PAPER • **OPEN ACCESS**

Technology formation of the mission of micro-level management enterprise in aviation

To cite this article: A I Kanashchenkov *et al* 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **537** 042040

View the article online for updates and enhancements.



IOP ebooks™

Bringing you innovative digital publishing with leading voices to create your essential collection of books in STEM research.

Start exploring the collection - download the first chapter of every title for free.

This content was downloaded from IP address 218.59.193.14 on 19/09/2019 at 00:11

IOP Conf. Series: Materials Science and Engineering **537** (2019) 042040 doi:10.1088/1757-899X/537/4/042040

Technology formation of the mission of micro-level management enterprise in aviation

A I Kanashchenkov, S V Novikov and D S Veas Iniesta

Moscow Aviation Institute (National Research University), Volokolamskoe highway 4, 125080, Moscow, Russia

E-mail: danonik92@mail.ru

Abstract. This paper briefly analyses the status of implementation of strategic management methods in micro-level enterprises of the radio engineering sub-sector with an emphasis on one of the most important tasks of the development of a company strategy - the choice of the general purpose of its activity (mission). It also proposes a technology for developing the mission of an enterprise, taking into account the market research trends in the development of functional tasks of core technical systems and the technological base of research, development and mass production of these technical systems. Furthermore, it presents a diagram of stage-by-stage development and annual refinement of the mission considering the development of the world and domestic market.

1. Introduction

The majority of Russian enterprises work using, in fact, 3 - 5-year (long-term) planning. But the concept of "long-term" largely depends on the conditions in which the corporation is managed. What is long-term for one organization may be short-term for another, and the planning horizon acceptable for one area of the organization may not be suitable for another area.

The term "long-term planning" may be preferred to "strategic management" because the latter term does not mislead with the planning horizon and indicates the importance and focus of this work. But many corporations for a number of reasons do not perceive the methods of strategic management and there is a tendency to pay more time to current issues, and, as a consequence, it does not remain to solve long-term strategic problems.

2. Methodology

The choice of the horizon of plans in the development an enterprise's strategy is of great importance. In this case, it is necessary to pay attention to two major factors [1]:

- how much time it will take to develop a new product;
- what the period for return on investment is.

As a result, a short-term management strategy horizon can be defined for companies that are rapidly developing a new product and have a short payout period, or a long-term horizon for companies with a long development period and long-term payments on liabilities [12].

In the Russian Federation the area of strategic management is investigated less than other problems of management from the point of view of procedures, methods, approaches and even principles at the decision, not only short-term tactical problems, but also, first of all, strategic problems. None of the

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.
Published under licence by IOP Publishing Ltd

enterprises under study has developed through technology methods and models for the development of enterprise strategy, available for practical use by managers and strategy developers. These and other drawbacks are amplified in many organizations by the fact that their managers are evaluated mainly by the results of current activities. That is why the implementation of strategic management methods is slow and insufficiently complex and qualitative, which restrains the development of economic growth [9].

When analyzing the work of firms, it is established that managers pay more attention to business planning [2], but without its relationship with the strategy. This is not by chance, as the current management mechanisms operate in the absence of any organizational and economic mechanism of development of the management strategy [6].

As the analysis has shown, strategic methods of management are used at the corporate level, but weakly and not comprehensively because of several reasons:

- theoretical developed methods of strategic management of the enterprise are not enough adapted to the practical field of technology of development of strategy of the enterprises, available for use by strategy developers;
- top managers and managers of lower management levels in most cases do not have the necessary qualification in this direction of activity.

Researches and analysis of scientific sources allow to draw the conclusion that businesses are based on the reception of profit and reduction of the expenses received as a result of strategy application, and corporate strategy defines the methods of a competition and business dealing. Therefore, without a carefully formulated strategy, the activities of the corporation lose their meaning and competitiveness, which leads to internal stagnation and deterioration of results [8].

The analysis shows that the majority of enterprises in the Russian Federation radio industry suffer from this very disease (lack of a carefully developed strategy), and as a result there are negative consequences and low rates of economic development.

The formation of the mission (the General purpose of activity) of corporations and micro-level management enterprises is carried out insufficiently systematically and comprehensively from the position of "what the enterprise should do and what it should not do". The company has a complex structure of purposes [13].

The main feature of quality management is a good quality strategy and its skillful implementation. It should provide high performance and proper level of customer satisfaction [7].

Before developing a strategy, it is necessary to have data on mission research and information from the strategic analysis of the two components:

- Strategic analysis of external factors: industry and competition.
- Strategic analysis of internal factors: strengths, weaknesses, opportunities and threats of the Corporation.

