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A Study on the Problem of Customer Relation Ship-Oriented Design Food.

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ABSTRACT

Customer relationship-oriented design of foodstuffs is one of the most perspective directions. Cluster Application-modular approach allows you to standardize the design process for different types of food, while increasing its effectiveness and efficiency. Developed by cluster formation design strategy consists of three main modules: problem structuring and design directions food; identifying target market segments; the formation of the strategy of the RFP. As a result of the performed study identified the causes of development of PM, defined approaches to the choice of the method of design, showing the path analysis of competition in the product market, it is proposed to use SWOT analysis to assess strengths and weaknesses of the enterprise, shows a layer of strategy RFP on the basis of a study of consumers ' requirements.

Keywords: food engineering, cluster-modular approach, identification of the target consumer, the sensory properties of food.

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INTRODUCTION

Increased competition and competition in the conditions of developing market in the food industry leaves no other option for producers, in addition to developing new food modernization and re-equipment of production, the introduction of new technologies, methods and materials. If the enterprise is not pursuing a policy of standing offers to the market a new product, it is not only can incur large financial losses, but also find themselves on the verge of bankruptcy.

Despite the fact that only a small proportion of future products is a success on the market and the risk is very great for the enterprise does not have alternative destinations to hold position and development, as the development of new and existing recycling products.

Modern trends in the food industry shows that the process of designing foods requires investment participation of professional specialists of different directions: marketing, research and Development Department (R&D), sensory analysts, quality managers, technologists-manufacturers in order to reduce time-to-market and achieve success.

Customer relationship-oriented design food products puts consumers in the process of product development and production technologies, which are tools for implementing consumer evaluation. Customer relationship-oriented approach is essential, because the process of product design based on the identity of the buyers and the influence of their accounting needs.

In connection with considerable relevance of this problem, a number of studies subject. Primarily explores the problem of various consumer products developed. (G. Ares et al, 2008, T. Duborasova, 2001, V. Matison et al, 2015 J. Mojet, 2005, A. Tikhomirov, 2010).

Special attention is paid to the development of new products with different properties including functional (E. Bichkova et al 2014, L. Rojdestvenskaiy et al, 2012, M. Erl et al. 2004), as well as the touch control.

P.A. Luning in the book (P. A .Luning et al 2002) examines the process of creating new products, including the integration of consumer preferences in the formation of product quality. Prospective application of Quality Function Deployment in the development of new products (W.P. Charteris 1993, L. Cohen 1995, A.I . Costa et al 2001, V. Matison et al) has developed (L. Manzocco et al, 2009, Tinovskaiy, 2014) modeling some aspects of the design process and product supply and its clustering of elements (D. Plaehnetal 2006).

An integral part of the design process of new products are marketing researches, which are necessary to assess the market and target segment (N. Malhotra, 2003). When designing food for successful market entry appropriate to develop the concept (V. Matison et al 2012) to identify the possibility of promotion on the market (L. Maiyrnicova et al 2011) and assess the risks of design (M. McCarthy et al 2005). The most important task when creating new products is to create a design methodology.

METHODS

The study used methods of cluster analysis in forming process design for the analysis and processing of the information used for market research, situational definition of quantitative and qualitative indicators applied statistical tools. Consumer segmentation was performed using the method of multivariate analysis groupings. RFP Strategy was carried out using SWOT -analysis, when it revealed the strengths and weaknesses of the enterprise, defined opportunities and risks. To assess the effectiveness of the RFP applied a value analysis and product design is carried out in accordance with the Gantt chart.

RESULTS

Cluster modular approach to RFP

In today's competitive environment in a timely and quick conclusion to the market of new types of food determines the financial-economic success of the food industry. Mechanism to identify customer

requirements, matches the wishes of buyers with the industrial, financial and marketing opportunities is a tool for the development of enterprises of food.

When designing food key success factor is the correspondence between the fundamental characteristics of the new product and consumer needs. There are various ways of designing foods.

