THINKING DESIGN-THIS INNOVATES FORMATION AND DEVELOPMENT EFFECTIVE METHOD

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Abstract: *According to international experience, in conditions of high competition, commercial organizations need to use the method of design thinking in order to introduce innovative products to the world market and maintain efficiency in the long term. The study proved that design thinking is a promising technique not only for generating and developing innovations, but also for solving important commercial, social and domestic problems.*

Key words: *design thinking, business, innovation, innovation processes, innovation, generation.*

Аннотация: *Согласно мировому опыту, в условиях высокой конкуренции для внедрения инновационной продукции на мировой рынок и сохранения эффективности в долгосрочной перспективе, коммерческим организациям необходимо использовать метод дизайн-мышления. В исследовании доказано, что дизайн-мышление является перспективной методикой не только генерации и развития инноваций, но и решения важных коммерческих, социальных и бытовых проблем.*

Ключевые слова: *дизайн-мышление, бизнес, инновация, инновационные процессы, генерация инноваций.*

Introduction

The diversity and effectiveness of products and services supplemented on the world market is determined primarily by their competitiveness. In such a situation, it is not enough to apply analytical thinking based on the analysis of available data. Innovation requires creativity, ingenuity, the ability to synthesize and create new products and services.

Creativity, teamwork, human orientation, curiosity and optimistic thinking are components of design, and the methodology used to find new solutions to existing problems is ham. The main feature of design thinking, unlike analytical thinking, is not critical analysis, but a creative process in which sometimes the most unexpected ideas lead to a better solution to a problem. Thoughtful design These principles are applied in various fields: from the treatment of childhood obesity to crime prevention, from the rocket industry to climate change. Design thinking is no longer limited to the creation of new material products, but concerns various processes and services, as well as interaction, communication and collaboration.

This article focuses on the study of the origin, methods and significance of the process of mental design, and in general we hope to assess whether this method deserves additional scientific attention in the future, and to propose effective approaches for this. Thematic analysis of literature.

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The idea of thinking design first appeared in 1969 in the book "The Sciences of Artificial ("Science in the History of Artificiality") Herbert Simon formed. Later, this idea was adopted by scientists at Stanford University I have developed and am developing the idea of thinking design Stanford Design the institute was founded. But in the field of business, in particular in its management, you can apply the principles and supports that designers apply to the goal set compatibility has been active since the mid-2000s (Boland, 2004). In recent years, Design Thinking has published literature on the topic of popular management [Berger, 2009; Brown, 2009; Esslinger, 2009; Fraser, 2012; Kelly and Littman, 2001; 2005; Lidtka and Ogilvy, 2011; Lockwood, 2009; Martin, 2007; 2009; Verganti, 2009], and Also, The Economist, Harvard Business Review, Business Week, The Wall Wall, The number of expert scientists publishing their scientific articles in major publishers such as The Street Journal and The New York Times is growing.

The emergence of the concept of thinking design is associated with Tim Brown, president of the IDEO design agency. He explained that the main reason for the formation of the new concept was the demand for a new innovative solution from entrepreneurs to meet the requirements of the global market. According to Brown, design thinking is an approach that can be integrated into all aspects of business and public life [Brown, 2009). Such an approach, on the one hand, requires reflection in order to include design among the management tools in the development of a long-term business strategy, and on the other hand, the ability of designers to influence changes in society is recognized [Lockwood, 2009].

In fact, reflections in prestigious scientific journals, including the Journal of Product Innovation Management and the Academy of Management Journal, have identified design as a key concept in innovation [Brown and Katz, 2011; Di Benedetto, 2012; Seidel and Fixon, 2013] and in general management [Gruber, de Leon, George and Thompson, 2015]. Also, one of the latest scientific papers published in the scientific journal "Journal of Product Innovation Management" is devoted to the conceptual analysis of design thinking [Pietro Michele, Sarah J. S. Wilner, Sabine Hussain Bhatti, Matteo Mura, Michael B. Beverland, 2018].

A number of scientists born in Russia also [Khomutsky D.Yu., Andreev G.S., 2015; Geyderikh P.V., 2018; Vasilyeva E.V., 2015; Gusakov A. A., 2019] reflected on the importance and place of design in business management.This topic has not been sufficiently studied by Uzbek scientists, but it is also necessary to recognize the initial scientific research. In particular, [Khotamov I., Juraeva M., Gantov A., 2017; Abdullayeva M., 2015] this scientific work discusses in detail the stages of design. This topic is relevant if we take into account the fact that this way of thinking is used almost everywhere, that is, when planning a trip, repairing an apartment, opening new media, forming student innovators, starting a business, developing a corporate identity and logo. Research methodology From a methodological point of view, design thinking is a heuristic method of studying problems in conditions of uncertainty, that is, solving non-standard tasks related to creative search. Design thinking, which is a specific way of thinking, is a thought process aimed at solving problems based on a combination of empathy (the ability to look at the world through the eyes of other people, to understand their needs, desires and tasks they face). From the point

of view of this research methodology, it represented a movement from the analysis of scientific and increasingly widespread popular sources to the formation of a working model of design thinking and its further consideration in the design process. Analysis and results

The term "mental design" has different interpretations. The best definition is given by the Interaction Design Foundation: "thinking design" refers to a multi-step process designed to study the motivation and needs of the user, refute false assumptions and find a new solution to the problem.

