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Design thinking as a start-up business planning strategy

Introduction

In today's business environment the domestic business is in an active search for the best way to meet the needs of its customers. Today, to gain competitive advantage in the market, business entities must be the most technologically advanced and service-oriented. The very development of an innovative product to improve the existing potential is the foundation for leadership in the market. Innovation is the best way to solve the existing demand, which gives additional value for the client and has a commercial sense for the company.

During the development of a start-up and its business planning, innovations play a crucial role. Innovation and design thinking, together with funding, are fundamental factors for the development of a successful start-up. Innovation strategy is based on the strategic goals of the start-up and depends on it's state of innovation potential. It can be stated that innovative activity is possible only if the enterprise

or start-up has a team of innovative thinking people. Innovation development also requires design thinking. People need to be updated on technology, design thinking, analytics, storytelling, and artificial intelligence etc. (Kaushik, Guleria, 2020).

The relevance of the research. Domestic business in modern conditions is actively looking for the best way to meet the needs of its customers. Which require not only knowledge, ideas, technologies, but also the development of a unified national system and the concept of business strategy. Design thinking is a tool for implementing new ideas and changing the economy to innovative. In this regard, mastering the methodology of design thinking has a great effect in accelerating of the innovative development of the country, helps to rearrange existing businesses, changes the market infrastructure, and also it is one of the effective ways of human self-realization and improvement.

In the vast majority of studies, design thinking is considered as one of the main elements of promoting innovation. The study of the theoretical foundations of design thinking is carried out.

The aim of the research. Identify the prospects of design thinking methodology as a toolkit for startup business planning.

Research objectives include revealing the concept of a startup when creating a business plan with the help of design thinking, considering the role of innovation in design thinking, studying and revealing the concept of design thinking, evaluating the use of design thinking methodology as a startup planning strategy.

Research methods. During the research the following methods were used:

Theoretical: generalization, comparison, analysis of information;

Analytical methods: comparative and graphical (for the construction of graphical charts, graphs, diagrams);

Empirical: observations, information gathering, mathematical calculations and comparative analysis.

Infrastructural support of an innovative activity occupies a special role in realization of the innovative potential of the start-up. The set of structural units of the company, which develop innovations, attract investors for their implementation and provide other functions for the implementation of innovative potential, and objects of the innovation infrastructure of the national innovation system, such as technology transfer centers and parks, cluster development centers, etc., are designed to promote the development of innovations of domestic start-ups. Innovation potential state depends on the availability, size and quality of these resources, the influence of external factors (innovation climate) and the internal environment of the organization, which promotes or, vice versa, prevents the generation of new ideas and their implementation in practice. As a result, it is important to form a corporate culture that will ensure a high degree of employees' initiative and willingness of the head and staff of the organization to work on the development and implementation of innovations and innovative potential promotion.

Innovative potential can be considered as a part of general potential of the organisation, there is an innovation component in each element of the general

potential. Main components that determine the innovation potential of the start-up are material, information, financial, personnel and intellectual resources (Fig. 1).

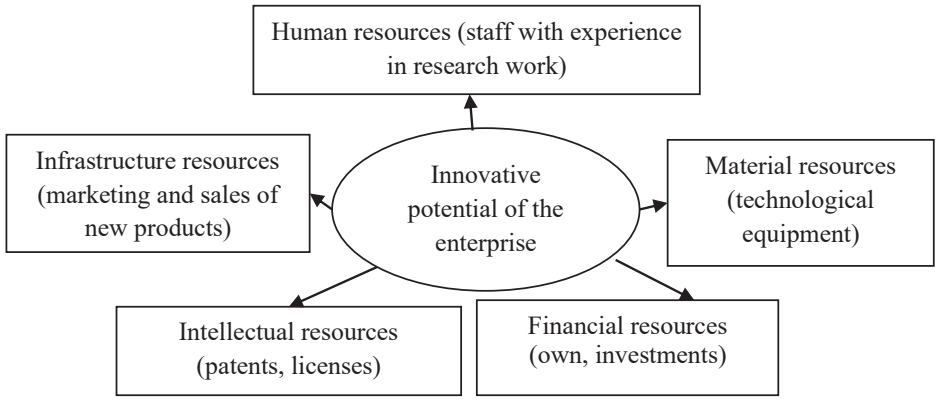

Figure 1. Resources of the innovative potential of the organization

Sources: Authoring.

