

**BUSINESS MODEL METALLURGICAL COMPANY BUILT ON THE COMPETITIVE
ADVANTAGE**

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Abstract

In the turbulently changing environment metallurgical enterprises are forced to search for the most effective methods of monitoring and detecting changes in the environment, to take effective adaptation activities leading to a continuous build competitive advantage.

The observed increase of competitiveness and globalization, as well as carrying out a mergers and acquisitions, have influence on the search for new methods, techniques and management tools. The knowledge development based on the economy, expressed through intense transfer and fusion of innovation, have substantially influence on the changes of the models and business processes. These phenomena and trends apply also to a large extent metallurgical enterprises.

The aim of the article is to perform a study, how to build an effective business model providing the steel company to achieve a sustainable competitive advantage. The article presents the idea, that competitive advantage is contingent upon the ability to produce and deliver to the customers, products perceived as a prime source of value. Also defined the concept of the business model and the business process through which a permanent competitive advantage is built.

Keywords: Business model, business processes, competitiveness

1. INTRODUCTION

In June 2013 the European Commission published a policy paper, which stresses the importance of the steel industry for the development of the economies of the European Union. Polish steel industry, having a long tradition is an important element of the processing industry and the entire economy of Poland. The restructuring of Polish steel industry has made the ability to compete internationally in terms of technology, but dynamically changing economic and legal environment still poses new challenges for steel producers [7].

By observing changes in the international economy, we can see a steady increase in the importance of information resources on the background of material resources or financial. Sources of successful steel company in a competitive market is seen in the efficient, effective management system and in the attitude of managers who quickly make the right decisions. The basis for all decisions is the information, in particular information about the company environment [13, 15, 16].

Competition in the economy plays an important role and is one of the important areas of interest of management theory and practice. The functioning of the metallurgical enterprises in a competitive environment, sets trends and creates types of the strategy and business models. Continuous rivalry market companies will look for sources to obtain a competitive advantage, in order to maintain or improve the existing market position [12].

In recent years, gaining popularity of the concept of business model that describes and identifies the principles of operation of enterprises, including steel companies, hence taken in the article the aim of carrying out a study on how to build an effective business model of ensuring the achievement of sustainable competitive advantage.

2. MODELS OF BUSINESS AND BUSINESS PROCESSES

The dynamic growth of competition, largely associated with the globalization of the economy makes it necessary to create the concept of doing business. Their theoretical specific expression, and also the application possibilities are concepts of business models. Their characteristics are important because they always are an important part of business processes, which are a kind way to realize value in the form of customer relations, in particular to provide them with products that meet specific needs. As a key theses and principles of the approach to the concept of conducting business can be considered [2, 5, 6]:

- ensuring the implementation of the two basic functions for enterprise and entrepreneurship (Marketing and Innovation),
- productive use of resources,
- the imperative of achieving profit and its relationships with business risk,
- creating innovative customer value and added value,
- obtaining competitive position in the market.

Designed and implemented by metallurgical enterprises business models determine to a large extent on the profitability and competitiveness of the organization. Analyzing the essence, structure and conditions, which determine the shape and types of strategic models are therefore an important element of cognitive sphere of development and operation of enterprises. At the same time such research can serve to improve or even build new models that facing the challenges of the market, which become necessary.

In one of the most extensive and interesting work devoted to the construction business models A. Afuah [1] shows the business model of the company as a set of activities, methods and time to carry them out, using its resources to create the highest value for the customer and secure the position of the acquisition value.

In developing the contemporary mainstream of process management are attempts to formulate new terms of business processes, including steel. The most common are slight development of the classic, and only in some cases, enhance the traditional plane of analysis of organizational processes, such as the study of methods of work and coordination of processes in time.

The term business process is described in different ways by the experts and academics in this field. This term is often defined with engineering or operational point of view. Alternatively, it is seen from the perspective of seller information technology and clearly defined inputs and results. While the temporal aspect of the business process is reflected in defining it as a specific contract work in space and time of the scheduled start and completion. The authors focused on the behavioral aspects of organizations, emphasize the business process definition importance of cooperation and coordination.

