

# Design thinking as a business tool to ensure continuous value generation

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Available online 6 July 2016

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## Abstract

As never before, turbulent business environments, scarcity of resources, hyper-competition and globalization have put significant competitive pressures on many businesses. Rapid specialized technology developments and increased global access to geographically unlimited markets allow consumers seemingly to have infinite choices for the best satisfaction of their needs in choosing desired products. Providing value to customers becomes vital to any organization to sustain the business in future. As a main task of design through design thinking is to seek value to customers, fosters management thinking from chaotic fluctuations in external turbulence and enables sustainable order in actions. This is why awareness of extended design application is becoming crucial hot topic nowadays among academics and practitioners.

**The aim of this paper** is to analyze awareness of design application and design thinking in Latvia, to highlight potentials of these innovative management methods and tools to build new organizational capabilities and sustain competitiveness in the challenging business conditions, to improve the welfare of society and create better environment for living.

Research was conducted to find out the stage of design application in broader sense leading to design thinking and design driven innovations was carried out in Latvia. 374 responses were collected from randomly selected companies in Latvia and as a results, due to national and regional specifics based on development level of micro and macro factors influencing entire innovation ecosystem, majority of business managers still focus on short-term business decisions and cost-reduction with limited awareness of design broader usage as a powerful innovation method for product development, improvement of business processes and renewal of business models.

**Research findings** prove the necessity to change thinking model of business management in order to develop the skills and capabilities to recognize emerging new driving forces of innovation unfolded through design thinking to ensure continuous value generation, order in external chaos and sustainable competitiveness.

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*Keywords:* Design thinking; Innovation; Strategy; Latvia.

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## 1. Introduction

New trends in business environment driven by globalization process and new technologies, expanding opportunities for companies to offer new solutions to satisfy current or emerging demands of individuals, business, public sector. Product life cycle is becoming shorter, competition increases, scarcity of resources - these are factors affecting current business environment more than ever before. As a result, there is a conflict among business tools and methods used in past decades and existing or evolving business environment frequently causing chaos in thoughts of business executives how to sustain their businesses in evolving circumstances. In order to sustain competitiveness and profitable business performance in long term, there is a growing need to seek for new gateways of business thinking by applying new tools and methods how to create value to the customers; e.g. how to make an order in puzzled business thoughts and how to lead organization to develop new competencies and capabilities fitting to the forthcoming business context.

One of the unfolded areas in previous management theories and practice is broader application of design and design thinking into business strategies and models to create value to customers and increase worth to organization itself. Furthermore, there is a growing attention in research literature (Borja de Mozota, 2003; Fraser, 2007; Geels, 2004; Golsby-Smith, 2007; Holloway, 2009; McCracken, 1986) that application of design and design thinking based on deep research process leads to the transformation in meanings of products and continuous renewal of the business concepts creating certain order in conceptual chaos.

The aim of this paper is to analyse awareness of design application and design thinking in Latvia, to highlight potentials of these innovative management methods and tools to build new organizational capabilities and sustain competitiveness in the challenging business conditions, to improve the welfare of society and create better environment for living.

## 2. Theoretical background

### 2.1. *Extended design definition*

In the last decades, management scholars and researchers worldwide have emphasized on one of the main task of design – to create a value of the product and thus it becomes a competitive advantage (Kripendorf, 1989). “Companies find that to stay competitive, they need to switch their innovation focus, paying more attention to creating offerings that fit people’s daily lives” says Kumar. It derives from design meaning proposed by Kripendorf “The etymology of design goes back to the latin *de+ signare*” and means making something, distinguishing it by a sign, giving it significance, designing its relation to other things, owners, users or gods. Based on this original meaning, one could say: design is making sense [of things]. The importance of targeting meanings and truly understanding (order of mind) what people are trying to achieve when they buy the product is a vital point in creating innovations (Christensen, 1997). There is a growing attention in scientific literature from such authors as Martin (2009); Verganti (2003) among others, regarding the particular role of design and design thinking in creating sustainable innovation in changing business environment.

Hutton (2010) describes it that “Design is the bridge between the consumer questing for the experiential and the company trying to meet that appetite with an offer that presents the new in a user-friendly and innovative way. It is at the core of the knowledge economy, and one of the coping stones of an innovation system” . In design-driven innovation primarily role is to change meaning that users attribute to the product rather than functional changes in the product itself. The necessary preconditions for this stage are business sophistication level requiring design thinking from business management perspective, fosters order in business development in external chaos.

