

DESIGN THINKING AS A INNOVATION TOOL IN ORGANIZATION

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ABSTRACT

The popularity of design thinking in the last few years is part of a wider debate about the role of design in business, and its place in business education. The reason for the surge in interest of the ‘methodology’ of design, is because of design potential for enabling business – and cultural – transformation, through the application of design processes to other areas. Many famous brands are experimenting with ways to embed design thinking in their organizational processes, and in using it as a company-wide innovation tool.

Key words: design thinking, interdisciplinary approach, innovations, organizational processes.

INTRODUCTION

Design thinking, in recent years, has been part of the debate of the role of the design in the business world and the business education in general. The main reason for the growing interest towards design methodology is the potential of design to give new opportunities to business and cultural transformation through implementing new design process in various fields. Many famous brands on the market experiment through applying design thinking strategies in other organizational processes and their use as innovative organizational tools.

The study of specialized literature confirms the role of design-thinking for:

- Enhancing creativity in the organization – Linda Naiman (2018);
- Increasing innovation activity - Jett McHugh (2016);
- Improving organizational culture - Coonor Behal, Andrew Moore (2018).

Design thinking as a method researches various approaches to problem solving, reveals the best solutions and contributes to a deeper understanding of the users and their behavior. It is a process of a practical and cre-

ative problem solving or answering of questions, which leads to achieving better future results.

Tim Brown defines the mission of design thinking as „the translation of the feeling and understanding of products and services that benefit our lives... „the translation of the feeling and understanding of products... Design thinking can be described as a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.“

As a methodology Design thinking can provide a way to solve different joint complex situations (tasks), dealing with problems which are not clearly defined and can support vague ideas through specific visual communication.

Due to the fact that the design process is appropriate for multiple participants to engage in it, Design thinking provides a future opportunity to sustain the relationship between the organizations, strategies, products and all stakeholders.

SYSTEMATIC THINKING

According to Meadows (2009), due to the fact that our world continues changing and grow in complexity, systematic thinking

will help us manage, adapt and see the wide variety of choices, made in the past. It is a particular thinking method which gives us freedom to identify the foundation of the problems and see new possibilities.

Another author, Charajedaghi (2006) states that the combination of analytical and holistic method is an important step in the evolution of our research methodologies and understanding of knowledge. We need both of the approaches – the holistic thinking (art and sciences are interdependent on each other) and the analytic thinking (science and independent variables). We also need a synthesis, the ability to combine two and more things, to create new things, to understand that the system is sustained and it works.

Meadows makes an interesting statement about the interconnection between the systematic, structural and behavioral approach and their application in situations in which we are looking for a way to change our contemporary systems. We need to understand how their behavior changes, how is this possible to lead to a positive result (in a wider sense) for other established systems as economics, business and environment.

The system is a network of elements, connected between each other in a way, which produces its own behavioral model for a longer period of time. After we understand the interconnection between the structure and the behavior, we can understand how the system works, why it results in bad outcomes and what should we do in order to improve its behavioral model.

INTEGRATED THINKING

The approach of integrated thinking, designed by Roger Martin from Rotman School of Management, represents a methodology of complex problem solutions. It is an opportunity to use other models and instead of choosing a single one to work with, all of

them serve to generate a new combination of rules and elements, creatively applied through a new better model. This is more of a trial to alter the decision making process in various situations. Those who use the Integrated Thinking methodology are capable of presenting the whole picture while still working on details and separate parts from it and can find creative solutions and reach the core of the problem.

For Martin „Design thinking“ is a balance of opposition of analytic thinking /use of deduction and induction, reliability, iteration/ and intuitive thinking /use of validity, creativity and innovation/ in a dynamic manner.

The knowledge funnel is a model, made by Martin about the principles of Design Thinking, which combines these two methods of thinking in three stages of observation, knowledge and creativity:

1. Identifying the problem that needs to be solved
2. Formation of the rules which bring the research and management together
3. Formation of algorithm – testing methodologies of the procedure

Talking about sustainable innovation, Antti Hantamak (2010) comments on the interest of Martin to apply Design thinking in business as an excessive reliance on analytic thinking.

However, a large number of companies lose new business opportunities if they do not find new knowledge or innovations. In his own research strategy, the company needs to find a balance between the research and the application.

When applying design thinking to strategic management, the organizations could use it as a way to generate value through establishing a connection between design and innovations, between formation of new ideas (design) and their application (innovation).

FUNDAMENTAL THEORETICAL ASPECTS

1. Design as a tool of strategy

From an organizational point of view **design** is not made separately, but in relation with a large number of organizational units and functions (marketing, engineering, finance, law, brand management etc.). Depending on their level of „design-knowledge“ organization would be prone to perceive design in one of the following of ways: from an aesthetic point of view (image and sensation), as a process, a solution of user’s needs, or (trending) as a **strategic business component and tool**.