Definitions of business process of a most general gives N.G. Carr [3] recognizing process for the operation, which makes a lot of steps generating a specific result or a series of concrete results. In contrast, M. and J. Hammer Champy [11] described the process as, the set of operations requiring input and the input gives the output score having a value for the customer.

A much broader look at the process shows P. Grajewski [9] treating it as a set of sequential steps, interlocking relationships of cause and effect in the sense that the results of these actions preceding inputs are actions following them. Any action or set of actions can be described as a process whereby from a certain initial value is obtained results. Similarly, T. H. Davenport [4] draws attention to the structural development of the process, creating a measurable set of actions aimed at achieving a particular result for the client or market. The process is thus a specific ordering of work activities across time and space, with a beginning and end, and clearly defined inputs and outputs.

The orientation of business processes meeting the needs of customers requires compliance with the client as an intelligent participant of them, which affects their progress and assesses the degree to meet the specific

needs. In this approach, only the client is unable to render the essence and specificity of skepticism in the process.

Overview of shots definition and classification processes presented on the basis of the literature indicates that there are many definitions of the process, but relatively few of them moves the problems of business processes, despite the fact that this concept works in both the theory and practice of management.

Based on theoretical considerations it can be concluded that such processes in many conceptions of construction business models - constitute a very important element. In particular, the importance of business processes in such models stems from the role they play in the creation of value (product) for the client, competitive advantage and customer relationships.

Management processes in recent years, particularly clearly focused on the primary purpose of the existence of companies, namely an increase in value.

For the purposes of the research of workuses the following definitions of the model and the business process. The business model is understood as a set of business processes connecting and developing resources, shaped in the form of social and technical architecture of the company. While business process is defined as a system of consecutive or parallel activities that provide value to the customer in the form of a specific product for meeting the identified needs. In particular, it means the element widely understood management model (business model) exerting a strong influence on the flexibility of the company, its ability to compete and risk management.

A basis for the adoption of such definitions, was the analysis and theoretical considerations.

3. BUSINESS MODEL BUILT ON COMPETITIVE ADVANTAGE

What can be observed on the market, and what is the core competitive game should be treated as a starting point in the discussion on the competitiveness of a company. Without competition there is no problem of competitiveness. The development of the concept of competitiveness is made on the basis of the process of "evolution," which can be seen in the theory of competition in general. Competitiveness means the ability to compete, and therefore action and survival in a competitive environment.

You will notice that the first investigated the company sees competitiveness more precisely defines the competitiveness of enterprises, namely the ability of enterprises to maintain their base of satisfying the needs of customers and consumers through more efficient supply of goods and services and better terms of price and non-price - better than competitors. This definition clearly exposes the reference element characteristics of the object, whose competitiveness we examine the characteristics of other objects. This means that competition is the hallmark of a relative, and therefore one whose significance implies some type of relation linking object, which is something predicate, with other objects.

In assessing competitiveness we, therefore, faced with the problem the choice of reference objects, which determine the outcome of the evaluation of the test subject. According to one of the most modern concepts of competitiveness in the long term it is the result of the ability to build cheaper and faster than competitors, key competences, which can give rise to completely new products.

According to research, that an effective way to improve the competitiveness of the company is to establish privileged relationships with selected partners in their environment. The importance of this ability is reflected in the cluster concept, which is spatially concentrated clusters of enterprises (both competing and cooperating with each other in certain aspects of the business) as well as institutions and organizations linked to a complex system of relationships of formal and informal nature, based on the specific trajectory of development (eg . technology or markets).

In different ways and in different terms, the second audited company goes, recognizing that competitive advantage is considered by them as the most important dimension of the conceptual model, which is the attribute. His other elements constitute a significant source of its model to create and maintain, or are seen as factors of its application.

In opinion of the second audited company's managers, a model based on the principle of a strict connection strategy adopted by the company to its application. Technology practical implementation of the strategy carried out by the construction value chain, providing both effective use of resources and skills, as well as restoring them.

