FEATURES OF THE DEVELOPMENT OF SOCIAL PROJECTS USING INFORMATION TECHNOLOGY

O.O. Chernyshov, T.V. Filatova

Odesa National Polytechnic University,
1, Shevchenko Ave., Odesa, 65044, Ukraine; e-mail: oleksii.chernyshov@outlook.com, filatova.321@gmail.com

The development of IT technologies in the social sphere has led to the widespread use of new developments to ensure the more efficient functioning of existing systems. Internet of things, machine learning, online education, Internet technologies, mobile applications, cybersecurity and other areas of information technology are widely used in modern projects aimed at providing services to consumers, helping those in need, advertising and other activities. The application of new ideas, technologies and approaches can be realized thanks to start-up projects, as they have easy scalability, great automation and focus on the end user, and do not require large investments and a large number of staff. Thus, the idea is subject to verification by the target audience of the product, minimizing the necessary development costs, which allows us to test the success of a new idea, concept, technology, methodology, etc. without large losses. This article describes and accumulates features of project development (start-ups) of social orientation using information technologies. The described methodology reflects the stage-by-stage formation and development of a start-up that will allow the business to select and create a product successfully implemented, implemented and bringing the effectiveness for which it was created. The article considers various ways of developing projects and building strategies, describes the limitations and advantages of existing approaches, business models, methodologies. Initially, it is necessary to assemble a team and determine the idea, available resources for the developed IT product, and, based on this, a strategy for its implementation and improvement. The project takes its place in the market, when satisfying customer needs better than the others in any aspects. The result that the start-up project seeks to become successful is to match the product and market fit, solve the customer problem, take into account the competitive environment (experienced possession of segmentation, positioning and product targeting), improve the problem / situation after launch project.

Key words: project; product; management; social project; IT.

Introduction

In the process of development of the social sphere, social projects have become an important aspect in solving various kinds of problems. In our time, with the application of information technology, new models are opening up to create and develop public innovations. New approaches to the creation of social projects provide significant hanging of efficiency through the use of information technologies that allow to automate existing processes, reduce costs and open new ways for financing. New approaches differ from established ones, they have many advantages over standard ones. Their use requires expertise in several areas, which complicates the creation of similar projects.

In order to determine the optimal approach to the creation of such a project, it is necessary to analyze and determine the stages of the development of existing projects that have gone from an idea to implementation.

Information technology in our time can significantly improve people's lives. By providing new approaches to social projects, it is possible to significantly improve their effectiveness and reach a new level of social attraction of citizens.

A social project is an implementation of an idea that is useful to society: countries, cities, people, etc. A social project in the field of information technology involves the

development of an information system, a software product that has a characteristic social value.

The definition of the social project, the concept of the implementation of projects in the field of information technology are considered and presented by various authors and researchers [1]. In addition, great importance is given to the universal principles of consideration or creation of any projects in various spheres of life in which a unified methodology can be applied. Analyzing existing projects in the field of social orientation, we can come to the conclusion that at the moment the development of public projects in the field of information technologies is topical. The purpose of their creation is not only to help the surrounding world in certain tasks, but also to provide services in this area [2].

Main part

The development of social projects unites the creation of both a software product and a social innovation. The complexity lies in the need for an integrated approach, which must take into account many aspects of the project. You need to take into account the various parameters of the idea: subject area, target audience, business model, team and available initial resources.

As an example of an IT social project, the article describes the Helpy project, which passed from idea to implementation in the framework of the projects "Programmer 2018" and "Social IT" and represents a volunteer platform [3].

Each project consists of many aspects. Let's highlight the main aspects of the important when creating a new project:

- the idea is the main concept of a future project; the idea should clearly define what tasks the future project will perform, for whom the product is developed, what competitors are on the market and what advantages this product will have in comparison with others;

- the team is a group of like-minded people; it is important that the team members are interested in the project objective and actively participate in its development, and also have the necessary competencies;

- the development strategy is a project development plan that includes planning of the economic, organizational, marketing, technical and technological aspects of the project;

- initial resources are all human and man-made resources; depending on the existing requirements of the project and available resources, the business model is determined.

The team is an important part of every project. Social projects are built around people interested in the idea of the project. Team members should specialize in various aspects of the project and have sufficient experience to fulfill their role in the team. Team building is an important stage in the creation of the project, and in cases where the final requirements for the project do not exist, the first stage in the creation of any social project is the definition of the team. In actual conditions, the initial concept of the project must be formed before the team is assembled, as this allows to form a team of like-minded people with the necessary experience and knowledge to solve the problem posed. To determine the actual topic, it is necessary to make a list of possible ideas for the future development of the project, for example, during a brainstorming session. Further the evaluation criteria are determined, which reflect the goals that enthusiasts set for themselves. For example, they can include the relevance, sociality, financial prospects and personal preferences of team members. As a result, the ideas with the maximum indicators are selected and, during the discussion, the final idea of the project is selected from them. In table 1 shows a layout that allows you to determine expertly the most significant project. Such a technique can be considered in different subject areas [2].