In his study „The integrative business“, Buchanan (1992) categorizes the connection between design and business in four different ways:

- Design of symbols and visual communication (graphic design, brand identity, corporate identity);
- Design of physical objects (product design);
- Design of user interaction and customer services;
- Design of complex systems or living environments for work, play or education (interior, architecture and urban planning);

From the client’s point of view, design process is a useful tool and method for strategic change, because it focuses on the user’s point of view in the development of new processes, products and services. One of the main roles of design management is to assign the path in which design combines with the business goals (strategic and operational) and with the experience and requirements of the users, while achieving added value to the products.

From an organizational point of view, design supports the brand and corporate communications as transparent and connects all internal processes of an organization (vision, values, goal) to the outside world audience of stakeholders, users and clients.

Increased attention to corporate identity became fashionable in 1990, branding provides users with the necessary transparency, helping them to differentiate an organization, product or service from that of competitors, and brand value becomes the indicator of added value for the organization. Organizations are constantly looking for new ways to generate ideas and new business opportunities which add value and create identity of the company. This includes realizing the potential of design and innovation as tools for creating corporate identity, develop brands and differentiate products from those of competitors.

Design Management Institute (USA) advice organization to be more open to Design Thinking through integrating design practices in their overall business strategy. They have opposing attitude and are often not aware of the potential opportunities that design can offer, equating it prohibitively expensive or lavish style, not a long-term investment to improve business efficiency.

Back in 1950 Tomas Watson, the CEO of International Business Machines (IBM) declares that „Good design is good business“. Good design generates additional social and economic value, makes the world better and improves our quality of life.

Table 1: The most common areas of partnership between design and business

Increase of market share	Increase of turnover
Reaching new markets	Increase of profit
Competitiveness	New products/services
Increase of employment	Developing Intellectual Property

European companies integrate design in their business strategies in a different way: radical innovations, design of product identity, design as means of added value, branding, design of corporate print materials etc.

During a typical design process, designers start the process of solving problems through analysis, synthesis, creativity, and try to combine the requirements of business and the needs of the user in a final decision. Designers can anticipate and provide solutions in two contexts – product-service and in an organizational context. They are looking for new creative opportunities and then visualize their ideas through design proposals, user scenarios and other techniques. Designers also produce design prototypes as a step towards defining the physical, functional and user requirements or specifications (so-called F3- Form, Fit, Function), which uniquely identify all or a separate component and determines the degree of interchangeability in the system.

Design is present in a tangible form - in people, projects, products and services with which we come into contact every day. They can be referred to as „interface“ design, and form an important part of the way designers make decisions about how we perceive an organization or a brand. But design is also present in the decisions made about the processes and connections that are part of an **integrated and interdisciplinary nature of design-practice**:

- Decision making about delivering new products and services on the market;
- Decision making about managing the relationship between people – clients, design consultants, stakeholders and end users;
- Decision making about organization of the teams, processes and procedures in any design process;

Taking a „lifecycle approach“ (how materials are used, how products are disposed of at the end of their use) and a „cradle to cradle“ (where economic, social and environmental benefits are designed into the system for product-service) design guarantees benefits by helping to review the overall perception of sustainability as expensive. This can help raise awareness of „design equity“ (how design can add value in itself) and stimulate debate about the relationship between the value of design and brand value (measured system, which is already known to the world business).

By adopting a proactive approach in this „doing more with less“ we need to be able to deal intelligently with the pursuit of the implementation of outsourcing to move the processes of decision-making by saving short-term costs (efficiency) to long-term investments (efficiency). Applying the tools and processes of design-thinking in the whole system (including production, distribution and consumption) can lead to creative answers on how to achieve more with limited resources, and to help uncover the unique capabilities of design-oriented create value. The current design-oriented approach involves co-creation and participation design (where users are involved in the design process), universal design (where the needs of a broader range of people into account) and sustainability (which takes into account the long-term impact).

2. The Design Management

Solving, management, organization and facilitation of how design can play a transformative role, how design-processes can be linked to business processes and how design strategy can support business and organizational strategy, are some of the areas of competence of the design management.

Design management is the managing of the design process. The wide variety of perspectives that exist in the design management reflects the participation of the wide array of individuals, professionals and scientists and related contexts. Peter Gorb (1990) describes the design-governance as „effective deployment of resources on design available to the organization in achieving its corporate goals,“ Bill Hollins (2004) defines it as „the organization of processes to develop new products and services“ and Rachel Cooper and Mike Press (1995), „to be design manager is the response of individuals to the needs of their activities and the contribution they can make to enable the design to be used effectively.“

Design Management: Managing Design Strategy, Process and Implementation (Best 2006) describes the management of design in the corporate context and respond to the growing recognition of design as a valuable tool for achieving the strategic objectives and the requirement for greater attention to tools, methods and processes design and management of design-thinking, planning and implementation.

