Marketing of Innovative startup

TOKAREV BORIS E. 1, SHKAROVSKIY SERGEY I. 2*

1, 2 State University of Management, Moscow, Russia

Abstract: In this article the problem of understanding of the place and essence of an innovative product startup marketing is discussed. The marketing concept of an innovative startup maintenance at stages of PreSeed, Seed and StartUp is formulated. It is shown that at different stages of a startup life cycle it deals with various consumers. The structure of the actions for each stage, directed to understanding of the market and consumers, is described. Classification of innovative startups markets stages is offered. The authors formulated a task to define how marketing influences at the startup as well as how critical is its transformation from one stage to another. In the research it is seen that startup marketing must use its specific set of instruments at every stage. At the PreSeed stage the main participants are businessmen who introduce an idea, and market can be determined as market of ideas. At the Seed stage investors are key clients and search of future customer becomes the main marketing goal. At the Sale stage market of startups is forming, where investors and final customers become principal figures.

Keywords: Innovative product, Consumer, Marketing of a startup, Startup stages

Received: 12 April 2018 / Accepted: 16 May 2018 / Published: 18 June 2018

INTRODUCTION

Every day the number of startups are constantly increasing worldwide. Everyone looks for the proper place, offering something new in the form of an unknown product, absolutely new processes, or changes in structures of the organizations. The statistics shows that only an insignificant part of new products remains in the market. The reasons of it are different, but our interest represents those products, which are connected with marketing activities and influence of the markets.

Modern practice pays very close attention to development of innovative products. The markets, in which such products appear, involve in the orbits more and more participants. The special attention to innovative products is caused by the fact, that they are accompanied by the strategic uncertainty of results: beginning with problems of technical feasibility of new product technology up to the search of financing resources.

Chance for success is in the proposed innovation product. We should accept this statement. However, it is very important how company realize its marketing efforts towards idea elaboration, creation of product characteristics and its design, as well as selection of investors and partners. For the investors the product often goes to the second place, the key moment for them is business itself and in which market it will be functioning. In this connection the main goal of the authors is to define type of markets where startup is gradually developed at stages of presale and sales. At the center of our research is formulation of key marketing activities which contribute to increase success of startup.

LITERATURE REVIEW

Realization of an innovative startup takes place in the standard sequence and on practice of new technologies introduction (Allen, 2003), certain logic according to the model of Stage-Gate (2018) and Sinfield (2005). In works of Alvarez (2017); Blank and Dorf (2012, 2012); G. A. Moore (2004); Ries (2011); G. A. Moore (2004); G. Moore (1995); Tokarev (2018a, 2018b) the maintenance of stages and the required actions of startups are presented. The fruitful idea is at the center of any startup. It is possible

*Corresponding author: Shkarovskiy Sergey I.
1Email: shkarov@mail.ru
to realize it by ourselves or to sell it. We deal with a market of ideas which is regulated by specific rules (Christensen, Hall, Dillon, & Duncan, 2016; Arat, 2018; Wasserman, 2012). Marketing of startups has to be changed while passing from one to another startup stage. R. Cooper proposed a model which describes nature of process from innovative idea to its realization. He develops ideas concerning possibilities and restrictions of his model (Cooper, 2014, 2018). Scientists, who develop startup marketing, pay main attention to necessary actions and works at stages of presale and sales (Abdullah et al., 2015; Anwar & Talib, 2018). Blank and Dorf (2012) deeply described these processes; they pointed out startup particularities for products in the form of information technology. This fact strongly confirms a need to take into consideration specific characteristics of a market where a new product will be sold. Ries (2011) and Alvarez (2017) paid main attention to the elaboration of measures for the Seed stage, they proposed necessary actions for creation and improvement of innovative products. In this way authors showed prevailing significance of the final customer. However innovative startup problem doesn’t focus only on product characteristics and their understanding by customers (Christensen et al., 2016). For any startup at the elaboration stage it is vitally important to find another group of proper clients. It deals with partners and investors who can invest intellectually and financially to projects at every stage of vital cycle. In other words, at this stage marketing is focused on these two target groups. In the listed works it is noted that stages of preparation and development of an innovative startup are accompanied by critical transitions: from technology into the idea (Allen, 2003); then in a prototype and from it into a real product; from start of sales into sustainable development (Blank, 2005; Biloc, 2017); from a market niche in growth (Kim & Mauborgne, 2017; G. Moore, 1995); and further, in case of success of a product in the market, into expansion of a product line. At the same time startups firstly use the main efforts into technology (G. Moore, 1995), further to study consumers, then to create a product, to choose market and to organize the company activities. Consecutive development is followed by need of basic reorganization of startup mechanisms while passing from one stage to another (Anthony, Johnson, Altman, & Sinfield, 2008; Kawasaki, 2015). Transitions are followed by need to change marketing activities directed on other consumers (Ulwick, 2005; Williams, 2015). In various markets companies have to change their models of business, proposing different values for customers (Jarjusey, 2017; Osterwalder, Pigneur, Bernarda, Smith, & Papadakos, 2014).

