Methodology for the formation of indicators balanced system for marketing activities of an industrial enterprise

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Abstract. The article presents a methodology for the formation of BSC, which is presented as a tool for strategic and operational management of marketing activities. An industrial enterprise with a large number of competitors and retaining leadership positions was chosen as the object of research. The main purpose of this article is to evaluate marketing activities. An analysis of relations with customers, sales organizations, agents, dealers, subcontractors, commercial intermediaries of subsidiaries, and representative offices was carried out. The main activity of the enterprise is: production of precast concrete for brick and partial construction; production of precast concrete for panel housing series 111.97; construction and sale of housing (primary housing in brick or panel construction); production and laying of "pavers". Strategic goals were set based on key factors and proposed options for their achievement, as a result of which the company will be able to grow in terms of marketing management. This topic is relevant for this enterprise.

1. Introduction
This article proposes a methodology for the formation of BSC (balanced scorecard compatibility) industrial enterprise. The methodology was tested in the course of its implementation at CJSC Firm «Kultbytstroy». The main types of finished products are multi-hollow core slabs, exterior wall panels and interior wall panels.

The following goals can be distinguished for introducing the proposed methodology into the activities of an industrial enterprise: to strengthen the management team and improve the marketing management system [1]; to spread the chosen strategy to the marketing services of the enterprise [2]; to connect the remuneration system of marketing employees of the enterprise with the achievement of strategic goals; reconcile strategic actions and necessary resources; support investment in intellectual and intangible assets; provide the basis for strategic training for the organization; objectively evaluate the effectiveness of the marketing activities of the enterprise [3].

2. Industrial enterprise analysis
The enterprise’s target market refers to a market with high entry barriers and high exit barriers. Thus, the company has a high profit potential and a high degree of risk, because if it has a decrease in sales, it will still be forced to remain on the market and wage endless struggle with competitors. Almost all materials used in production are produced in the Krasnoyarsk Territory (with the exception of metal
and materials used in the decoration of apartments). Auxiliary materials for production are purchased in Krasnoyarsk.

At the moment, the company has more than 23 competitors (the main ones are: on the market for precast concrete – OJSC "KZHBMK", OJSC "Sibiryak", LLC "Stroytekhnika", etc.).

The strongest and most aggressive competitors are organizations such as Monolithholding LLC; Sibiryak, LLC USK; "New City", LLC; Sibagropromstroy, "Monolithholding" - capital construction, incl. housing, civil and industrial construction; "Sibiryak" - production of the entire cycle of construction and installation and repair-construction works; "New City" - development and sale of residential real estate. Of the competitive strategies [4], the «Kultbytstroy» Firm includes a violent strategy. This strategy becomes attractive when consumer demand is constantly growing. For this, CJSC Firm «Kultbytstroy», having analyzed the market for construction and installation works, began to produce colored panels.

In the construction market, «Kultbytstroy» plays the role of a contender for leadership, as this company seeks to expand its market share and is ready to attack the companies of leaders and other competitors. «Kultbytstroy» CJSC, among the general offensive strategies, chose a flank attack in a geographical direction. For «Kultbytstroy», a specific attacking strategy is a distribution innovation strategy. CJSC «Kultbytstroy» is trying to create new distribution channels for products [5].

Key consumers of the company’s products are middle-income residents who purchase economy and comfort apartments, as well as middle-income and high-income residents who buy business-class housing. Also, consumers of the enterprise’s products are investors – individuals and legal entities purchasing residential and non-residential premises erected by the enterprise. The economy class housing segment in the primary residential real estate market is the largest (largest) and makes up about 60% of the total structure of residential property buyers, the comfort class is about 30%, and the business class is about 10%.