Thinking design (from the English "design thinking") is a technique that helps to find solutions to complex problems that meet the interests of users. This method is based on the principle of anthropocentrism, according to which the purpose of each research and work of kandai is not the interests of the enterprise, manager, project managers and bureaucratic structures, but of an individual. The mission of design thinking is to surpass existing stereotypes and standard methods of problem solving ("non-standard thinking" - "thinking out of the box").

So, design thinking is, first of all, a method of product formation it turns out. For example, IDEO (innovation agency in Silicon Valley) 2000- over the years, the style of design thinking has been used. At that time his its main goal is to develop several elements in the development of a product (service it was aimed at combining: Goya style, quality, aesthetics and functionality. IDEO Director Tim Brown, based on his professional experience, revealed the essence of this style: "it is based on three pillars, namely empathy, collaboration and testing, a model of thinking that puts people at the center of problem solving." [Brown Tim. Design is a goal in business. The Myth of the Literary Agent, 2018. 128 p.]. The method of mental design consists of six stages: each stage consists of two parts: divergent (Latin divergere scattering) a set of solutions to one problem tracking and convergent (Latin convergere accumulation) solution of the problem

Follow the instructions clearly.

1-stage - empathy. A human-oriented design and processing center. Empathy is the act of putting yourself in another person's shoes and trying to understand their feelings, desires, ideas and actions. For example, it is impossible to do this without understanding who the product or project is intended for. The designer will solve other people's problems, not his own. To create a good design, you need to grieve together with a person in maksadi to understand what is important for him. Talking in a confidential tone will help the designer find the right ways to interact with people and simpler innovative solutions. Karashta's empathy helps to take a fresh look at people and different situations.

2-stage concentration. The only way to find the right solution is to solve the problem this is the correct understanding ocusing plays a very important role in the business process, because it allows you to get a vivid idea of the problem that needs to be solved, based on the collected information about people's lives. The content of concentration is the correct expression of a question related to a problem that should later become a task. The question posed here should be aimed specifically at solving the client's problem, and not at highlighting the general problem. If the client firm had to work individually at the empathy stage, then teamwork would be required at this stage.

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3-stage - development of ideas. Not a very good idea, broad opportunities are important. Development of ideas these ideas and solutions should be the focus of attention in the working mode. In the case of a thought process, this stage will be considered as a branching of various concepts and results that can be applied as a solution to the problem. As soon as a sufficient number of ideas are created, you can narrow down the search space, look for rational ideas and move on to choosing the best ideas.

4-Choose stage. All ideas until they collide with real reality it looks great.

To determine the ideas that will develop, it is necessary to pass them through a "sieve". How to choose the right ideas?

express the selection criteria (the most impressionable, the most unexpected, rational). If there are several criteria, then each criterion should have its own weight. The criteria allow us not to lose the innovative potential accumulated during the development of Goya voting (the risk of voting may be that if 6 people "agree" and 4 "disagree", then the condition will be met, but about half of the team's enthusiasm will manifest itself very slowly) creating prototypes. Prototypes for evaluating the efficiency of ideas allows.

5-stage-prototyping. A simple prototype will tell you a lot. Prototyping consists in creating iteration layouts that will help you find the right solution. At the first stage, prototypes should be as simple as possible. Test transmission and confirmation of the idea with prototypes .Before creating a prototype, you should answer questions about what and how to test complicates and two questions that are such. This will help break down prototyping and testing into specific stages. 6-boskich test. Learn more about the solution and about the user receive.

Testing is carried out in order to get feedback from the creators about the prototypes. This helps the user to understand and penetrate deeply into the problem that is being worked on.

The modern management system requires that every manager has a well-thought-out plan. Jack Welch, former CEO of General Electric, comments: "99.9 percent of clerks always stick together because they don't know how to think. It is impossible to make people think, it is only necessary to create conditions for them to think. In this regard, it would be advisable to teach the audience in educational institutions how to think, and not what to think about. Below is an example of success when using design thinking technology.

We provide information to companies that have achieved: General Electric: achieved a 30% increase in revenue in 2003 when it introduced design thinking technology;

Own Philips Lighting: Design thinking has allowed the company to enter the global market.

Airbnb: Thanks to the introduction of design thinking technology, simply a startup has become one of the largest portals specializing in housing search and rental housing. When the company's employees studied the user experience and found out that there are photos of apartments of very poor quality on the site, it was decided to contact a professional photographer, and it succeeded.

Conclusion

Summing up, we can say that thinking is the positive aspects of design consists of:

1. Problems are solved using an interdisciplinary approach. This allows you to take into account different interests and abilities of people through practice and experience.

2. Design thinking is primarily a way of creativity, constant movement and gaining experience that is supported. 3. There is also a strategy in design thinking, but this is a whole complex of problems includes a new look. The main part of design thinking involves the search for unusual, new styles, avoiding the usual dogmas. In general, large companies around the world, such as Healthcare, Procter & Gamble, Philips Electronics, IBM, General Electric, Toyota, Samsung, LG, are already effectively using thinking - design to organize the process of management and production of products.

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