In order for the innovation to be successful, the design thinking methodology is used, which increases the predictability of success, speed of market penetration and reduction of investment risks in the innovation. Design Thinking – a linear follow-up of traditional planning approaches that use the designer's sensitivity and methods to meet the needs of people in order to, that technologically implemented and which lifelong business strategy can convert into customer value and market opportunities (Brown, 2008). Design thinking is an approach to solving more or less any task that is based on the methodology of solution design with a focus on human consumers, as a final consumer of a product or service. This term has been actively used in business since 1991, when the Kell brothers from Stanford University adapted the methodology and started the design consulting company IDEO. The basis of design thinking is a nonlinear process, which consists of 5 stages: empathy (examination of the environment of the project), problem identification, idea generation, testing and implementation. Thus, under the conditions of business modernization, design thinking is the most successful technique for creating innovation not only for all the well-known companies such as Facebook, Google, Apple, Procter&Gamble, Samsung, IBM, IKEA, but also for developing a startup (Gubinsky, 2021). The process of design thinking is a set of specific criteria. The main thing in this methodology is to do something, try to do something, gain experience and do it again. This method opens the tools with which you can start to think in an innovative way (Zubkova, 2018).

In the last decade startups have become an integral part of innovative modernization of many highly developed countries. A large number of startups are implemented and help people. But despite the fact that they are so effective, startups in most cases remain without adequate support and funding and are implemented at their own risk.

During the COVID-19 pandemic, the number of startups developing software rapidly increased. The term "startup" itself appeared in Forbes magazine in 1976 and Business Week in 1977 to designate companies with short operational histories. Approximately 100 million startups are launched frequently, and more than 1.35 million of these are startups associated with new technological solutions, unfortunately not all of which are implemented due to risk. The most privy to the investment climate can be abducted by IT technologies and piece-meal intellectuals. It is noteworthy that one of the most dynamic sectors is the sphere of financial services. Time is money, and startups are able to spare this valuable resource and conduct financial operations anywhere in the world in a few seconds, for the value of gold (What insurance startups exist and how they can be useful, 2021).

"Startup" means "to launch" in English. This type of business, which did not exist before and directions on receiving income by means of realization of a new idea. In our country this area is underdeveloped, but promising.

Today, one of the main organizations engaged in the development of startups in our country is the state Ukrainian Startup Fund. It was initiated by the initiative of the Ukrainian Government and was registered in 2018. The fund began its active operations only on 11 June 2019. Its mission is to support the creation and development of early-stage technology startups (pre-seed and seed) in order to increase their global competitiveness. The budget of the Fund is formed at the expense of the state funds, which were set aside for its work. Moreover, the sources of funding can be charitable and voluntary contributions from legal entities and individuals, foreign, international organizations and donors. At the end of January 2021 the Ukrainian Startup Fund registered about 3,700 applications, approximately 229 startups were funded for UAH 160 million (Ukrainian Startup Fund, 2021).

Unfortunately, there are many barriers in the Ukrainian market that hinder the successful existence of startups and traditional businesses. The tax system and insufficient legislation are negative risks that hinder the development of projects. Among the positive features of Ukrainian business environment we can mention low competition in different spheres of activity. Even IT sphere, which makes up the left part of all business projects of Ukraine, is freely accessible in comparison with foreign countries. That is why the way for implementation of own projects is open for everyone. Development of innovative business environment, start-ups, traditional business in Ukraine stimulates scientific and technological progress and promotes implementation of new world achievements, that is why it is necessary to develop this sphere of activity (Nagorsky, 2017).

Thus, before you start a startup, it is necessary to create an optimal business plan for its development. A detailed plan of business activities – a card that will help you find an investor or persuade the bank to lend and insure. Design Thinking has emerged as an approach to solve business problems by thinking like a designer to leverage creativity and innovation (Bongiovanni, Louis, 2021). Using the methodology of design thinking, innovative startups gain additional competitive advantages and have more chances for success due to the growth of customer loyalty.

