

## **MANAGEMENT BUSINESS PROCESS OF REENGINEERING WHOLESALE COMPANIES**

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### *Abstract*

*This article summarizes the theoretical principles and practical recommendations to improve the efficiency of wholesale and trade enterprises through improved management process and reengineering of business. In the following article the key aspects of business management, such as: demand, purchases and assets management, relationships with partners were considered. Business processes were allocated into two basic categories: primary and secondary. Secondary business processes are focused on service, management and development. The author provides principles, conditions and specific methods of the practical usage of reengineering: systematic and "clean sheet of paper" approach. In addition, all the risks in the process of development and implementation of reengineering were taken into the consideration, as well as detailed system of planning operational risks was established.*

*Keywords: aspect, business process, wholesale, wholesale business, design, reengineering, risk, manufacturing operations, management, efficiency.*

### **1. Introduction**

Wholesale on its economic substance acts as a sale of goods within the sphere of commodity circulation, and the material content as additional manufacturing operations at conveying goods from producers to trade. Transformation processes in trade, constant changes in the external environment influencing the formation of commercial relations and increasing competition in the markets. This necessitates the search of innovative mechanisms for managing business processes, including commercial. Background of reengineering as a new ideology of business process management are: progress in information technology; the success of his adaptation applied in the production and trade; spread the commitment of consumers to the individualization of consumer goods, provided high quality and appropriate level of service; scientific and technological progress; the emergence of innovative technologies and, consequently, increased competition in the field of commodity circulation. This leads to the need to find innovative toolkits business process management of wholesale trade.

### **2. The degree of investigation of the problem at the present time, the purpose of the research**

The founder of "reengineering" is Michael Hammer, his definition of reengineering - is the fundamental rethinking and radical redesign of business processes to achieve significant improvements in key indicators for the current business performance as cost, quality, service and efficiency [6]. It is believed that the definition proposed by M. Hammerom and Dzh. Champi,

accurately reflects the essence of this phenomenon. Today, business process reengineering related works of such scholars as V. Apopiy [1], O.Vynohradova [3], T. Davenport [7], E. Deminh [8], and M. Robson, F. Ullah [4], L. Taranyuk [2], Yu. Telnov [5] and others. Each of the authors puts their emphasis on the implementation of reengineering projects, but are not illuminated to the management of business process reengineering of wholesale trade.

The main purpose of the article is to study the development of theoretical positions and practical recommendations for management business process reengineering of wholesale trade.

### 3. Results and discussions

Commerce and processes occurring within the wholesale company consists of functional chains that are interrelated and which depends on the general condition of all commercial and logistic systems. Using a process approach in management reengineering in wholesale company provides a deeper understanding of the concept of business processes. In a broad sense in business process understanding - a structured sequence of actions to implement the relevant activity at all stages of the life cycle of the subject [2].

Business process management in the wholesale trade should be regarded as key integration of logistics operations, which starts from the end customer and cover all providers of goods, services and information, while adding value to the subjects of the process. It is possible to articulate key aspects of business process management during the wholesale and identify positive impact on participants. With this approach advisable to focus on business processes such as demand management, procurement, material management, profit and relationship with customers (Figure: 1).

