



KAPITEL 8 / CHAPTER 8⁸

FEATURES OF THE DEVELOPMENT OF STARTUPS IN THE IT INDUSTRY

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Introduction

Today, every day a large number of various startups are registered in the country, many of which are subsequently closed, while others achieve a positive result. Due to the great competition, it is not easy to succeed with a new entrepreneurial idea, but it is possible. A developer or entrepreneur who decides to launch a startup must understand his responsibility for every action. If there is support, it's good, but in any case, a specialist should make decisions. Specialists, assistants, and even investors, not seeing rapid progress, can leave an entrepreneur who believes in his business idea. That is why, having decided to open a startup, you need to learn how to take into account its features.

8.1. Development of startups to improve the efficiency of the enterprise

Confidence in your idea is very important for any startup, but only a technical genius is not enough to implement it. A developer can be arbitrarily educated, technically savvy, but if you don't know the laws of the market and don't know how to work with a client, then most likely you won't be able to overcome the first stage of a startup's life – from idea to initial financing. Therefore, now, if we talk about the IT sphere, the main task is to teach the geniuses of science and technology the basics of doing business and understanding the importance of this component of a startup. In the IT industry, such things are done, for example, by a start-up school at universities, which accepts everyone - from schoolchildren to pensioners - and works in a constant brainstorming mode, when ideas are tested in a competitive mode of group competitions. At the same time, schools work with investors who are looking for the best projects of startup school students. Here they usually help to make the first prototype of the product - every year universities organize the Sikorsky Challenge competition, the winners of which receive project funding (Business, 2022; On the way, 2021).

It must be understood that a startup involves the creation of something new,

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original and unusual. At the same time, startups do not always appear at a time when established enterprises can develop gradually, slowly, for which you also need to be prepared. If you see real progress, albeit not as powerful as initially expected, then you need to continue working in this direction, you need to make efforts to improve the efficiency of the enterprise. The effectiveness of an IT business largely depends on the team that the entrepreneur will recruit to implement the business plan. In the overwhelming majority of cases, a powerful impetus is needed to implement what has been conceived, which involves well-coordinated work and great dedication of each team member. You have to work a lot more than you did before to make a startup work.

At the time of the decision to launch a startup, you need to come to terms with the fact that most of the money you earn will have to be invested in the development of this business. This is the only way to achieve serious success with your startup. It is necessary to invest most of the profit in increasing production, in modernizing work, in advertising in order to continue to actively develop the business. To open a startup, you need to be able to take risks. Only those who know how to take risks can implement a new, unique business project. In other words, a businessman must be a certain kind of adventurer in order to achieve the desired success.

A startup is considered to be a young business with the effect of development and quick profit. The main advantage of an IT startup is doing what you love. In fact, by developing a project, a person develops an idea that he embodies from scratch. Any startup is new, both for a startup and for consumers. The lack of framework in the work on the project concerns both the work schedule, which is flexible in a startup (a distinctive feature of all IT), and the general idea, there are no framework for its implementation.

A startup is a risk, especially if we talk about the option when a person, having an idea, leaves everything, rushes headlong into embodiment. After all, there are no guarantees of success, because competition in the IT field will not give you time to relax or take a break. Therefore, experienced start-ups are advised to bring the idea closer to the final form, test it under the necessary conditions, and only then, having a foundation for the presentation of the project, deal exclusively with it.

8.2. Features of creating startups with artificial intelligence

No matter how promising, at first glance, the idea, it is important to stand confidently on your feet, having a constant income. Today, startups with artificial intelligence (AI) are most relevant. According to many experts, artificial intelligence



is the future of the world. With the advent of chatbots, voice assistants, and AI-enabled self-driving cars, it's hard to argue. Now that you have a chance to benefit from this latest technology, there are a number of things to clarify. The hottest AI trends for SMBs. A few years ago, artificial intelligence was a buzzword in the technology community. Everyone wanted to take part in the action, but in fact no one knew what to do with it. Things have changed a lot because the industry now has a much better understanding of what AI can and cannot do. With that said, some of the most impactful AI-based startups in the recent past include: language recognition and translation; preparation of tax documents; knowledge from crowdsourcing; stock forecast (Business, 2022).

