

Development of Marketing Positioning of the Pilotless Bus in the Russian Market

Anna Gorokhova¹ and Andrey Efremov²

Abstract – In paper technique of development of pilotless bus marketing positioning in the Russian market will be offered. The technique consists of 4 stages: a research in positioning; determination of key properties of pilotless bus, company, market; definition of the development directions of the pilotless bus; comparative assessment of positioning options.

Keywords – Pilotless bus (unmanned bus), Positioning, Marketing, Consumer perception.

I. INTRODUCTION

Now innovations act as a significant source of competitive advantages of the companies [3]. However development and removal on the market of innovations have high risk [2]. One of the directions of innovative activity risk reduction is development of marketing ensuring commercialization of innovations [5]. In this paper will measures for development of positioning of the pilotless bus in the Russian market are proposed.

In Russia the idea of development of the pilotless bus arose in 2015, and several companies became interested in this innovation: automobile corporation "KamAZ", BMG subsidiary (Bakulin Motors Group) - "Volgabus" and also state scientific center of the Russian Federation NAMI.

Due to the emergence of a new prototype of the NAMI pilotless bus, it is expedient to carry out the analysis of external and internal factors on removal on the market of this product for the purpose of detection of competitive advantages of the NAMI company before producers of analogs.

The main competitor on release of pilotless buses of the NAMI company is the BMG subsidiary (Bakulin Motors Group) with the commodity brand "Volgabus" - "Matryoshka M2B8"(Volgabus (BMG)).

This paper focuses on the following problem: improving the efficiency of the marketing strategy for commercialization of an innovative product (pilotless bus) using advanced marketing positioning tools, taking into account the perception of the quality of the pilotless bus.

The purpose of this paper is to justify a set of marketing measures for positioning an pilotless bus on the Russian market.

The paper has the following structure: analysis of key competitiveness parameters of NAMI pilotless bus [1];

¹ Anna Gorokhova Moscow polytechnic university, 107023, Moscow, Bolshaya Semenovskaya str., 38, Russian Federation, agor_80@mail.ru

² Andrey Efremov Moscow polytechnic university 107023, Moscow, Bolshaya Semenovskaya str., 38, Russian Federation, a.a.efremov@mospolytech.ru .

identification of the main properties of the pilotless bus industry [7]; identification of development directions of pilotless buses industry [6]; comparative evaluation of various options for positioning an pilotless bus.

II. DEFINITION OF THE CURRENT MARKET POSITION OF PILOTLESS BUS AT THE RUSSIAN MARKET

For positioning development of the pilotless bus it is necessary to characterize the current market position and to define key drivers of the market in comparison with competitors. It will allow to reveal successful points of differentiation of goods which in the subsequent can become starting points in positioning of a brand [4].

For NAMI the main and only competitor on creation of a similar product in the Russian market is the Volgabus trademark (Bakulin Motors Group) with the pilotless bus "Matryoshka M2B8" [5]. A. Bakulin became the founder of this company on production of buses, spare accessories, and also pilotless bus. The company is founded relatively recently since 2014, but could already win a considerable share in the market of public transport.

It is necessary to determine by the first step in creation of process of positioning of a brand the current position and the relation of consumers to the NAMI company and the Volgabus trademark. For this purpose it is necessary to define the relation of target audience to the NAMI and "Matryoshka M2B8" pilotless buses. We will carry out this analysis by poll of alleged target audience with visual representation of NAMI and "Matryoshka M2B8" pilotless buses and the description of the key technical parameters of a product. Later we will ask to describe the seen product 7-10 words. The following results were received:

- NAMI pilotless bus: The modern economic product intended for safe transportation of passengers;
- "Matryoshka M2B8" (Volgabus (BMG): Robotic known brand of the modern qualitative pilotless bus.

III. DETERMINATION OF KEY PROPERTIES OF PILOTLESS BUS, COMPANY, MARKET

The second step in creation of goods' positioning is determination of the main properties in the industry. It is necessary to make four lists of properties of the pilotless bus:

- market properties of goods – this type of properties is obligatory for each product in the market;
- properties of goods of the company are priority properties which are possessed by the pilotless bus of NAMI;

- properties of goods of the competitor are priority properties which are possessed by the "Matryoshka M2B8" pilotless bus;
- properties from consumers are the main characteristics of a product which are priority for target audience.

