

The necessity of the implementation of business processes reengineering in machine-building enterprises of Ukraine

Maryana Gvozd

Department of Management of Organisations, Lviv Polytechnic National University, UKRAINE, Lviv, S. Bandery street 12,
E-mail: gvozd-m@ukr.net

Abstract – The paper studies the current state of the machine-building enterprises of Ukraine. In the paper the most problematic economic and social issues that hinder the development of domestic machine-building industry are singled out. The necessity of the application of modern management - business process reengineering to improve production and economic activity of Ukrainian machine-building enterprises is grounded.

Key words – reengineering, business process engineering plants, process oriented approach.

I. Introduction

Today the rapid development of all processes of socio-economic phenomena in time and space is observed. This issue is gaining increasing importance for economic development. Under these conditions, the modern domestic enterprises must be conducted not only compete with companies-analogues, but with the crisis and instability for the successful operation. Such conditions create the need for advanced management theories that provide rapid response to all the challenges of the environment. Particular attention is paid to provide re-engineering of business processes, which was used by leading companies in the world since the 90s of the twentieth century and has proved itself as a highly effective management. However, the Ukrainian specialists in management have a number of unsolved issues regarding the practical implementation of projects of reengineering business processes in general and machine-building enterprises of Ukraine in particular.

II. The results of research

Exploring the theoretical aspects of business process reengineering, it is known that the founder of the term was M. Hammer, who in 90 years of the twentieth century gave a start to the development of new high-performance vehicle management. From its inception to the present day business processes reengineering increasingly attracted the attention of domestic and foreign theorists and practitioners: O. Vynogradov, K. Volkov, T. Davenport, A. Zabulonov, E. Zynder, S. Idelmenov, S. Kiselev, P. Kutelov, V. Medynskyy, E. Oyhman, V. Ponomarenko, E. Popov, M. Robson, P. Strassman, A. Strickland, M. Hammer, J. Ciampi, O. Cheremnykh, A. Cherep, K. Potopa, M. Chernenko, F. Ulla, etc. Each of the researchers, exposing the subject of business process reengineering, is focusing on various aspects of its

application. For example, A. Cherep, K. Potopa, A. Tkachenko reveal the practical aspects of reengineering business processes in the food industry. V. Medynskyy, S. Idelmenov consider mechanisms for the implementation of business process reengineering on different-business effectiveness and efficiency increases tenfold. Under these conditions, it is necessary to implement the modern technologies and management at domestic machine-building enterprises.

Mechanical engineering is rightly called a key branch of the economy. Its role and place are specified in the project "Concept of the national target program for the development of industry of Ukraine till 2017". In particular, the document states that the industrial structure becomes more progressive, where engineering (40% of total production), chemical industry (over 15%), food (14%), light industry (9%), metallurgy occupy the first place (7%). [3, p. 91].

Carrying out a detailed analysis of engineering, instrumentation and electronics showed that in January and February 2012 in comparison with January-February 2011, an output in engineering grew to 26.3 %. Producing machines and equipment increased to 45.3 %, and the output in production of electric, electronic and optical equipment increased to 40.0 %, but the output of the companies, manufacturing vehicles and equipment, reduced to 12 % in comparison with January-February 2011. The production of machine tools for wood processing increased (14.3 %). High-voltage electrical equipment, tractor sprayers, electric transformers, electric lamps, increased volume recovery services and equipment of railway rolling stock increased in quantity, too. [4]

However, production of electric lamps (97.9 %), low-voltage electrical equipment (91.2%), machinery and equipment of special purpose buses, devices for grinding food mixers and juicers, instruments and apparatus for automatic regulation and control, electric motors and alternators, counters for liquids decreased and the volume of services for maintenance and repair of railway rolling stock fell down, too.

Studies show the poor state of the engineering industry, resulting from a large number of problems that slow down their development. The problems faced by enterprise engineering industry can be divided into social and economic.

The most problematic economic issues include:

– *At the state level:* the lack of control by the state over the activities of monopolies and middlemen product engineering companies, a high level of shadow economy, an imperfect tax system;

– **At the enterprise level:** lack of ability to pay producers, morally and physically obsolete fixed assets, low upgrading of enterprises, low level of innovative activity of domestic enterprises.

The most problematic social issues include:

– *At the state level:* an inefficient state social policy, unstable investment policy in the field of health and education, ineffective government policies for ecological and natural resources; disarranged mechanism of functioning of the labor market.

– *At the level of the enterprise*: the outflow of skilled engineering and skilled workers to employ abroad, the lack of corporate social responsibility, the lack of an effective system of remuneration and bonuses, the lack of environmental responsibility in business, an old system of the occupational safety and others.

In the field of engineering there is a lack of state support, the low level of innovativeness of enterprises, the slow development of engineering industries and a high level of shadow economy. Engineering industries have low profitability and lack of own funds to finance their own activities. All these deficiencies lead to poor socio-economic conditions, the deterioration of material and technical equipment of enterprises every year in the engineering sector and reduced number of employees, what increases depreciation of fixed assets. In engineering wages grows rather slowly, a decline and destruction of the social infrastructure of the country leads to a reduction in financial motivation. To reduce the instability in engineering it is necessary to apply effective mechanisms for management (macro and micro), which in turn should be based on providing structural harmonization of economic and social components of machine-building enterprises [8].