Managers-strategy developers based on a comprehensive strategic analysis, studying the position of the Corporation at the moment should also carefully study the external and internal environment of the Corporation to understand whether the needs of the business will change in the next, for example, five years and further, and if so, how. They should be able to answer the questions:

- how they see the future of their enterprise;
- in what direction it should develop;
- what technologies will they use in the future;
- what position in the industry the company should take, for example, in five years.

If the strategic vision determines the future image of the enterprise, the mission describes the activities of the enterprise at the present time: what goods and services it produces, who its customers are, what are the technological and business opportunities [3].

The mission contains a description of the three elements:

- the needs of the buyer, that is, what needs to be met;
- groups of buyers, that is, those who will be the object of service;

- actions, technology and knowledge, that is, how the enterprise creates and distributes customer value and meets the needs of all customers.

Guided by the scheme of development and selection of the General purpose of the enterprise, you can make generalizations and formulate a methodology for its development and selection (figure 1) [5].

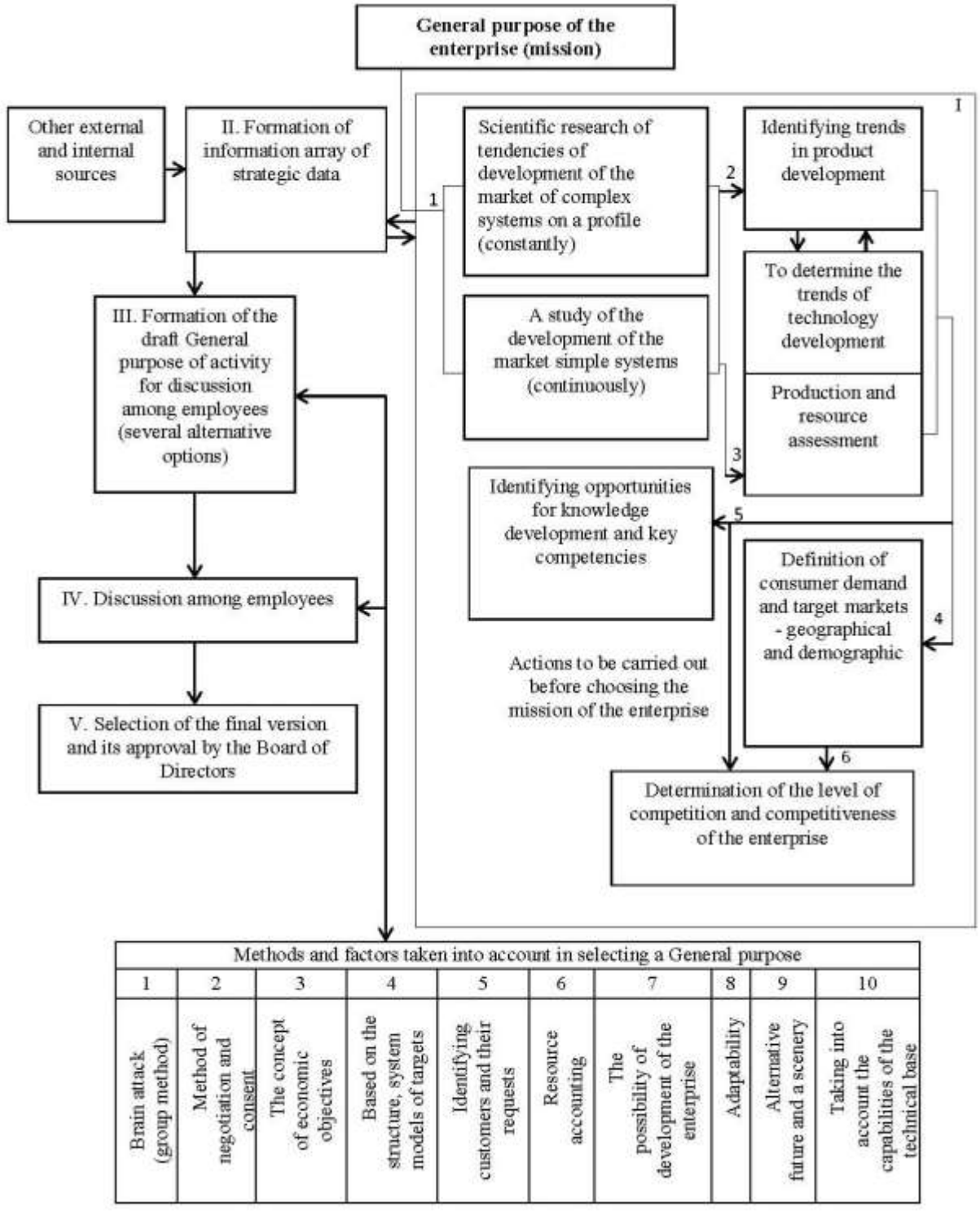

Figure 1. Technological model of development and selection of the General purpose of the enterprise.

Below is a description of the technological model, i.e. the actions that must be carried out to develop and implement the General purpose of the enterprise [4].