Design management, by its very nature puts fundamentally different disciplines, professions and stakeholders together, creating a trend and an overall idea of how to facilitate and provide the best possible solution for all parties involved. In the process of managing design includes both internal (corporate design resource) and external (design consultancies and agencies) in the following three stages:

- Management of design-strategy: Inspiring design-thinking, emerging design projects and initiatives. For example, identifying and creating conditions in which may be proposed, ordered and encouraged design projects; inclusion of design-thinking strategy

of an organization; identifying the main capabilities of design; interpreting customer needs; searching for connections between design and business as a whole.

- Management of design-process: development and management of the design process: developing and leading design projects, programs and opportunities. For example, identifying and creating the right conditions in which design projects may be included, how to combine presence and experience in an organization to influence the perception of the organization and its identity, how to influence the perception of the brand.
- The management of design application – management and delivery of design projects and results. For example, processes and practices in project management, process decision-making, including specific materials, working relationships and responsibilities, development of guidelines for the design and manuals; support.

Referring design-governance to organizational environment (Best 2006) demonstrates how to engage design on three levels:

- Design of corporate level (including vision, strategy, policy and mission).
- Design level strategic business unit (including tactics, systems and processes).
- Design at operational level (including project management, procurement, assets and touch).

In The Fundamentals of Design Management (Best 2010) describes the concepts and principles that facilitate the management of design projects, teams and processes within the creative industries:

„Design-management associated with successful management of people, projects, processes and procedures behind the design of our everyday products, services, environments and experiences. It is also associated with managing relationships between different areas (such as design, management, marketing and finance) and various roles (such as clients, designers, project teams and stakeholders) (Best K. 2006).

The introduction of any product or service on the market often requires extensive input and support from a wide range of different people with different areas of expertise, abilities and skills. But the way to manage people, processes and projects can have a huge impact on the success or failure of them on the final result. Similarly, the various planning processes require different approaches (eg, „first to market“ vs. „Just-In-Time 'processes). This is the role of design management - to find all these professionals, projects and processes within an interdisciplinary and collaborative network to perceive the wider business, social, political and environmental conditions so as to maintain a consistent financial terms of experience.

One of the most valuable aspects of design-management as an approach is that it provides a framework for implicit integration of new processes in the existing approaches and methodologies. When design experience is engaged in the process of solving the problems, the actual „design problem“ is also a „design opportunity“ to redefine the problem itself and if identified as a need to offer a new approach or engage various stakeholders in finding an adequate solution. Such an approach to design increases the chances of creating projects that demonstrate tangible, valuable results and added value.

3. Design, strategy and innovation

In strategic business approaches, which tend to rely on analytical and structured understanding of the market probabilities, meaning the processes of design-thinking is to generate and send new or intuitive insights and opportunities for germination inherent in the market.

According to Harvard Business Review, there are two schools of thought when it comes to strategy for value creation:

The first believes that the path to value creation lies in abandoning the old-fashioned practice of relying on instincts and be replaced by a strategy based on rigorous quantitative analysis.

Second favors creativity and innovation. According to proponents of this philosophy the creative instinct of unlimited analytical thinking rises a source of true innovation.

Before proceeding to the final realization it is also useful to analyze the product from an economic perspective, assessing the costs and benefits as well as the risks associated with the introduction on the market. It is essential to involve all actors and all business skills in order to minimize these risks and to ensure the right path to create the new product.

THEORETICAL CONCLUSIONS:

1. Design-oriented organizations today perceive design as a strategic business element and as a tool to achieve a higher added value of its products.

2. European companies integrate design into their business strategies in a different way: radical innovation, product innovation, sophisticated corporate printing materials, better branding, etc.

3. The management of the design process is linked to the development of the process itself by improving the management of

the design-projects and the practical application of their results.

4. Design-thinking, apart from strategic thinking and philosophy, is an innovative tool that provokes new opportunities to meet the needs of the market.

PRACTICAL INTERPRETATION

The theoretical questions of design-thinking as a strategic tool for the organization, the scope of design management, the relationship design-strategy-innovation and the role of design manager find their practical interpretations and intensively developing sector of wood and furniture industry in Bulgaria.

Representative of the industry study refers indicators to measure innovation activity furniture makers and the results obtained by groups and types of innovators (D. Ivanova, R. Popova, 2012).