The article shows a developed the cluster modular approach to the RFP, which is the most progressive as it allows not only to unify the design process, but also, on the other hand, flexible approach to forming procedures by removing or replacing some of the operations, modules or even clusters, depending on the type and destination of the product under development. This gives you the ability to optimize the process of RFP, reduce cost and shorten the product on the market.

The structuring of the problems and directions of RFP.

Originally defined by the direction of the RFP, you select the method, design the goals and objectives.

In determining the directions of product design in power primarily enterprise development strategy to achieve superiority over rivals by creating a product with the best consumer characteristics at an acceptable price.

Orientation of the RFP is taken account in formulating the problem. It may be expanding the range of existing products through the development of new forms of mass changes of the product, adding and expanding of flavouring and aromatic properties, use of new ingredients and packaging changes retention periods. Usually in this case does not require a large investment, significant changes in marketing policy and processes of production, purchase of new equipment.

When developing innovative product creates a new recipe, product design and packaging, apply the latest technology and equipment, a groundbreaking marketing policy that requires additional financial and production costs, with the newly formulated problem RFP.

Create a creative product that uses new discoveries, technologies and methods, requires in most cases a radical retooling of enterprises, new structures and significant financial costs. In that case, when the formation of the PPP problems and strategies need to assess financial and economic capacities of the company, the availability of resources, the payback period of the project.

Depending on the strategy of food enterprises causes of the need for an RFP can be divided into three groups:

- causes, caused by a decrease in market share of the company;
- causes defined proposals businesses;
- causes defined a long-term development strategy.

The first group includes the reasons requiring urgent action, so how else can occur considerable financial loss. These reasons are caused by the following circumstances:

1. Sales categorized as food, produced by the enterprise, decreases while this segment of the market is increasing, which leads to a decrease in the market share held by the company.
2. Sales in this category requires an increase in marketing expenses for its promotion on the market.
3. Competitors offer on the market of products in this category, with the best quality-price feature, thereby reducing the market share of the enterprise.
4. Target Consumer Loyalty decreases, and it gradually goes to market this product category.

The second group is represented by causes defined pre-planned suggestions businesses. These include:

1. Market analysis is conducted by the marketing structure, showed the presence of niches that you can fill in the release of a new product that matches the profile of the company.



2. Developed a new advertising company, under which it is possible to develop an alternative relative to competitor products superior in quality, but remaining in this price range.

A third group, the most important reason is determined by the long-term development strategy of the enterprise. They are caused by the following circumstances:

1. The company increased investment, organized or modifies the marketing structure, R&D, quality, sensory laboratory.
2. Structure of marketing, R&D, sensory laboratory have proposed expanding the range for this category of products, the range of new packaging, the use of new ingredients, create new tastes and aromas.
3. Manufacturing Department and quality Department proposed new technological methods and technologies to create an innovative product with which you can make a breakthrough in the market.
4. The research group R&D has created a new creative composition of the product, which had never appeared on the market.
5. Retailer suggested company to create a new product or modify an existing one, so that it is sold under the brand name of a trading network.
6. In line with the strategy of the enterprise is organized by production of a new profile for which you want to develop a line of products.

On the basis of the reasons determining the need for an RFP, to select the type of product to be developing.