Table 1.

EXPERT LAYOUT OF PROJECT SELECTION

Title	Criteration № 1	Criteration № 2	…	Score by criteration №1	Score by criteration №2	Subjective assessment (max 5)				Total
						Name №1	Name №2	Name №3	…	
Title a	Criteration a1	Criteration a2	…	score	score	score	score	score		
Title b	Criteration b1	Criteration b2	…	score	score	score	score	score		
...	...	...	…	...	...	...	...	...	...	...

It is worth noting that the total number of points is determined by the formula of the amount by which the ideas of the projects are subsequently ranked. The team leader, or appointed trustee, determines the evaluation criteria and evaluates these criteria. In addition to evaluation criteria, it is possible to take into account personal estimates of the team, if the number of its members is small, then the responsible person must determine how many points are allocated for each criterion and for each participant. As an example of a sorted idea table, the Helpy project table is shown (see table 2). When the idea is chosen, all the forces go to think through its concept, it includes: defining the target audience, business model, technical implementation, competitive analysis and strategy, which determines scalability, implies the automation of the key activities of the project and the immediate plans of the project. To help in this process, it is usually resorted to the support of mentors, people with experience in a particular area related to product development, including technical implementation, monetization, design, marketing, etc.

Table 2.

SORTED PROJECT IDEAS TABLE OF HELPY

Title	Description	Business model	Social significance	Business model	Subjective assessment (max 5)				Total
					A	C	B	K	
A Volunteer Platform	Our clients are volunteers ...	Interest from …	10	8	5	5	5	5	38
A Assistant Deaf	Application helping deaf. It …	Purchase an app…	10	7	5	4	5	3	34
A Labor market analyst	Market analysis service	Collaborations…	9	7	5	5	4	3	33
K Finding the nearest help	Search for volunteers…	Transaction Percentage	10	7	4	3	4	4	32
B Service rental of equipment	The service that facilitates…	Interest from rent	7	7	5	2	5	4	30
A Marshrut Tracker	Application development…	Monthly subscription for customers	7	8	4	5	4	2	30
A Service evaluation of doctors and honey. institutions	A rating platform from …	Advertising	8	6	5	3	4	3	29
B Job search service for students	Search Offer Platform	Advertising…	7	7	5	2	5	3	29
A Scientific nutrition	Selection of diets according…	Subscription (no ads, offline)	8	9	4	5	1	2	29

The target audience helps to allocate the necessary functionality of the project, which is determined on the basis of the needs of future customers, also a good understanding of the consumer allows to determine the correct business model, technical implementation and think over the development strategy. Competitive analysis makes it possible to highlight more clearly the weak and strong sides of the market, which clearly shows which elements of the project need to be improved. For competitive analysis, it is sufficient to identify market leaders and their key strengths and weaknesses. An example of a competitive analysis of the proposed Helpy project is shown in table 3.

Table 3.

COMPETITIVE ANALYSIS OF THE IT PROJECT HELPY.

	Communication without intermediaries	Broad audience reach	Publicity of profiles
Helpy	+	+	+
IT-Volunteer	+	-	–
Ukrainian Volunteer Service	–	+	–

The business model of a project can be based on one of the following principles (Fig. 1):

- the non-commercial approach [4, Article 1] is an approach based on the field of volunteerism, where all expenses are covered by charity; is often used in classical social projects, but makes the project highly dependent on non-permanent resources and does not provide adequate reliability and sufficient resources to support the technology project;

- the nonprofit approach involving grants and / or funding [4, Article 6] - the approach involves ensuring project costs through grants or investments from stakeholders; allows to develop the project under conditions established by the investor, and based on the resources provided; the investor provides support, but also can set a lot of constraints that hinder the growth of the project, or incline its development into a profitable investor channel;

- the commercial approach [5] - an approach based on the provision of paid services and guided by the principles of supply and demand; this approach is able to properly provide the required technology project, but requires a certain initial capital, which is determined by the costs of developing a client product, and experience in creating a business;

- the commercial approach involving grants and / or financing [5] is a commercial approach based on attracting investors for project development when there is a shortage of resources; often this approach provides insignificant control over the organization's processes on the part of investors; an investor can provide mentoring assistance.

The main stage is the development of the final product. This is a complex process that is based on all the previous stages and requires proper knowledge of technology, as well as the skills and experience of software design and resource management of the company. This stage can be radically different depending on the chosen idea, business model, team and available financial resources.