Development of effective business model involves a risk of its imitate by competitors. Distance between competing firms can rapidly decrease due to the instability of competitive advantage or improvement business models by competitors. In such a situation, there is need for continuous improvement of business models (ie. Run to the front). Managers of the audited companies think that, this can be achieved through innovation partial or breakthrough.

Partial innovation are connected with changes in the existing model. They express a building advantage, eg. In the area of product quality, distribution network, network sales, research and development, dealing with customers (CRM) or production processes.

More specifically, the elements of the material, and also occurring between them dependencies that exist in the construction of the company's business model is shown in **Figure 1**.

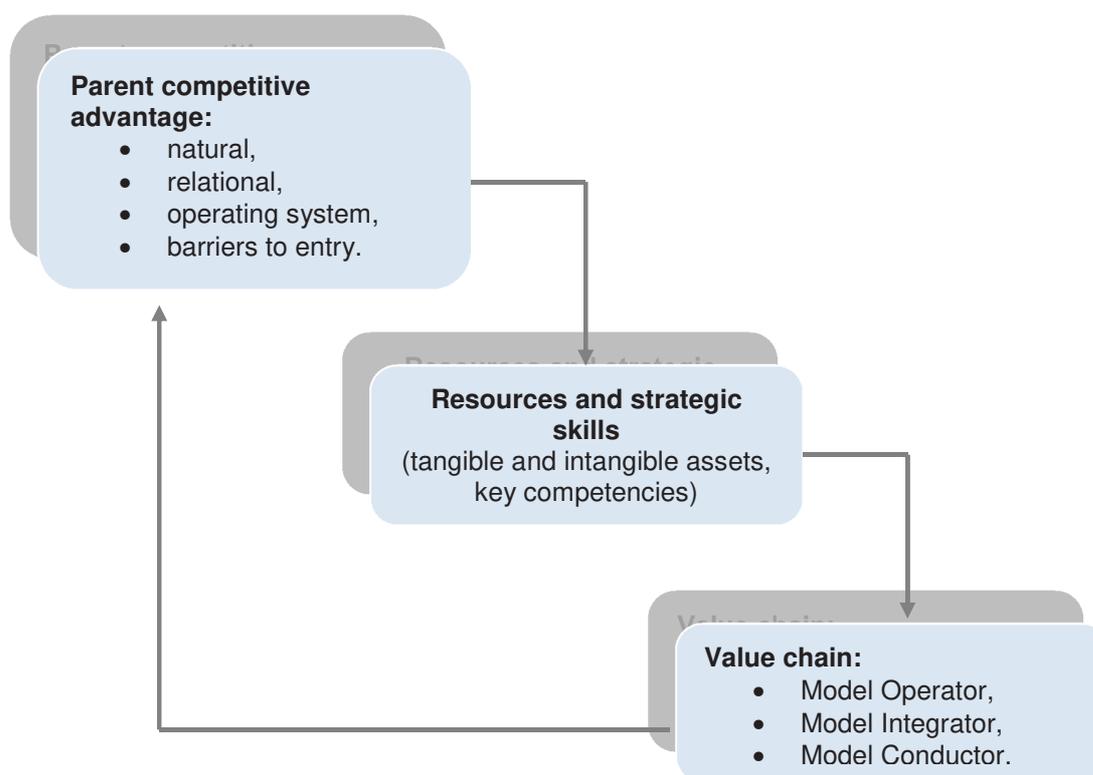


Figure 1 Construction of the business model of the company, also metallurgical [15]

Visible interconnectedness and feedback resulting from the structural relationships between the elements, as well as their internal components are not making clear their chapter. Looking at the figure presented a diagram of the model, however, that a competitive advantage can be regarded as of its conceptual dimension and the resources, skills and value chain as the practical aspects of achieving this advantage.