### 2.2. *Design application perspectives*

Although the meaning of design originated centuries ago, many scholars have brought it on the surface in the last decades and research materials show evident correlation between use of design in the country and its overall competitiveness.

Companies that use design as a central element in their strategy are much more likely to have introduced each type of innovation. For instance, 65% of these companies have introduced innovative goods, compared to 28% of

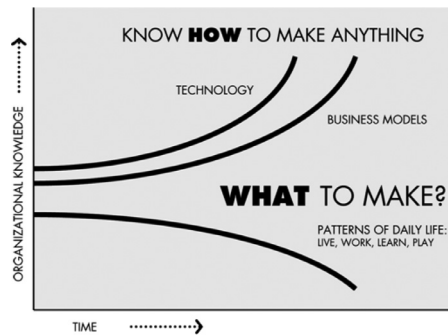


Fig. 1. Innovation knowledge gap. Kumar and Whitney (2007).

companies that do not use design. Furthermore, other companies that use design regularly are also more likely to have introduced each type of innovation compared to those that do not use design systematically, or that do not use design at all. For example, 47% of companies that say design is integral, and 51% of those that use design as a last finish say they have introduced innovative marketing strategies, compare to 29% of companies that do not use design systematically, and 22% of those that do not use design at all (Innobarometer, 2015). Nearly half of the companies in UK where design is integral part of their strategies, have seen increases in turnover, profits and competitiveness (UK Design Council, 2007).

There are still unfolded opportunities of broader applications of design and design thinking in the private and public sectors.

As Trueman (1998) marks, “design as a tool in successful innovation has often assumed a low profile if managers are unclear about its value”. Limited applicability of design as a stylish element of luxury goods or form of art, having “lack of predetermined outcomes” (Boland and Collopy, 2004). Rather than styling the form, design is for “proposing vision” is claimed by Verganti (2003). As a business activity, design is not only a tool for modifying form and function of the products, but it “directly influences commercial constraints such as manufacturability, safety, and marketability. By creating new concepts, simplifying process to reduce cost, streamlining product function, or transforming business practice, designers create new experiences, add value, and sometimes give birth to new markets” (Heskett, 2004).

“Consumers have so much choice that they have developed ways of shopping, managing family life, working, traveling, keeping healthy, and other modes of living that are almost impossible to predict. In the age of mass production and mass markets, consumers’ choices could be predicted in part because they had so few. We have moved from a scarcity in production ability and adequate information about consumers to the polar opposite: now we possess a deep knowledge of how to make things and an inadequate understanding of how people are living their lives. This leaves corporate leaders knowing how to make anything but not knowing what it is they should make (Fig. 1),” is explained by Kumar and Whitney (2007).

This way knowledge gap indicates overall chaos in thinking and it leads to chaotic activities of business management what frequently leads to poor performance results of the organization. The emerging need to recognize new methods and tools is highlighted also in EC president Barosso in Political guidelines for the next Commission (2010) emphasizing that “there is a lot of untapped potential in the cultural and creative industries to create growth and jobs. To do so, Europe must identify and invest in new sources of smart, sustainable and inclusive growth drivers to take up the baton”. Therefore, clear understanding the ways how companies could innovate is directly related to order of business management’s thoughts about future demands and values by bringing new, radical meanings to existing industries thus prolonging life cycles of the industries or creating new industries.

### 2.3. Design development level evaluation framework

Many studies Danish Design Center (DDC), Bureau of European Design Associations (BEDA among others) prove that extent to which design enhances creativity, innovation and competitiveness depends on the company’s use of design. In order to measure the level of design activity in the companies and asses economic benefit of

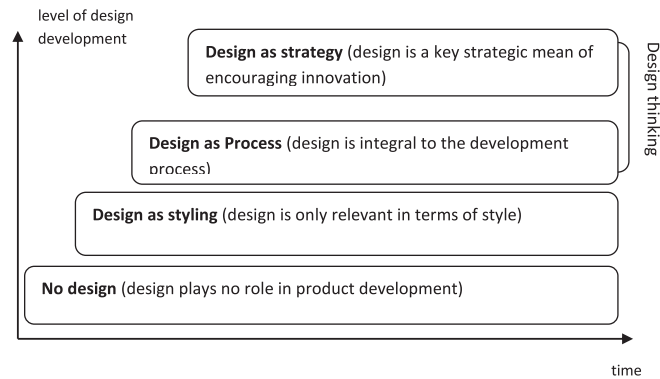


Fig. 2. “Design Ladder” framework.