The use of information technology involves a variety of design and development options. The main thing is that it's convenient, as accessible as possible and, if possible, free of charge.
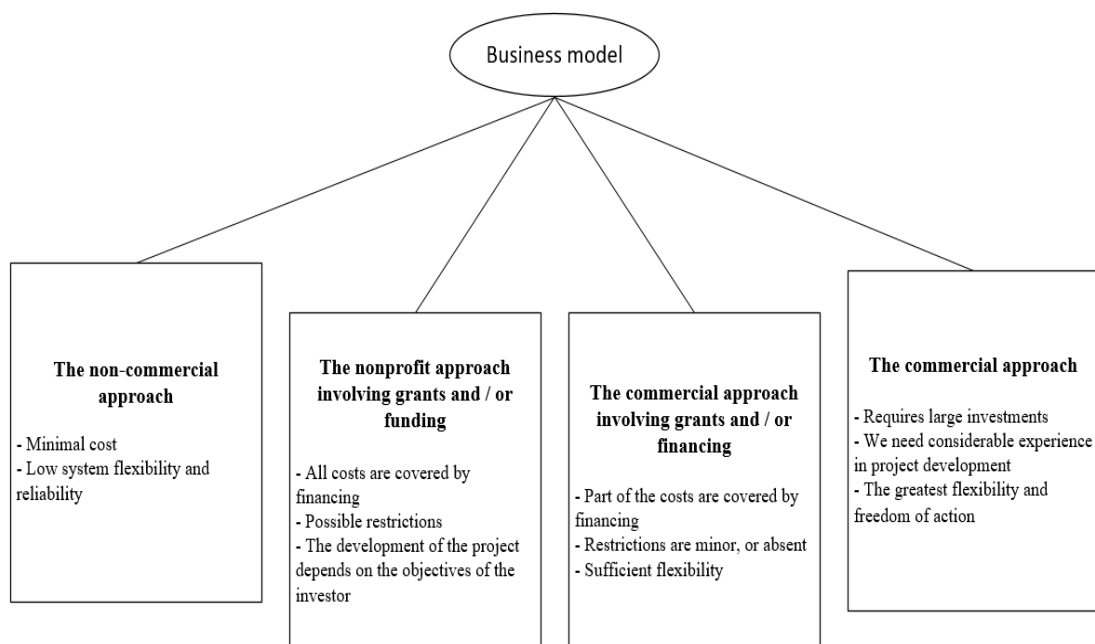
Fig. 1. The business model principles

The described ideas and possibilities for designing and implementing social projects are presented on the example of a successfully implemented project, approved by experts and specialists of the given subject area.

Conclusion

The result of the description of the presented methodology can be a public platform for volunteers and organizers Helpy, which went through all the described stages and was recognized by experts in the field of IT. Developed as part of the Social IT project, system Helpy moved from idea to implementation, faced with all the steps described in the article. The project is guided by the commercial principle of modern start-ups and continues to develop.

To reduce the risks of the project - it is necessary to choose the right approach to its development, based on the many complex factors described in the article.

The development of a social project using information technology is complex. It combines approaches to creating both a software product and social innovations. Such projects should have all the advantages of approaches to new technological projects, have easy scalability and flexibility of the system, apply new types of business models and approaches to the development and development of new software products in the consumer market.

References

1. Palchuk, V. Social Information Communications and the Development of the Activity of Modern Information Centers. Naukovi pratsi Natsionalnoi biblioteky Ukrainy imeni V. I. Vernadskoho – Transactions of V. I. Vernadsky National Library of Ukraine / V. Palchuk. – Kyiv, 2017. – Pp. 74-91 [in Ukrainian].
2. Filatova, T.V. Methodology for the presentation of social projects in the IT industry / T.V Filatova, O.O. Chernyshov // Materials of III International Conference Computer Algebra and

Information Technologies CAIT-Odessa-2018, 20th, to August, 25th, 2018, Odessa I.I. Mechnikov National University. – Pp. 85-87 [in Russian].

3. The Boris Kolesnikov Foundation. (2018). "The result of the beneficent project "Programmer 2018" Mode of access: http://kolesnikovfund.org/ru/news/1652.

4. Zakon Ukrainy pro blagodiynu diyalnist ta blagodiyni jhganizatcii vid 06.11.2016 Mode of access: http://zakon3.rada.gov.ua/laws/show/5073-17

5. Ignatovich, N. Zarubizhniy dosvid rozvitku sotsialnogo pidpriemnitstva. VIsnik Kiivskogo natsionalnogo universitetu im. Tarasa Shevchenka. Seriya: Ekonomika / N. Ignatovich, V. Gura, 2014. - vol. 165.