According to the managers of the audited companies, regardless of whether we have a mutation of the existing business model, or create a completely new, with the goal of creating and retaining value in the market, we operate always on the same material. Its elements are:

- competitive advantage,
- resources and skills,
- value chain.

In the surveyed enterprises of the metallurgical industry competitive strategy consist in maintaining special operations which allow to stand out. This means a conscious choice a set of actions that bring a certain set of values, which allows maintaining existing customers and acquiring new ones. In the part concerning the sphere of operational advantage due to the ability to effectively and efficiently carry out activities typical of the business, thus similar to the activities of the competition. The measure of such activities may be, for example: the efficiency and effectiveness of resource utilization obtained inter alia by improving the quality or faster development of new products.

Among practitioners of the steel industry, there is widespread belief that competition between companies based on their competitive business models. Models illustrate the mechanism by which the generated and supplied value to the client, which connects to the process of building and maintaining a competitive advantage.

4. CASE STUDY

Results of research are presented using case studies of two selected companies. The first of them is trade and service company developing steel products service centres. The second one is long hot rolled steel products rolling mill.

In the researched enterprises of metallurgical industry the competitiveness of the model of business is based on process management. In the first stage of research in the enterprises a detailed analysis was conducted with a consideration towards its functioning. As a result, the following things were stated: lack of supervision of the key processes in the company, which have influence on the quality of the products and lack of training of production workers, lack of current forms, outdated list of qualified suppliers, no records of complaints for damaged items, lack of full supervision of the issued and materials returned from the complaint, incomplete verification of materials, supplies, and many other shortcomings, which significantly affected the operation and competitiveness of enterprises.

A work began on building a competitive business model based on process management, sequentially implemented the following actions:

- 1) Identification of processes implemented within the organization and outsourced.
- 2) Determination of a sequence of processes and their mutual interaction.
- 3) Establishment of goals, the owners, input and output as well as the processes structure.
- 4) Ensuring of the availability of resources needed to implement monitoring processes.
- 5) Monitoring and analysis of the processes.
- 6) Estimation of the risk, consequences and influence of the processes on a client, suppliers other interested parties.
- 7) Implementation of continuous improvement of processes.

An important stage was specifying which processes belong to the basic processes, management processes and the auxiliary ones, and then mapping those processes (with identifying activities that have a direct impact on their competitiveness). Processes were mapped with flowcharts. In the researched metallurgical companies a several maps of processes were created. Among others the following processes were mapped:

- The buying process and verification of deliveries

- The production process
- The process of quality management system
- The process of surveillance devices and equipment control - measuring
- The process of internal audits

Due to the limited possibility of disposal over the data of the surveyed companies, the 2nd figure shows a simplified map of the main process - product realization in the mill.