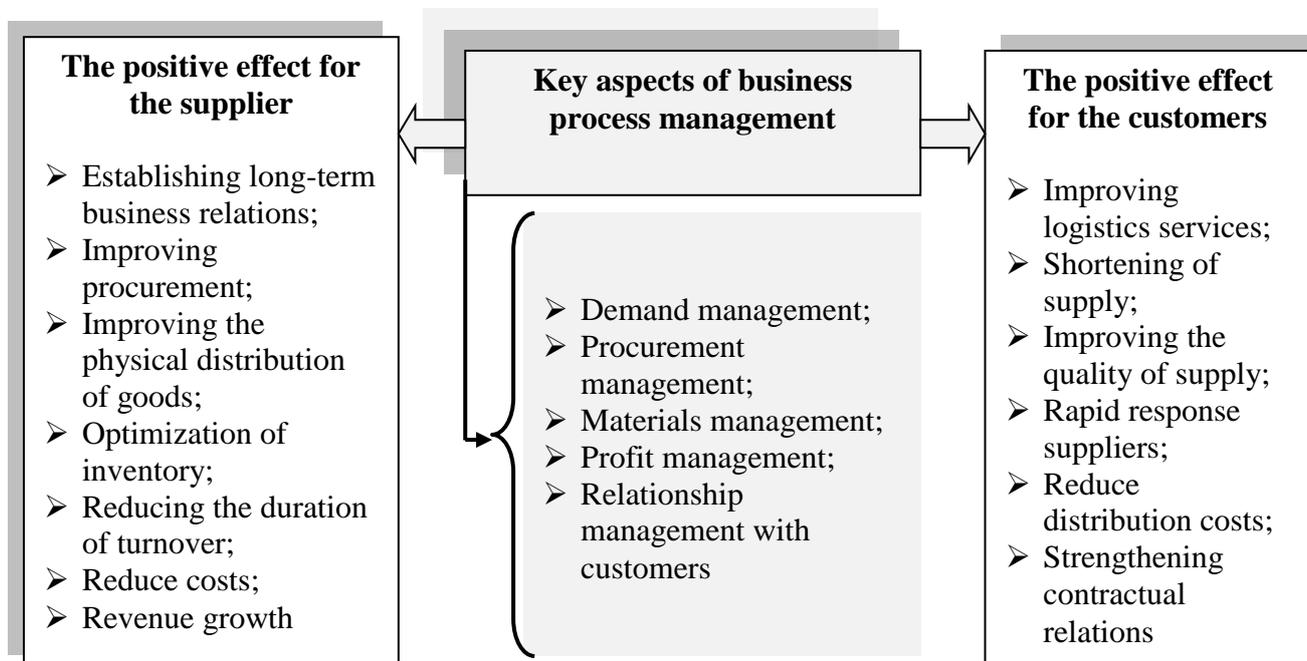


Figure: 1. Key aspects of business process management to wholesalers

Source: authoring

Thus, the trading company should be considered as a system process: 1) business process management upper level; 2) business process management responsibility; 3) business process manufacturing operations.

Every commercial company based on market finality of business, product policy, specialization, forms and methods of wholesale, size, storage space, etc. - has a characteristic set of business processes.

The concept, given by M. Porter, who composed chain (capacity) values identified primary and Supporting (ancillary) activities and other research and development scientists consider it appropriate to carry out the separation of business processes for companies trading on the main and auxiliary.

We agree with the views of scientists who find it necessary to single out among the supporting business processes: serving, management and development of their subsequent division into subprocesses (Figure: 2). Therefore, you should consider how broad or narrow should describe business processes for wholesalers, as a result of re-engineering its limits are, suppliers and buyers in every business process, and the interfaces between them.

