing technological capabilities (case 1, case 2), as a reaction to emerging competitors' technologies (case 3), and/or simply to reduce cost (case 1). Furthermore, the failure of case 3 made the management team even more aware of the need to better understand customer demands as a basis for selecting innovation ideas.

Company Beta, too, follows a stage gate model for moving new product and business concepts through a process roadmap and development process. For each innovation project there is a steering group, which is situated at the gates. This group includes representatives from the management team and the R&D group, and a product/project manager as well as supply chain staff (purchasing, distribution). The business intelligence unit, however, is not involved in that process. For that reason, according to one of the company managers, the discussions in the steering groups at the gates are concerned with performance errors in existing products, rather than searching for wholly new products/businesses that could better meet present, and potentially new, customer demands.

### 4.2.3 Cross Analysis

Both companies try to reuse successful business model innovation processes (new idea generation and implementation processes). However, while company Alpha is keen on pushing ideas and technology into the market place, company Beta is more in favor of adopting a customer pull strategy. Furthermore, both companies try not to repeat failures made in the past. Consequently, the failed outsourcing attempts of company Alpha (cases C and G) has led the company to re-experiment with familiar, "pushed", business model innovation processes, while company Beta, based on the failure of case 3, has chosen to no longer push new ideas and technologies into the market place, without consulting their customers first.

These observations has led us to conclude that instead of learning to improve, both companies tend to "simply" repeat successful business model innovation processes and, equally, "simply" to drop unsuccessful approaches. This lack of experimentation with new business model processes, and the lack of learning from their failures may decrease the growth potential of both companies. Yet, this observation is also confirming our statement mentioned earlier, namely, that in most cases, managers' strategic preference typically involves "more of the same" innovations (or, in this case, "more of the same" innovation processes).

## 4.3 Discussion: Single vs. Multi BM Innovation

As the cases suggest, there are many possibilities for innovating the company business model. A company can, for example, strategically choose to innovate the core business fundamentally by transforming the entire business from "as-is" into a completely new one. Cases 1, for example is an illustration of such innovation scenario.

Business model innovation can also come in the form of mergers or acquisitions (e.g. case 2). In such cases, business model innovation is considered to be a highly risky process, since the company partly, and sometimes even completely, abandons its original business and core processes, and develops a completely new business that encompasses new processes the company was not familiar with in its past.

An alternative process to innovate a business model would be to keep the core business fully operational ("as-is" followed by continuous improvements), and alongside it, to develop additional business models aimed at serving new markets and operating in other industries than those the company was familiar with. Company Alpha, for example, was particularly successful in launching such business model innovation initiatives, as illustrated in Figure 3.


**Figure 3:** Company Alpha's business model innovation initiatives

On the whole, by embedding Chesbrough's (2007) open business model innovation thinking into our cases findings, we can argue that, on an aggregate scale, business model innovation possibilities can be perceived under three categories, namely:

1. Level of business model openness – i.e. innovating the "as-is" core business or (also) outside it.
2. Internal and/or external competences used through the innovation process.
3. Existing and/or new markets that the company is operating in.

Figure 4 illustrates what we argue to be the business model innovation "cube", where we have placed the business model innovation cases of companies Alpha and Beta in the accurate boxes for illustration (e.g. Case 1 – BM innovation that took place in the existing *core business*, using solely *internal competence*, aimed to serve a ***new*** *market*).

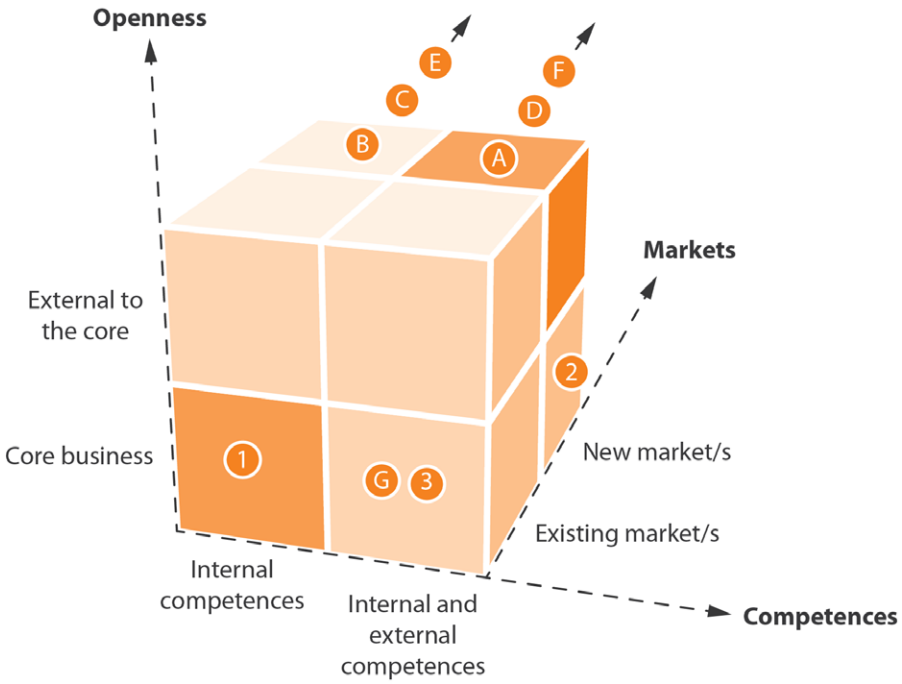


**Figure 4**: The business model innovation cube

As the model suggests, the BM innovation initiative on the bottom left box (i.e. core business, internal competences, existing market/s) will manifest itself as somewhat incremental BM innovation initiative. Alternatively, the upper right box (i.e. external to the core, internal and external competences, new market/s), will manifest itself as a multi business model initiative, and gives a more open view (Chesbrough, 2007) to the business model of the company. In these cases, a company choses to create a new business while still keeping the "as-is" core business fully operational – if the business model innovation initiative fails, the company could continue operating in existing markets, provided that the financial losses (due to the failure) were not too large.

Yet, it should be noted that given that all business model innovations are loaded with risks, it is still highly questionable which of the initiatives should be the preferred one to pursue. Open, network-based innovation also brings with it many (other) risks, and with that, new challenges. Obstacles associated with network-based innovation can manifest themselves as e.g. difficulties in finding a common value for the network partners to work with; in understanding the synergy (i.e. "who's doing what?"); in insuring trust between partners; in developing a joint profit formula; in securing sustainability to the new business; in securing intellectual property rights (e.g. Chesbrough 2007, Tidd and Bessant 2009, Miles *et al.* 2005, Dodgson *et al.* 2006, Ahmed and Shepherd 2010).

## 4.4 Conclusion

Companies today, in some industries more than others, invest more capital and resources just to stay competitive, develop more diverse solutions, and increasingly start to think more radically, when considering whether or not to innovate their business models. However, although many managers are very eager to consider more disruptive changes to their business model, they do not usually quite know how to articulate their existing or desired business model, or, even less so, understand the possibilities, or rather the processes, available for innovating it. The objective of this paper was therefore to propose several processes that are available for companies for innovating their business models.

The cases presented and analyzed here suggest that managers can perceive business model innovation possibilities under three levels of analysis, namely: degree of *business model openness*; (supply of) *competences* used through the innovation process; and *number of markets* that the company is operating in (Figure 4).

Finally, several approaches are possible to extend and test the results presented in this paper, including more case studies, to shed additional qualitative light on the findings presented here, or a survey, especially for generalization purposes.

**Sum-up questions for chapter 4:**

- What is your understanding to the term "Business Model"?
- What does it mean to innovate the business model?
- What is the difference between product innovation and business model innovation?

# 5 Innovative business models on NewConnect

(Written by Jan Michalak)

[Please quote this chapter as: Michalak, J. (2014), Innovation business models on NewConnect, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

## 5.1 NewConnect and other alternative markets in Europe

Innovative business models, such as Nintendo's multilateral gaming platform, are usually developed by seasoned companies (Osterwalder, Pigneur 2010), but start-ups do this even more often. The reasons for a more widespread use of new business models among start-ups are the following:

1. mature companies using proven business models find it harder to introduce new ways of doing business because of organizational inertia and the tyranny of status quo
2. well-established companies have the resources, activities, channels and value propositions that match their current, proven business models so they may be less useful or even useless for new business models
3. companies with a long tradition frequently operate complicated and time-consuming decision-making procedures that hinder the implementation of new business models
4. the idea of a novel business model sometimes leads to the creation of a start-up.

Some new business models need to gain critical mass to become successful. For example, Google based its business model on a massive or even global use of their services (Tsai et al. 2011). Internet platforms (both providing their products and purchasing them) need many users to break even and to generate profits for their operators. Gaining the "critical mass" requires – apart from winning customers – to build up the core processes and amass enough resources to make the business model sustainable. This cannot be achieved without suitable level of financing.

In order to raise start-up capital entrepreneurs use different sources of funding: their own savings, family loans, business angels, seed capital, and venture capital (Denis 2004). Recently, with the development of alternative securities markets, some companies started to seek capital there. These markets seem to be perceived as an interesting alternative to venture funding. Also, the more seasoned firms developing innovative business models may nowadays consider alternative markets as an advantageous way of financing their undertakings. Business angels and venture capital funds may also use the secondary market as a means of disinvestment. Therefore, it seems natural that we witness a surge of new entities using alternative market to raise capital. One of them is NewConnect. It is a Polish alternative (secondary) stock market, which was created to promote innovative business models.

The Warsaw Stock Exchange decided to establish NewConnect for companies that:

- want to scale up their business models in the start-up phase
- need to raise capital ranging from a few hundred thousand to a few million Polish zlotys
- represent innovative sectors or innovative business models
- plan to achieve capitalization of up to PLN 20 million
- show high dynamics of potential growth and declare their wish to enter a regulated market (i.e. the WSE) in the future.

NewConnect was established in the summer of 2007. Its first session was held on 30th August 2007. By the end of September 2012 it witnessed 430 debuts, its capitalization exceeded PLN 9 billion (Polish zlotys) (i.e. over EUR 2.2 billion). The highest share price rise on the debut was 1875% and the greatest long-run price decrease reached 99% (Newconnect.info, 2012).

This chapter seeks to answer the following questions:

1. Does NewConnect promote innovative business models?
2. Do companies listed on NewConnect disclose enough information about their business models?
3. Are business models of the New Connect companies sustainable?
4. Are there differences between the sustainability of innovative and traditional business models?

In most cases, secondary markets are created for two main reasons (Vismara, Paleari, Ritter 2012): to provide "a waiting room" for smaller and younger companies that want to enter the main market and to establish a special market for high-tech companies that involve higher risks and greater returns. The first type of the markets is represented by the Second Marche of Paris Bourse, the Geregelter Markt of Deutsche Boerse, Mercato Risstretto of Borsa Italiana. The second type of an alternative market was Neuer Markt in Germany, Nouveau Marche in France, Nuovo Mercato in Italy, Niuewe Markt NMAX in the Netherlands, and EuroNM in Belgium.