Prevailing innovators in furniture businesses are product innovators indicative of incorporation of design and soft-thinking strategies and their perception of organizational design as an innovative tool:

- Product innovators – upgraded furniture, new to the manufacturing plant (70%);
- Process innovators – new methods of production (48%);
- Organizational innovators – new methods of work organization and decision-making (48%);
- Marketing innovators (47%);
- Eco – Innovation – implemented a procedure to reduce the harmful impact of waste materials (2.5%).

The product design competition „Bulgarian furniture of the Year“ is initiated as a forum for distinguishing design-oriented Bulgarian furniture companies in their search for innovative ideas. CHERGA - Bulgarian Design Group, together with the Branch

Chamber of Woodworking and Furniture Industry (BCWFI) held a competition for product design concepts „Furniture of the Year - Workshop for Ideas 2015“. All proposals are reviewed by members of BCWFI (over 300 companies) as potential products for production to be developed in collaboration between designers and manufacturers. As a result each of the concepts produced by the next edition of Technomebel and World of Furniture fairs can participate in the „Bulgarian furniture of the Year“ competition.

Twelve companies with a total of 14 products participated in „Bulgarian furniture of the Year“ in 2015. Participants in the fifth edition of the competition are the companies: Bora TNK, Valinor, Globe Industries (Mattresses Daydream) GS Malmgreninteriars Leo Design, Furniture Style, Retroujut Aksaga, Siana Furniture, TED-BED, Fish Bike Creative and Hegra – D.

The growing role of design manager in the management of design-process is undeniable and this is confirmed by the ongoing events in the country. The annual conference of interior designers, organized by the Association of Interior Designers in Bulgaria (AIDB) is a good example in this direction.

The aim of the Association is to organize meetings between designers, investors, furniture companies and universities. According to Ms. Gena Sabeva, president of AIDB „We want our events to be a stage for designers. We want to create popular names as among his colleagues and among the general public. So this year we started with lectures of renowned design studios in different universities. There, students are introduced with great interest about the life and work of their colleagues have already succeeded.“

The conference speakers were successful Bulgarians with design projects on the international stage – Svetoslav Todorov, STUDIO MODE (winner of the international

prize for „Restaurant and Bar Design Awards“ – „BEST BAR“ and „EUROPE“ for the restaurant „GRAFITTI“ in Varna) Arch. Elia Nedkov (Winner of many awards, some of which „Polydecor Design Award“, „DuPont Corian“ food and coffee bar, etc.), Georgi Georgiev. (Researcher of the design process, an artist who explores a different perspective of the design process and the creation of new ideas, creativity in the process of creating interior design (lives and works in Japan.) and Maria Slabakov. (Artist and chief designer of „ART Studio weakling“ Miami, USA – a family company with over 30 years experience in Bulgaria and the United States, a key partner of the company Barton G – party leader in the industry and organization of events in the US.).

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CONTENTS

RESEARCH ON THE QUALITY OF PROCESSING WITH A HORIZONTAL BANDSAW	5
Valentin Atanasov, Marian Todorov, Vladimir Spasov	
A STUDY OF THE DISTRIBUTION OF THE VESSELS AS A DIAGNOSTIC SIGN.....	12
Nikolai Bardarov, Stilyana Simeonova	
STUDY ON THE POWER – ENERGETIC INDICATORS OF A UNIVERSAL MILLING MACHINE	18
Zhivko Gochev, Georgi Vukov, Valentin Atanasov, Pavlin Vitchev	
DESIGN THINKING AS A INNOVATION TOOL IN ORGANIZATION	25
Diana Ivanova, Pavlina Vodenova	
TECHNOLOGICAL SPEEDS FOR SOIL PREPARATION OF FOREST AREA WITH SPECIAL FORESTRY TILLER	33
Konstantin Marinov, Velika Yordanova	
EFFECT OF PARTICIPATION OF VINE FIBRES ON SOME PHYSICAL AND MECHANICAL PROPERTIES OF FIBREBOARDS.....	44
Viktor Savov, Julia Mihailova, Rosen Grigorov, Evgeni Molev	
SOME FEATURES OF TIMBER QUALITY OF <i>BETULA PENDULA</i> ROTH. GROWING IN CARPATHIAN AGROFORESTRY	52
Ivan Sopushynskyy, Ruslan Maksymchuk, Ihor Tymochko, Nikolai Bardarov	
QUALITY CHARACTERISTICS OF DOUGLAS FIR STEMS (<i>Pseudotsuga menziesii</i>) FOR THE PRODUCTION OF MASSIVE WOOD MATERIALS	57
Neno Trichkov, Daniel Koynov, Cvetelin Ranov	
ADVANCED DESIGN METHODS APPLIED IN DESIGN EDUCATION AT THE UNIVERSITY OF FORESTRY	66
Pavlina Vodenova	
SCIENTIFIC JOURNAL „INNOVATIONS IN WOODWORKING INDUSTRY AND ENGINEERING DESIGN“	73