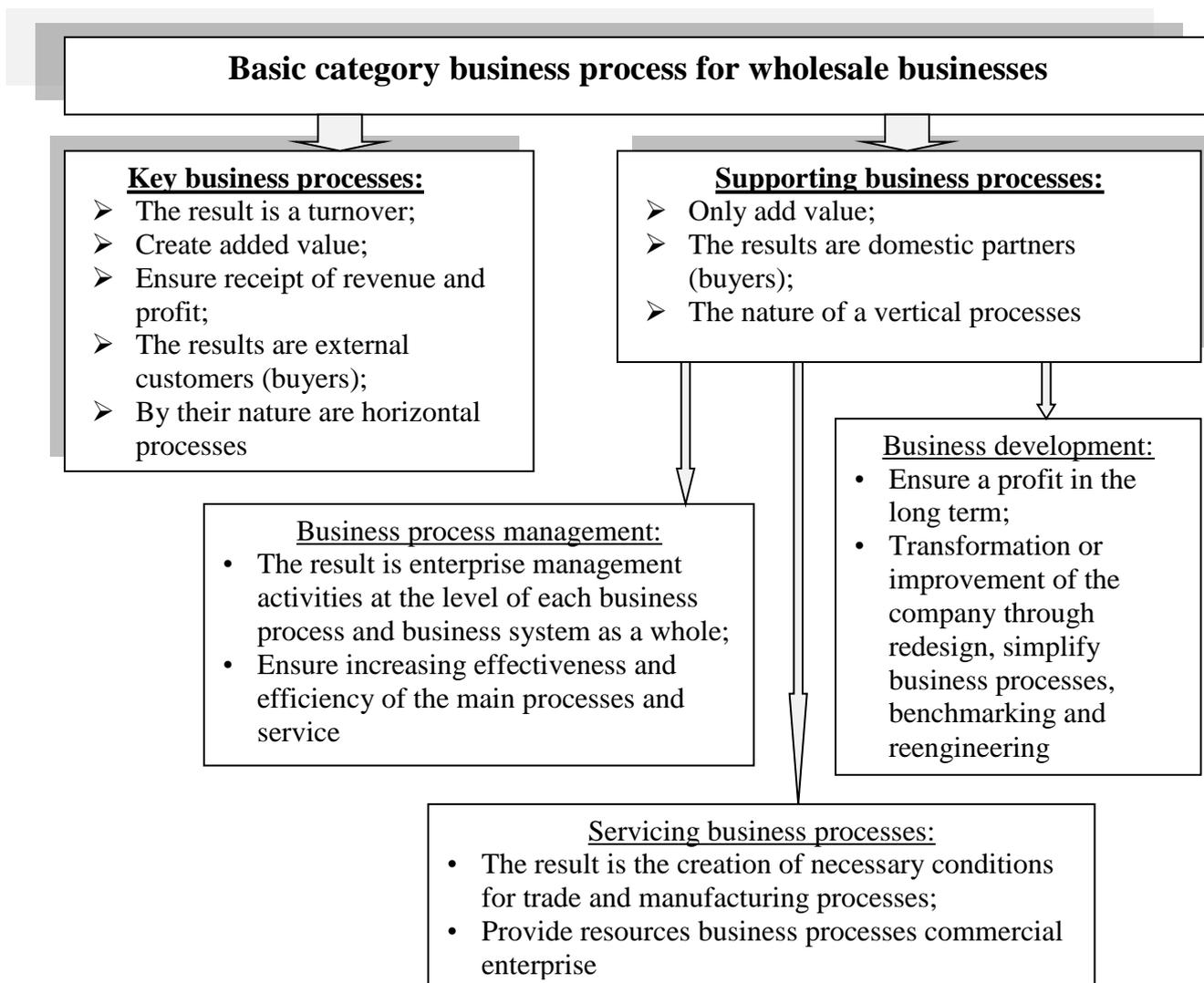


Figure: 2. Signs classification of business processes in the basic categories

Source: authoring

In the scientific literature there are two ways of describing business processes:

- 1) associated with concepts like algorithms process works, apply subject to the regulation of activities;

- 2) associated with a description of the process as stream objects (streaming model) used in the consideration of individual tasks business enterprise and its business units in the form of "input - output".

Modern business process management through reengineering is a fundamental rethinking and radical modification of commercial and manufacturing operations to achieve substantial changes in work to improve the critical current indicators such as cost, quality, service and speed. This definition focuses on the goals of business process reengineering and improving on such activities which will achieve significant change and development.

There are two fundamentally different ways of reengineering. The choice of method is determined by the role played by the business processes in the wholesale enterprise that is driven by performance commercial and technological operations: the level of their performance, reflecting the prerequisites for choosing the direction redesign, improvement of existing or complete replacement of the new business processes. To implement management decisions concerning business process reengineering distinguish the following ways of application [3]:

- 1) systematic reengineering - used when the current business process clear, documented and analyzed systematically creating new and better business processes;
- 2) reengineering from "clean sheet of paper" - used when an existing business process is completely destroyed and recycled, new business process from scratch by creating a fundamental rethinking of existing business process.

Like any other process improvement, reengineering can be divided into phases: planning, development and decision-making implementation. Principles of business process reengineering is the basis for improving the performance of wholesale companies (Figure: 3).