According to earlier research, the long-run performance of IPOs on the secondary market is dramatically worse than on main markets. Giudici, Roosenboom (2004) argue that IPOs on secondary markets underperform (are underpriced). Vismara, Paleari, Ritter (2012) have found, in turn, that 3-year buy-and-hold abnormal returns equal -19.0% for the secondary-market IPO compared with +12.3% for the main market IPOs. They even write about 'a secondary market curse', as the best companies from such markets are expected to leave it and join the main market. They also indicate that alternative markets are often created in "hot periods" to be closed in "cold periods", giving the examples of Neuer Markt in Germany and Nuovo Mercato in Italy.

Secondary markets of the NewConnect type have less stringent requirements for placing IPO on the stock exchange market, lower listing fees, and fewer disclosure requirements. These markets are therefore more open to young companies that develop new business models or even start-ups.

The number of IPOs launched in developed countries was relatively small in recent years. Ritter (2011) argues that the fundamental reason for this situation was changes in the distribution of income and wealth in the world. The explanation that Gao *et al.* (2011) propose refers to a decline in the relative profitability of smaller companies compared with large corporations that have a longer history of operation. Contrary to these statements, NewConnect seems to be a great success, especially regarding the number of its debuts.

## 5.2 Information documents as a way to present business models

NewConnect serves companies that are relatively small even in the start-up phase. In the case of these companies, it is extremely important that investors understand their business models. Communication and reporting business models are discussed at length from the perspective of investors' information needs by Ch. Nielsen in chapters 5 and 6 of the book, The Basics of Business Models. The topic has been long discussed by academics, authors of different business reports and standard setters (Beattie 1999, Epstein & Birchard 2000, FASB 2000, Lev 2001, DiPiazza & Eccles 2002, IASB 2010, IFAC 2012).

It is worth noting that investors choosing the NewConnect companies are those that are aware of risks involved in their investments. An assumption that most of them are informed investors would be in line with the opinions of the majority of the authors mentioned above, who point out that business reports should reflect value creation processes and the main building blocks of a business model (i.e. the business model canvas: customer relationships, customer segments, value propositions, channels, activities, resources and partners, revenue streams and cost structures (Osterwalder, Pigneur 2010)). At this point, it is reasonable to assume that business model reports should communicate the value proposition, company strategy, critical success factors, a degree of risk, market conditions, etc.

Below, we will analyze the extent to which these information needs and requirements are met by companies listed on NewConnect.

The disclosure requirements for the companies listed or seeking to be listed on the NewConnect are as follows:

1. Information Document (memorandum/ prospectus) presenting the offer to place the issues on NewConnect
2. current (and continuous) reports on the most important events in the company
3. current (and continuous) simplified quarterly financial statements
4. current (and continuous) audited annual financial statements and management reports.

The Information Document is the most comprehensive source of information for investors in companies planning to enter NewConnect. Its structure and contents are regulated by the Polish law and the Warsaw Stock Exchange Regulations.

The Information Document should embrace five main parts (which frequently constitute separate chapters).

Part one provides an extensive description of risk factors. These are divided into risks associated with the issuer, its business and the business environment (e.g. high volatility in earnings, legal risk, demand risk, pricing and other risks), and risks associated with equity and capital markets, for instance risks involved in the liquidity of shares, the risk of trading suspension or of being delisted.

Part two describes entities which are responsible for information contained in the Information Document: the issuer, the authorized adviser and the auditor.

Part three presents the characteristics of financial instruments intended for NewConnect.

Part four provides the detailed information about the issuer.

Part five contains the financial statements for the last 3 years of operation.

These are typically a balance sheet, an income statement, a cash flow statement, as well as notes and explanations. The Information Document is supplemented by a valid copy of an excerpt from the National Register of Companies, issuer's statute and a list of definitions and abbreviations used in the document. The NewConnect Information Documents are shorter and less complicated than IPO prospectuses produced by companies that want to enter the main market of the Warsaw Stock Exchange.

Parts four and one of the Information Document are the most important for understanding the company business model. These parts present a short history of the issuer, its strategy, basic information on key products or services (including total sales for the group and the issuer by market segments). Table 4 provides a comparison of parts four of Information Documents drawn up by two companies 1.

**A comparison of Information Documents prepared by chosen issuers**

| Company A | | Company B | |
|---|---|---|---|
| Traditional Business Model | | Innovative Business Model | |
| Food processing | | Image protection in the Internet | |
| Total (2219) | % of content | Total (4847) | % of content |
| Products description (502) | 22.62% | General information (75) | 1.55% |
| Sales results (270) | 12.17% | Main activities (609) | 12.56% |
| Technological process (223) | 10.05% | Information system (442) | 9.12% |
| Distribution channels (225) | 10.14% | Business model (261) | 5.38% |
| Competitors (190) | 8.56% | Competitors (1522) | 31.39% |
| Financial results (662) | 29.83% | Description of the market (1418) | 29.25% |
| Investment plans (147) | 6.62% | SWOT analysis (106) | 2.19% |
| | | Financial forecasts (215) | 4.44% |
| | | Further development plans (199) | 4.10% |

**Table 4.** A comparison of Information Documents prepared by chosen issuers

The numbers in the brackets stand for the number of words.

Further analysis of Information Documents shows that they contain most or even all elements required by investors and regulators. Nevertheless, prospectuses are often quite general (showing for example only the type and number of e-games prepared by the issuer) and are sometimes full of unnecessary details such as all statistical codes of company products and activities. In most cases, prospectuses focus on the product details, as well as the market and its segmentation. They do not clearly indicate which elements of value proposition are the most important for the issuer's customers. The information on company strategy is also usually presented in an overly concise and superficial way. The weak point of business reports produced by NewConnect companies is that they present the information on assets (resources), cost and revenue streams as traditional accounting documents rather than from the management perspective. The second weakness is that they omit information about the costs of generating many intangible assets and of developing and maintaining the company core competencies. This makes them different from IPO prospectuses prepared by companies in Denmark, which contain a relatively considerable amount of information on intangible resources (Bukh *et al.* 2005).

## 5.3 Sustainability of innovative business models

Ch. Nielsen and C. Lund state in chapter one of the book, The Basics of Business Models, that a business model is a sustainable way of doing business. The two main questions that we try to answer are whether NewConnect promotes innovative business models and whether the models are sustainable.

The term innovation seems to be overused these days. Authorities in many countries and regions declare their wish to foster innovation. According to the Lisbon Strategy, by 2010 the European Union was to become the most competitive and dynamic innovative (knowledge-based) economy in the world, characterized by sustainable economic growth with more and better jobs and greater social cohesion.

Innovation measurement is still in its infancy, though one of the most common frameworks for measuring innovations is the Oslo Manual, where two main types of innovations have been identified:

1. technological product and process innovation
2. organizational innovation.

A technological product innovation may take the form of a technologically new product, i.e. one "whose technological characteristics or intended uses differ significantly from those of previously produced products. Such innovations can involve radically new technologies, can be based on combining existing technologies in new uses, or can be derived from the use of new knowledge". A technologically improved product is "an existing product whose performance has been significantly enhanced or upgraded". A technological process innovation is "the adoption of technologically new or significantly improved production methods, including methods of product delivery" (the Oslo Manual, pp. 31–32). An organizational innovation may consist of the introduction of significantly changed organizational structures, the implementation of advanced management techniques or new or substantially changed corporate strategic orientation (the Oslo Manual, pp. 36–37).

In order to know whether NewConnect promotes the use of innovative business models we need to determine the characteristics of innovative business models. The question of business model innovation is also discussed in chapter 4 by Y. Taran, but the presentation is underpinned by a case study analysis. Taran lists ten cases of business model innovations involving the existing and new technology-based products offered to existing and new markets by existing and new business units. The various classifications of innovative business models are presented in the table 5.

**The classifications of innovative business models**

| Timmers (1998) | Nielsen (2012) | Weil and Vitae (2001) |
|---|---|---|
| • e-shop<br>• e-procurement<br>• e-auction<br>• 3rd party marketplace<br>• e-mal<br>• virtual communities<br>• value chain integrator<br>• information brokers<br>• value chain service provider<br>• collaboration platforms | • buyer-seller models<br>• advanced buyer-seller models<br>• network-based business models<br>• multisided business models<br>• business models based on ecology<br>• bottom of the pyramid business models<br>• business models based on social communities<br>• co-creation and consumer collaboration models<br>• freemium models | • content provider<br>• direct to consumer<br>• full service provider<br>• intermediary<br>• shared infrastructure<br>• network value integrator<br>• virtual community<br>• whole of the enterprise |

**Table 5.** The classifications of innovative business models

The classification of a business as using innovative model changes over a time, because a combination of assets, processes and value proposition which was recognized as innovative several years ago may now represent the dominant business model (Slyvotzky *at al.* 1999). The Wal-Mart business model was innovative in the 1960s, but 20 years later it became the prevalent solution in the retail business. The next part of the discussion presented in this chapter is based on the assumption that the business models present in table 5 may still be considered innovative.

Nowadays the concept of sustainability is used very often. According to S. Roosa (2010), sustainability "has become the socially preferable approach to almost everything. There have been references to sustainable policies, sustainable communities, sustainable agriculture, sustainable horticulture, sustainable use of the oceans, sustainable ecosystems, sustainable housing, not to mention sustainable businesses, sustainable practices, sustainable business practices and sustainable ad nauseam".

One of the first documents to mention sustainable development was the Brundtland Committee's Report (1987) that defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development). According to Nidumolu, Prahalad and Rangaswami (2009), sustainable development has recently been a key driver of innovation including business model innovation.

The Global Reporting Initiative guidelines (GRI 2011) recommend that corporations report on three main dimensions of sustainable development: economic, environmental and social. GRI has also developed a number of indicators to measure the degree of sustainability. The economic indicators reflect the distribution of value added among stakeholders and the company's economic impact on society. The environmental dimension is measured in sustainability reports by indicators presenting factors of impact on the natural environment, such as consumption of raw materials, energy usage, water consumption, the exposure of biodiversity, emissions of hazardous substances. The social dimension is captured through indicators of relationships with employees, e.g. the number, type and geographic location of employees, the type of employment contracts, the number of training hours and safety at work indicators.

The research data used in this chapter do not allow such defined sustainability to be measured. To the author's knowledge, none of the NewConnect companies prepares and publishes sustainability reports. Moreover, measures reflecting the socio-environmental aspect of business model sustainability are very uncommon in both Information Documents and Management Commentaries of these companies.

The other meaning of sustainability stresses the company ambition to survive over time and become successful, preferably profitable organization in the long run. (Nielsen, Lund 2012, p. 10.)