Conclusion

After analyzing the problems faced by domestic machine-building enterprises in modern terms, the application of business process reengineering becomes increasingly necessary as the role of business process reengineering to ensure competitive advantage is crucial, because the tools for its proper application, resolve vital objectives such as identifying "bottlenecks" in production, eliminating unproductive structural units, improving product quality and customer service and improving driving performance of industrial and economic activities in the light of the effective use of resources and strengthening controls in this aspect.

The implementation of reengineering measures in mechanical engineering is extremely important, because it leads to increased organizational and management capacity of enterprises and in turn, it determines the need for scientific and technological development in the future to establish a correspondence between innovative market needs and innovative capabilities of the enterprises, etc.

References

- [1] N.I. Shyfrina, "Stan ta perspektyvy rozvytku mashynobudivnoho kompleksu Ukrainy" ["State and prospects of development of machine-building industry of Ukraine"], *Visnyk ekonomiky transportu i promyslovosti – Journal of Transport and Industry Economics*, no. 29, pp. 394-415, 2010.
- [2] S.M. Savchenko, "Konkurentospromozhnist ukrainskoho mashynobudivnoho kompleksu na zovnishnikh ta vnutrishnikh rynkakh" ["Competitiveness of Ukrainian machine-building complex on the internal and external markets"], *Problemy pidvyshchennia efektyvnosti infrastruktury*
- Problems of improving the efficiency of infrastructure, no. 29, pp. 20-29, 2011.
- [3] A.H. Chernomaziuk and V.V. Stadnyk, "Suchasni tendentsii rozvytku vitchyznianoho mashynobuduvannia ta yoho resursni determinanty" ["Modern trends in domestic machine-building industry and its determinants"], *Visnyk Zaporizkoho natsionalnoho universytetu – Journal of Zaporizhzhya National University*, no. 2 (6), pp. 91-99, 2010.
- [4] "Ofitsiinyi sait Derzhavnoho komitetu statystyky Ukrainy" ["Official website of the State Statistics Committee of Ukraine"], ukrstat.gov.ua. [Online]. Available: <http://ukrstat.gov.ua>. [Accessed: Oct. 25, 2013].
- [5] N.V. Cherevyk and A.A. Taran, "Suchasnyi stan ta neobkhidnist perebudovy mashynobudivnoho kompleksu v Ukraini" ["Current state and necessity for reconstruction of machine-building complex in Ukraine"], *WEB-resurs nauchno praktycheskykh konferentsiy. Spetsproekt-2011. Sektsiya «Ekonomycheskye nauky» - Virtually scientific resource conferences. Special Project 2011. Sections "Economics science"*, 2011.
- [6] V.O. Zanora, "Stan pidpriemstv mashynobudivnoi haluzi Ukrainy" ["State of machine-building industry in Ukraine"], *Vseukrainskyi naukovo-vyrobnychiy zhurnal. Stalyi rozvytok ekonomiky. Ekonomika ta upravlinnia natsionalnym hospodarstvom – Ukrainian research and production magazine. Sustainable economic development. Economics and national economy*, no. 3, pp. 37-41, 2011. [Online]. Available: http://www.nbu.gov.ua/portal/soc_gum/sre/2011_3/index. [Accessed: Oct. 25, 2013].
- [7] A.Iu. Kryzhna and O.Iu. Rudnieva, "Tendentsii ta perspektyvy rozvytku mashynobuduvannia Ukrainy" ["Trends and prospects of machine-building development in Ukraine"], *rusnauka.com*. [Online]. Available: http://www.rusnauka.com/9_KPSN_2011/Economics/9_84219.doc.htm. [Accessed: Oct. 25, 2013].
- [8] L.Ie. Dovhan and N.O. Simchenko, "Suchasni aspekty staloho rozvytku mashynobudivnykh pidpriemstv" ["Current aspects of sustainable development of machine-building companies"], *Ekonomika ta upravlinnia pidpriemstvamy mashynobudivnoi haluzi: problemy teorii ta praktyky - Economics and management of machine-building industry: problems of theory and practice*, no. 3 (3), 2008.
- [9] N.P. Karachyna, "Mashynobuduvannia Ukrainy: suchasnyi stan, tendentsii ta perspektyvy rozvytku za umov ekonomichnoi kryzy" ["Machine-building in Ukraine: current state, trends and prospects of development in economic crisis conditions"], [nbu.gov.ua](http://www.nbu.gov.ua). [Online]. Available: http://www.nbu.gov.ua/portal/natural/Vnulp/Menagement/2009_647/11.pdf. [Accessed: Oct. 25, 2013].
- [10] M.Hammer, J.Champy, "Reengineering the corporation: A manifesto for business revolution", New York: Harper Collins, 1993, 32 p.