Source: adapted by authors from framework developed by Danish Design Centre (DDC, 2003)

Table 1

Calculations of minimum required sample size for population (N), for categorical data (Cochran, 1977 and Bartlett, Kotlik, & Higgins, 2001), (in numbers and %), Central Statistics Bureau of Latvia and authors research data.

Country	Population size (N) and randomly selected amount of respondents	Minimum sample size (n) for population (N), categorical data	Valid responses collected, (response rate in %)
Latvia	8772 (1600)	368	374 (23, 4%)

design, DDC has developed methodology “Design ladder” (DDC, 2003). This is a four-step model (Fig. 2), where the 1st step of “ladder” means no design, e.g. design plays very limited role or no design at all what would create a value to customers; 2nd step is design as styling; the 3rd step is where design is considered in terms of a process in product or service output but serves only in the initial stages of product development. The 4th step is design integration into organization, renewal of the business concept leading to forming necessary preconditions for design driven innovations. Furthermore, particularly in steps 3 and 4 there is strong need for design thinking approach from business management perspective. Design process in the upper stage is linked with companies’ strategic directions and plays significant role in every stage of development of sustainable competitiveness.

Consequently, design activities, linked to its objectives, form three major design usage levels: design as a product, design as a process and design as a transformation. Where design application as a transformation is considered in a broadest form in a way of design thinking and design competence is applied to entire value creating processes of design-driven innovation. Therefore, this is particularly important to find out factors influencing and obstacles preventing design development to the highest levels of “Design Ladder” leading to design thinking in every particular region in order “to remain competitive in this challenging global environment, it needs to put in place the right conditions for creativity and innovation to flourish in a new entrepreneurial culture (Europe 2020 Strategy).

### 3. Research methodology

In order to evaluate design application level authors have analysed whether business executives are aware about design broad meaning and apply design thinking in their organizations in Latvia. For this purpose we used survey research method’s questionnaire form of 19 questions to identify dominating business strategy, management thinking patterns, cooperation trends with professional designers and factors affecting design broad application and design thinking.

In the research 1600 respondents were randomly selected among enterprises in Latvia, surveys responding requests were e-mailed to the executives of selected companies (Table 1). 374 valid responses were collected thus representing 23,4% of the target group selected to ensure representativeness of the research findings.

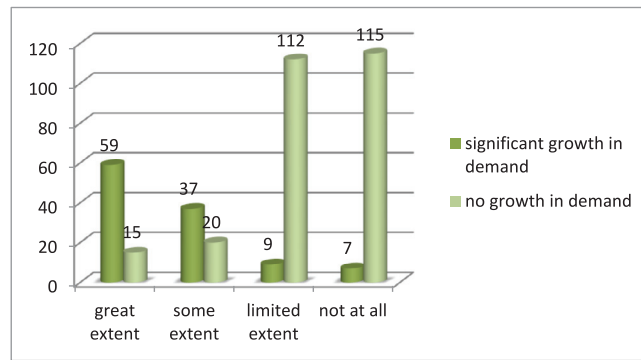


Fig. 3. Extent of design as a strategic tool in business management application influence on company's growth in demand and thus it has positive reflection to business development, in Latvia, (numbers of responses), *authors' research data*.

In increasingly challenging business environment the first and the most important task for the company is to stay ahead of the competitors; e.g. increase company's business performance. Consequently, this task is forcing companies to find new gateways of organizing their businesses, and design holds some vital clues. Therefore, it is important to evaluate particularly how design enabled companies to develop their business from the perspectives of growth in demand. These particular data about company performance in the last five years are gathered using Likert's scale of 4 levels: from "great extent" when company had applied design as strategic tool in business management significantly and up to level of "not at all" what means that design as strategic tool in business management is not applied. Another variable is an extent of growth in demand.

Data indicate (Fig. 3) that 59 respondents or 16% of total respondents have stated they introduced design in a great extent and faced significant growth in demand. Additionally to this, 37 respondents or 10% of the respondents have marked that design enabled significant growth in demand in slightly lower extent. Summarizing, only every fourth or 26% of all business executives have applied design as strategic tool in business management and faced significant growth in demand in their companies in Latvia in the last five years.