There are many ways to measure and evaluate this "financial" aspect of sustainability. According to neoclassical economic theory and financial theory (Friedman 1962, Brigham Gapensky 1997), companies should enable their shareholders to maximize their wealth. Many complicated measures of wealth have been developed, such as market value added, economic value added and total shareholder value. These measures are the best suited to the purposes of seasoned companies (Brigham Gapensky 1997, pp. 64–67). In the case of start-ups or other relatively small companies, more suitable are traditional measures such as:

1. survival
2. increase in sales
3. achieving profitability
4. equity increase
5. price-to-book value
6. ROE
7. dividend payment
8. transfer to the main market of the Warsaw Stock Exchange.

Below, we discuss the traditional measures and the benefits that arise from them.

**Survival.** One way of evaluating the business model sustainability is the survival of the company. A company going bankrupt does not seem to have a sustainable business model.

**Increase in sales.** An old adage is that business is like a tree – it either grows or dies. Successful business models should be able to produce value proposition that will be highly valued by customers. Properly designed and delivered value propositions should lead to increases in sales. Therefore, a sales increase and a sustainable business model may be associated.

**Achieve profitability.** In order to be sustainable a company must have a surplus of revenues over its costs. Otherwise, the company will use up its equity and will go bankrupt. This research uses operating profit and net profit to evaluate business model sustainability.

**Increase in equity.** Companies that successfully use well-developed business model should be able to increase their shareholders' equity. This increase can be recognized as a measure of business model sustainability. However, this proxy of business model sustainability (and all others) should be treated with caution. On the one hand, equity may increase due to subsequent issues of shares determined by the poor financial performance of the company. On the other hand, equity may decrease because of paid dividends. Dividend payments are often perceived as signs of good performance (see below).

**Dividend payment**. In financial theory, dividend payment frequently serves as a proxy for company sustainability and is used as an important variable in valuation models. Organizations paying dividends are considered to have a good financial situation, as they have profits to share with their shareholders.

**Price-to-book value**. The success of the NewConnect companies may be also measured with the price-to-book value. It may show that investors value the company's future cash flows more than they can read from its current accounts. This ratio should be treated with caution, though, because extremely high price-to-book values frequently symptomize overvaluation (and a market bubble).

**Return on equity.** This measure of profitability shows how many euros / zlotys of profit are generated in the company by each euro / zloty of shareholders' equity, thus indicating its efficiency. Rising return on equity suggests that a company increases its capability to generate profit without considerable increases in capital.

**Transfer to the main market.** As NewConnect is perceived as a kind of "feeder" for the main market, a transfer to the main floor of the Warsaw Stock Exchange may be considered a measure of the company's success.

Sometimes the "financial" and the "socio-environmental" aspects of sustainability are opposed to each other. Many CEOs in the European Union and the US stress that having to comply with stringent environmental regulations weakens their position in global competition. On the other hand, Nidumolu et al. (2009) emphasize that for sustainable business models to be created customer value proposition and other elements of business models must be reconsidered, e.g. processes and the use of resources. They give an example of the EU ban on lead solders that made Hewlett Packard invent and use new solders combining tin, silver, and copper. Moreover, organizational and technological innovations within sustainable development increase companies' profits, as being environmentally-friendly decreases costs following a reduction of inputs. Additionally, better products are likely to increase companies' revenues.

## 5.4 Sustainability of business models used by companies on NewConnect – results of empirical research

Being listed with NewConnect also means that the organization and its business model are successful, because it managed to convince investors that it is worth investing in. As already mentioned, it is difficult to judge whether or not a company uses an innovative business model (in many companies innovative business model cease to be innovative). We started on the assumption that companies operating innovative business models use in their prospectuses words related to innovation. The Information Documents of the sampled companies were analyzed with the data-mining software. The first step in the content analysis was to create a catalogue of words likely to point to an innovative business model. The catalogue included words such as new, novelty, innovation, innovative, creation, co-creation, collaboration, network, the Internet, freemium, platform, portal, website, knowledge, patent, research, development, novum, modernization, change, transformation, content, ecology and the prefix e-.

As most of these words may combine into various phrases, some of which have nothing to do with really innovative business models, for instance a new stock issue or New York, we chose to use concordance analysis. Concordance analysis belongs to the data mining techniques and is applied to screen large amounts of text with the aim to find many uses of a word or phrase in their contexts. It resembles a natural language learning process, when a person grasps the meaning of words in a language by hearing and reading them in different contexts. Concordance analysis is also used to find patterns in the mass of the data, i.e. researchers use it to search through a database of accident records to see possible links between an injury and factors such as fall, grease, ladder, wet or slippery floor, etc.

The sample of companies covered by the research included organizations listed on NewConnect at the end of August 2012. Cases were made with companies that had been continuously submitting their data between their debut and the end of June 2012. The identified sample contained 409 companies meeting the criteria. From this number we subtracted all companies preparing their Information Documents in languages other than Polish (2) and those whose prospectuses were missing (3 companies). As a result, the sample was reduced to 404 companies.

Following a simple principle – the occurrence in the Information Document of a word from the catalogue in proper concordance – we assigned companies to the group of organizations applying innovative business models. The remaining companies formed a group operating on a traditional business model (a sort of a control group). After the companies were distributed between the two groups, the groups were compared using measures showing their sustainability (the rate of success). This analysis allowed us to draw the following conclusions.

First of all, 195 (48.27%) of companies in the sample were classified as using innovative business models (hereafter IBM companies). The other 209 (51.73%) were classified as running traditional business models (hereafter TBM companies). The range of NewConnect companies and their business models is very wide. There are companies that build their business models on technological product innovations, for instance algorithms enabling online medical diagnostics based on artificial intelligence or image protection in the Internet, and those using proven business models such as fast food chains or housing construction. The above proportions do not give us a straightforward answer to the question about NewConnect promoting innovative business models or not. On the one hand, it seems that traditional business models are more frequent among companies listed on NewConnect. On the other hand, there are almost as many companies pursuing innovative business model. Moreover, some companies that successfully issued their shares on NewConnect would not be allowed to place their issues on the main floor of the Warsaw Stock Exchange or even be eligible for bank loans.

Earlier research shows that business models have a strong effect on the financial performance of their users (Malone *et al.* 2006). The most aggregate financial data on companies using traditional and innovative business models are presented in tables 6–9 below.

### A Comparison of Sales

| Sales | TBM companies | IBM companies |
|---|---|---|
| Average | 12 214.69 | 8 623.94 |
| Median | 3 352.00 | 2 115.00 |
| 1st quartile | 820.00 | 523.50 |
| 3rd quartile | 11 888.00 | 5 389.50 |
| Maximum | 181 406.00 | 448 341.00 |
| Minimum | 0.00 | 0.00 |

**Table 6.** A comparison of sales

Companies using innovative business models have lower sales than those with traditional business models. This is consistent with our expectations, because IBM companies are often in the earlier phase of their life cycle and some of them did not have time to develop effective distribution channels. It was surprising to find, though, that the company with biggest sales volume used an innovative business model based on ecology (a recycling company).

### A Comparison of Assets

| Assets | TBM companies | IBM companies |
|---|---|---|
| Average | 30 808.44 | 17 276.21 |
| Median | 11 312.00 | 5 918.00 |
| 1st quartile | 4 194.00 | 2 790.00 |
| 3rd quartile | 31 942.00 | 18 747.00 |
| Maximum | 533 219.00 | 566 042.00 |
| Minimum | 218.00 | 0.00 |

**Table 7.** A comparison of assets

Companies based on innovative business model have lower assets than those operating based on traditional business models. This is in line with the earlier findings, because TBM companies are often 'brick and mortar' companies that are more dependent on physical assets than IBM companies that are mostly Internet platforms strongly determined by their intangibles (frequently unaccounted for in their balance sheets). Interestingly, the company with biggest assets was identified as using innovative business model based on internet marketing and co-packing.

### An Equity Comparison

| Equity | TBM companies | IBM companies |
|---|---|---|
| Average | 15 371.75 | 7 687.32 |
| Median | 5 748.00 | 3 669.00 |
| 1st quartile | 1 939.00 | 1 197.50 |
| 3rd quartile | 14 351.00 | 11 027.50 |
| Maximum | 413 211.00 | 90 381.00 |
| Minimum | -57 312.00 | -3 578.00 |

**Table 8.** An equity comparison

The results for equity and assets are similar. TBM companies have significantly lower equity levels than IBM companies, which may be due to their being in the earlier stage of life cycle and to more aggressive financing policy pursued by IBM companies.

### A Comparison of Profits

| Profit | TBM companies | IBM companies |
|---|---|---|
| Average | 264.85 | -242.86 |
| Median | 29.00 | -87.00 |
| 1st quartile | -366.00 | -361.50 |
| 3rd quartile | 456.00 | 225.50 |
| Maximum | 30 674.00 | 11 280.00 |
| Minimum | -21 886.00 | -52 996.00 |

**Table 9.** A comparison of profits

Net profits contribute to the biggest differences between the two groups of companies. In the first half of 2012 both the average and the median of financial results were positive in traditional business model companies, as opposed to IBM companies where they were negative. It may be a sign of worse financial performance and poorer financial sustainability of the latter. One factor blurring our findings is that profits were analyzed for the first half of 2012 whereas many e-commerce companies generate profits in the last quarter of year.

To find out whether TBM and IBM companies differ significantly in sustainability, we compared their financial sustainability measures (see point 3 of the chapter).

The outcomes are presented in table 10.

### Bankruptcies and transfers to the main market

| Number of companies: | TBM companies | IBM companies |
|---|---|---|
| gone bankrupt | 5 | 0 |
| transferred to the main market | 13 | 4 |

**Table 10.** Bankruptcies and transfers to the main market

All the five companies that went bankrupt were identified to have traditional business models. That none of IBM companies went bankrupt may be a coincidence. The greatest number of companies debuted on NewConnect in 2011 (many of them had innovative business models) and the time of their activity seems to be too short to tell us something about their sustainability. Studies covering longer periods are needed to find out if the business models of IBM companies are sustainable or not.

The group of companies transferred to the main market included 13 TBM companies and only 4 IBM companies. This means that more companies with traditional business models are frequently more mature and so they are more determined to enter the main floor, which is the "ultimate goal" pursued by companies listed on alternative market.

### Financial sustainability measures

| Percentage of companies: | TBM companies | IBM companies |
|---|---|---|
| **increasing sales** | 77.99% | 78.46% |
| **generating operating profit** | 61.24% | 48.21% |
| **generating net profit** | 65.55% | 49.23% |
| **increasing assets** | 63.64% | 68.21% |
| **increasing equity** | 64.59% | 60.00% |
| **paying dividend** | 22.49% | 9.74% |

**Table 11.** Financial sustainability measures

The results presented in the table cover a period between the debut and ***the end of*** the first half of 2012.

Table 11 shows that in companies using traditional business models almost all financial sustainability measures have better values. More companies in this group were able to generate operating profit (61.24%) and net profit (65.55%), and to increase their equity (64.59%). In contrast, less than half of organizations with innovative business models obtained operating profit (48.21%) and net profit (49.23%). The lower share of companies generating profits in the IBM group may be attributed to the fact that more of them were start-ups and so they needed more time to break even. Another possible explanation is that, as in the period of the dot-com bubble, their managers and investors believed that a development of a business model based on the Internet or ecology was enough to be successful in the market and financially. The better financial situation of companies with traditional business models makes it possible for them to pay out dividends.

