

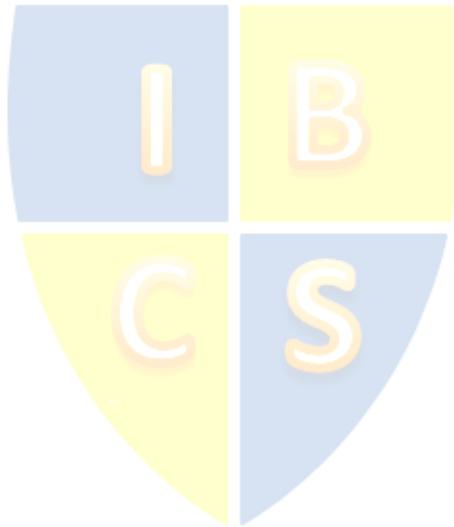
Concept thinking

Mikko Sääskilahti
University of Lapland

ABSTRACT

A new mind-set referred to as concept thinking is presented in this paper. Development tasks can be seen as concepts covering all parts of business. Concept thinking ensures large-scale innovativeness and finite entities. A new model defines the role of engineering and concept thinking in development initiatives. The more abstract a development task is, the greater the role of concept thinking is. Also the results of an interview study on the most successful companies in Finland are presented here. The study outlines that all the companies had sharp concepts and highly specialized business models.

Keywords: concept thinking, concept development, new business development



Copyright statement: Authors retain the copyright to the manuscripts published in AABRI journals. Please see the AABRI Copyright Policy at <http://www.aabri.com/copyright.html>.

INTRODUCTION

In today's complex business environment, it is difficult to separate e.g. new product, service, and business development from one another. The factors leading to breakthrough solutions and innovations may lie within different fields such as products and services, business and finance, organization and networking, and processes and production. Companies need a new mind-set to consider these areas systematically. This paper introduces concept thinking as a new approach and mind-set in the aforementioned context.

Concept development is traditionally seen as the most critical phase of a development process (Perttula and Sääskilahti, 2004, Orihata and Watanabe, 2000), and very often it has been connected to product and service development activities (Khurana and Rosenthal, 1998, Alam, 2006, Kim and Wilemon, 2002). The front end process is often described as being fuzzy because of its unsystematic nature. Systematic concept development is often seen as a tool to reduce the fuzziness of the early stages of development (Alam, 2006, Perttula and Sääskilahti, 2004). Nevertheless, Sääskilahti et al. (2008) argue that the traditional interpretation of concept development is not wide enough; business should be considered as a whole. In their paper, Khurana and Rosenthal (1998) argue that the greatest success is achieved by organizations that take a holistic approach to the front end. They continue that a comprehensive approach to the front end effectively links business strategy, product strategy, and product-specific decisions. New concepts can be created by forming holistic packages. In concept thinking, all parts of business will be taken into consideration. Indeed, concept development should be seen as a mind-set rather than a mere phase of the development process.

STUDY AND RESULTS

To examine successful concepts a small interview study in Finland in winter 2011 was made. This study is part of the ProtoProducts project carried out by the University of Lapland, Rovaniemi University of Applied Sciences, and the Lapland Vocational College. The project is funded by the ERDF (European Regional Development Fund). Fourteen companies among the most successful manufacturing companies in Finland in 2010 were picked up to gain an overview of the forerunner concepts supporting the development initiatives within the food industry in Finnish Lapland. Seven companies from the food industry were interviewed, three from the textile and fashion industry, and four from other manufacturing industries. The ProtoProducts project aims to understand the mechanisms of the food business and food product development and to find a useful model for concept development in food companies.

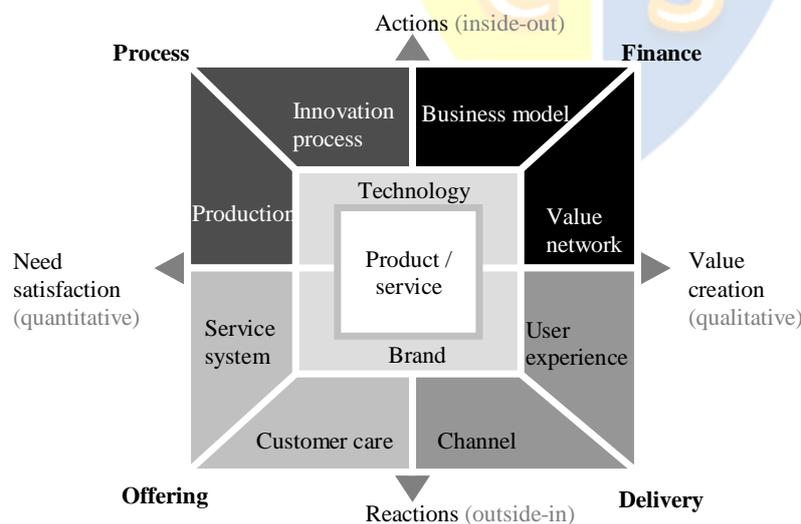
The study shows that the best companies have sharp concepts and a high degree of specialization. The most interesting finding was that food companies and textile and fashion companies had the same recipe for success: they had special raw materials and/or a special manufacturing process, they had found a narrow market niche to which they offered special products with no or low competition and they had created a unique and authentic brand. Also the role of skilled workforce was considered to be very important because of the special materials and processes used in the companies. A company must also be agile and be able to serve customers in a tailored manner. When a concept is clear, it is easy to develop new products on it. Both the food and the textile companies had a wide range of products under their brands, and they had reached new user groups by developing suitable products in line with the existing concepts. According to the study, product development was altogether seen as a very important issue.