We also support the opinion of scientists that in today's global conditions of state development it is necessary to evaluate the impact of information management on the regulation of economic systems and their condition. The search for innovative approaches to improving the areas of regulation and measures of influence on the development of systems, in particular financial, environmental, security, etc., was sought. So, the proof is implemented through the use of a set of innovative models, in particular, those that are theoretical and practical basis for the possibility of their use to solve the universal problem of modeling cause-effect processes to assess the impact of decisions in any regulation of business processes (Bacho et al., 2019).

It is very important to form innovative thinking skills in students, so we conducted a survey among fourth-year students of the Educational and Scientific Institute of Economics, Management and International Business, we conducted an opinion poll using Google-form on the topic: "Design thinking as a planning strategy for a business startup". The study involved 330 participants, only 100 of whom or 30.3% were familiar with the concept of "design thinking", and 69.7% of the participants (230 people) were not familiar with it. a student study was chosen to study the design-thinking methodology. This sample is representative and the results can be summarized for all student managers who are the most active participants in the startup movement in Ukraine.

It was found that the most popular meaning of the term "startup" is the definition that it is a commercial project that is based on any idea and requires funding for its development. Almost half of those surveyed answered this way, 45.5% to be exact. Also 36.4% (120 respondents) said that all three definitions are true.

The survey also revealed that 150 people believe that a startup can only be started with an idea and consider it the most important way to start a startup. But another 51.5% or 170 people believe that a startup can be started not only with an idea, but also with technology and with a strong desire. But there are also 9.1% (30 individuals) who believe that a startup can be started based only on motivation.

When asked "what were the most important criteria for launching a startup", most responses were related to the business plan, followed by team and money. The middle answer was related to connections and risk. This means that most believe that the most important thing in a startup is a business plan, which will make launching a startup easy (Fig. 2).

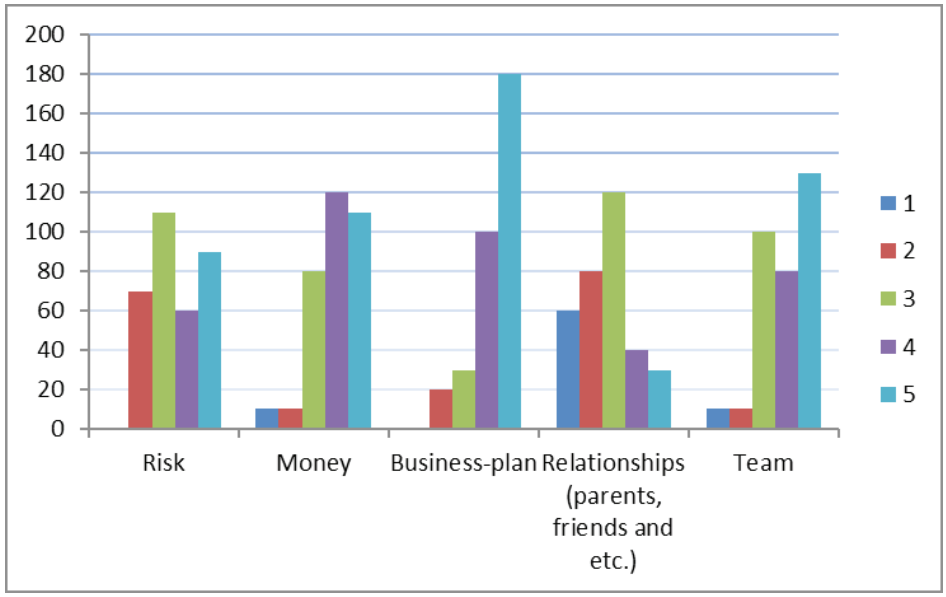

Figure 2. The importance of startup tools

Sources: on the basis of the conducted opinion poll on the topic: "Design thinking as a planning strategy for a business startup".