Now AI is mainly used in applications that require data and computers to recognize it, such as CRM systems. On the contrary, human activity can be repetitive and is likely to become more so as computers can eventually outperform humans at just about any task. This is the job of the future – automating repetitive manual work. Consider the necessary conditions for creating an AI startup. An AI startup needs the right team to launch successfully, including programmers, software engineers, data scientist, marketing manager, and others. It's like any business venture, where initial success depends a lot on hiring the right people.

The most important roles that you will need to fill immediately are for basic data science functions, and prototyping will require at least two to three people. Additional roles for AI startups include Product Design and UX Designer, Product Managers, User Experience Experts, and other marketing support staff. Once you have an AI platform in place, marketing will be essential, but you need a good product to go to market. This means that in the beginning you should focus on hiring experienced and knowledgeable data scientists and engineers to train your AI platform for interpretation, learning and improving its performance over time (Business, 2022; On the way, 2021).

An important issue when building startups is securing funding for your AI startup. A startup with artificial intelligence requires a lot of money. You will need a lot more business funding than your average software startup. You need to not only create a product that attracts users and customers, but also create a service that will help them realize it.

When it comes to funding AI startups, there are several options: bootstrap approach (self-financing); interaction with venture investors; getting a loan for a small business; start with a small pilot project. Self-financing gives you complete control over your firm. On the other hand, in rare cases, this may expose the initiator to the greatest financial danger. If we talk about interaction with venture investors, then they may be interested in supporting the firm in exchange for a seat on the board of directors



or a share in the company. A careful company strategy may be required to secure financial investments.

When it comes to obtaining a loan for a small business, one can consider that a loan can be beneficial if there is not enough money, but it is necessary to take full control of the IT firm. Prepare a comprehensive business strategy for existing banks and credit unions, including projected costs and financial projections. It is possible to start with a small pilot project, before investing a large amount in your company's strategy, you need to start with a pilot project to see if it is possible to continue moving in the right direction or make some adjustments to increase your chances of success.

Usually, a startup school works like this: first there are short lectures, then students work in a constant mode of brainstorming and competition. Each lesson is a vote for the best idea and its promotion. Then the collectively selected product becomes a model, on the basis of which all stages of startup development are analyzed, step by step. Next, the students of the IT start-up school go “into the field”: they work with potential clients, after which they report on their successes and vote on who was the best. Thus, the best ideas and their authors are identified. Many investors, business angels come to classes and look at the ideas of students (Development, 2022).

Specialists who are engaged in acceleration, that is, the promotion of startups, strongly advise you to work on the marketability of the product already at the stage of the initial idea. For our country, this still seems inappropriate because of the outdated idea of a profitable business, but the market dictates its own laws. Startups always start with a small team, so networking and referrals are important. This way it will be easier to assemble a team of people you trust. The scheme of work in each company and team is developed independently. For some startups, rigid vertical management is suitable (and this is normal), for some, on the contrary, it is important that employees develop horizontally and make decisions together. In any case, there should be no chaos: someone should be responsible for important areas.

A startup, like any other new business, is always a risk. For a project to be successful, many factors must be taken into account. However, not everyone is ready for this. Foldable smartphones, dual-screen laptops and smart headphones: the expected gadgets of 2021. In particular, American analysts from CB Insights systematically interview the leaders of unsuccessful startups. It turned out that the main reason for the failure was that no one needed their product or service. After all, many teams did not analyze their market. And they solved the problem that they were interested in dealing with. Here are some of the things they are usually responsible for: developing a technical vision and roadmap for your startup; building a technology stack that will meet the specific needs of your product; description of requirements for



developers and screening of candidates for technical positions; distribution of roles in a startup and management of a team of developers; tell developers about the technical side of your startup (Development, 2022; How,2022).

Outsourcing development will almost always be the right choice in the early stages. However, there are a few things you need to know before you find team members for your startup in the outside world. First of all, figure out what you want from your developer. Even if you manage to find a brilliant partner, you still have to work. You will need to explain your business vision to them, describe the key features of the intended product, and provide inputs such as design and research findings. In other words, you need to be prepared to present your idea to a developer. Generally speaking, you need to put together a team that covers the following areas: business analysis; user Interface Design (UX); quality assurance (QA, also known as testing); devOps (Setting up and maintaining a shared software infrastructure); internal development (creating software and setting up the rules for its operation). An experienced technical director will help you find a developer, preferably from outside. This developer will need to use appropriate technical knowledge as well as startup-friendly traits and soft skills (Development, 2022; How,2022).