We used also two sensitive measures of sustainability that are more sensitive: return on equity and price to book value, which are presented in tables 12 and 13.

### A comparison of price-to-book values

| Price to book | TBM companies | IBM companies |
|---|---|---|
| Average | 2.93 | 4.65 |
| Median | 1.32 | 2.06 |
| 1st quartile | 0.75 | 0.87 |
| 3rd quartile | 2.73 | 4.22 |
| Maximum | 78.05 | 125.91 |
| Minimum | 0.07 | 0.05 |

**Table 12.** A comparison of price-to-book values

### A comparison of ROE values

| ROE | TBM companies | IBM companies |
|---|---|---|
| Average | -12.1% | -13.2% |
| Median | 0.9% | -1.7% |
| 1st quartile | -10.0% | -17.5% |
| 3rd quartile | 6.5% | 4.7% |
| Maximum | 518.4% | 60.5% |
| Minimum | -1300.0% | -211.0% |

**Table 13.** A comparison of ROE values

Companies with negative equity were excluded from the analysis

The obtained price-to-book values are consistent with financial theory. Means and medians for IBM companies are higher than for TBM companies. This situation is probably caused by several factors. First of all, IBM companies more frequently use intangible assets and investors tend to attribute higher value to them than to items presented in financial statements. Secondly, higher price-to-book values often signify that investors expect higher returns. They are the reflection of innovative business models and the likelihood that the company will grow rapidly in future producing abnormal returns. However, they may also show that the market overvalues IBM companies' shares.

As far as the return on equity is concerned, the results for companies in both groups are similar and rather poor. The median oscillates around zero, its value being 0.9% for companies using traditional business models and -1.7% for IBM companies. The factor that blurs the findings again is that the analyzed ROE values concerned the first half of 2012 whereas companies in some sectors generate profits in the last quarter of the year. Furthermore, in the first half of 2012 the Polish economy slowed down, which must have had an effect on the financial performance of the NewConnect companies.

Measured by the number of debuts and capitalization growth in the recent years, NewConnect turns out to be one of fastest growing alternative markets in Europe. A content analysis method called concordance analysis showed that almost half of the NewConnect companies (48.21%) had innovative business models.

The comparison of financial sustainability measures revealed that companies based on traditional business models outperformed those using innovative business models. The probable explanation is that the latter were still in the early stage of development. Less than half of them were able to generate profits (even at the operating level). This is a poorer result than in the case of companies using traditional business models.

The five years' period in which NewConnect has been in place is probably too short to fully answer the questions asked in the introduction. The unquestionable advantage of having NewConnect is that it allows its companies to raise capital they would otherwise not be able to raise in the main market or via bank loans. Another advantage is that the companies can attract the publicity they need for their business model to gain critical mass and run smoothly.

The problems associated with NewConnect are low liquidity and sinking valuations of its companies. At the end of September 2012 the main index of NewConnect, the NCIndex, was 34.55 points (the starting point was 100 and the maximum of 145.95 was noted on 2nd January 2008). Another warning sign in the second part of 2012 was a growing number of NewConnect companies filing for bankruptcy (more than during the first five years). These problems were partially caused by the poor situation in most securities markets all over the world and decreased risk appetite due to the global financial crisis.

One of the potentially most serious threats is that a sort of vicious circle solidifies on NewConnect. The poor financial performance of its companies may attract fewer institutional and individual investors to this market. This would probably cause lower liquidity and valuation of the companies. Low valuation and low liquidity may disappoint investors and discourage even more of them from investing in companies listed on the alternative market of the Warsaw Stock Exchange. If this situation continued NewConnect might suffer the same fate as some other secondary markets and be liquidated. The future is uncertain as always. Better knowledge of business model development, reporting and analysis among both entrepreneurs and investors cannot be overestimated. To give comprehensive answers to the questions asked in the chapter, longitudinal studies are needed, as well as comparisons with other alternative markets. An interesting line of future research would be the one investigating how the type of a business model (i.e. a freemium model) affects its sustainability[1].

**Sum-up questions for chapter 5**

- Why alternative markets, such as New Connect, should help fostering new business models?
- How can business model sustainability be measured?
- To what extent does Information Document or other types of prospectus enable its recipients to understand the business model of the company?
- What are the weak points of alternative markets?

# 6 Globalizing high-tech business models

(Written by Romeo V. Turcan, Associate professor, PhD)

[Please quote this chapter as: Turcan, R.V. (2014), Globalizing high-tech Business Models, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

## 6.1 Setting the Scene

In the early process of the emergence of new international ventures, entrepreneurs are constantly in a 'tension extinguishing' mode as they are trying to ease tensions in the organizational gestalt which consists of mutually supportive organizational system elements combined with appropriate resources and behavioral patterns (Slevin and Covin, 1997). Two sources could be identified that effect these tensions, namely strategic experimentation (Nicholls-Nixon, Cooper, and Woo, 2000) and business model experimentation.

The strategic experimentation differs from the concept of strategic change in that it is not predicted on the assumption that these actions involve realignment of an existing strategy; rather, the emphasis is on forming and executing a strategy in an effort to reach a steady state for the first time. Entrepreneurs experiment with the business models of their international new ventures in an attempt to establish the dominant logic of the venture, whereby entrepreneurs reach an agreement on the way in which the business is conceptualized and critical resource allocations decisions are made (Prahalad and Bettis, 1986).

For example, tensions occur in decision making when entrepreneurs are required to determine the growth path of the venture. What shall the growth scope be: local, international, or both? What shall the international growth pace be: gradual or rapid? What shall the product mix be: only product-base, service-base, or hybrid product mix? How shall the venture enter the market: through dealings, structures, or both? What market entry modes to pursue? Will the venture grow organically or by attracting venture capital? Opting to attract venture capital, entrepreneurs are to deal with dyadic tensions that are the result of differences in entrepreneurs' and VCs' goals and measures of success (Turcan, 2008). Shall entrepreneurs look for strategic partnerships that may generate additional tensions as the new venture may become captive to the chosen strategic partner (Turcan, 2012)?

This chapter will focus on gestalt tensions during the early process of emergence of international new ventures. International new ventures are defined as ventures that aim to derive profits from international activities right from their inception or immediately after (Oviatt and McDougall, 2005). These ventures usually attract venture capital due to their potential for very high gains in combination with the availability of early exit strategies (www.nvca.org). At the policy level, international new ventures are seen as critical engines of economic growth (OECD, 2004). The data that are presented as part of the discussion throughout this chapter are derived from Turcan (2006); a summary of the data is provided in the Appendix.

## 6.2 Tensions at the Inception

Since by definition international new ventures internationalize instantly at or immediately after their inception, the issue of whether to internationalize or not is irrelevant. The central issue then is how to internationalize. A set of tensions arise when entrepreneurs have to decide what business model to adopt. For example, should the venture be based on a product-led business model; service-led business model, or a hybrid business model in which both service and product business models co-exist? The experience suggests that in order to internationalize, entrepreneurs shall adopt product-led (or hybrid) rather than service-led business models. The underlying assumptions behind such decisions are the uncertainty and limited scope for growth, which entrepreneurs have to and eventually will have to live with in service-led ventures. Here is how entrepreneurs reflect for example on the uncertainty:

'*We were a service based organization, like it or not. We were doing a lot of outsource development, which meant that you do not really build a sustainable value into your business. So when you start January first next year, you start from scratch; you do not have a number of contracts that are related to maintenance or whatever…it was very much a wish for us to look at annuity based revenue opportunities*' – the marketing director of Finance-Software;

'*I spent the late 80s going through a recession with my own business being in real, real troubles. And all you have to do is to go out and talk to people, and survive. That is the fundamental when you are a small, service business with no capital behind: everything is organic. You eat from what you earn. And that is it*' – CEO of Tool-Software.

As to the scope, it is actually difficult to expand and internationalize a service-led business. Simply put by one of the co-founders of Finance-Software after an unsuccessful attempt to penetrate the German market: '*Services do not travel*'. The same view emerged from the discussion with an investor:

'*Service-based businesses have difficulties to internationalize…just turn it another way: why would you go abroad in the first instance. I've seen IT-integrators who expanded to London: fair enough – London is a good, lucrative market. And, they started saying that they want to open an office in California. And you just think: why? Just because it is exciting and sexy to work in California! You have minor technology and your people are not that much down than them… They will do that for a year or two and after they realize how difficult it is, they will retrench*' – the venture capitalist.

It is critical thus for the entrepreneurs to understand not only that service-led and product-led businesses require different business models, but also the fact that the transition from a service-led business model to a product-led business model produces tensions in the organizational gestalt: e.g., differences in the cost structures, levels of margins, marketing and sales, market positioning, and administration are the chief sources of these tensions as several entrepreneurs explain:

'*At this point we felt that there was a need to establish more of a real company: to hire full-time development staff; to establish an office…. Selling services however is completely different pitch from selling the product. Services tended to be low volume, very high value contracts, over one year, or six months; but the product would be sold at a much lower price, therefore we had to be selling at a higher volume*' – CEO of Project-Software;

'*We always recognized that software is an area where if you can get the right software product then you can get serious amounts of money out of it. Because unlike manufacturing a product, there is no manufacturing costs; there is initial development cost, but once you have developed the product then the profit margin you get out of selling that price of software is very high*' – CEO of Finance-Software.

These tensions that are built within the organizational gestalt have to be alleviated quickly by assembling and deploying appropriate resources in order to support the initial international development of the new venture. Entrepreneurs have at their disposal two generic growth paths to make this happen: either through organic growth or acquisition growth[2]. These paths are business model dependent. For example, entrepreneurs who aim to adopt the hybrid business model in order to develop the product might pursue this goal via organic growth. Entrepreneurs who aim to adopt product-led business model right after the inception of the new economic activity have a higher chance of attracting venture capital. Since both entrepreneurs and venture capitalists agree that services are difficult to internationalize, it follows that the growth path of a company is contingent on product-led business model and/or hybrid business model. Although, entrepreneurs' views on what business model to adopt may differ as presented below:

> '*As we were diversifying we felt that there were opportunities for cross selling between our consulting clients, i.e. to sell our product to those clients. At the same time we felt the need to keep those businesses separately, because they are quite different in nature*' – CEO of Project-Software;
>
> '*Our move was very much to become a product focused business. The plan was to continue to make revenue from service, take some of our guys out of that kind of revenue earning, which was an investment in our part, and keep them, as an investment, working on the product*' – CEO of Finance-Software;
>
> '*We started of as a service business. We had a working project in hand that we finished. That gave us some revenue to start with. Really the goal was to switch to product revenue. As soon as we developed the first version of the product, we focused on selling the product rather than the service*' – CEO of Data-Software;
>
> '*We structured our business to product development. We also built a service capability, which generated cash and was meant to be project oriented at developing sort of tactical revenue really*' – CEO Tool-Software.