ОСОБЛИВОСТІ РОЗВИТКУ СОЦІАЛЬНИХ ПРОЕКТІВ З ВИКОРИСТАННЯМ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ

О.О. Чернишов, Т.В. Філатова

Одеський національний політехнічний університет,
просп. Шевченка, 1, Одеса, 65044, Україна; e-mail: filatova.321@gmail.com,
oleksii.chernyshov@outlook.com

Розвиток IT-технологій у соціальній сфері призвело до широкого використання нових подій для забезпечення більш ефективного функціонування існуючих систем. Інтернет речі, машинне навчання, онлайнове навчання, Інтернет-технології, мобільні додатки, кібербезпека та інші сфери інформаційних технологій широко використовуються в сучасних проектах, спрямованих на надання послуг споживачам, допомагаючи тим, хто потребує, рекламу та інші види діяльності. Застосування нових ідей, технологій та підходів може бути реалізоване завдяки стартап проектам, оскільки вони мають просту масштабованість, велику автоматизацію та зосередженість на кінцевому користувачеві, а також не вимагають великих інвестицій та великої кількості співробітників. Таким чином, ця ідея підлягає перевірці цільовою аудиторією продукту, мінімізуючи необхідні витрати на розробку, що дозволяє нам протестувати успіх нової ідеї, концепції, технології, методології тощо без значних втрат. Ця стаття описує та акумулює особливості розробки проектів (запусків) соціальної спрямованості за допомогою інформаційних технологій. Описана методологія відображає поетапне формування та розвиток стартап проектів, що дозволить організації вибирати та створювати продукт, який успішно впроваджується, використовується та забезпечує ефективність, для якої вона була створена. У статті розглядаються різні шляхи розробки проектів та побудови стратегій, описуються обмеження та переваги існуючих підходів, бізнес-моделей, методологій. Спочатку необхідно зібрати команду та визначити ідею, наявні ресурси для розробленого IT-продукту та, відповідно, стратегію її реалізації та вдосконалення. Проект займає своє місце на ринку, коли задовольняє потреби клієнтів краще, ніж інші в будь-яких аспектах. Результат, при якому стартап проект прагне стати успішним, полягає у відповідності продукту та ринковому потенціалу, вирішенню проблем клієнта, врахуванню конкурентного середовища (досвіду володіння сегментацією, позиціонуванню та націлюванню на продукти), поліпшенню проблеми / ситуації після запуску проекту.

Ключові слова: проект; соціальний проект; управління; програмний продукт; IT - область.

ОСОБЕННОСТИ РАЗВИТИЯ СОЦИАЛЬНЫХ ПРОЕКТОВ С ИСПОЛЬЗОВАНИЕМ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ

А.А. Чернышов, Т.В. Филатова

Одесский национальний политехнічний университет,
просп. Шевченко, 1, Одесса, 65044, Украина; e-mail: filatova.321@gmail.com,
oleksii.chernyshov@outlook.com

Развитие ИТ-технологий в социальной сфере привело к широкому использованию новых событий для обеспечения более эффективного функционирования существующих систем. Интернет продукты, машинное обучение, обучение через интернет-технологии, мобильные приложения, кибербезопасность и другие сферы информационных технологий широко используются в современных проектах, направленных на предоставление услуг потребителям, помогая тем, кто нуждается, в рекламе и других видах деятельности. Применение новых идей, технологий и подходов может быть реализовано благодаря стартап проектам, поскольку они имеют простую масштабируемость, большую автоматизацию и сосредоточенность на конечном пользователе, а также не требуют больших инвестиций и большого количества сотрудников. Таким образом, эта идея подлежит проверке целевой аудиторией продукта, минимизируя необходимые расходы на разработку, что позволяет протестировать успех новой идеи, концепции, технологии, методологии и т.п. без значительных потерь. Эта статья описывает и аккумулирует особенности разработки проектов (запусков) социальной направленности с помощью информационных технологий. Описанная методология отражает поэтапное формирование и развитие стартап проектов, позволит организации выбирать и создавать продукт, который успешно внедряется, используется и обеспечивает эффективность, для которой она была создана. В статье рассматриваются различные пути разработки проектов и построения стратегий, описываются ограничения и преимущества существующих подходов, бизнес-моделей, методологий. Сначала необходимо собрать команду и определить идею, имеющиеся ресурсы для разработанного ИТ-продукта и, соответственно, стратегию ее реализации и совершенствования. Проект занимает свое место на рынке, когда удовлетворяет потребности клиентов лучше, чем другие в любых аспектах. Результат, при котором стартап проект стремится стать успешным, заключается в соответствии продукта и рыночного потенциала, решению проблем клиента, учету конкурентной среды (опыта владения сегментацией, позиционированию и нацеливанию на продукты), улучшению проблемы /ситуации после запуска проекта.

Ключевые слова: проект; социальный проект; управление; программный продукт; IT-область.