Let's define the realized need for purchase of pilotless bus (Table 1).

TABLE I
DEFINITION OF REALIZATION OF BASIC NEEDS OF THE CLIENT UPON PURCHASE OF THE PILOTLESS BUS

Properties of goods in the market	Requirement
Design	Esthetic requirement, need for beauty
Low cost	Economic investment
Modular platform	Multipurpose applicability
Independent operation	Main technical base
Existence of modifications	Multipurpose applicability
Passenger capacity	Efficiency of invested funds
Safety	Need for safety
Service	Need for the loyal attitude towards the buyer
Quality	Need for safety
Multipurpose equipment	Main technical base
Comfort	Efficiency of invested funds
Operation of the car in severe weather conditions	Multipurpose applicability
Accumulator charge time	Main technical base
Fast reaction to breakage	Efficiency of invested funds
Course stock	Main technical base
Existence of equipment for persons with limited opportunities	Multipurpose applicability, social requirement
Maximum speed of the movement	Efficiency of invested funds
Loading capacity	Main technical base

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Further it is necessary to analyze, how it is possible to improve the NAMI pilotless bus before his competitor. The following directions of improvement of the pilotless bus were revealed:

- For excursions: Introduction of a system of the audio-guide (for foreign citizens the translation of information by means of the built-in earphones near each seat);
- Equipment by the solar battery, as additional charge of energy;
- Introduction of a system of the wireless Internet (Wi-Fi).

After definition of possible improvement of a product it is necessary to define the possible problems interfering purchase of the pilotless bus. For this purpose we will answer three key questions:

1. How do competitors solve these problems?
2. Whether is there an opportunity to take the leading position at the solution of this problem of your company?
3. Whether will there be for the target consumer a solution of this problem significant?

In Table 2 it is representable the received results.

TABLE II
VERSIONS OF THE SOLUTION OF NEEDS OF THE CONSUMER

Requirements and problems of target audience	Do the current players of the market solve this problem?	Whether leadership in a solution is possible?	Whether can be a differentiation point?
Emergence of sudden obstacles	yes	yes	yes
Quick response to road accident	yes	no	no
Responsibility for incident	no	yes	yes
Small passenger capacity	no	yes	yes
Existence of security aids for children	no	yes	yes

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Thus, it follows from Table 2 that the promising directions for improving the pilotless bus are the following: the possibility of resolving sudden difficulties, responsibility for the incident, low passenger capacity and the availability of safety equipment for children.

IV. DEFINITION OF THE DEVELOPMENT DIRECTIONS OF THE PILOTLESS BUS

Having defined differentiation points in versions of the solution of need of the consumer, it is expedient to find such points of differentiation which will promote use of the NAMI pilotless bus in some concrete situation.

It seems advisable to search for points of differentiation of an unmanned bus by several components: conditions of use of this product (Table 3); prospect of achieving leadership positions on specific market properties (Table 4); promising development of unique properties of the product (Table 5).

Table 3 shows that NAMI competitors are not interested in the aspect of using unmanned buses in winter conditions, but this is important for Russia: in many territories, winter lasts more than six months; NAMI competitors are not currently

considering projects for the use of unmanned buses as infrastructure elements (airports, campus territories, etc.).

TABLE III
SIGNS OF DIFFERENTIATION OF THE PILOTLESS BUS DEPENDING ON THE CONDITIONS OF ITS USE

Method and situation of emergence of requirement / use of goods	Whether competitors can solve the need for each situation in the best way?	Whether can be a differentiation point?
Use of pilotless transport in winter conditions	no	yes
Transportation of passengers at the big airports	This application is not considered by the competitor	yes
Transportation of employees in large enterprises	Is not present / the solution of requirement is identical among competitors	no
Transportation of passengers in large hospital complexes	This application is not considered by the competitor	yes
Transportation of passengers across public roads	yes	no
The large educational institutions having the isolated territory with a large number of buildings and constructions (campuses)	This application is not considered by the competitor	yes
Theme parks (amusement parks, zoos, etc.)	This application is not considered by the competitor	yes

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TABLE IV
OPTION OF LEADERSHIP IN MARKET PROPERTIES

Market properties of goods	Whether will be valuable to the consumer if the product carries out this property best of all?	Whether there are goods realizing this property it is the best of all?	Differentiation point
Low cost	yes	no	yes
Passenger capacity	yes	no	yes
Safety	yes	no	yes
Quality	yes	yes	no

Fast reaction to breakage	yes	no	yes
Maximum speed of the movement	yes	no	yes
Loading capacity	yes	yes	no

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Table 4 shows that it is realistic to achieve leadership positions on a number of market properties: low cost, passenger capacity, safety, the ability to quickly repair and high speed.