RESEARCH METHODOLOGY
At various stages of work with an innovation search and choice of consumers become critical for a startup effectiveness. J. Moore states said that at different stages of startup preparation, consumers are different (G. Moore, 1995). In other words, types of consumers at various stages of startup preparation differ. Therefore, during transitions from a stage of startup preparation to another change of customers list must be followed by basic change of the marketing principles.

Regularities of marketing application at different stages of startup were studied by the authors on the basis of conducted relative case analysis. Studying of enterprise projects [27-31] showed us an objective need for startups to strictly define consumers, markets and marketing tools to use.

It turns out that not only marketing is different at various stages of an innovative startup, but the markets are various as well. This phenomenon radically changes a basis of marketing decisions.

We may point out that markets, through which a development of any startup is being held, are various too. The concept of the market in this context means that each stage supposes a possibility for partners to present and to sell/buy the whole startup or some part of it. In the following table we offer a classification of the markets for stages of innovative startups (see Table 1):
Table 1: Classification of the markets corresponding to startup stages

<table>
<thead>
<tr>
<th>Innovation stage</th>
<th>Innovation market definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of market opportunities</td>
<td>Market of the innovative ideas</td>
</tr>
<tr>
<td>Concept elaboration/ Product development/ Testing/ Seed stage</td>
<td>Market of technologies, market of innovations</td>
</tr>
<tr>
<td>Startup</td>
<td>Market of startups</td>
</tr>
<tr>
<td>Initial growth of sales</td>
<td>Niche market</td>
</tr>
<tr>
<td>Growth of sales</td>
<td>Market product/New product category</td>
</tr>
</tbody>
</table>

We showed that transition from one stage of a startup to another one bears in itself crucial marketing decisions. The most important thing is to understand the market in which startup is present.

RESULTS AND DISCUSSION

The basic principles of approaches of an innovative product marketing follow from qualitative distinctions of the markets, namely:

- for stage of formation of the idea (PreSeed) marketing of the ideas, marketing of technologies;
- for developing stage (Seed) marketing of innovations, marketing of new technology;
- for startup stage marketing of a startup;
- for stage of start growth of sales niche marketing of innovations;
- for stage of growth traditional marketing of product segment development;
- for stage of product growth and line development marketing product expansion.

The life cycle stages of innovative product development very strongly differ one from another and, what is extremely important, they differ on the organization of marketing work on each of them. As on each of these stages the consumers behavior essentially differs, it demands to select corresponding methods of response to various aspects of their behavior. At stage of product development, it is necessary to find needs of new consumers, to arrange the offers under them. At the next stage, one should develop these offers, to find forms as well of effective representation and new ways of application at the expense of entering into new segments; and of course, to raise and keep consumers. In spite of formal difference of the listed stages, it is necessary to understand that all this is links of a uniform chain. One Russian businessman thought up and took out the patent for 30Sec Milk™ technology (see Figure 1). Thanks to this innovative technology during cow milking small farmers can independently spill raw or pasteurized milk in standard liter packing with the increased period of storage. Each packing contains information on the exact time of milking and a specific cow from which milk was received. Thus, the idea of business is constructed on modern technology which gave an opportunity to farmers and businessmen to remove milk processing companies from value creation chain, which control this market and which do not allow new participants to enter this market.