Large marketing organizations, agents, dealers, subcontractors, commercial intermediaries, subsidiaries, and representative offices act as business partners of «Kultbytstroy». Trading contractors are one of the channels of distribution. Improving work with a partner is the main goal of the marketing activity of the enterprise. CJSC «Kultbytstroy» mainly uses a direct sales channel for apartments (producer-buyer), but sometimes it also uses an indirect (single-level channel). Direct sales channel – the sales department of the company is engaged in the sale of apartments and enables the manufacturer to control the market situation; influence the price of their products. CJSC «Kultbytstroy» on the sale of residential real estate cooperates with real estate agencies ("Alliance-T", "Arbis", "Arevera", etc.), to attract buyers and liaise with the sales department of the company [6].

The strengths of «Kultbytstroy» are: product prices, which are 10% lower than the industry average prices; high quality of products; high growth rate of sales up to 119% per year; simultaneous use of traditional and contractual distribution channels. Weaknesses of the enterprise are: low profitability of products (2%); low marketing budget (2% of sales); staff turnover of the marketing department (78%). CJSC «Kultbytstroy» offers the following opportunities: an increase in the pace of housing construction leads to an increase in market capacity; growth of incomes of the population allows the company to expect that access restriction systems will be installed on the secondary housing market; participation of the enterprise in the investment fair to attract new investors; the desire of city residents to improve housing conditions can lead to an even greater increase in the pace of construction, which is facilitated by a decrease in% on mortgage lending. However, the company may face the following threats: an increase in the unemployment rate in the country may entail a refusal to improve housing conditions by residents of the city, as well as a decrease in household incomes; the threat of intense rivalry for «Kultbytstroy» is quite large, as there are strong competitors in the market; toughening tax control and the likelihood of government regulation of housing prices will lead to lower prices per sq.m. - this possibility will also lead to “slight injuries”, however, the probability of this possibility is small [7].

3. Company prospects
BSC should reflect the listed factors of marketing activity of the enterprise. In this case, the BSC should take into account relations with resellers and customers, for which special marketing measures
should be developed. Therefore, for this enterprise it is advisable to use five perspectives: “Information and innovation”; "Marketing events"; "Resellers"; “Customer Relations”; "Efficiency". With the help of perspective indicators, “Information and Innovations” analyzes how an organization with a developed learning culture applies the results in future work to more effectively use its resources [8].

In the future, “Marketing Events” presents the main elements of the marketing mix of the enterprise. In the future, “Resellers” presents indicators relevant to cooperation in the field of marketing. They are presented in terms of how they are suitable for planning and controlling work with intermediaries. In the “Customer Relationships” perspective, indicators are presented that regulate customer relations. In the future, “Performance” presents a set of indicators that allow you to control the effectiveness of marketing activities. Such a structure of prospects makes it possible to more reasonably identify the key factors for the success of the enterprise (the factor that is responsible for the success and survival of the enterprise) [9].

Key success factors can be identified in accordance with the prospects of the BSC (figure 1).

### Figure 1. Key success factors for industrial enterprise.

Based on key success factors in order to implement an organizational vision, strategic goals are determined (table 1). In the process of analyzing strategic objectives, answers should be received for each prospect of the BSC.

For each key success factor, several strategic goals can be formulated that are associated with one of the five prospects for enterprise development [10].

The table summarizes the strategic goals for the enterprise. These goals relate to key success factors for the enterprise and five perspectives of BSC.

### 4. Performance and efficiency indicators

Achieving one goal serves the achievement of another and so on, to the main enterprise strategic goal. The links between the various strategic objectives are clearly visible through a causal chain. Based on the strategic goals, the indicators of the effectiveness and efficiency of the BSC are determined.
Table 1. Key success factors and related strategic goals of an industrial enterprise.