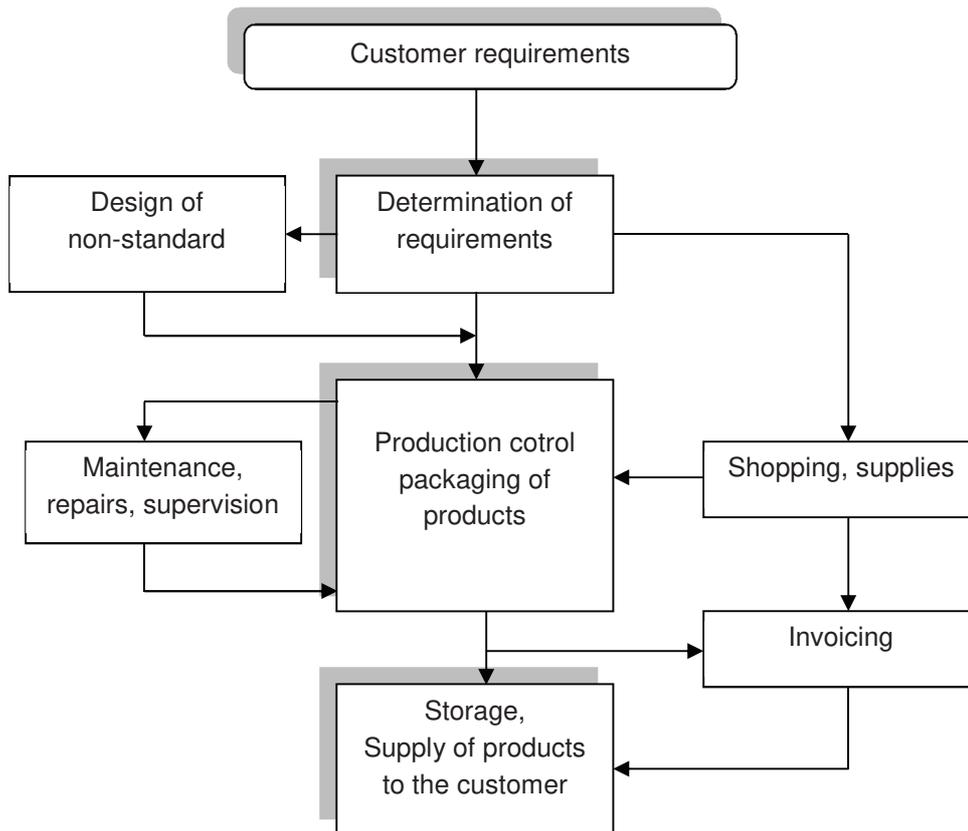


Figure 2 Map of the main process - product realization in the mill

After mapping the processes, the card processes were developed. They are used to control and to analyse processes. Each card presents a particular stages of a process, such as:

- name of the process,
- owner of the process,
- goal of the process,
- subject of the process,
- entry,
- exit,
- process indicators,
- metrics of the process.

Benefits resulting from implementing the business model based on process management on which indicates the management of the surveyed metallurgy companies can be divided into both internal and external benefits.

The achieved internal benefits are:

- systematization and arrangement of the structure of the company, achievement of the clarity and rationalization of the processes,

- early detection of defects and imperfections,
- improvement of the quality of products,
- reducing the number of errors, a significant reduction in the cost of poor quality and additional disclosure of the sources of their formation,
- ensuring timely and regular orders,
- clear division of powers and responsibilities of departments and individuals,
- improving the information flow in the company, which helps in making fast and accurate decisions,
- increase in efficiency and productivity,
- reduction of production costs,
- shortening the time of the order implementation,
- adaptation of the organizational system to better business management.

The external benefits include:

- increase in customer satisfaction, meeting their requirements and their perception of the quality of products,
- improvement of the reputation of the company and increase in its position among competing companies,
- improvement of collaboration with suppliers and contractors,
- reduction in warranty claims,
- increase in the credibility of the company.

5. CONCLUSION

Critical analysis of the literature and conducted case study shows that the elements of the business model and the relationships between them build competitive advantage. The dynamics of the environment and growing competition makes the company foundry to survive in the market, it must be extremely flexible and competitive. Business models and innovations rapidly become obsolete. To maintain a leadership position, the company and their managers need to constantly look to the future, because the concentration on the present does not allow to remain competitive. Modern companies must constantly seek new solutions in the field of organizational structures, which is associated, among others, with the need to meet the demands of a competitive market. The answer to the challenges of competitiveness management is focused on creating a process organization that provides more than in classical forms the dynamism of the system organization, while allowing for better and more flexible use of company resources. However, the design and configuration of process organization is a complicated undertaking especially that means getting around the ground yet poorly recognized by both practitioners and theoreticians of management.

Effecting changes in models of functioning of metallurgical enterprises are increasingly relating to the use of innovations, building social responsibility and sustainable development, which is closely associated with the application of knowledge management. One of the most important models of business management metallurgical enabling flexible, efficient and competitive functioning of the company on the market is a model-based processes. This model is important for companies seeking new solutions and formulas of business.

Emerging new forms of competition and cooperation. It uses new models applicator in a wide range of different types of innovation (business models based on the principles of the so called new era of innovation) and the concepts of steel company, sustainable (sustainable enterprises) [10].