The evidence suggests that international new ventures, which adopt hybrid business models, have a higher chance of surviving. Figure 24 below shows the strategic intent at the inception of new economic activities and the actual strategy at the time of crisis. Finance-Software, Project-Software and Tool-Software pursued the identified international business opportunities by adopting a hybrid business model, i.e. they continued providing services, and at the same time invested their own profits into the product development. Cases D and E, having raised initial venture capital, pursued the identified opportunities by focusing on a product-led business model. At the point of crisis, Finance-Software and Tool-Software were still pursuing hybrid business model strategy and were growing organically. Project-Software, having adopted a product-led business model, together with Data-Software and Mobile-Software could not cope with internal and external pressures and ceased trading. The following section will discuss the effects of these changes in the business models and the growth paths on the internationalization efforts of the new ventures.

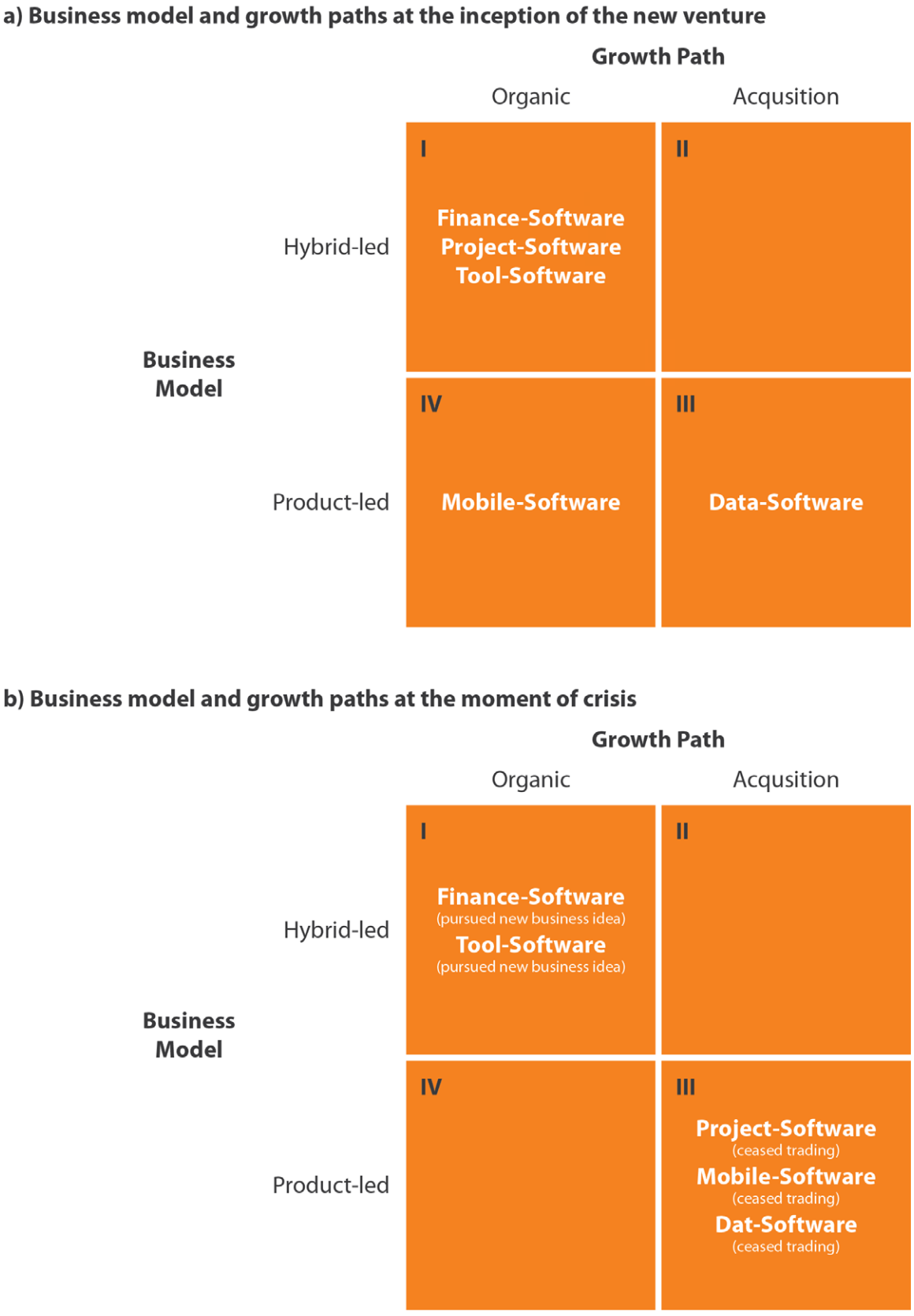


**Figure 5.** The evolution of strategic intent

## 6.3 Dyadic tensions

Entrepreneurs who aim to adopt the hybrid business model in order to develop the product might pursue this goal via organic growth. Entrepreneurs who aim to adopt product-led business model right after the inception of the new economic activity have a higher chance of attracting venture capital. These variables, however, might control each other in a loop. Entrepreneurs may change their original intentions of adopting a hybrid business model in order to pursue the product development under VCs' pressure and adopt product-led business model instead. Consequently, this vicious relationship may well be the source for disagreements and tensions between the entrepreneurs' and the VCs' agendas.

That is, as a result of receiving venture capital, entrepreneurs have to alleviate another type of tension: dyadic tensions. Specifically, these tensions materialize as the result of differences in the entrepreneurs' and the VCs' goals (Turcan, 2008). For example, entrepreneurs want to achieve profitability via long-term growth, whereas VCs' goals are to exit quickly via out-and-out growth – an agenda driven by the life cycle of VCs investment portfolio and the success rate of this portfolio as one VC explained:

> '*We have a target to invest from 15 to 20 million pounds a year.… The success rate on average is three out of ten are absolute stars: you give the business plan, and they completely deliver that. Then, we would see one or two out of ten would go bust; and the balance is somewhere in the middle*' – venture capitalist.

As venture capital comes in, it pushes the growth forward, and it starts to climb the value curve. The ideal time for VCs to exit is when the internal rate of return that measures the investment retirement is at its highest value; usually within three or five years after the investment was made. It follows therefore that within a maximum of three to five years from an investment, VCs will look for an exit. According to one business strategy consultant, however, '*…the strongest company is the one which forms the best relationships with its investors*'.

Four types of goal alignment are identified: life changing opportunity; no marriage; illusive alignment and enslavement (Turcan, 2008). The ideal situation for VCs and entrepreneurs is when their agendas are aligned creating thus a life changing opportunity especially for entrepreneurs. As often expected, however, some entrepreneurs just do not want to sell their company. And if, as a result, no compromise is reached, then there will be no marriage between the two, as one VC explained:

> '*When companies are coming to us with a wrong model, we may question them, query them, they may change it. But if they have different view from ours, we probably will not invest*' – venture capitalist.

These two types of goal alignment pose interesting questions for future research. For example, the importance of creating a *life changing opportunity* culture could be assessed by the value of the exit. That is, what would be the relationship between the alignment of entrepreneurs' objectives in terms of exit at the initial round of funding and the value of the exit? It might be conjectured that that higher value at exit would be achieved in those firms that had the entrepreneurs' objectives aligned in terms of exit right at the initial round of funding. Another pointer for research is to ask how different a value of an exit would be when the entrepreneurs' objectives converge gradually with VCs' objectives *during* their marriage?

When entrepreneurs and VCs do not arrive at a consensus and as a result there is no marriage between the two, researchers may delve into the effects of denials of funds. That is, what happens to the firms that were denied funding to pursue the identified new economic activities? Will they pursue other avenues for funding, give up and grow organically or fail? Crucial in this process of pursing other avenues for funding is the stigma associated with failure to secure first round of funding. The issue of stigma of failure becomes even more acute in countries like Denmark and Finland, where the VCs' community and the advisors' community are very small, and susceptible to collusion.

There are situations when entrepreneurs are ignorant as to the VCs' true agenda, hence the illusive alignment of goals. For example, when asked about the possible effect of VCs desire of quick exit on the performance of the company, the CEO of Data-Software was surprised to hear that VCs might even have this agenda:

> '*Do VCs want to exit quickly? I do not think that is true. We did not have any VC that was pressurizing for a short-term exit. They wanted us to grab the opportunity and maximize the value of the investment. Maybe some naïve entrepreneurs who are new comers to the game may believe in this*' – the CEO of Data-Software.

In this situation of illusive alignment of goals, for VCs it is easier to mitigate the effect of getting an investment, which is when entrepreneurs lose control having actually retained the majority of the shares, via illusive control, by making entrepreneurs believe they are in control of the situation as long as they unknowingly and reflexively advocate VCs' agenda. As several experts noted:

> '*The day entrepreneurs get venture capital, they lose control, because VCs are using shareholders agreement/contract that goes outside share earnings to have rights to do things and to stop things firmly in the house. They have rights to positive and negative control, i.e. to do anything serious they have to do in spite of the board*' – business strategy consultant;

> '*There is a side effect of taking VC money. In my experience VCs do want control. They want to exert control over the things that are not working. Typically VCs will invest in the business and the management team that is there. By and large they will leave it alone, if it works*' – liquidator.

Entrepreneurs find themselves enslaved when they are trying to sell to the VCs their own business model and vision of growth, but VCs disagree and impose their own (Figure 5). For example, in order to get venture capital, the founders of Project-Software had to change their original business model and growth path from gradual internationalization (staring in UK, then moving to Europe, then to US) to rapid internationalization (going to US immediately, then to Europe, then maybe to UK). As the CEO of Project-Software explained:

> '*Our original pitch was to stay in the UK, get sufficient knowledge of the sales process, and then go to the US. At the very first meeting with our investors they said that this was a daft strategy; the vast majority of the IT sales is in the US, therefore you should be in the US straight away. Change your plan. So, we changed the plan, otherwise we would not get the investment*' – the CEO of Project-Software.

For entrepreneurs this is a catch-22 situation: they cannot or do not want to say 'no' as they for example i) are desperate to get funding in order to develop and/or market their product, or ii) lack sufficient knowledge and experience to argue their case, or iii) are trying to avoid the situation when they could be blamed for the firm's failure when things go wrong. By saying 'yes' to something they do not agree with, i.e. by enslavement, they force themselves into a tacit conflict situation, which entrepreneurs have to live with for the remainder of their marriage with VCs. It might be expected that if a consensus is not found to alleviate these dyadic tensions as quickly as possible, dissatisfaction with the deal will continue amplifying, and will inevitably lead to a divorce.