TABLE V
POSITIONING OPTION ON UNIQUE CHARACTERISTICS OF PILOTLESS BUS

Unique properties of a product	Whether have value for target audience?	Differentiation point
Operation of the car in severe weather conditions	yes	yes
Existence of equipment for persons with limited opportunities	yes	yes

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Table 5 confirms that the unique properties of the product can also form the basis of its market positioning, since they are of high importance to the target audience.

V. COMPARATIVE ASSESSMENT OF POSITIONING OPTIONS

Thus, having carried out the detailed analysis on positioning of goods in the market, with definition of differentiation points we will consolidate the obtained data in one Table 6, and by means of an expert method of estimates (survey of 132 automotive executives), based on the allocated points of differentiation of goods, we will define the importance of the marked-out criteria for target audience. This work is carried out not only for definition of mainly significant positions of goods, but also for identification of a further vector of development of the NAMI pilotless bus.

TABLE VI
ASSESSMENT OF OPTIONS OF PRIORITY PROPERTIES OF POSITIONING OF THE PILOTLESS BUS

Properties / situations	Trust	Long term	Uniqueness	Memorability	Emphasizes properties of a product	Meets needs of target audience	Total point
Options of improvement of commodity category							
Introduction of a system of the audio-guide (for foreign citizens the translation of information by means of the built-in earphones near each seat)	2	3	3	3	1	2	14
Equipment by the solar battery, as additional charge of energy	2	3	3	2	1	2	13
Requirements and problems of target audience							
Emergence of sudden obstacles	2	3	1	1	2	2	11
Responsibility for incident	3	2	2	2	2	3	14
Passenger capacity	1	3	2	2	3	3	14
Existence of security aids for children	3	3	3	2	2	3	16
Method and situation of emergence of requirement / use of goods							
Use of pilotless transport in winter conditions	2	3	2	1	1	2	11
Transportation of passengers at the big airports	2	2	3	2	1	2	12
Transportation of passengers in large hospital complexes	3	2	3	2	1	2	13
The large educational institutions having the isolated territory with a large number	3	3	3	2	1	2	14

of buildings and constructions (campuses)							
Market properties of goods							
Low cost	3	2	2	3	3	3	16
Safety	3	3	2	2	3	3	16
Fast reaction to breakage	3	2	2	2	2	3	14
Maximum speed of the movement	2	2	1	2	3	3	13
Unique properties of a product							
Operation of the car in severe weather conditions	2	3	2	1	1	2	11
Existence of equipment for persons with limited opportunities	3	3	3	3	2	3	17

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For carrying out the final analysis of positioning of goods and identification of the priority directions of development of the pilotless bus the group of target consumers to whom the list of the revealed properties of goods was submitted was invited, and it is offered to estimate each parameter on three to a ball scale. By results of poll of the concept (property) which gained the greatest number of points are for the consumer the most effective and important when choosing purchase of the pilotless bus. Properties which gained least of all points by results of poll can become for the company a vector for their development and improvement.

Thus, the main priority properties which the pilotless bus has to possess are:

- Existence of a system of the audio-guide (for foreign citizens the translation of information by means of the built-in earphones near each seat) for pilotless buses on excursion trips;
- Existence of security aids for children;
- Use of the pilotless bus in large the educational institutions having the isolated territory with a large number of buildings and constructions (campuses);
- Low cost and safety of the incorporeal bus;
- Existence of equipment for persons with limited opportunities.

VI. CONCLUSION

In this paper the technique of development of marketing positioning of the pilotless bus in the Russian market is offered. The technique consists of 4 stages: a research of an initial situation in positioning of goods and its perception by consumers; determination of key properties of goods, company, market; definition of the directions of development of goods; comparative assessment of various options of positioning of the

pilotless bus. This technique allows to reveal successful points of differentiation of the pilotless bus which in the subsequent can become starting points in positioning of a brand. The main priority properties which the pilotless bus has to possess will be as a result defined.

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