1. Activities prior to the formation of the information array of strategic data.

1.1. Annual research work to determine the requirements of the market for the further development of complex technical systems in the direction of equipment of the enterprise. The results of such studies provide recommendations on the parametric range of changing technical quality parameters and data on the pace and timing of the development of new systems or adaptation to market conditions of existing technical systems.

1.2. Marketing research of market trends of simple technical systems, referring to consumer demand, the state of competition, trends in geography and demography of the market. Determination of rates and terms of modernization or renewal of the market or possible substitutes of goods. These two studies are carried out simultaneously annually and the information set is updated annually.

1.3. On the basis of the previous two researches tendencies of development of production are defined and the task for technological services about change of the organizational and technological environment of researches, development and production in the form of the specification is set [15].

1.4. Technological services determine the trends of technology development, determine in advance in terms of cost and evaluate the resource capabilities of the enterprise in this regard. Give rational proposals about the possible pace and timing of updates the technological base of development and production. Data are submitted to the appropriate center development strategies and include them in the data array of strategic data [10].

1.5. Having information, the marketing service clarifies consumer demand in the current and long-term periods, as well as forms the geographical and demographic parameters of the markets for each product and service and transmits them to the strategy development center (SDC) and to the information array of strategic data.

1.6. At the same time, the human resources services, together with the competent services and the strategy development center, determine the opportunities for knowledge development and key competencies, and determine the direction of their development. This data is transmitted to the SDC and placed in the information array of strategic data.

1.7. In the process of developing problems according to claim 1.1-1.5 marketing services together with the competent services and the SDC determine the level of competition and competitiveness of the enterprise. This data is transmitted to the SDC and placed in the information array of strategic data.

2. On the basis of the conducted research (section I) and other external and internal sources, the information service forms an information array of strategic data [11].

3. A group of specialists who are entrusted with the development of the mission together with the SDC formulates alternative versions of the mission and organizes their discussion in the teams of the enterprise.

4. Discussion among employees of the enterprise is carried out under the leadership of a team of specialists on the development of the mission. This group summarizes the comments and suggestions and, together with the SDC, forms the final version of the mission for submission to the Board of Directors for approval.

5. The Board of Directors reviews the mission, makes suggestions or comments that are eliminated, and the mission is approved [14].

The temporary model of the enterprise mission development is shown in figure 2.