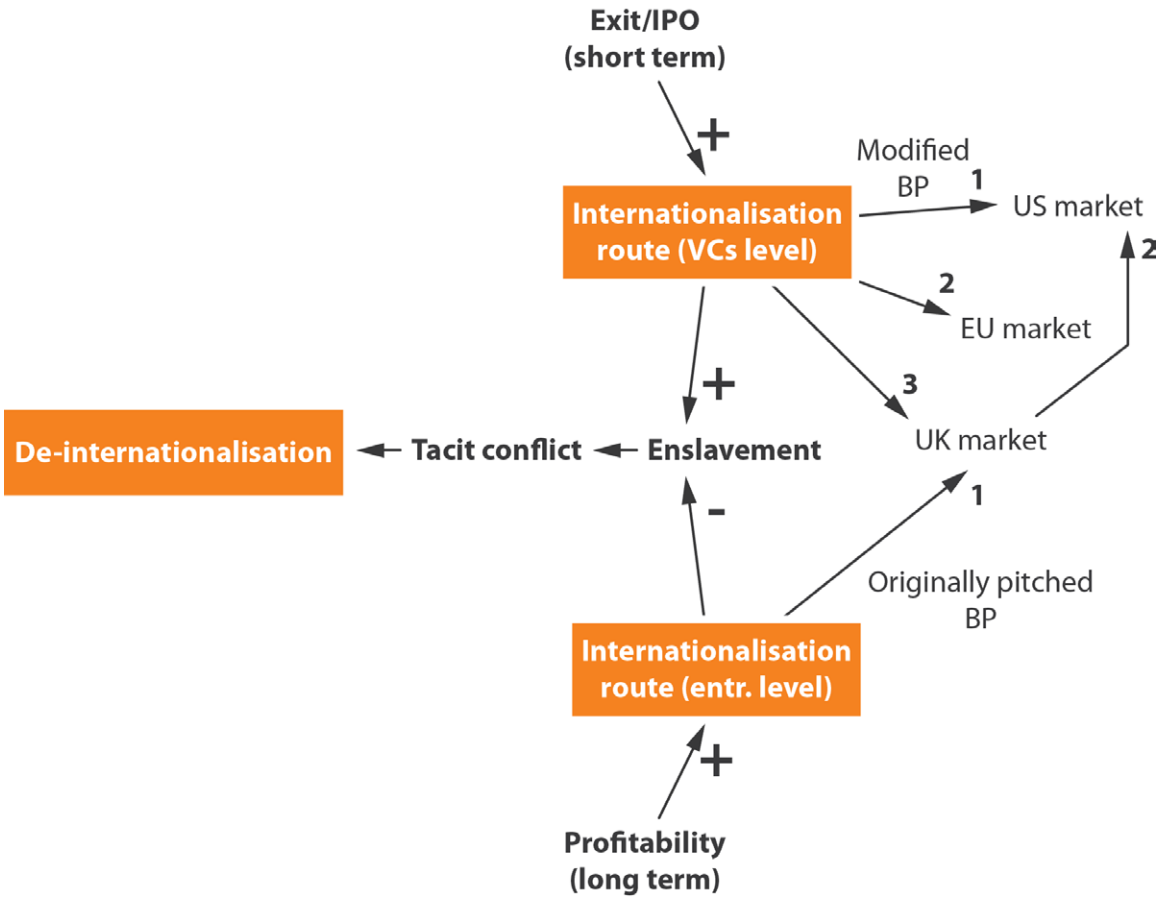


**Figure 6.** Enslavement as the effect of dyadic tensions

## 6.4 Conclusion

As shown in previous sections, international new ventures go through several critical events in their efforts to internationalize, and constantly are in tensions extinguishing mode. Entrepreneurs are trying to ease the tensions in the organizational gestalt as a result of a change in the business model and growth path. To internationalize, international new ventures have to develop a product-led business model as services do not travel. Opting to attract venture capital, entrepreneurs are to deal with dyadic tensions that are the result of differences in entrepreneurs' and VCs' goals and measures of success. Dilemmas occur in decision making when entrepreneurs are required to determine the pace, the entry mode, and the international marketing mix of the international strategy of the venture.

Once through strategic experimentation and business model experimentation a dominant logic is achieved, the questions that most need to be addressed by entrepreneurs are: to what extent is the chosen organizational gestalt continuing to deliver returns and positive performance, and if less than optimal, what change would better effect attainment of projected targets. Agility plays a crucial role in effecting the desired and/or needed change. Agility is about flexible decision making and a flexible cost base structure that allow decision makers (entrepreneurs and VCs) to scale up and more importantly to scale down according to the activity level that the firm is experiencing (Turcan, 2008, p. 295).

The other vital point in effecting a change is for decision makers to actually acknowledge that there is a need for change and act accordingly rather continue pursuing failing course of action. If decision makers eventually do recognize that the existing organizational gestalt is less than optimal, and decide to stop committing further organizational resources, the question then becomes at what point *too little is not too late* (see e.g., Turcan and Marinova, 2012).

**Sum-up questions for chapter 6**

- Which types of critical events do new international ventures go through?
- What is the difference between strategic experimentation and business model experimentation?
- Once through strategic experimentation and business model experimentation a dominant logic is achieved, the questions that most need to be addressed by entrepreneurs are: to what extent is the chosen organizational gestalt continuing to deliver returns and positive performance, and if less than optimal, what change would better effect attainment of projected targets.
- If decision makers eventually do recognize that the existing organizational gestalt is less than optimal, and decide to stop committing further organizational resources, the question then becomes at what point too little is not too late.
- What are the effects of dyadic tension on new ventures?
- Which role does agility play in effecting the desired change?

# 7 Business model design

(Written by Sune Gudiksen, PhD Fellow)

[Please quote this chapter as: Gudiksen, S. (2014), Business model design, in Nielsen, C. & M. Lund (Eds.) *Business Model Design: Networking, Innovating and Globalizing*, Vol. 2, No. 1. Copenhagen: BookBoon.com/Ventus Publishing Aps]

In past times a working business model could stand for a long time before being challenged by market conditions, but with the revolutionary Internet and through that the introductions of communication technologies with a rapid speed, firms are forced to rethink the fundamental business model logic continuously. Traditional ways of doing business in such branches as newspapers, motion pictures, music records, health etc. does not necessarily secure a sustainable business anymore. McGrath argues that firms no longer can rely on *sustainable* advantages but need to go on a hunt for *temporary* advantages – similar to the need for the constant development of products and services (McGrath 2010). The notion of business models has existed for a while, but the need for continuously rethinking and creating new business models has never been as prominent as now.

The typical way of working with business logics has been grounded in causation philosophies, analysing (all) factors or causes that lead to a certain market or business phenomenon. The evolvement of entrepreneurship has provoked a counter opposition with the term *effectuation*. Coined by Sarasvathy effectuation describes a kind of decision-making entrepreneurs employ in situations of uncertainty (Sarasvathy 2008). In effectuation the focus is on *action* taking because there may be insufficient data available (Chesbrough 2010). The field of design has been used to deal with problems that are in no way straightforward why I argue for using design thinking as a third way – maybe a middle way– between the unexplored effectuation and the fully depicted causal reasoning.

First of all, the chapter provides arguments for the benefits in using design thinking in business model uncertainty situations. Second, I seek to extract and demystify the core notions of design thinking through empirical examples from business model workshop cases.

## 7.1 Business model uncertainty

In business model literature a tendency towards using design as an innovation factor is emerging. Why is that? Mainly because of more rapidly new technologies, a wider market because of globalization, the knowledge revolution and a need for more systematically innovation not only in product or service development but also in the business model. Some studies in innovation argue for the importance of creating a balance between strong ties be that productive, reliable, and long established and weak ties be that speculative, unpredictable and facilitating serendipity to obtain success (Cruickshank 2010). In the innovation journey towards turning weak ties into strong ones it can be argued that there is a need for an exploratory mode of thinking.

As in many other fields business model researchers struggles with a consensus definition of what a business model is ranging from a description, a statement, a pattern to an architecture, conceptual tool or a framework (Zott *et al*. 2010, see definitions throughout the book). It is not my intention to promote a particular prose definition why I hold on to the foundation that a business model is about value creation (for the customer) and value capturing (for the firm), which is in line with Osterwalder *et al.* definition that a business model is 'the rationale of how an organization creates, delivers and captures value' (Osterwalder *et al.* 2010). The only thing I would like to change is maybe the word 'how' as it limits the definition to only include what is already there, not 'what could be there' – a future state. Proposing alternative scenarios and future states is what design thinking is all about. Furthermore I want to note that while business models might have the same core, the components and the terminology we use for them differ in specific business models.

A focus in recent years has been on introducing new kinds of business model types as the prevailing ones. Anderson focus on what he terms 'freemium' business models, where a certain amount of people or customer segment get a product or service for free sometimes in a limited time period, while other segments pay for the product or advanced features (Anderson 2008, 2009). Chesbrough has an agenda of promoting open innovation and open business models inviting in new partners, stakeholders and users (Chesbrough 2006, 2007). A final example of these archetypes are crowdsourcing or crowdfunding, which is a kind of democratization and collective response were users finance upfront with an amount of their own choice, sometimes cutting away the middlemen (or one can argue that the online platforms are the new middlemen). While there are valuable patterns in these archetypes descriptions they are only *archetypes*, something to be inspired by, but not necessarily fully copy.

Another recent direction and where one would start to see design approaches is the search for frameworks, which can explain and describe the core components of business models. A highly popular one is the *business model canvas* (Osterwalder et al. 2010), which is based on nine building blocks or key components to a business model. Another framework is *the Butterfly business Framework*, but only with five elements arguing that people think in sequences and cannot work with nine elements at the same time, they need to think in sequences (Ankenbrand 2011). While these frameworks are very important because they deliver a shared language or a terminology easy to approach and communicate for everyone (and indeed a good starting point), they also have boundaries and constraints that are needed to break out of occasionally to avoid box thinking, going beyond post-it notes and really put oneself in a design thinking mode. In recent literature and practises the field of design are investigating the potential in using design competencies – hereunder design approaches and methods – in the business model field (Buur & Gudiksen 2012, Ankenbrand 2011). At the same time business model research are moving towards integrating more designerly ways of working with business models, but usually do not use the same terms as designers. Indeed, the second half of the Osterwalder et al. book consists of design-oriented methods.

If we take a shorter look at design management literature the last decade has had several influential authors who all advocate for the idea of design thinking as a vital component, not only in the development of products, services and experiences, but as well in business, organizations and management (Boland et al. 2008, Martin 2009, Brown 2009, Buchanan 2008, Cooper *et al.* 2009). If we delve into a couple of the most known ones Roger Martin have some visionary points. First, he advocates for approaching management problems as designers approach design problems, while also putting an agenda forward on moving design thinking into MBA courses. Second, Martin distinguishes between two schools of thoughts in business. On the one hand we have a 'strategy based on rigorous, quantitative analysis' with the basis of analytical thinking. On the other hand we have an approach based on creativity and innovation based on 'intuitive thinking, the art of knowing without reasoning'. He concludes that 'neither analysis or intuition alone is enough – in the future, the most successful businesses will balance analytical mastery and intuitive originality in a dynamic interplay that I call design thinking'. This is maybe a bit stereotypically as I have stumbled upon managers who have certainly applied abductive reasoning (though, they have probably not learned it at business schools), but the notion and the argumentation of the shift in the approach is an important contribution. Third, his foremost contribution besides the overall visions is the formulation of what he call 'the knowledge funnel' that is the illustration of the process designers use going from mystery, over heuristic, to algorithm. While design researchers typical have not wanted to make a single design process description because it goes against the nature that every project has a different or unique process, Martin succeed in making an abstract formulation of the nature of the process, not guidelines as such. Traces leads back to design influential works like Rittels 'wicked problems' and Schöns the reflective practitioners (Rittel *et al* 1973, Schön 1983, 1987).