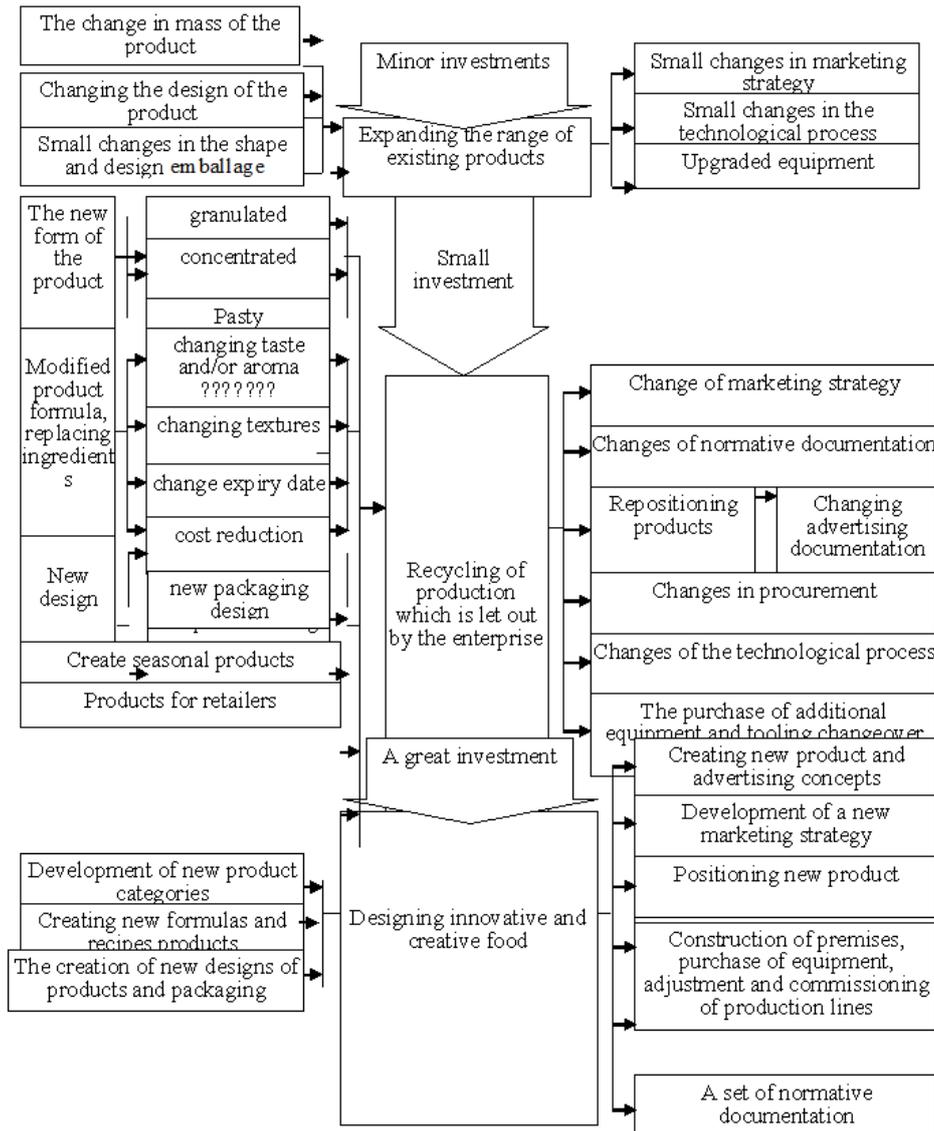


Figure. 1. Classification schemes for the development of food

The most common low-expansion process rulers produced food products company. This process is used when you want to change the mass production, design, implement small changes in the shape and design of packaging.

Line extension requires small changes to marketing strategies, technological process, as well as the readjustment of the equipment.

In many cases, competition on the market requires constant recycling of their products. Rapid changes in the market situation, the emergence of new competitors on the market producing similar products of high quality at an affordable price to the consumer leaves the consumer choice but planned work on designing a new food. Recycling of food products is to develop:

- a new form of existence of the product, for example, granular, concentrated, pastelike, etc.;
- retrofit product formulas with replacement ingredients, that allows you to change the taste, aroma, texture, shelf life properties, lower cost;
- new product and packaging design;
- Special seasonal foods for the new year, Christmas and other holidays;

- products for retailers, either produced at the enterprise product, sold under the brand name network, or a newly created product under the order and under the retailer's brand.

Recycling of food requires several costly compared with the extension of the ruler, because it requires a change of marketing strategy and advertising concept, product repositioning, purchase additional nomenclature of raw materials, process and change extra snap and readjustment, and maybe purchase needed equipment.

Designing innovative and creative products refers to processes requiring significant financial and resource costs. However, in the case of the success of the enterprise becomes the market leader and gets great financial advantages.