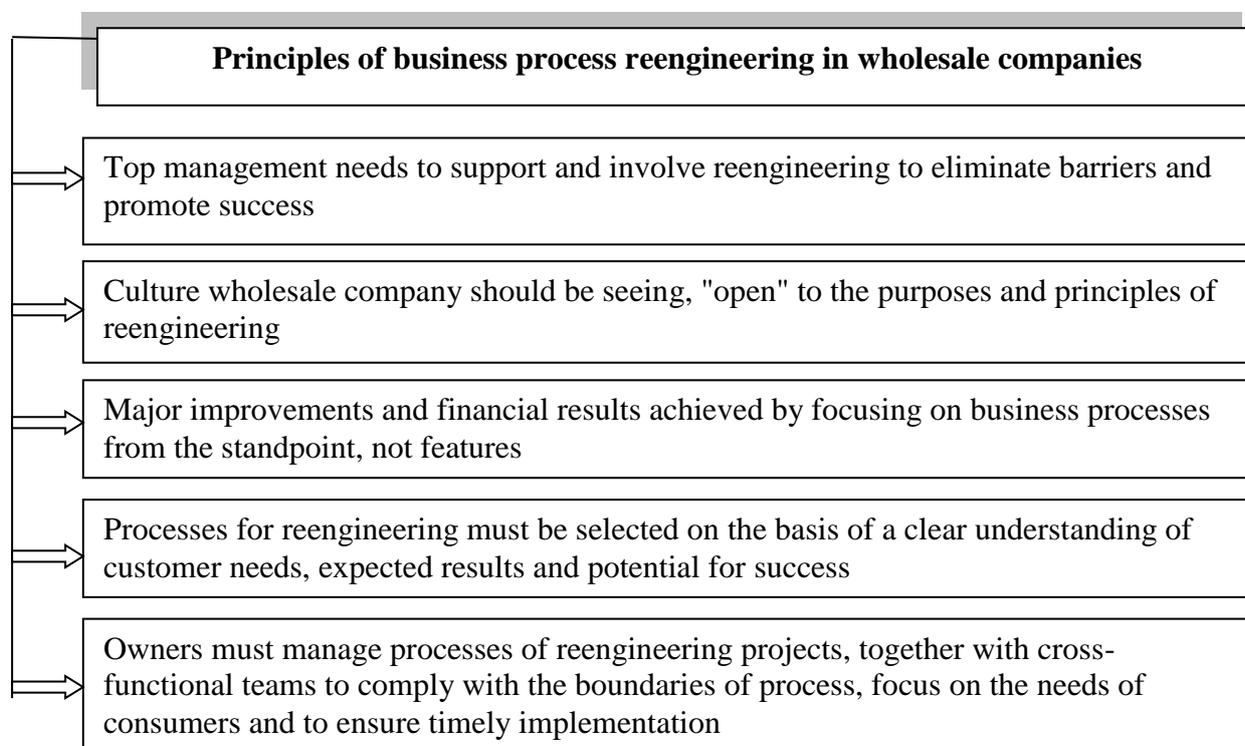


Figure: 3. The principles of business process reengineering in wholesale companies

Source: authoring

The analysis of statistical indexes of wholesale development in Ukraine allowed to establish the subzero role of most wholesale enterprises in the economic indicators of industry. An important statistical index is the volume of commodity supplies. On the enterprises of wholesale in Ukraine they present approximately 5% of wholesale turnover. Chart: 1 shows data in relation to the wholesale circulation development in Ukraine.