| BSC perspectives               | Key success factor                                                                 | Strategic goals                                                                 |
|-------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Information and innovation    | Development of a new product – office group electromagnetic locks.                 | Introduction of new types of products.                                          |
|                               | The constant collection and rational use of information about customers, the market for products, competitors. | Introduction of new information technologies.                                   |
| Marketing events               | Expansion of the range of products and the conquest of new market segments.        | Reasonable prices and a full range of products.                                 |
|                               | Development of professional skills of employees of the marketing service of the enterprise. | Development of the selection system and training of the enterprise marketing service employees. |
| Resellers                     | Using of contractual distribution channels to delay access to the market for wireless access control systems. | Strengthening relations with resellers by supporting them in the design of the trading space, advising on the organization of work. |
|                               | Strengthening contacts with resellers through the use of traditional and contractual distribution channels. | Development of traditional and contractual distribution channels.               |
| Customer relationship         | Strengthening the commitment of consumers due to the high quality of products and the high growth rate of sales. | Formation of long-term relationships with customers, active work with regular customers. |
|                               | Increased profitability of working with customers in the market due to moderate market prices, high quality products, and the use of traditional and contractual distribution channels. | Ensuring profitability of working with clients.                                 |
| Performance                   | Attracting investors.                                                              | Increase return on investment.                                                  |
|                               | Growth in sales while reducing product prices.                                     | Increase in market share.                                                       |

Performance and effectiveness indicators are units of measurement related to the key success factor and the strategic goal of the enterprise. Table 2 provides an overview of performance possible indicators and effectiveness for each of the strategic goals [11].

Table 2. Strategic goals and performance indicators of industrial enterprises.

| Strategic goals | Performance and efficiency indicators | Definition |
|-----------------|----------------------------------------|------------|
|                 | Information and innovation             |            |
| Introduction of new products | Ability to innovate. | Number of innovative proposals / projects. |
|----------------------------|---------------------|------------------------------------------|
|                             | Intensity of innovation. | Number of projects for a given period. |
|                            | Customer knowledge. | Number of criteria by which one client is evaluated. |
|                            | The intensity of analytical performance evaluations. | Number of criteria relevant to consumer behavior. |
|                            |                     | Number / scope of ongoing analytical performance evaluations. |

### Marketing events

| Reasonable prices and a full range of services | Relative price. | Price of own product. |
|-----------------------------------------------|-----------------|-----------------------|
|                                               | The share of turnover assortment sales. | Average price of similar products offered by competitors. |
| Development of a system for selecting and training employees of the enterprise marketing service | The presence of a personnel reserve in the framework of the marketing service. | Amount of an order consisting of at least two assortment items. |
|                                               | Actual personnel reserve in the unit. | |

### Resellers

| Strengthening relations with resellers by supporting them in the design of trading space | Obligations of trading partners. | Subjective assessment of the trading partners responsibility to the manufacturer. |
|----------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------|
|                                                                                        | The share of turnover under contracts with trading partners. | Turnover under contracts with trading partners net revenue. |
| Development of traditional and contractual distribution channels                        | The market share of the enterprise in the distribution channel. | Sales turnover in the distribution channel. |
|                                                                                        | Timeliness of fulfillment of obligations. | Total sales channel turnover. |
|                                                                                        |                                               | Quantity / cost of deliveries made on time. |
|                                                                                        |                                               | Total / Total Cost of All Shipments. |

### Customer relationship

| Formation of long-term relationships with customers, active work with regular customers | Customer satisfaction. | Consumer satisfaction index. |
|-------------------------------------------------------------------------------------|-------------------------|------------------------------|
|                                                                                     | Temporary customer value. | Average customer relationship duration. |
| Ensuring profitability of working with clients                                       | Customer turnover rate. | Number of terminated / non-renewed contracts. |
|                                                                                     | Customer profitability. | Total number of customer / expiring contracts. |
|                                                                                     |                         | Profit from the client. |
|                                                                                     |                         | Net customer revenue. |

### Performance

| Growth in return on investment | Return on investment. | Return on investment index. |
|--------------------------------|-----------------------|------------------------------|
|                                | Profit ability.       | Average revenue per unit of productivity (capacity). |
Performance and effectiveness indicators should be transformed into appropriate target values (planned indicators), and then into a set of measures necessary to achieve the target values [12, 13].