If we shift to the industry and IDEOs frontman Tim Brown (2009) is talking about moving away from 'reliability' towards instead 'viability' and at the same time striking a perfect balance of desirability, feasibility (referring to technology) and viability of products and businesses. By viability he means 'what is likely to become part of a sustainable business model'. While the business model and business perspective is mentioned by Brown it is treated as a part of the product or service development Sand depending heavily on that. There is no attempts to work with the business model in a designerly way. Cooper *et al.* traces the progression of design management dividing it into three stages: (1) Design management in the context of manufacturing, (2) Design management in the context of marketing and branding and (3) Design management in the context of the organization and society. An important point in stage three is the shift from 'designing as managing' to 'managing as designing', in spite of this clear point stage three still seems to be in its infancy maybe because of the lack of empirical backing.

Though increasingly influential in the design research field none of the above design management approaches have succeeded in creating a strong argument through empirical practise. My approach is to do what designers do best – convince through making as a starting point for theory. Therefore I explain core design thinking characteristics through concrete design activities and case examples.

## 7.2 Business model design

The highly popular 'design thinking' terms are discussed both in academic literature and on various blogs from notable authors. As other fields has started to turn their attention to design a suddenly demand for describing the field has come to surface. This creates a dilemma for the design field, which has been holding back on describing their own field because of 'the risk of oversimplifying its object of study' (Dorst 2011), while at the same time keeping a sense of mysticism about how designers work. If we try to demystify the core of design thinking there is enough consensus about the five following categories: (1) the type of the design problem, (2) type of reasoning (3) empathy design, (4) prototyping and (5) thinking through materials and playing with them. This does not in anyway encapsulate the design field but gives an introduction to business model design through concrete examples.

### 7.2.1 Wicked problems

As already argued in this chapter and throughout the book, business models are in a state of uncertainty. The design field has worked with these uncertainties for years. Rittel *et al.* back in 1973 provided ten characteristics for wicked problems, among those the notion that solutions to wicked problems is not *true-or-false* but *better-or*-worse, this is no puzzle solving. Forty years after Rittel's introduction of the term 'wicked problems' to characterise design work (Rittel *et al.* 1973), I now suggest to look at business models from a similar perspective and therefore as an area of interest for design. Not only is the business model important, in some cases the innovation or competitive advantage rests not in the product or service offering, but in the business model itself (as Chesbrough has been pronouncing for a while). As I started to argue when a field like in this case business model moves into a state of uncertainty we move away from causal problems. This quote from entrepreneurship researcher Sarasvathy who have been interviewing a large number of successful entrepreneurs, might convince you:

*"Causal problems are problems of decision; effectual problems are problems of design. Causal logics help us choose; effectual logics help us construct."*

I have been a part of a project partnership between my department and a media house for quite a while. The media house, as most media houses based on journalism, struggles with the fall of permanent subscribers and an overheated market of possibilities for advertisers. The typical question has been how to secure revenue streams or value through digital content? This would qualify as a wicked business model problem – it is not only about quality anymore, in the sense that if there is a strong value proposition it automatically leads to profit. In Denmark we now see larger media websites increasingly experimenting with payment models, but they only scratch the surface of discovering new business models (one can examined *Huffington Post* who reportedly has managed to stay on top). The media houses are dealing with a problem that could potentially cover every area in the business models – rethinking competencies and resources, new partnerships, new or dedicated customer segments, pricing models, organisational structure etc. Through business model design workshops I together with colleagues initiated design activities in which the media house company took the first steps towards thinking about their business model as a design problem.

### 7.2.2 Abduction

Type of reasoning, which is mostly referred to philosopher Peirce and abductive reasoning or a balance between divergent and convergent thinking (in Kolko 2010, Dorst 2011), seems to be an area with consensus – abductive reasoning *is* how designers work with problems in general. It relate as well to Martins previous mentioned knowledge funnel. Neither is superior to the other – simply more appropriate for the task at hand. As we see in the model below design thinking is about diverging and converging continuously – we want to open up, close it down a little, open up again etc. – sometimes a breaststroke swimming metaphor is used.

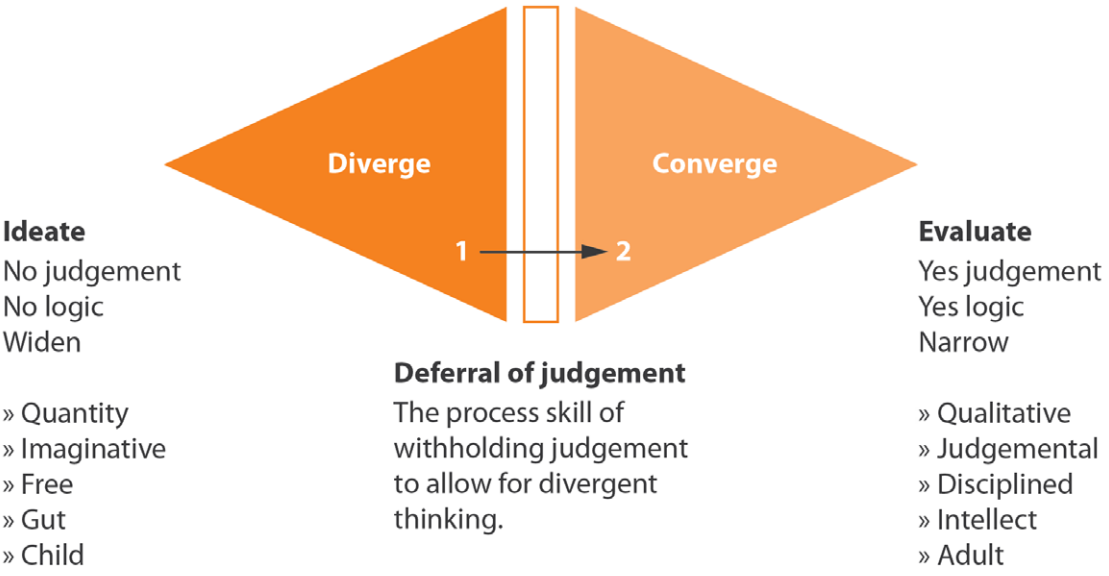


**Figure 7:** The yin and yang, divergent and convergent thinking.

Presented with a problem statement one of the most important tasks for the designer is to broadened and work around it, and by that reframing the problem from different angles. Through the design activities the media house problem were continuously reframed. The problem was to begin with how do we gain value from niche-oriented journalism on websites. Throughout the workshop the activities helped to enter an exploratory mode where new issues were discussed, for instance what is journalism actually in an online setting? Who can create content? Should we only think about a direct profit value or could it just be visibility or attentions websites? This initiated new thoughts and ideas to take along, like considering the media house websites to be a platform where different users delivers content be that journalists, bloggers, users or thinking about the journalists as tutors who provide quality to user-generated content.

### 7.2.3 Empathetic business design

Understanding the needs or desires of the people for whom you are designing, is a key issue in design thinking. Initial research is done to understand everyday life of people whether it is work or leisure – research is not done through customer segmentation standards, but through design ethnography methods and by design anthropologists. Length of ethnographies varies depending on task and resources – it can be quick 'n' dirty one or two day studies or it can be over several months. Ethnographic data can be turned into for instance a persona that represents a group of people with specific desires. Personas is a proven tool to keep the people one design for in the center all the way through the design process and to help avoid such issues like 'the elastic user' – designers stretching the understanding of the users so it fits with the design and 'self-referential design' – designers putting themselves into the middle instead of the users (Cooper et al. 2012, Adlin & Pruitt 2006).

The research insights or the user models are then transformed into possible design opportunities and scenarios in sketching and prototyping activities. To contrast product and service development with business model design, it is very often business-to-customer (B2C) design problems, while in business model design it can be both business-to-customer and business-to-business (B2B). In B2B it is seldom only one person that make the buying decision, it can be a committee, and long time offerings and suppliers is essential as it can influence the brand and for sure the entire business. Value propositions to end-users is typical about addressing a specific need or desire, while in value propositions to other businesses one has to understand both the people that makes the decisions, the brand and values of the firm, and indeed if possible the business model they applies and operate. I have experimented with making paper-based standing personas for B2C along side paper-based standing 'cars' with categories that represent a business customer. Combined with a non-linear customer journey tool like 'the service ouroboros' that has a focus on circular, possible never-ending journeys it functions to go into detail of every touchpoints that a business have with a potential customer, to identity opportunities for new or improved touchpoints (for details on the service Ouroboros concept and tool see Gudiksen & Svabo 2014, and Gudiksen & Brand 2014). In the below figures the left one shows a filled in 'car-model' of a potential B2B customer, and in the right figure the car has journeyed through touch points made of tangible wood-pieces.

Through the understanding of the users design solutions is secured to be in line with either the end-user desire or a business' need – one might still fail but chances are that the design will fit better into everyday life.

**Figure 8:** The B2B Car (left) and the user journey with touchpoints (right).

### 7.2.4 Prototyping business models

Designers experiment with different kinds of materials to work with and think through. Paper sketching and visualising is maybe the ones that are most mainstream, for instance Dan Roams Napkin sketches or within the business model field Osterwalder et al. canvas that is highly visual. This is properly also a major reason that the canvas has gained so widespread use. Visual learning is only one approach, though, as design often also is associated with tangible and embodied learning, or in the words of design researcher Nigel Cross designers use 'non-verbal modelling media' (Cross 2006).

I sometimes use a tangible design activity as a warming up for a business model design workshop – to set an exploratory mode and mindset. I call it 'Ice stick experiments'. It is a simple exercise where two or more groups have a set of ice sticks. They are now given 15 min 'to build the highest structure using no more than the ice sticks and the table surface'. When time is out they have to let go of the sticks (below one can see two groups ending result). This simple exercise has many objectives. First of all, in wicked problems or uncertainty situations it is about taking risks and experiment and not be afraid of failures. Secondly, it is about making prototypes and testing them over and over again – most often the groups that win have experimented quite a lot. Thirdly, paying attention to the design problem formulation is central, for instance some of the groups starts to break the ice sticks though they ask or look at my to see if they break any rules. Fourthly and last, the groups have to act upon the other groups advancement similar to market conditions. When they can see that another group have a higher structure, they have to make choices about if they want to take higher risks and think of something completely different, because time is ticking.