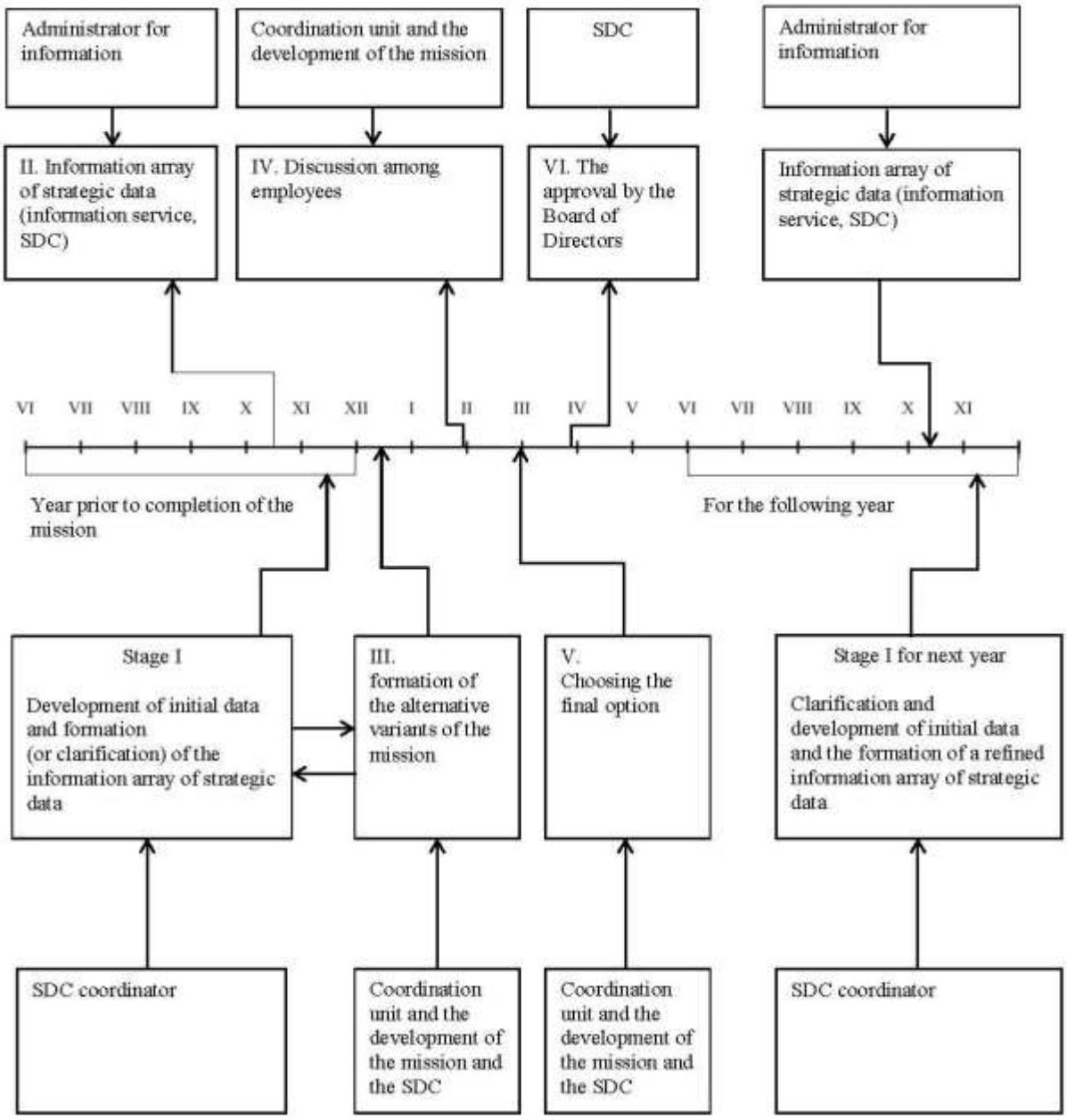

Figure 2. Temporal development model of the mission of the enterprise.

3. Results

The methodology and scheme of development and selection of the mission explicitly allows to ensure the unity of the enterprise goals and the basis for motivation of employees, to obtain the basis for the allocation of resources, to ensure the overall tone of the enterprise, to create a business environment, to identify those who cannot identify their interests with the goals and the overall course of the enterprise, to simplify the goals and translate them into specific tasks, to provide such a concretization of goals, which makes it possible to assess and monitor the cost indicators, timing and efficiency of the enterprise.

4. Conclusions

The main problems that prevent the development of high-quality General purpose of micro-level management enterprises, which reduce the efficiency of activities and do not allow the company to have

a higher rate of economic development. The structure of the General purpose of the enterprise in a generalized form, taking into account the main parameters, goals that must be taken into account in the development and implementation of the objectives of the activity. In this paper we propose the possibility to bring the existing scientific developments in the field of strategic management methods in the technological field of their practical use.

References

[1] West T 2005 *Educ. and Pract. Guide* 232
[2] King W and Cleland D 1982 *Strat. Plan. and Econ. Pol.* 397
[3] Thompson A A Jr and Strickland A J III 2007 *Strat. Man.: Conc. and Sit. for Anal*. 928
[4] Kanashchenkov A I 2000 *Theory and Pract. of Man. of Mod. Org. and Econ. Sys. (Based on the Exp. of Rus. Ent.)* 312
[5] Novikov S V 2018 Strategic Analysis of the Development of High-Technology Manufacturing Facilities *Rus. Eng. Res.* **38(3)** 198-200
[6] Kraev V M, Tikhonov A I and Novikov S V 2018 Economic Conversion in the Aviation Industry *Rus. Eng. Res.* **38(4)** 330-3
[7] Novikov S V and Dmitriev O N 2018 Vision of Genesis of Presentation of Hi-Tech Project during Competitive Selection *Rus. Eng. Res.* **38(4)** 320-2
[8] Dmitriev O N and Novikov S V 2018 Economic Assessment of Federal Scientific Programs *Rus. Eng. Res.* **38(4)** 326-9
[9] Novikov S V 2018 Russian Support for Innovation and Export Growth *Rus. Eng. Res.* **38(4)** 305-8
[10] Kanashchenkov A I, Matveev A M, Minaev E S and Novikov S V 2017 New Generation Compact Integrated Radar Systems for Aerial Vehicles *Rus. Aeron.* **60(4)** 647-52
[11] Dmitriev O N and Novikov S V 2017 Conception of managing of fuzzy-institutional meso-level organizational separations in a context of product projects internationalization *Eur. Res. Stud. Jour.* **20(4)** 277-89
[12] Novikov S V 2018 The features of innovative processes in the russian federation: analysis of current practices *Esp*. **39(39)**
[13] Novikov S V and Veas Iniesta D S 2018 State regulation of the development of the connectivity of the Russian territory *Esp*. **39(45)**
[14] Metechko L B and Sorokin A E 2018 Cluster strategy for eco-innovation at manufacturing enterprises *Rus. Eng. Res*. **38(4)** 316-9
[15] Makarenko A V and Sorokin A E 2017 Model of influence of power line elements on power efficiency of mechatronic modules for advanced mobile objects *Rus. Aeron.* **60(1)** 128-33