One food company had an especially interesting concept. They had a group of small bakeries that were built on a joint concept. They delivered their products in a different manner compared to their competitors and they guaranteed the daily freshness of their products. They also made sure that the dealers did not have to worry about unsold products. In addition, their products were fancy, featuring unique brands and stories. This company also had a well-defined system for financing its expansion. Multiplying a concept is, of course, nothing new – e.g. supermarket, restaurant, and gas station chains have been doing it for ages. All in all, this proves that there is a great deal of untapped potential in many businesses concepts. Actually, companies have two ways to grow: either they create new concepts or they multiply one concept.

CONCEPT THINKING

In this approach, a concept is an entity with products and/or services in the core and four main fields around it: offering, process, finance, and delivery. This model is a modification of an innovation classification referred to as Ten Types of Innovation (www.doblin.com). All businesses have these components, and most importantly, all these components can be realized innovatively. Thus, when creating a new concept the development activities should cover all these components. Also, this model helps to ensure that a concept will be solid and that no part of it will be discarded without deep examination. Innovative organizations are constantly producing new ideas, but the ideas are often isolated and loosely connected to the business. Thinking through concepts enables innovators to handle larger entities. They are able to think not only in terms of product and service ideas but also in terms of how money can be made, how products and services are delivered, and how value is shared within a network.

Figure 1: Theoretical structure of a concept



Many companies have multiple businesses in their corporate portfolios, and often these businesses have been built on a specific technology (Burgelman et al., 2009). Traditionally, companies have built businesses on technologies but nowadays technology itself is not necessarily seen as a key to success and, as said before, innovation may emerge in areas such as brand development or product delivery. Concept thinking would help companies to re-evaluate their core competencies and to abandon the thought that technology is in the core of innovation. Companies can build new businesses more freely if they are not

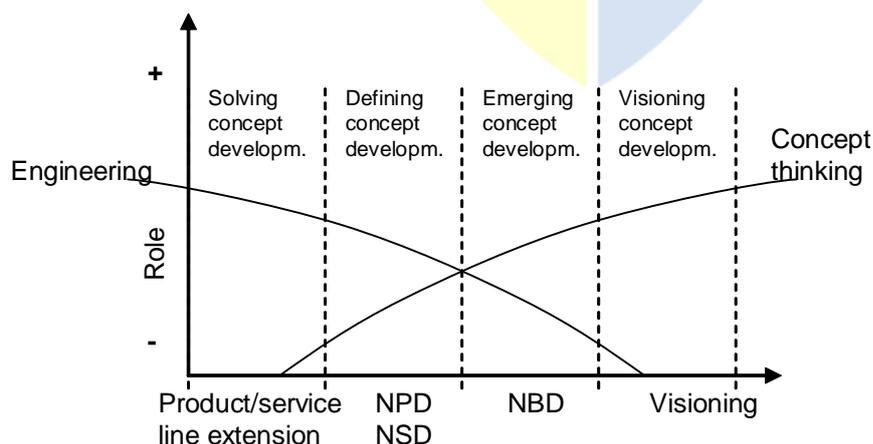
tied to certain technologies but can instead find right solutions case by case. There are many examples of businesses that have failed while trying to hold on to a certain technology even though the signs of change have been apparent.

Product-centric thinking is dangerous if there is no clear vision of the whole concept and especially of the user experience. Thinking through concepts, it is easier to draw a bigger picture and understand for example the general purpose of a service system. Design thinking can be seen as part of concept thinking. Basically, design thinking is to think differently (Davis, 2010). In this context, every part of a business must be questioned when developing a new business or when reshaping an existing one. While design thinking is a mind-set forcing people to think out-of-the-box, concept thinking forces one to think in systems. In concept thinking, many parts are linked to one another, and if one part is changed, others need to be redefined too. Büchel (2005) argues that managers dislike new business ventures as they are loose, uncertain, flexible and ever-changing and do not fit neatly into the corporate policies of successful companies. She also continues that innovation is, however, critical to maintaining a competitive advantage, and extending the core businesses only goes so far. Consequently concept thinking would be beneficial in new business ventures.

ROLE OF CONCEPTS

We argue that the more abstract a development task is, the more important the role of concept development becomes. In new business development and visionary work, new concepts and concept thinking become indispensable because of the complex nature of the development activities. And vice versa, engineering work dominates in product and service design but loses its significance when new businesses are developed. In the case of product/service line extension, concept thinking is actually not needed because the concept already exists and stays intact. On the other hand, when creating new visions, all the plans may stay at a conceptual level because the new concepts are formulated only to support decision making – not to be realized as such.