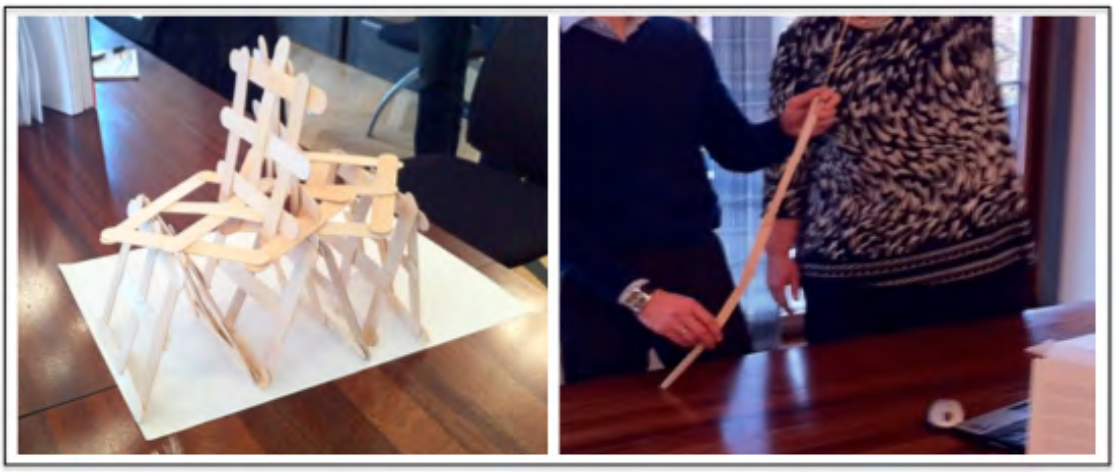

**Figure 9:** Two different outputs of the Ice stick exercise

The next questions is then how to prototype a business model? A design activity that has proved useful to initiate highly encouraged discussions and lead to radical new scenarios is the so-called 'pinball business game'. Prior to the activity we set up an inclined surface with railings. The participants are now asked to build a business model representation out of strips of wood, soft, bendable materials and sticky tacks.

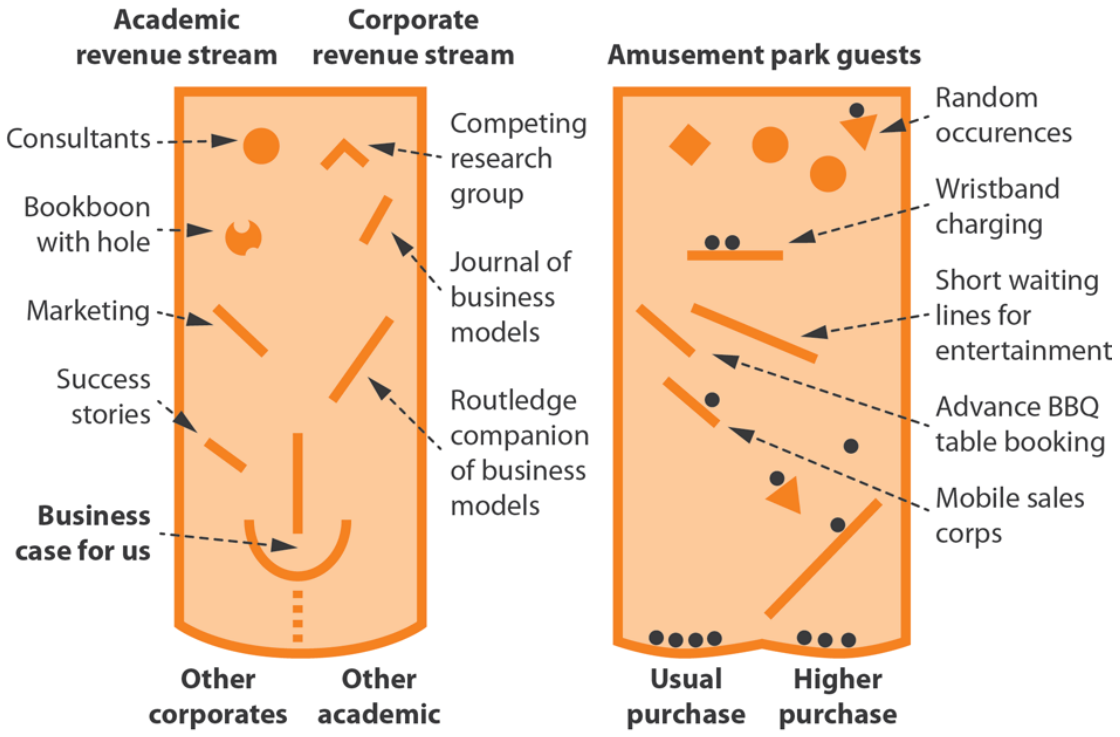


**Figure 10:** The pinball playing fields. Left is the business model research center. Right is the amusement park case.

The pinball game design activity typically closed the day, and was successful in encapsulating the results from prior activities and indeed challenging them, but even more interesting the business model terminology used in each design activities were expanded. In the research center case, for instance:

Center leader: What about BookBoon (a publisher), is it corporate or academic? Wouldn't you say in the corporate side?
Participant A: Is it?
Participant B: Isn't that something that captures both of them?
Participant A: You can cut a hole in the Bookboon

Here the group discusses that a certain publisher in a way is part of both sides, corporate and academic, so a suggestion is made that a hole can be created in cardboard material. The soft material provides a way to illustrate this tricky part of the business model representation and can be compared to boundary objects, as it is 'both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites' (Star 1989).

In another case we worked with a larger amusement park. In the amusement park group an expansion of business model terminology happens because of a surprising test-run:

(Upon releasing the balls)
Participant A: There's a bit of a revenue highway over there!
Manager: They're the people who always spend more money, who earn a higher salary.
Participant B: Or who use their pension funds!

The term 'revenue highway' is introduced to describe the business model representation not because of the materials alone, but because of the behavior of the balls running down the fields hitting the different materials. It is examples of a vibrant, socially constructed concept that has the potential to move the conversation in an innovative direction (Buur & Larsen 2010). The power that this simple design activity has to introduce potential future scenarios and expanding business model terminology is extraordinary.

The proposition is that the pinball game functions as a partial representation or an mock-up that to begin with illustrate patterns, but when letting the balls roll the structure is challenged and restructured – it is prototyping and testing continuously. Prototypes are a more concrete and tactile representation of the system you are going to build or in this case the business model you are going to operate – they provide tangible learning experiences. The pinball game functions as a generative part of prototyping where the goal is to get the ideas from participants out of the head or as a helper for verbalizing. Warfel argues that there are two models 'the day at the spa and the extreme makeover', corresponding to incremental and radical innovation (Warfel 2009). Before launching an extreme makeover designers emphasizes the need to (rapidly) prototype and test it.

The pinball game works both as a shared communication early prototype and a way to work through a specific business model design concept. Often prototypes challenge assumptions by the very making of it, but in this case it is both the making part and the try-out of the balls – a double action, first you need to reach common understanding and then you have to act upon a randomizer incident.

### 7.2.4 Materials and playing

At first glance it seems highly interesting that 'design thinking' is the most used term out there, because how do designers think in general? As exemplified in the pinball activity, *thinking* is done by *making* as well as *playing*. The purpose is not to have a full representation of the business model followed by deeper analysis, but instead to challenge assumptions and move discussions in radical new ways. As such we think with our body and hands which psychologist might would have called physical reasoning (Piaget 1962). Concept design games termed by architect and designer Habraken back in the late 1980s, have been used in the design field for various design purposes. Iversen et al. 2002, Brandt 2006). The pinball game metaphor sets a lively atmosphere and invites improvisation to the table and when the dynamic materials *the balls* run down the field surprising things happens.

In another design activity Chesbrough' open business model were put to a test. The central purpose was to explore potential partnerships through an overview of own resources or competencies and what partners can give. Essentially, this is a give-and-take design activity. The business case owners in the workshop were to choose five central resources they already had, while three other participants played the role of a partner and were to figure out five resources that partner might have. Materials were shot glass or other transparent materials to write resources on. It was now up to the business case owner to choose both whom they wanted to approach and approaching style.


**Figure 11:** The partnership game set-up

The partnership game contains many different aspects, for instance partner resource overview, trying out approaching style, discussing partner reaction and bargaining with resources. We have used the activity in many cases, for example in a Nordic food festival business case and the willingness from participants to role-play is high, which might be because of the simple game set-up. This design activity is especially good at enabling 'as-if-worlds' in a secure setting before eventually pursuing at specific partnership.

Other directions within design exist in the so-called full embodied learning for instance roleplaying of various kinds, bodystorming and professional theatre scenario play (see Ankenbrand 2011 for an example within business models). Further experiments with different kinds of design methods, tools and techniques seems highly relevant in the hunt for radical business model innovation.

## 7.3 Implications for business model practice

Throughout this chapter I have provided arguments through excerpts of the design activity repertoire I have experimented with the last couple of years. In a nutshell four points can be summarized for the impact this might have on business model practice and research.

1) First of all considerations over the usefulness of different kinds of reasoning are essential. For optimization or straight-forward business model problems (if they still exists) it might be most fruitful with causal reasoning. In cases of uncertainty or just a need for exploration of possible future scenarios I argue design thinking will be the right choice.
2) Through ethnography studies designers aim for a deep understanding of the people who will be buying and using a value proposition. In a business model setting this is extended to encapsulate both B2C and B2B customers, but still the fundamental part is to design from a human-centered point of view and investigate potential customers needs, desires, brands, business model logic etc. Through that design opportunities emerges.
3) To enable different kind of exploration further development and experiments are needed to have a larger repertoire of business model design toolkits inspired by design essentials. These tools should be able to provide a rapid prototyping mode to discuss potential scenarios outcome, before choices is made on which one to pursue. Far too many decision are made on authority, experience alone or causal, analytical statistics.
4. A business model problem offers an opportunity to bring together different professional perspectives like for examples managers, marketers, designers, anthropologist and operators as they all influence and have an impact on the business model success. Collaborative design activities can provide an exploratory mode where everybody involved in the end can get an ownership and feel part of the solution – after all many of them are also going to operate different part of the business model afterwards. It will also secure a better alignment between the different activities that supports the value propositions and a better, cohesive business model.

Through the business model tools I offer a perspective where authority is not the only ruler of decision, but instead it is the collaborative exploration of scenarios and opportunities that guides business model design choices.

**Sum-up questions for chapter 7:**

- How is business model design problems characterized?
- What is the dominant way of reasoning in business model design?
- How can one take the customer into consideration in business model design?
- What is meant by prototyping? What is the underlying learning principle?
- What kind of techniques do designers use in order to propose future business states?

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# 9 Endnotes

1. The author wishes to thank Dr. Jerzy Czarnecki from Lodz University for the discussion and insightful comments.
2. Here, *organic growth* refers to the situation when entrepreneurs i) invest their own money to establish a new venture or ii) re-invest their profits to start a new business idea. *Acquisition growth* refers to the situation when entrepreneurs use external resources to finance these new economic activities via equity or debt.