An innovative product is a product new category never produced at this facility. Sometimes release a new product category is a response to the actions of competitors, but in many cases, companies that have research centres or departments R & D prepare in advance innovative products, getting information from the marketing structures of the situation on the market.

Creative product is a product that has never met, is the result of new breakthrough technologies or discoveries. As an example of creative products is the appearance of protein substitutes for meat, vegetable-based proteins.

Create, release and promotion of innovative and creative products requires the creation of new product and advertising concepts, develop marketing strategies, the creation of new processes and technologies, equipment purchases, and sometimes new buildings that meet the relevant requirements.

Within the framework of the formation of the problem of the RFP defines a method of designing. Traditional is a consistent design in which all phases and operations are performed one after the other and subsequent operation is the output of the previous one. However, this method is not always effective in terms of the need for rapid release of the product on the market. While designing a number of operations and phases in parallel, significantly reducing overall development time.

Cross-functional approach implies distinction and delegation of authority, depending on the team of cross-functional features. Prospective cluster modular design, allowing to unify the process and flexibility to modify it by removing or adding individual stages and operations.

Based on identified trends and causes of RFP, establishes goals and objectives of the RFP. The main objective is to develop a food product that meets the needs of consumers who are willing and able to buy, with strengthened the competitive position of the enterprise, increasing its market share and increase profits.

To accomplish this goal are solved the basic tasks:

- formed strategy RFP;
- identifies the target user, and the resulting trial created the concept of PM;
- formed and structured key product specifications, creates a recipe, product design and packaging;
- creates a prototype of the product carried out test marketing, planned and structured processes of production, developed regulatory documentation produced experimental-industrial party, runs a batch process.

Identifying target market segments, corresponding to the created product

Under module 2 to achieve the desired objective collects the information necessary for the design of PP. Information can be obtained directly from the primary consumers, employees of commercial entities (wholesale organizations, shops, supermarkets, networks, etc.). and secondary detected by so-called "desk research".

Operations are used to collect information:

- creation of information-gathering tools;
- determining the composition of the necessary information;
- determining the sources of information;
- the analysis and structuring of information.

To create a primary data base, the most common tool is the poll that can be in the form of individual-social interview, telephone interview and a mail survey. Usually the individual interviews conducted by structured questionnaire with demonstration cards advertising modules, labels, etc., this method allows you to create a foundation for building consumer's profile.

Less expensive are telephone interviews lasting usually 10-20 minutes, during which the interviewer gets the necessary information.

Post polls on a structured and standardized questionnaire the least flexible, but effective enough, because anonymity allows respondents to be more forthright compared with personal interviews.

A focus group is currently the most common tool for gathering information. It can be used at different stages the study, from elementary to gather preliminary information to the final prototype to evaluate product design and packaging.

Composition of the necessary information is determined on the basis of the requirement of the RFP. Identifies consumer preference and acceptability requirements are determined by demographic, behavioral and psychographic characteristics of consumers and a number of other parameters.

To obtain secondary data in desk researches materials of State statistics, reports on retail sales, industrial electronic and print editions, industry experts, etc.

For the analysis and structuring of information used chart "voices of consumers", and affinity, dispersion methods, regression, factorial and correlation analysis, as well as the forecast analysis needed to identify opportunities for product promotion.

When situational analysis evaluates the market selected products segment. Identify sales trends for years, are determined by market participants, including foreign ones. Optionally identifies peaks seasonality of sales and trends for individual types of products.

When analyzing the concentrations in the product market, takes into account both large and small companies with their market share in this segment.

Competition analysis is important when developing a new product, especially when entering a new market. Primarily analyses the existing major companies and their market share and, in addition, potential competitors to enter the market with a competing product competitive strength is investigated. Suppliers and buyers, as well as impact substitutes. Explores the features and specifications of competitive products, development strategy, technical and economic potential of firms-competitors. This is particularly true of high-yield and emerging markets.

In assessing the competitiveness of developed food product defines the properties and characteristics of its advantage over competitor's products. Takes into account the impact on sales of goods-substitutes, consumer preferences, the ability to impact marketing tools, integrated border purchasing power availability in places of purchase, etc.