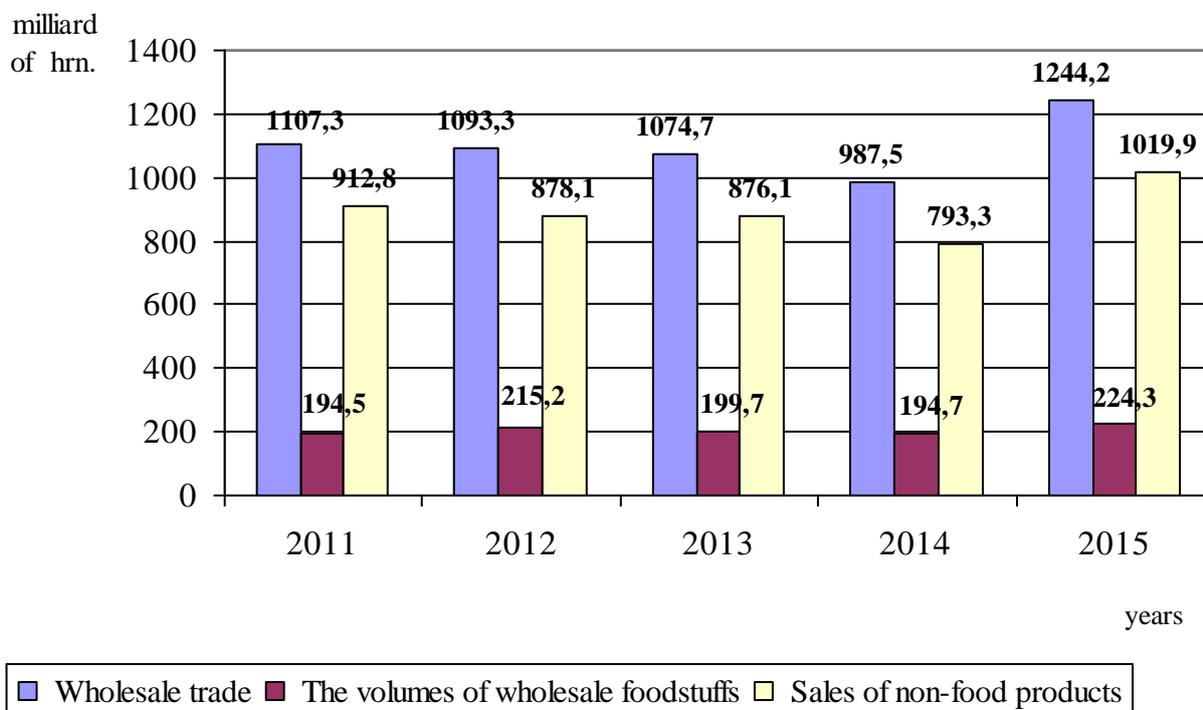


Chart: 1. Dynamics of wholesale circulation development in Ukraine for 2011-2015 [9]

Enterprises with wholesale circulation up to 500,0 thousand hrn./year provided in 2015 only 0,3% of the general volume of wholesale circulation; yet 10,4 enterprises with an index from 500,0 thousand hrn./year to 1 million hrn./year provided on the whole 0,5% of the general volume of wholesale circulation. At the same time, the basic part of wholesale circulation (94,7%) formed 15,3 enterprises with indexes higher by 10,0 million hrn./year. Exactly due to the activity of such powerful enterprises in 2015 the volumes of the wholesale selling of both food and non-food stuffs grew compared to 2011. In 2015 the specific gravity of food stuffs presented 18,0% (against 17,6% in 2011), and non-food commodities - accordingly, 82,0% (against 82,4% in 2011) in the structure of wholesale circulation [9].

The negative part is that, next to the general increase of volumes of the wholesale selling, the reduction of realization of commodities of home production (from 63,9% in 2011 to 46,9% in 2015) takes place [9]. It means that wholesale enterprises did not organize qualitatively enough the process of distributing the commodities of Ukrainian production.

Ground up and not observance of specialization of wholesale enterprises, their unevenness regarding territorial placing, the low level of provision of ware-house areas (only 8 of wholesale enterprises have them) does not allow to execute most commercial functions.

Ukrainian business reengineering is strongly required, as it leads to significant changes. And for most wholesale companies crisis reengineering is needed. In terms of undefined business process, reengineering is almost impossible, since there is no place to implement it. We are talking about engineering business processes and management practices. Do not underestimate the impact of reengineering of the entire business system as a whole, limited redesign commercial and manufacturing operations.

It confirms the conducted monitoring of applying the tool of reengineering in practice by the Ukrainian enterprises after the levels of introduction. Most wholesale enterprises that carried out reengineering according to the first scenario (i.e. only conducted diagnostics and optimization of business processes) belong to midsize and large business, from them: 35% – productive enterprises, 25% – trade, 30% – service businesses, 10 – other industries. According to the second scenario (optimization of business processes by introducing information technologies) reengineering transformation was conducted, mainly (55%) in the productive sphere, credit and insurance (23%) establishments and those companies (22%) related to the production or sale of software. According to the third scenario (planning business processes by introducing information technologies and creating internet –business – space), enterprises which did not find supporters any more.