![30Sec Milk™ Production Cycle](image_url)

Figure 1. 30Sec Milk technology™
Let us analyze specific moments of startup marketing stages and a substantial part of businessman actions aimed at marketing support of the project.

**Marketing stage of the business idea search**

As a rule, there is nothing special at the search stage concerning a possible innovative idea realization, except the idea or some certain practices which are based on the big or small efforts to create a new product. Conditionally marketing at this stage can be described with the following formula: “hypothesis - criticism - market opportunities” (Knapp, Zeratsky, & Kowitz, 2016). The main part of works comes down to reveal consumers presence and their potential. All these things may be described with the only question: whether the product is necessary to the market? Marketing tasks at this stage are concentrated in the expected and analytical activities. At this stage the market potential analysis of a product is carried out. The understanding of future product means to define logically its market. The natural way of this process realization includes firstly identification of future product, and then, in case of existence of his market opportunities existence, - to work on it. The results of decision-making are presented in the following matrix ≪Idea potential/Company possibilities≫ (see Table 2):

![Table 2: Matrix ≪Idea potential/Company possibilities≫](Table 2: Matrix ≪Idea potential/Company possibilities≫)

<table>
<thead>
<tr>
<th>Idea potential</th>
<th>Company possibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Perspective direction of researches Implement</td>
</tr>
<tr>
<td>Low</td>
<td>Exclude from consideration Look for ways of potential expansion</td>
</tr>
<tr>
<td>Small</td>
<td>Big</td>
</tr>
</tbody>
</table>

The main consumers of the innovative ideas are researchers and businessmen. The ideas are on sale, which are conceded and given free of charge.

Our businessman found an opportunity to apply technology in providing consumers of small country towns with his fresh bottled milk. However, applying the invention to own farm, he found out one more market, namely, delivery of a complete set of the equipment as well as sale of licenses for their use.

**Marketing of idea realization and product development**

This stage is very important and difficult at the same time. Innovators need to acquire activities, which are rather new to themselves. These activities are directed to define consumers, to understand their demands, to create prototypes, to test and adapt repeatedly future product to the properties accepted by consumers. At this stage the formula of marketing can be described as “concept of product - definition of consumers - realization in a prototype - testing - completion” (Knapp et al., 2016; Tokarev, 2018b).

The constant adaptation of product prototype is multiply repeated. Innovative process has a cyclic character. From any stage of works it should be possible to return on previous one in case of negative result. This procedure is especially appropriate while testing a product, determining set of its characteristics, improving of design. We may assume that such regular returns on the previous stages will strongly prolong the process of product launch in the market. But, if the product will be introduced in the market when its potential users are not ready to consume, it would mean impossible to sell out such product. Obviously, it is better to make mistakes earlier than later when the product has been already introduced in the market and its changes would significantly require much more resources (Kawasaki, 2015).

It is important with which means and what allows to receive a portrait of future consumer. As a rule it includes experiments of different form. The required result has to reflect psychographic characteristics of a potential client: if he appreciates money, if he prefers predictability, if he depends on others opinion or he makes decisions independently, what is his incentive for product acquisition, what disturbs him, what problems he has to solve.

The user’s profile should become the actual result of all marketing efforts at the stage of startup preparation aimed at understanding of future consumers. This profile of user is represented in the form of the imaginary archetype description in which his peculiar features of character, his goals, life concepts and real behavior of the typical consumer-innovator are reflected.
Recently in marketing there was relevant a theme of consumer value creation. Innovation can increase considerably the level of values offered to consumers only if it will lead to grow their satisfaction degree. Values describe the general concepts or expectations which determine customer behavior. It means that the main marketing task of this stage consists of such values determination and their realization in a new product (Furr & Dyer, 2014).