As aptly put it, Z. Malara "All this makes the reality of organizational emerging new rules, principles and ways of functioning of the company, which force it kind of inventing the future. This means abandoning the need for today's enterprise metallurgical patterns existing in the past and the transition from the old rules to be provided for the company resourceful to the formula enterprise intelligent, and thus the need for, among others, remodeling the management structure, the implementation of other rules than before collecting information

about the market, revitalization and a more efficient use of resources, in order to build a sustainable competitive advantage" [14].

REFERENCES

- [1] AFUAH A., Business models. A Strategic Management approach. McGraw-Hill Irwin, 2004, pp. 9-10.
- [2] BRZÓSKA J., Model biznesowy - współczesna forma organizacyjnego zarządzania przedsiębiorstwem. [In] Organizacja i Zarządzanie, Gliwice 2009, no 2(6), pp. 17.
- [3] CARR N.G., Does It Matter? Information Technology and the Corrosion of Competitive Advantage. Harvard School Press, Boston 2004, pp. 34.
- [4] DAVENPORT T.H., Process Innovation: Reengineering Work through Information Technology. Harvard Business School Press, Boston 1993, pp. 55.
- [5] GORYNIA M., JANKOWSKA B., Wejście Polski do Strefy Euro a międzynarodowa konkurencyjność i internacjonalizacja polskich przedsiębiorstw, Difin, Warszawa 2011, pp. 19.
- [6] GORYNIA M., Luka konkurencyjna na poziomie przedsiębiorstwa a przystąpienie Polski do Unii Europejskiej. Akademia Ekonomiczna w Poznaniu, Poznań 2002, pp.49.
- [7] GRABOWSKA S., FURMAN J., The business model of steel company - focus on the innovation, <http://www.metal2015.com/files/proceedings/21/papers/4097.pdf>
- [8] GRABOWSKI J.F., Konkurencyjność przedsiębiorstw w perspektywie integracji europejskiej, In.: Na progu Unii Europejskiej. Szanse dla polskich przedsiębiorstw, Szkoła Główna Handlowa, Warszawa 1998, pp. 147.
- [9] GRAJEWSKI P., Organizacja procesowa. Projektowanie i konfiguracja, PWE, Warszawa 2007, pp. 55.
- [10] GRUDZEWSKI W. M. HEJDUK I.K, SANKOWSKA A., WAŃTUCHOWICZ M., Sustainability w biznesie czyli przedsiębiorstwo przyszłości. Zmiany paradygmatów i koncepcji zarządzania, Wydawnictwo Poltext, Warszawa 2010, pp.13.
- [11] HAMMER M, CHAMPY J., Reengineering w przedsiębiorstwie, Neumann Management Institute, Warszawa 1996, pp.49.
- [12] JABŁOŃSKI A., Modele biznesu w sektorach pojawiających się i schyłkowych. Tworzenie przewagi konkurencyjnej przedsiębiorstwa opartej na jakości i kryteriach ekologicznych. Wyższa szkoła biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza 2008, pp. 27.
- [13] JELONEK D., Portal korporacyjny w zarządzaniu zasobami informacyjnymi o otoczeniu przedsiębiorstwa. Prace naukowe Uniwersytetu Ekonomicznego we Wrocławiu, no. 23, Wrocław 2008, pp. 4.
- [14] MALARA Z., Przedsiębiorstwo w globalnej gospodarce. Wyzwania współczesności, Wydawnictwo Naukowe PWN, Warszawa 2006, pp. 11.
- [15] OBŁÓJ K., Tworzywo skutecznych strategii, PWE, Warszawa 2002, pp. 97.
- [16] PORTER M. E., What is Strategy, Harvard Business Review, November - December 1996, pp. 62-78.
- [17] PRAHALAD C.K., KRISHNAN M.S, New Age of Innovation, Mc Graw Hill, 2008, pp. 15.
- [18] TUCKER R., Driving growth through innovation, Berrett-Koehler Publisher, San Francisco 2008, pp. 18.