Designing business processes determine the qualifications of employees who will perform the process. This leads to a change in the organizational structure and management system for assessing, hiring, training and development of employees.

This system, in turn, creates a new set of values (beliefs, rules of conduct, standards) supporting the process.

Reengineering starts with business process redesign, but changes the entire organization. Nowadays, many leaders of wholesale companies have realized that a successful reengineering of business processes involves more than designing new processes and following their implementation. Successful reengineering needs: 1) unity of performers and leaders in conducting changes; 2) quality management personnel and staff involved in vigorous action to amend; 3) business processes with outputs corresponding client goals and objectives of business; 4) information technology as a condition of radical changes that are going to meet the needs of implementation of reengineering initiatives.

In reengineering projects with no long-term strategic adaptation mechanism that can be achieved only by:

- 1) implementation of continuous management of business processes;
- 2) the need for continuous management interfaces, attributed reengineering business processes to optimize the results achieved in the implementation of business processes of moderate difficulty, because the deep structural problems can be solved only in the long-term evolutionary change;
- 3) conflicts between the various goals of business processes: the results of the restructuring of business processes related mainly chosen goals are usually the efficiency of business processes and delegating responsibility, so the effectiveness of market resources and thus are only partially;
- 4) difficulties in implementation: implementation of new or restructured business processes, as a rule, did not immediately leads to the need for modification of the basic models of business processes.

Due to the experience of reengineering can assume that its conduct leading to process improvement and increased performance indicators several times (2, 4, 10 or more), or 50%, 70% and even 90%. Reengineering for the proper conduct of reducing costs and cycle time to 60 to 90% and the error rate by 40-70%. Alley and the likelihood of risky situations - many tens of percent (often - up to 70% with significant conversion).

Business process reengineering provides maximum improvement and process improvement, but at the same time is the most expensive method and can be daunting for a wholesale company, and sometimes even destructive because a fairly high degree of risk.

When conducting business process reengineering 80% failures caused motivation mandatory participation of management, need expert management and especially proper risk assessment, which in turn will lead to the correctness of the general risk management.

Thus, the decision to re-engineering of business processes is a measure of uncertainty. Elements of uncertainty associated with the reengineering must be evaluated so as to make the minimum impact possible adverse developments in the future. Especially the situation of failure process reengineering concerning Ukrainian wholesale companies.

Place of risk analysis in the management of business process reengineering wholesale companies shown in Figure 4. From this it follows that rational planning reengineering involves a mandatory assessment of associated risks with a view to developing measures for proper consideration, which is one of the prerequisites for the success of these programs.