The result of future consumer study must show a lack of contradictions of the potential consumer profile. We have to take into consideration the factors which influence it. These factors are ranged, and as a result developers may see which of them are most important for customers. If such work is done, then chances exist for a new product. For formalization of task search as well as for decisions for consumers Anthony et al. (2008) and Sinfield (2005) have independently offered two models operating in the opposite logical directions (see Table 3):

Table 3: Comparison of tasks search models and decisions for consumer decisions models ([20,21,24]

<table>
<thead>
<tr>
<th>Task</th>
<th>Who can use this decision for proper tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who is a target consumer.</td>
<td>5. To what tasks can this decision be applied.</td>
</tr>
<tr>
<td>2. What problem do they try to solve.</td>
<td>4. In what circumstances the decision is most effective.</td>
</tr>
<tr>
<td>3. In which circumstances do they most often face this problem.</td>
<td>3. What requirements are met by this decision.</td>
</tr>
<tr>
<td>4. What demands do they make while performing this task.</td>
<td>2. What obstacles does the proposed solution overcome.</td>
</tr>
<tr>
<td>5. What barriers arise in attempts of tasks solution.</td>
<td>1. What are possibilities of this decision.</td>
</tr>
<tr>
<td>What decision will satisfy the consumer.</td>
<td>It goes from the proposed solution.</td>
</tr>
</tbody>
</table>

The sequence of answers search corresponds to the sequence of numbering in models. It is recommended to describe answers by means of verbs which answer the questions posed. The importance of model applications is allocated for formalization of value for the consumer.

The purpose of innovations is to simplify, reduce costs, accelerate, increase useful efforts. The result of innovation means a new value creation for consumers which is perceived by them and has sense. The consumers will begin to buy an innovative product if they see in it a value for themselves. This value will be defined by product uniqueness and its qualities as well as by the fact how much it will satisfy customer needs and how it may solve his problems.

As the standard principles of pricing concerning innovative products are inefficient, the deep understanding of proposed solution importance for the consumer creates prerequisites for determination of product offer price. For example, it is possible to try to determine its price on the basis of customer economy, decrease in different expenses, reduction of necessary resources. These measures contain search of the correct arguments to protect company’s price. The above listed factors of new decision advantages are crucial for further marketing researches.

The main participants of the innovation markets are businessmen and investors who begin to believe in the potential of future product, they contribute to it with their forces and financial means.

Returning to our example about that businessman, we noticed that development of technology for a milk flood in the milking course took more than two years. The incentive for project implementation was a strong market trend on consumption of genuine fresh milk without powder allergic additives. He tested the equipment both on his enterprise and on others, receiving comments and recommendations about improvement of processes. He invested his own money in this startup.

Marketing stage of innovative product startup
After beginning of product sales, processes of the real consumers adaptation begin and, consequently, adaptation of sale models take place. Price are to be revised. At this stage we can see the first reaction of buyers and competitors.
Tasks of the commercialization process beginning include the following items:
- adaptation of new ideas in the offering innovative product;
- estimation and measuring of consumers reaction;
- introduction of changes into the consumer properties of a product.

It is necessary to repeat this cycle before achievement of a balance between number of product properties, introduced by its developers, and consumers expectations.

Numerous researches of unsuccessful innovations startups showed that the main part of problems is caused by the following factors: the market does not accept an innovative product; consumers do not understand its purpose and do not perceive new product values. In this situation the most important thing is to find out the reasons of problems.

After introducing a product in the market, specialists are focusing on:
- target consumers;
- completions of sales models;
- analysis of the chosen price correctness;
- estimation of first reaction and customers and competitors.

At this stage marketing specialists make many intuitive decisions. It is a compelled reaction which is a result of some defects which earlier did not come into the view of a startup team.

Strategic decisions on product startups are based on understanding of first consumers who have got an innovative product and used it. For innovators it is very important to study the ways of product use, to know positive and negative feedback of customers. Only after examining of customer reactions to new products and knowing his appreciation of its properties we may contact product creators for introducing of possible changes into functional characteristics.

At the beginning of the sales the company has limited list of potential clients who at the seed stage came into his view or who were involved in testing. But their quantity isn’t enough for commercialization, that is why it is necessary to find intensively new customers.

As it is well-known from a number of works, in particular Anthony et al. (2008), customers and not customers are always present in the market. For an innovative product all of them can form a target group. In the Table 4 we can see classification of innovative startup potential consumers.