In the process of developing a startup, you will have a lot of questions that you have not thought about before. Answers to many of them can be obtained only after gaining knowledge in various areas - for IT specialists, such a gap in education is the business component. It is important not to postpone attending courses, trainings for later, but to study already at the stage of the first prototype in order to talk with investors on an equal footing. At the stage of creating a startup, there is only an idea that materializes into an interface prototype. As a rule, at best, it is tested on a small sample of users or within a team. But this does not always give reliable results. It's like watching the behavior of a lion in a cage - its behavior in wildlife is different. Consider the root cause and how to avoid failures. The Lean Startup approach developed by Eric Rees comes to the rescue. This is the main point - to receive feedback from users as early as possible (MVP) and start creating a startup according to the scheme: "create" - "evaluate" - "learn" and again through the cycle. Thus, the development goes in small steps, you get feedback early and understand how much what you have come up with is needed by the market and how much people are ready to consume it. Investors and market experts advise scaling the idea and from the very beginning presenting it not as a startup, but as a business - understanding this will help you talk correctly with both potential clients and investors. It is advisable to come to a meeting with an investor with contracts already signed with clients. It is also necessary to understand the market capacity and pre-calculate how much your company will grow over the next six months



or a year. If you are creating a startup with partners, then it is important to study and work out the psychological moment of entering and exiting the business - ideally, to prescribe the interests of all parties so that there are no disagreements later.

8.3. Analysis of the current demand for software products as the basis for creating a new development in IT

The main idea for creating something new in IT is active demand. This means that the product must be needed and in demand. Online courses are one of the types of start-up projects where this type of course is common and popular. If you consider yourself an expert in something, then you can organize such courses. The main thing for such an idea is the correct presentation. Consumers of such courses are looking for creativity, freshness and uniqueness. So, YouTube allows you to correctly and convincingly express thoughts to its users, it will be useful to think about creating your own channel. On such a channel, you can share useful tips, thoughts, new life hacks, in other words, what interests subscribers. With an increase in the number of subscribers, advertising revenue will increase. Separately, it is necessary to say about Web development, which is in high demand, therefore, if one has certain skills and abilities, then it is advisable to work on developing a portfolio without leaving the main place of work. And in the future to implement a web-development project. The creation of wearable devices also brings tangible income in the IT business. The emphasis in such devices is aimed at a healthy lifestyle, health status and sports performance. The sale of such devices has been profitable for more than one year. Mandatory stages of development are presented in fig. 1 (Development, 2022).

Nowadays, people are increasingly trying to save time, this applies to all areas of life. Sometimes, in order to get advice from an expert, a person is ready to pay a rather large amount. And if such a consultation is also convenient, carried out in the usual conditions, this will give the consumer maximum comfort. Therefore, online consulting is often considered as an effective business using information technology. Online tracking of delivery is also quite popular today, many have long chosen the delivery industry as a profitable business. Online ordering, as well as fast delivery around the city, is convenient and in demand, but there are still not enough tracking services. The use of online stores in modern life allows you to rationally use your time, so this type of shopping is already familiar. Various modern software developments allow you to make a profit. Virtual reality applications are relevant in the light of the development of artificial intelligence. More and more people are interested in getting