Regarding the definition of design thinking, 57.6% of respondents defined it as a search of ideas in order to provide business development as a method of overcoming current issues and matching internal capabilities, external expectations and needs. Other 15.2% define design thinking as a methodology related to the final research product, team work for achieving strategical and tactical goals of research. 9.1% of participants consider design thinking as an approach that supports a lot of business tasks, while other 6.1% stated that design thinking is a term which means «creating» or «constructing». On the other hand, 24.2% of respondents answered that all definitions mentioned above are correct for describing design thinking.

The survey also included question about design thinking stage in business development. According to the survey, 43.8% of participants are sure that design thinking is the first stage of business development, followed by a business plan and, finally, a start-up. The other 3 groups of participants, 18.8% each, believe that the stages of business development can be as follows: design thinking – start-up – business plan; business plan – design thinking – start-up; start-up – design thinking – business plan (Fig. 3).

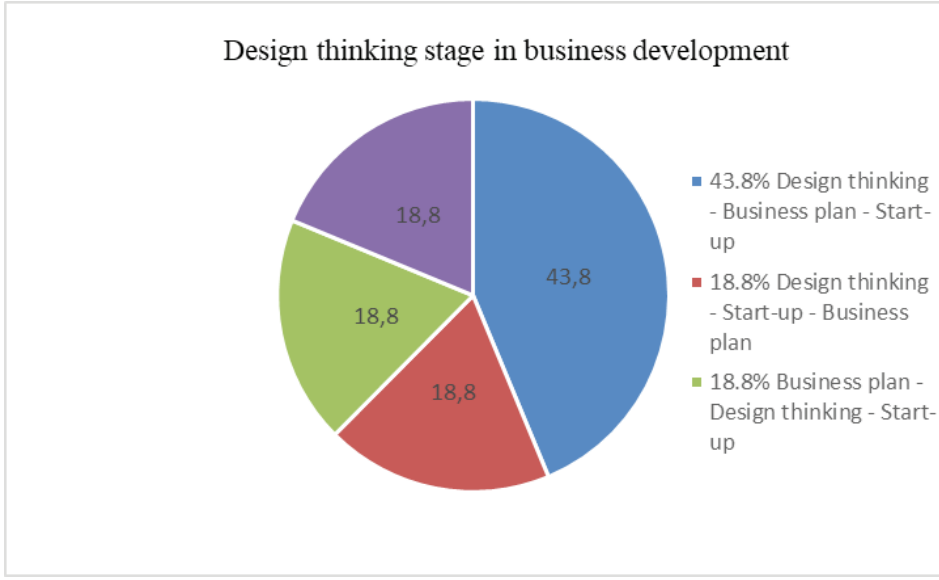

Figure 3. Design thinking stage in business development according to the survey

Sources: on the basis of the conducted opinion poll on the topic: "Design thinking as a planning strategy for a business startup".

Regarding the question about the sequence of design thinking process 21.9% of participants answered that it should look as follows: empathy, idea, prototyping, testing and definition. Another 21.9% are sure that idea comes first, then prototyping, testing, definition, empathy. 25% of respondents stated that design thinking starts with the definition, followed by idea, empathy, prototyping ang testing at the end.

As a result of the survey, it was also discovered that design thinking is considered by 59.4% of participants as almost successful methodology for creating innovations and as the most successful methodology by 28.1%. Other 9.4% state that design thinking can not be considered as creation innovations methodology at all.

The direction of changes in value chains concerning products and services that are subject to strong integration processes will be determined by client needs. Such entities will be better adapted to their individual needs, which is going to made possible by data analytics and application of innovative solutions aimed at personalisation of the offer. Start-ups operating as part of Industry 4.0 play an ever more important role in the process of creating and implementing innovative solutions (Pukala, 2019).

Conclusions

Nowadays, design thinking is a producer of novelty, a generator of new discoveries and ideas, able to productively solve complex problems and makes sense only if it is transformed into a business plan and implemented in real life. The study found that

today, design thinking is the driving force of modernization and innovation, and should be considered a key link from the business plan to the startup.

The design thinking methodology serves as an effective tool for startup business planning and is suitable for use in current business projects. It will also be relevant for identifying and resolving the problems of all project stakeholders, identifying the target audience, reducing risks and approving management decisions.