<table>
<thead>
<tr>
<th>Table 4: Classification of possible startup consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing consumers</strong></td>
</tr>
<tr>
<td>Consumers of products who aren’t satisfied with their consumer properties and looking for a new value.</td>
</tr>
<tr>
<td>Consumers of products analogs and substitutes which are competing with an innovative product.</td>
</tr>
<tr>
<td>Consumers who know about existence of offers and are ready to get the existing products, however they postpone to purchase them for various reasons of cultural, psychological and other character.</td>
</tr>
<tr>
<td>Consumers who are positive to a product and are ready to get this product, but they are not capable to pay required sum for it.</td>
</tr>
</tbody>
</table>

Consumers of the new markets in which the product or its analogs weren’t presented. We stress that the not consumers are the main part of future innovative product customers.

Before beginning of this stage every company must have at its disposal prepared marketing-mix. This complex has very limited opportunities on coverage of potential consumers, the small budget for promotion, indistinct target audience of consumers.

It is obvious that the price is one of indicators of product competitiveness. It is important but, it is not the only significant one. At the beginning of sales it is required to define which product characteristics
are positively perceived by consumers, and which ones have their negative reaction. Crucial are those characteristics which define the choice of product buyers, and therefore consumers are ready to pay money.

Pricing on innovation is subjective enough, especially if we deal with hi-tech one. The price for a new product will be defined according to a set of various and often strongly interconnected factors, which include in particular:

- financial resources, it means expenses which have to be lower than income;
- market efforts, in other words how many consumers of a new product are available in the market;
- psychological factors, which mean an aspiration to return faster spent means; - self-estimation of innovation force by developers;
- marketing budget to introduce a new product in the market.

In pricing process there are always so-called ≪forks≫ between expenses and appointed product cost. However, an essential factor is to understand value of product by its consumer. In real life startups determine the product cost on the basis of comparison with the prices of existing analogs and their substitutes.

If those factors aren’t found, then pricing is carried out on the basis of value of the consumers solved problems. In this case the price of a new product has weak connection with its real production costs. One representative of a Russian venture company has given numbers of iPhones regarding composed costs of the initial version: assembly cost is $6, accessories - $60, and final price of smartphone sale is $600. Concerning the iPhones seventh version, some experts pointed out that costs of accessories have increased up to $230 because of components price rise due to the fact that they have higher technical characteristics; this fact caused further price increase of the whole product, and as a result it decrease its profitability.

With high probability this initial set will be used for a short period of time. Then this complex has to be changed when the niche stage of product development begins; or in case of failure it will be useless to do anything.

Therefore, it is necessary to determine the elements which make complex decision at this stage: product and its properties, price, how and to whom offer this product, what channels to use, with what partners to build the relations. It is obvious that such decisions should be elaborated beforehand; but at the beginning of sales it is necessary to make prompt changes. Marketing is implemented in the form of a limited set of means which is often actually personalized.

Startup marketing means actually this stage. The main participants are consumers and various partners, including investors and buyers of startup businesses.

**Marketing of innovative product niche stage**

Innovative products in their development pass niche stages. This stage has some specific moments. The main thing consists in the fact that the product has survived after start of sales, it has gained a certain number of supporters. There was a chance to the product to raise and expand in the market.

Many innovative niches disappear quickly from the market. This destiny waits for the most of innovative products. Some of them exist unchangeable for many years, without having an opportunity "to overcome an abyss" (G. Moore, 1995). Companies aspire to have the niches, which are growing up to the full-fledged segments of the market.

Criterion of a niche development is the sales rise indicator, expressed in physical or monetary units. The generalized empirical data demonstrate that the sales rise rate at a stage of product introduction is from 5% to 15%, at a growth stage it considerably exceeds 15%, and finally at a stability stage it is various from -5% up to +5%. Possibilities of niches evolution depend on whether interested companies will be able to identify them, whether buyers and consumers know about their existence. At this stage marketing and market researches are connected with search, estimation choice of niches for their development.
Niche marketing has a limited arsenal of means. Success key at this stage are the final users, as well as how widely they will be able to accept a new market product. Regarding the innovative products the fulfilled analysis of market niche types [14], gives us ground to declare existence of the following kinds of the market niches, which are presented in Table 5:

The main marketing efforts at a niche stage have to be directed to explanation to consumers regarding new product advantages. We may mention the following main advantages for any customer:
- it solves an urgent consumer problem;
- it satisfies consumer needs (for example: the product saves time, is cheaper, facilitates access, expands opportunities, accelerates process of data exchange, gives better security and reliable communication).