Analysis of the situation on the market allows you to jump to the definition of the target market and segment. On the basis of the information received is structured quantitative indicators (volume and allocation of the share of the target market, the level of saturation, market trends, the amount of available market niches and growth rates), as well as qualitative (preference and acceptability to consumers of the developed products, the power of position of buyers, the possibility of alternative shopping, descriptive characteristics of the main profile of the consumer).

Segmentation is usually conducted on the criteria: regional, demographic and behaviorally. Regional segment carried out Division by regions, province, region and city. Stand out the most attractive segments, including cities with a high level of incomes of the population, such as Moscow. Saint-Petersburg, Ekaterinburg, etc. Demographic segmentation criteria occurs according to the parameters: gender, age, income level. Psychographic segmentation is dividing the market into different groups based on social class, life style and personal characteristics of the consumer. When behavioral segment is determined by the readiness to buy a product, means-tested in the product, reason for purchase, etc. when carrying out segmentation method is the most commonly used groupings and methods of multivariate analyses.

On the basis of established criteria and use one of the methods identified target market and segment, combining consumer groups preferring this product. Defines a strategy for outreach, which is quite promising concentrated marketing, providing enterprise resource concentration on the target segment, capacity, availability, viability and profitability which is calculated.

Creating PPP strategies.

Before directly proceeding to develop a new product, it is necessary to assess the opportunities and risks of the RFP, the strengths and weaknesses of the company. This assessment is conveniently spend using the technique SWOT -analysis (analysis of strengths, weaknesses, opportunities and threats). opportunities and threats matrix is drawn up with the help of which the estimated probability of opportunities (access to new markets, expansion of production, vertical integration) and the emergence of dangers (the emergence of new competitors, rising prices of raw materials and equipment, the advent of cheap substitute products). Identifies the strengths of the enterprise, for example, retrofitting with modern equipment, the arrival of a new professional management, the use of innovative technologies, as well as weaknesses : the location of enterprises in the city center, the lack of logistics systems, use of outdated management systems, etc.

On the basis of conduct SWOT analysis identifies promising directions of development enterprises and, in particular, problems relating to the RFP.

The results of the SWOT analysis are used in assessing market capacity of the RFP, which takes into account a combination of factors, making it possible to eliminate the weaknesses of enterprises significantly reduce the emerging threats and risks and ensure the success of a new product on the market.

For the successful implementation of the RFP must assess the economic and financial aspects of the project. Previously held estimated rating:

- the cost of resources and the production of a new product;
- -sales, derived from studies of demand;
- -indicative price based on studying consumer opinion and comparison with competitor;
- -the indicative cost of production;
- -cost of an RFP.

The effectiveness of financial and analytical analysis can be enhanced using DAF (value analysis), which represents a complex study of the cost and the characteristics of the product, including the functions and resources throughout the life cycle of products (ŽCP) and aims to optimize the ratio quality price.

RFP strategy as an integral part of the Organization's strategy is a focus on long-term development priorities of food enterprises, directly dependent on the level of scientific and technological development and the results of the work in previous periods. RFP strategy is innovative because it allows the company to continuously improve its research and production potential, retain and expand the target market, competitors, directly responding to requests from consumers. When developing the strategy RFP evaluated directions associated with creating and using:

- innovative product features that meet the requirements of consumers;
- innovative technologies and processes;
- methods of management and marketing;

- physic-chemical methods and touch control.

To develop a new food product requires specific organizational structure. Usually the RFP are engaged in departments of R&D (research and development), quality and marketing. Promising the creation of cross-functional group, which brings together specialists from different areas, including the representatives of the following departments: marketing and distribution, development and research, quality control, technology and production, procurement, logistics, as well as consultants on financial-economic and legal issues. Head cross-functional group is developing a strategy and manages the process of design.