The scientific novelty of the work lies in the study of the relationship between design thinking, business planning and startup idea. It is reported that the design thinking methodology itself acts as a toolkit of business planning for successful implementation of innovation, which increases the viability of success, the speed of market entry and reduction of investment risks in innovation.

Practical Significance. It is proved that the methodology of design thinking is a key line from planning a business plan to launching a startup, properly built methodology of design thinking contributes to the development and strengthening of market positions, helps to achieve a unified and holistic strategy for a business plan.

Thus, before you start a startup, you need to make an optimal business plan for its development. A detailed business plan is a card that will help you find an investor or persuade the bank to give a loan and protect yourself. Applying design thinking methodology, innovative startups gain additional competitive advantages and more chances for success at the expense of increasing the attractiveness of clients. During the development of the startup and its business planning, innovations play a crucial role. Innovation and design thinking together with financing are the main factors for the development of a successful startup.

Abstrakt

Design thinking jako strategia planowania biznesu startupu

W artykule omówiono specyfikę sukcesu startupu oraz wpływ design thinking, który opiera się na metodologii projektowania rozwiązań z naciskiem na człowieka-konsumenta, jako końcowego użytkownika produktu lub usługi. Startup jest pierwszym niezbędnym etapem cyklu życia innowacji. Aby innowacja odniosła sukces, stosuje się metodologię design thinking, która zwiększa przewidywalność sukcesu, szybkość wejścia na rynek oraz zmniejsza ryzyko inwestycyjne w innowację. Aktywnie działający system wsparcia dla start-upów jest podstawą aktywnej działalności innowacyjnej, zwiększania ilości innowacyjnych produktów, eksportu produktów high-tech. Rozwój projektów typu startup jest szeroko rozpowszechniony za granicą. Stwierdzono, że cechą charakterystyczną tych udanych projektów jest to, że przynoszą one wysokie zyski, a także podnoszą poziom gospodarki w swoich krajach. Stwierdzono, że ważne jest, aby zbadać kwestię udanego uruchomienia i wdrożenia startupów poprzez struktury, które przyczyniają się do ich rozwoju. Ponadto, oczywiste jest, że design thinking jest najbardziej skuteczną metodologią tworzenia innowacji, która jest aktywnie wykorzystywana przez różne światowej sławy firmy. Niniejszy artykuł formułuje model metodologiczny design thinking dla głównych cech sukcesu

startupów. Wdrożenie tego modelu obejmuje następujące kroki: uogólnienie koncepcji „startupu", uogólnienie koncepcji „myślenia projektowego", identyfikację etapów cyklu życia startupu, systematyzację kluczowych komponentów pomyślnie zrealizowanych startupów oraz analizę zdolności myślenia projektowego startupu.

Słowa kluczowe: design thinking, startup, cykl życia startupu, innowacyjność

Abstract

Design thinking as a start-up business planning strategy

This article discusses the peculiarities of startup success and the influence of design thinking, which is based on the methodology of solution design with a focus on human consumers, as the end user of a product or service. The startup is the first necessary stage of the life cycle of innovation. In order for the innovation to be successful, the design thinking methodology is used, which increases the predictability of success, speed of market entry and reduction of investment risks in the innovation. Actively working system of support for start-ups is the basis of active innovation activities, increasing the volume of innovative products, export of high-tech products. Development of startup projects is widespread abroad. It was found that the peculiarity of these successful projects is that they bring high profits, as well as raise the level of the economy in their countries. It is stated that it is important to study the issue of successful launch and implementation of startups through the structures that contribute to their development. Moreover, it is obvious that design thinking is the most successful methodology for creating innovations, which is actively used by various world-renowned companies. This article formulates a methodological model of design thinking for the main characteristics of startup success. The implementation of this model includes the following steps: generalization of the "startup" concept, generalization of the "design thinking" concept, identification of the stages of the startup life cycle, systematization of the key components of successfully realized startups, and analysis of the design thinking capabilities of the startup.

Keywords: design thinking, startup, startup life cycle, innovation

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