At the niche stage we deal with a classification of consumer base and segmentation on their needs, as well as on the value of sales proposition and readiness of consumers to pay for this value. Sales of an innovative product assume further active work on studying of the consumers. It is necessary to be convinced of correct product value formulation. We have to know what key clients appreciate in our product, and if they are ready to pay.

J. Moore considers that the niche is an intermediate link between innovators and early followers which will become an entire segment, or will cease to exist. According to him the only correct strategy is to be big fish in a small pond (Knapp et al., 2016). This statement bears the reason of understanding of niches location in startup development when the process of sales growth takes place. Not accidentally J. Moore calls figuratively passing of innovation development stage overcoming an abyss. Between a niche and a growing segment there is a very big gap, and not all companies can overcome it (Kim & Mauborgne, 2017).

Niches market demands to itself the corresponding attention. Marketing of market niches is the next evolution from consumers-innovators, to the subsequent early followers. At this stage it is necessary to use an effective and practical marketing mix aimed at maintaining of available consumers and at the same time it is directed towards new use of the product. At the same time this set of marketing means will be utilized during the limited period of time, namely before process of a niche transformation.

Other businessmen, who were engaged in selection of bacteria, found a way of cleaning of equipment interiors for a milk food without application of chemistry; and they patented it. The main consumers of their technology became large milk-processing plants which spent many forces and funds for ensuring purity of equipment. At the beginning they collected investments on the crowdfunding platform. However, after beginning of sales businessmen found large market which had practically no competitors. It includes small boiler houses in which all pipelines need also a clearing. Other patented bacteria were

<table>
<thead>
<tr>
<th>Niche type</th>
<th>Description of characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product type</strong></td>
<td>They are defined actually by product properties and its application. Such niches have no strict borders, sales of niche products are carried out in the different geographical markets and to different types of consumers.</td>
</tr>
<tr>
<td>Branch or technological innovative niches</td>
<td>Their existence is defined by opportunities of certain technologies use in production processes.</td>
</tr>
<tr>
<td>≪Areal≫ or geographical or territorial niches</td>
<td>Products are offered in the limited market territory, according to geographical, climatic and resource living conditions of consumers.</td>
</tr>
<tr>
<td>Consumer niches</td>
<td>They are determined by specific characteristics of consumers, psychographic situational functional role and cultural features of final consumption.</td>
</tr>
</tbody>
</table>
offered them, which effectively cope with the work. However, it was required to attract third-party investors. As a result, this market was created firstly in one city, and then it was expanded on other cities and regions of the country.

Marketing of innovative product growth
This stage has many common features with the marketing of traditional products. The whole set of marketing means is used, as sales growth has to be supported; it expands a market share with various active marketing instruments.

CONCLUSION
The special purposes have to be formulated for each stage innovative product startup marketing. For stage 1 (marketing of the ideas) the purpose is the analysis of feasibility of an innovation in a market product. Ideas are an independent product which has its own consumers and price.

At the second stage (marketing of innovations, marketing of technologies, exactly - marketing of actually innovative product) it is necessary to study product value for the consumer. Marketing of this stage includes two elements: marketing of product development and definition of target consumer as well as marketing of technology sale. There are two essentially various markets with different consumers. At the third stage (marketing of a startup) search of first consumers and adaptation of a product under the actual demands. The startup assumes active sales of an innovative product. At the same time, the startup critically needs financing of permanent work on improvement of a product, adoption of its characteristics according to consumer demands. Therefore, the consumer market is developing in parallel with market expansion of investments into the project.

The fourth stage (niche marketing) includes analysis of product prospects and estimation of sales growth potential. The niche stage is very critical. If the startup lived up to it, then it is already good sign of its viability. But each businessman seeks to grow and extend his commercial activities. For this reason any niche can be transformed into the whole line of market niches, and in case of success it may become a full-fledged market segment. Marketing has to be reconsidered and adapted in each niche on its own way.

On the fifth one (marketing of development of a product) the goal is to develop product and product line expansion. It is top recognition of innovative product by the market and compensation of all efforts and financial expenses as well.

REFERENCES