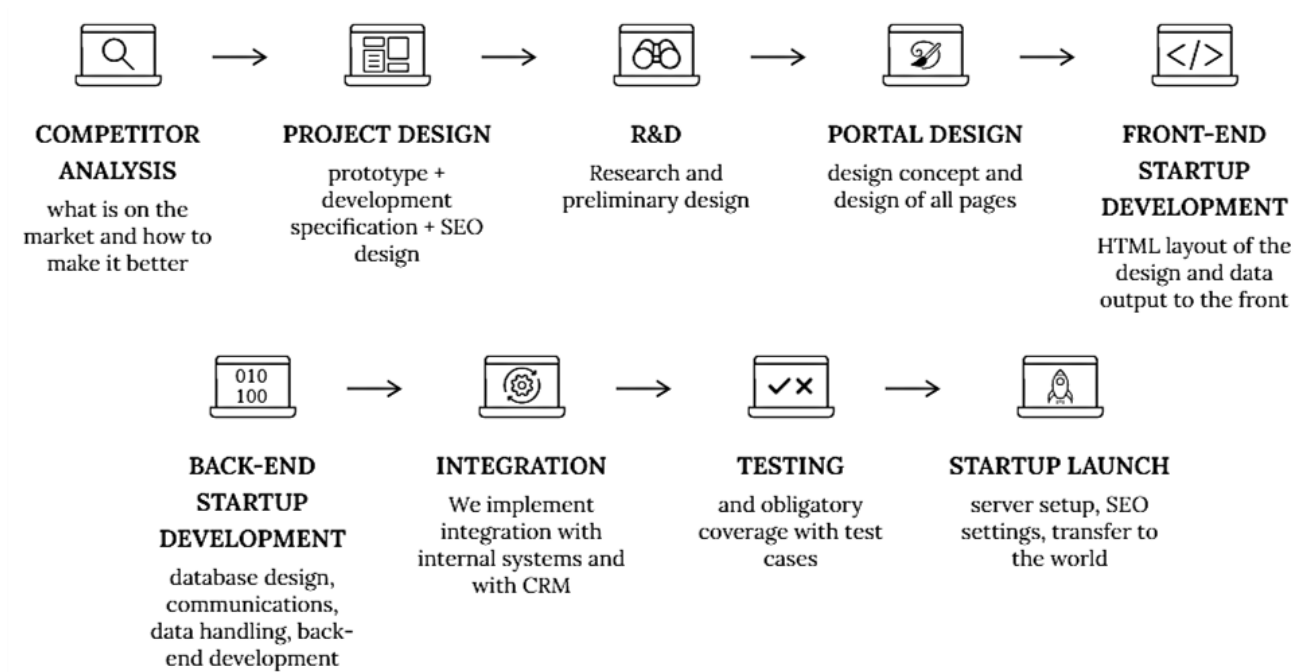


Fig. 1. Stages of development of a startup project

new emotions and impressions, where there is little to surprise modern society. Virtual reality has immense prospects for the development and implementation of ideas.

An exchange bank deserves special attention. The meaning of such a bank is in non-monetary deposits. People invest skills, services that are exchanged for other services of investors. It looks like this: I can provide the services of a programmer for free, in exchange for the provision of other services. The all-consuming fashion for perfect photos brought the creators of such applications a financial foundation. Such applications can change photos, create effects and filters. Information services are widely used today, it is always convenient to have a reference book with information at hand. The focus here is on correctly provided information and the stable operation of IT services. It is also relevant in the world of constantly changing information to say about the creation and editing of news lines that allow you to get acquainted with the news of interest, as well as events. The service that provides the news feed service is individual, it can search, filter and send the information you need. A separate area of the IT business industry is the possibility of creating video games, and this type of business has its own wide audience. With an education in IT, as well as the ability to think outside the box, you can achieve significant results. A new approach in education that gives more freedom and more independence allows us to talk about the elements of gamification in the learning process. Learning in the game, as practice has shown, brings good results and interests students.

The possibilities of using computer and information technologies in educational



processes are described in a large number of articles and other results of scientific research. Today, many are dismissive of all kinds of hubs, co-working spaces, but these places can become indispensable on your way from an idea to a product. In a hub, especially a thematic one, you can meet like-minded people, make business contacts, communicate with people - and thus also promote and test your project. All over the world there are venture capital funds that invest in startups.

Conclusions

Speaking about IT startups, there are positive and negative points: the success rate of IT startups is very low, although if it becomes successful, it brings the corresponding income. The policy of modern investors towards startups and ideas is positive. Most investors try to invest as much as possible, afraid to miss out on new profitable opportunities that once won the lead in IT technologies. Properly executed preliminary research is one of the main success factors) for a startup in the field of IT. This area is developing most dynamically in the world precisely due to the constant creative search for innovative ideas and their capitalization to occupy a certain niche in the market. It is also worth analyzing the existing IT problems that need to be solved, what special exclusive service or program is needed in the market. For an idea to be successful, the following are critical: determining that such a service is not yet available on the global market, early stages of planning, brainstorming and testing the effectiveness of ideas. Search engines with various keywords should be used to find out if a similar product or service exists and how well it solves its problems.