Figure 2: The role of concept thinking



In this model the role of engineering is considered to be strong in the development of new products and services because product (service) development is often conducted by following formal product development processes. However, the more radical a product or service innovation case is, the stronger the emphasis on concept development is. In radical product and service development, the related business areas also need to be restructured, which means that e.g. the value network or delivery issues must be questioned. Then concept

thinking should take on a significant role. Nevertheless, when developing line extension or face-lift types of products and services, concept thinking is not necessary because the core concept remains unchanged.

Concept development activities vary according to the type of development in question (Perttula and Sääsikiähti, 2004, Sääsikiähti et al., 2005). When creating upgrades or line extensions, designers seek the best solutions by developing competitive design concepts. Very often there is a need to solve problems innovatively when designing new products and services. This type of concept creation is referred to as solving concept development. In NPD/NSD the role of concept development is to draw a big picture of the development project to communicate and test the concept before it is developed further. Multitalented teams can also divide the design tasks while still heading toward a common target. A well-defined concept is the key to successful product and service development (Sääsikiähti, 2010). This type of activity is called defining concept development.

In new business development (NBD) new and emerging things are gathered together. This approach is referred to as emerging concept development. The role of concept thinking is very strong, and the innovativeness of a concept can depend on various parameters such as the new business model, services, or brand and user experience. Visioning concept development is important when developing new concepts for studying and decision making purposes. In this category the main purpose of study may be to develop and test a new business model, a product or service design, user interaction, networking, or delivery channels. Nowadays concept development of this type is mainly restricted to product concepts especially in the automotive and consumer electronics industries and in the IT sector. Visioning is not commonly used when creating new holistic business concepts. New business development has huge innovative potential which is lying dormant because systematic concept development methods and approaches are not used as efficiently as they could be.

CONCLUSION AND FUTURE WORK

In this paper a new mind-set referred to as concept thinking has been presented. The focus is presently moving from product and service development towards concept development, where all parts of business are re-examined. Concepts should be seen as the core of business; some companies grow by developing and launching new concepts, and on the other hand, some grow by multiplying an individual concept. Further product and service development is fluent when there is a strong concept to follow. The ability to change also increases when a business is based on concept thinking because renewals concern whole concepts – not just single products or services. The role of concept thinking changes according to focus. In product development, engineering has a stronger role than concept development but in new business and visioning activities, concept thinking should dominate. Concept thinking enhances the ability to see the bigger picture and makes it possible to question every part of business.

Cooperation inside organizations is a big question mark – how do designers, innovation teams, business people, and managers find a common language so that they can develop new and holistic concepts. What processes, methods, and tools are needed? Parties are familiar with product and service prototyping and testing, but how entire concepts in the early phase are prototyped? How customers and other interest groups can be involved in the work? The world has plenty of fine companies with interesting concepts, and their best practices should be transferred from one industry to another. Moreover, universities should think about how multidisciplinary cooperation and concept thinking could be taken into account in their education.

REFERENCES

- Alam, I. (2006), Removing the fuzziness from the fuzzy front-end of service innovations through customer interactions. *Industrial Marketing Management*, 35, 468 – 480.
- Burgelman, R. A., Christensen, C. M. and Wheelwright S. C. (2009), *Strategic Management of Technology and Innovation*. 5th ed., McGraw-Hill, New York.
- Büchel, B. (2005), Managing New Business Ventures, *European Management Journal*, 23, 3, 274–280.
- Davis, B. M. (2010), Creativity & Innovation in Business 2010 - Teaching the Application of Design Thinking to Business. *Procedia Social and Behavioral Sciences*, 2, 6540–6546.
- Khurana, A. and Rosenthal, S. R. (1998), Towards Holistic “Front Ends” In New Product Development. *Journal of Product Innovation Management*, 15, 57-74.
- Kim, J. and Wilemon, D. (2002), Strategic issues in managing innovation’s fuzzy front end, *European Journal of Innovation Management*, 5, 1, 27-39.
- Orihata, M. and Watanabe, C. (2000), The interaction between product concept and institutional inducement: a new driver of product innovation, *Technovation*, 20, 11–23.
- Perttula, M. and Säaskilahti, M. (2004), Product Concept Development as a Conscious Resource, *Proceedings NordDesign 04*, Tampere, Finland.
- Säaskilahti et al. (2005), A Method for Systematic Future Product Concept Generation. *International Conference on Engineering Design ICED 05*, Melbourne, Australia.
- Säaskilahti M. (2010), Innovative Concept Development in the Food Industry. 1st international conference on Trends and Challenges in Food Technology, Nutrition, Hospitality and Tourism, 26 – 27 October 2010, Ljubljana, Slovenia. www.doblin.com, 7th April 2011.

BIOGRAPHY

Mikko Säaskilahti is a researcher at Faculty of Art and Design, Department of Industrial Design, University of Lapland, He can be contacted at: University of Lapland, Yliopistonkatu 8, FI-96300 Rovaniemi, Finland, Europe. Email: Mikko.Saaskilahti@ulapland.fi