However, research data specify that the majority of business executives (61%) have applied design and design thinking in business management in limited forms or have not used it at all. In this group, there are 112 or 30% of all respondents which have stated that design as strategic tool in business management they have applied very limited or in significantly to their business. Furthermore, 115 or 31% of all respondents provide information that they did not applied design as strategic tool in business management in their companies.

At the same time, these respondents indicate that there was no growth in their companies in the last five years period. It is meaningful to remark that very small proportion of the companies or 4% of all respondents stated that they have used design as a strategic tool in business management but they did not face any growth in demand what is subject to further research.

#### 4. Discussion

The most important in "Design Ladder" framework (DDC, 2003) is to realize the increase of value what design extended application brings to the customers and organization itself. If design is used merely as styling to particular products, there is very limited or no expected value brought to the stakeholders. The idea behind is that broader design is used and integrated in the company to create vision, strategy and as integral part of the processes, more it brings value to stakeholders.

In Latvia significant majority (over 60%) of respondents consider design as a stylish element for visual improvement of products and very limited amount of respondents indicated design application need in broader sense. Therefore, accordingly to "Design Ladder" grading, this is 2nd level of design application in business in Latvia; e.g. limited awareness of design application and value what it delivers to the customers and organization (see Fig. 4).

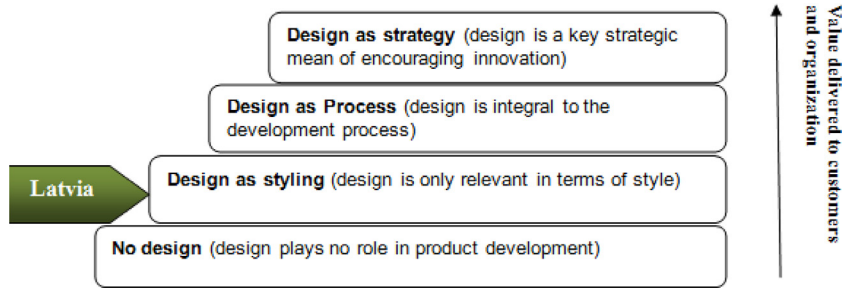


Fig. 4. Evaluation of design application level in business in Latvia and Estonia. “Design Ladder” framework adapted by author with contextual explanations (DDC, 2003) and author’s research data insert.

Table 2  
Business management thinking models (developed by authors).

Existing thinking model	Design thinking model
Competitiveness can be achieved by traditional cost cuttings, lowering all expenses and prices • mass production  • heavy reliance on RD investments as sole solution • design is used for aesthetical considerations in some stage of product development • design increases costs and can be used only as differentiator in mature markets • limitless differentiation, improving quality, efficiency, innovation to satisfy current demands of existing industries based on analysis of past events	Competitiveness is achieved by creating products with new meaning and higher added value • customization, understanding of identity and social cultural requirements and their future trends • emphasis on products meaning and its value, • design process is fused with companies key objectives  • design integrates technology, commercial functions and human identity • open innovations in various forms through transforming the culture of the organization

Although external factors like technology, market demand changes, globalisation and shifts in socio-cultural trends are evident and strongly influencing the business strategies and models of the companies, business management still lacks behind of the time in their thinking models as it is summarized in Table 2.

**5. Conclusion**

In the last decades, design development and linked objectives, have dramatically changed from the limited application as a style, to design integration in business process further to the new advanced level of design usage as business transformation. External changes are the basic reasons for continuous search of new methods and tools to cope with shorter product life cycle, intense rivalry, product differentiation problems, increased funding requirements in traditional RDs, economic cycles, challenges of global competitiveness, and changes in social and environmental awareness. Traditional business methods based on sole continuous contraction of costs and boosting efficiency are not limitless and drive to problematic business results and lost competitiveness in a long term. Concepts such as strategic design, design management, design thinking and design driven innovation are notably entering business environment by conceptually new applications to foster order in external chaos. National innovation policies, financial support and education systems have not yet caught up, particularly in Latvia, where traditional business thinking and low value added industries are widely present. Considering that this research of design application and design thinking refers only to Latvia but it would be interesting to perform this kind of study in other countries to verify the outcomes.

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