When the RFP should take into account a number of factors that affect the development process, which include:

- the relatively high level of development costs and development of new products, especially when creating innovative and creative products;
- high level of risk when you market new products;
- the similarity of the basic technologies for enterprises in the field of competitors for the production of food;
- high dependence of demand, especially for food, premium from the economic situation in the country;
- variability of some raw materials during storage, transport and food production.

Development of new products in the enterprise of food industry is fraught with risks, which must be managed with a view to preventing the occurrence of risk events. Initially, it is necessary to identify risks, primarily, related directly to the RFP. These include risks: lack of competitiveness of the new PM, leakage of information on the planned PM to competitors, increase purchasing prices for raw materials, ingredients and materials, Project underfunding, loss of controllability of the RFP process. An analysis and risk assessment, determining its value, ranking evaluation of potential magnitude of impacts from the emergence of risk events and opportunities to identify and eliminate the risk situation. Depending on the values of indicators of relevance and prioritization of activities should be undertaken to eliminate or reduce the risk to an acceptable level. RFP for risk management need to ensure traceability of identified residual risks by implementing procedures for monitoring, validation and verification.

With a view to ensuring performance discipline in designing appropriate develop a Gantt chart, which recorded modules and operation RFP. For each operation is assigned a champion and fixed time frame for the implementation of activities. Gantt chart allows you to track the progress of the design and, if necessary, intervene to prevent failure, which may lead to the collapse of the project in General and will require additional funding.

DISCUSSION

The issue of designing new products and existing recycling is a priority for the food industry in Russia. In recent years, more and more enterprises goes to new methods of constructing food using as a central element in consumer evaluation, which is a major factor in getting the product to market.

In connection with the stiff competition in the grocery market, many food companies are working in conditions of uncertainty and risk, when resource limitations and the high complexity of production processes requires innovative thinking in creating food with programmed properties that correspond to the requirements of consumers.

Satisfaction of needs is a prerequisite in the RFP, but the long-term success of the enterprise depends on the creation of a targeted audience of buyers in a selected market segment.

Studies have established the basis for the creation of cluster-modular model, whereby it became possible to create RFP strategy based on an analysis of competition in the product market and the assessment of the competitiveness of the product to be created.

Complex applied research methods: SWOT and DAF-analysis, affinity diagrams and Gantt, , etc. enabled with modern position determine the direction of design and form a strategic framework for food design.

CONCLUSION

Now the problem of designing food belongs to the most important challenge facing the food industry.

Food market is saturated, and, despite the crisis, competition is increasing. In these circumstances, the application of scientific methods of designing food producers will considerably strengthen its position in a competitive market.

As a result of the carried out researches designed cluster design process food products related to the most important element is the formation of strategic direction design PP.

Module 1	Module 2	Module 3
Structuring problems and directions of design PP	Identifying a target market and a segment of the RFP	Creating a strategy RFP
Identification of design and identify the causes of development of PM	2.1. Creating tools and information gathering	3.1. Analysis of strengths, weaknesses, opportunities and threats of food enterprises
Setting goals and objectives, the choice of method of designing and formulating issues RFP	2. 2. Situational market analysis	3.2. Analysis of DAF process RFP
	2.3. Competition analysis and evaluation of the competitiveness of the generated PP	3.3. evaluation of the strategic directions of the RFP
	2.4. Definition of capacity, availability, viability and profitability of the target market and segment RFP	3.4. Selection, analysis and evaluation of organizational forms RFP
		3.5. Preparation of the Gantt chart
		3.6. Forming strategy RFP

Figure 2: Cluster formation of strategic direction of the food design

The cluster, as shown in Figure 2 consists of the following modules:

- ✓ structuring problems and direction of the RFP;
- ✓ identifying target market segments, corresponding to the projected product;
- ✓ creating a strategy PP.

The cluster allows using the developed methodology to determine the direction and design method for your product; an analysis of the competition and the evaluation of competitiveness on the basis of the collected and structured information; identify target market and segment, determining capacity, availability, viability and profitability of the RFP; assess financial and economic side of the project, identify and assess the risks, and as a result create RFP strategy.

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