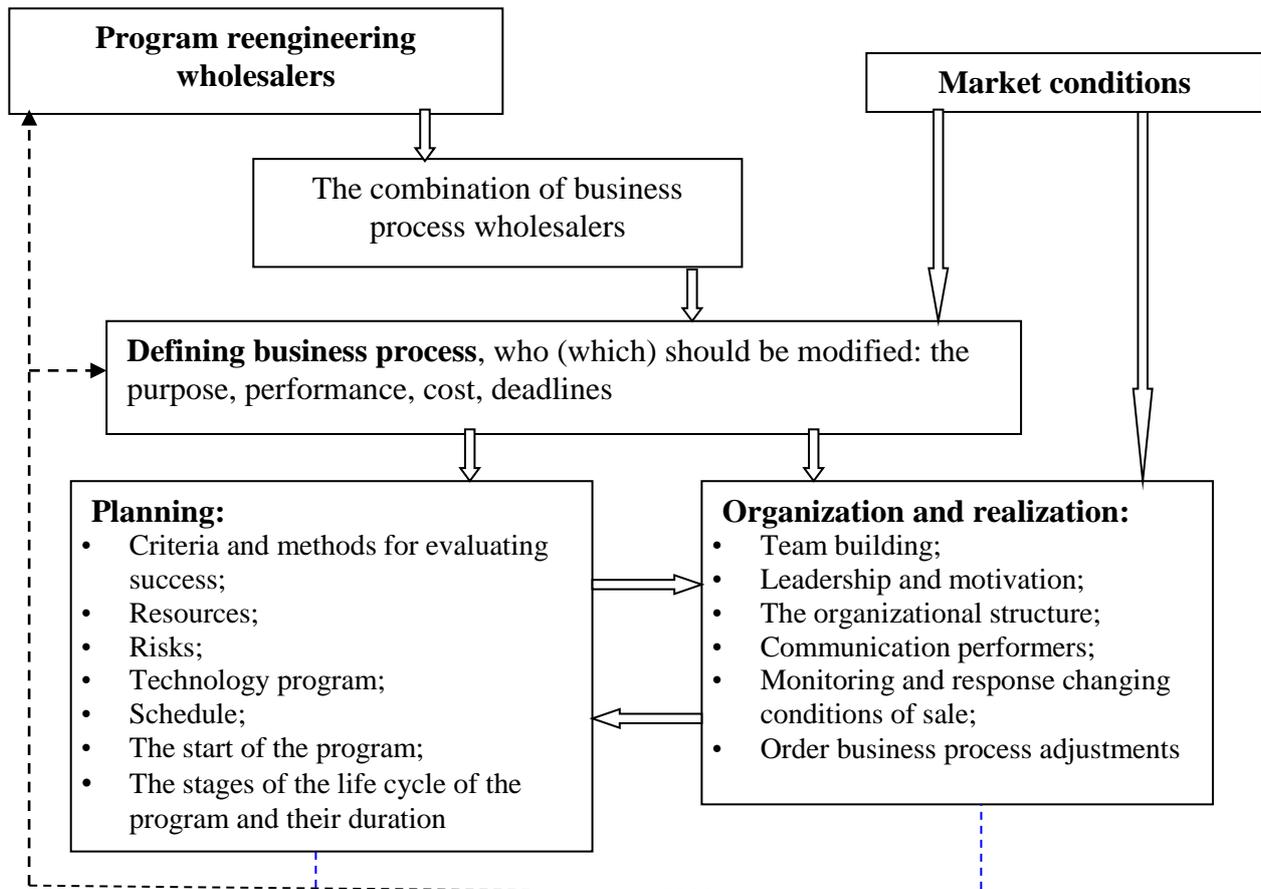


Figure: 4. Scheme of management business process reengineering in wholesale company

Source: authoring

The solution can serve as system modeling and analysis process. Operational risk planning system consists of the following stages: 1) development policy in the area of operational risks; 2) modeling of selected processes; 3) identification and assessment of operational risks; 4) development of measures to reduce operational risks; 5) development of the concept of operational risk management system.

The solution to such problems may be the use of modeling and analysis processes. One of these solutions today, is the methodology and system ARIS, which can not only describe existing business processes, organizational structure, trading range, etc., also realizes the possibility of operational risk classifiers.

There is a correlation between the degree of risk and profit, which usually determines just that investments in which the expected large profits, will inevitably be high risk. The purpose of risk analysis - to potential partners or project participants the necessary information to make decisions about whether to participate in projects and activities to protect them from possible financial losses.

The method sensitivity analysis (ranking parameters) - is using changes in the parameters to determine the viability of the project in the face of uncertainty. The expert expects a possible change of each factor or variable that determines the effect of the change in index of a certain decision and separates the relevant factors or variables for more in-depth study. It determines the number and points to the impact of uncertainty and trying to express mathematical way relationship among variables. Sensitivity Analysis provides the calculation of basic model based on the assumed values of input the project for which the determined value of the net present value. This value is the basis of a comparison of the assumed changes that need to be analyzed. The main problem for such analysis is the impossibility of the same degree of reliability submit all the variables that exist in the project, as some of them hardly be forecast, but for others it makes no sense to give an accurate prediction, as already concluded an agreement for the supply of certain types of goods at a fixed price that allows these parameters to predict accurately. Thus, the essence of this method is to measure the sensitivity of key indicators that determine the outcome of the project (NPV or SRP) to change a particular value.