Table 3 shows the medium-term target values of the BSC of the enterprise, recommended during the testing of the proposed methodology, on the basis of which it is necessary to assess the reliability and reality of the measures developed to increase the competitiveness potential of the enterprise [14].

**Table 3.** Medium-term target values of a balanced system of marketing activities indicators of “Kultbystroy”.

| Key success factor | Strategic goals | Performance and efficiency indicators | Target values | Improvement actions |
|--------------------|----------------|----------------------------------------|---------------|---------------------|
| **Information and Innovation** | | | | |
| New product development | Introduction of new products | Ability to innovate. Intensity of Innovation. | Growth of at least 10% over three years. At least 3 new products or projects introduced in three years. | Studying the global experience of innovation using benchmarking tools and its possible application in the enterprise |
| Constant collection and rational use of information about customers, product sales market, competitors | Introduction of new information technologies | Customer knowledge. The intensity of analytical performance evaluations. | At least 75% of customers 12 sign each. Annual analytical performance evaluation. | Formation of a marketing information system of an enterprise |
| **Marketing events** | | | | |
| Expanding the range of products and conquering new market segments | Reasonable prices and a full range of products | Relative price Share turnover of assortment sales | Own product price is 8% lower than the average price of similar products offered by competitors. Growth of at least 4% per year. | Formation of an effective product and pricing policy of the enterprise |
| Development of professional skills of employees of the marketing service of the enterprise | Development of a system for selecting and training employees of the enterprise marketing service | The presence of a personnel reserve in the framework of the marketing service | Not less than 90%. 40% reduction over three years. | Systematic retraining of managers and specialists in specialized educational institutions. Formation of a favorable social and psychological climate in the team. |
| Resellers | | | |
| Using contractual distribution channels to delay the market for substitutes. | Strengthening relations with resellers by supporting them in the design of the trading space, advising on the organization of work | Trading partner liabilities. Share of turnover under contracts with trading partners. | At least 75% of responsible trading partners. Growth up to 25% during three years. | Formation of an effective distribution policy at the enterprise |
| Strengthening contacts with resellers for account of the use of traditional and contractual distribution channels | Development of traditional and contractual distribution channels. | The company's market share in the distribution channel. Timeliness of fulfillment of obligations. | 45% growth over three years. Up to 90% of products completed on time in three years. | |
| Customer relationship | | | |
| Strengthening customer loyalty due to high quality products and high sales growth | Formation of long-term relationships with customers, active work with regular customers | Customer satisfaction | At least 90% of satisfied or highly satisfied customers. Achieve ongoing relationships with 75% of customers. | Further development of the quality system. Development of the necessary internal regulatory documents. Implementation of a customer satisfaction rating system. |
| Increasing the profitability of working with clients in the market | Ensuring profitability of working with clients | Customer turnover rate. Customer profitability. | Reduce to 10% in three years. 10% growth annually. | Formation of a management accounting and analysis system |
Performance

| Attracting Investors | Return on investment | Return on investment Profitability. | Growth of at least 5% per year. Growth of at least 10% per year | Studying the global experience of innovation and investment using benchmarking tools and its possible application at the enterprise |
|----------------------|----------------------|------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------|
| Growth in sales while reducing product prices | Increase marketshare | Marketshare. Consumer reach. | Growth of at least 2% over three years. Growth of at least 5% over three years. | Formation of an enterprise management system based on the results |

5. Conclusion
The methodology for the formation of the BSC of an industrial enterprise was considered. A full analysis of the enterprise’s activities was also carried out, the strengths and weaknesses of the enterprise were highlighted, and actions to improve them were set relative to strategic goals.

The selected company «Kultbytstroy», in its strategy, relies on business partners - resellers. The industry in which the enterprise is operating does not have a high degree of vertical integration.

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