As an indicator of project sensitivity to changes in certain variables using the elasticity of net present value (NPV), which is calculated using the formula:

$$NPV\text{Elasticity} = \frac{NPV\text{Percentchange}}{\text{Percentchangeof second variable}} \quad (1)$$

The advantage of this indicator is that its value does not depend on the choice of units of different variables. The greater elasticity, the higher the degree of dependence NPV or internal rate of return (ie its sensitivity) of the analyzed variable project. We know that there is an inverse relationship between the cost of implementation of the project and performance indicators. This means that the increase in payroll costs would reduce the net cost. Thus, the numerator in the formula (1) will be negative and the denominator - positive, which will result in negative coefficient of elasticity.

The purpose of scenario analysis - consider extreme results and the probability distribution of net present value of the project. He created the three scenarios, the expected (base case that was the basis of sensitivity analysis) and two further developed - optimistic and pessimistic. Effective training is conducted optimistic scenario in terms most favorable environment project. Worst or

pessimistic scenario shows how wide will the project if the conditions for its implementation will be much worse than expected. Except for very large projects that involve significant capital investment scenario analysis will be enough to guide received understanding of the characteristics of profitability of the project. If this work is done carefully, such analysis is able to accurately show the distribution of extreme results. However, the difficult relationship between the variables he very well shows the middle value distribution NPV. Need more scenarios to demonstrate the point between the two extreme values. This will improve the accuracy of prediction. This method of design a scenario is very complicated and time-consuming. Efficiency is increased in the case when the work is done by the software and spreadsheets.

When the determination of the likelihood of a new scenario, the project can calculate using a spreadsheet risk analysis should be carried out by the method of simulation programming or known Monte Carlo. This method is determined by the type and extent of the probability distribution of the project, selection method measures the significance of uncertain variables calculated possibility of each model.

#### 4. Conclusions and suggestions

Managing business process reengineering will increase the profitability of wholesale enterprises by optimizing the commercial and manufacturing operations. This in turn will reduce cycle time delivery and wholesale of goods; optimize the use of resources in business processes and in general will help minimize the costs of treatment. We believe that the re-engineering of wholesale trade focused on rapid adaptation to changes in the market environment will facilitate optimization of commodity, financial and information flows resulting from the use of rational schemes of interaction with partners and relationship of business processes.

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**Rezumat**

*Lucrarea conține sinteza tratamentelor teoretice și recomandările practice vizînd îmbunătățirea eficienței activității întreprinderilor de comerț cu ridicata prin perfecționarea managementului prin reengineeringul proceselor business. Sunt cercetate aspectele cheie ale managementului proceselor de afaceri în întreprinderile de comerț cu ridicata, inclusiv de gestionare a cererii, achizițiilor, fluxurilor materiale, relațiilor cu partenerii. Se prezintă gruparea proceselor de afaceri pe categoriile principale și auxiliare. În cadrul proceselor auxiliare de business atenția s-a concentrat pe tratamentele naturii deservirii, managementului și dezvoltării. Sunt examinate principiile, condițiile și sunt precizate modalitățile aplicării reengineeringului sistematic și al celui denumit "foaie curată". Este fundamentat locul riscului în procedura elaborării și aplicării programelor de reengineering, se precizează sistemul de planificare a riscurilor operaționale.*

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**Cuvinte-cheie:** *aspect, proces de afaceri, comerț cu ridicata, entitate de comerț cu ridicata, proiect, reengineering, risc, operațiuni tehnologice, management, eficiență.*

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**Аннотация**

*В статье обобщены теоретические положения и разработаны практические рекомендации по повышению эффективности деятельности предприятий оптовой торговли на основе совершенствования процесса управления реинжинирингом бизнес-процессов. Рассмотрены ключевые аспекты управления бизнес-процессами на предприятиях оптовой торговли, а именно управление спросом, закупками, материальными потоками, взаимоотношениями с партнерами. Осуществлена группировка бизнес-процессов по основным и вспомогательным категориям. Среди вспомогательных бизнес-процессов внимание сосредоточено на определении сущности обслуживания, управления и развития. Приведены принципы, условия и уточнены способы применения реинжиниринга: систематического и с «чистого листа». Обосновано место риска в процессе разработки и реализации программы реинжиниринга, уточнена система планирования операционных рисков.*

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**Ключевые слова:** *аспект, бизнес-процесс, оптовая торговля, оптовое предприятие, проект, реинжиниринг, риск, технологические операции, управление, эффективность.*

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