

SUSTAINING COMPETITIVE ADVANTAGE: STRATEGIC DIRECTIONS FOR BUSINESS PROCESSES AFTER REENGINEERING

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One of the most pressing issues in scientific research regarding the reorganisation of industrial enterprises remains the question of the further development of business processes following re-engineering. The challenge lies in the enterprise's ability to sustain the radical changes achieved through these processes and to steer them towards stable growth. The functioning of business processes before and after re-engineering differs significantly, as the system operates in a completely new direction with altered functional and output flows. This article further develops a methodological approach to identifying priority strategic directions for the development of business processes during re-engineering changes, which, unlike others, takes into account an expert assessment of the growth of all types of industrial enterprise potential as a result of organisational and economic transformations.

Keywords: business process, re-engineering, strategy, strategic development, assessment.

JEL Classification: L23, M11, O32

Formulation of the problem. Analysis of recent research and publications. It is well known that one of the most effective methods for the financial and economic recovery of manufacturing enterprises is the re-engineering of business processes. It is applied when traditional methods of reorganisation no longer resolve the main problems.

The theoretical and practical foundations of business process re-engineering have been the subject of research by many scholars, including A.-V. Sheer, M. Robson, M. Hammer, A. Cherep, L. Taranuk and others.

At the same time, the scientific works of the aforementioned scholars and other publications do not devote sufficient attention to strategic analysis that would examine the specifics of developing the most effective management strategies for industrial enterprises at the post-re-engineering stage. Those responsible for executing business processes will face new challenges, and this will require some time for adaptation and understanding.

The author is therefore convinced that, from a process management perspective, in addition to new regulatory documents, provisions, pilot implementations, training courses and seminars, there must be a core strategy for the development of new business processes, aimed at sustaining the growth of the enterprise's key performance indicators and their continuous improvement. The above considerations determined the choice of the research topic and defined its aim and objectives.

Research findings. Since the implementation of re-engineering is a significant factor in an enterprise's innovative development, the subsequent management of business processes should be guided by the application of innovative development strategies. The application of an innovation strategy can be viewed as an activity aimed at eliminating and overcoming negative phenomena that have arisen during the implementation of new staff functions within the business process and the associated regulatory

documents. At the enterprise level, a whole set of strategies is usually selected a specific system. Source [3] refers to this system as a ‘strategic set’ and provides the following definition: ‘this is a system of various types of strategies developed by the enterprise for a specific period of time, which reflects the specifics of the enterprise’s functioning and development, as well as the level of its aspirations regarding its place and role in the external environment’. A strategic set (Fig. 1) must be hierarchical in nature, as it is always possible to distinguish the enterprise’s overall strategy, product and commodity strategies for individual production business processes, support strategies for procurement processes, and so on. The hierarchy of the strategic set is geared towards achieving realistic, interrelated objectives; towards clarity of content and an understanding of the need to apply a specific set (system) of strategies; and towards reliability, which implies its comprehensive justification and balance, as well as the reflection of business processes in their entirety and interrelationships. It should be noted that a well-formed strategic set will be reflected in a balanced, high level of development across all hierarchical levels of the enterprise.

To form an effective strategic set, each hierarchical level must be analysed by specialists in those business processes that will operate on the basis of the selected strategies. In this way, clear coordination is established within the framework of multi-directional strategies. At the same time, all actions will be carried out in accordance with strategic plans. It is clear that only by applying a comprehensive approach to the further improvement of the redesigned business process is it possible to manage its activities effectively through strategies.

The author proposes to demonstrate the practical application of the toolkit for determining strategic directions for the development of core business processes following re-engineering using the practical example of the core business process ‘Production’ at the machine-building enterprise ‘Promtekhkomplekt’. It should be noted straight

away that the strategy for the innovative development of this business process following re-engineering has two key directions: either the further accumulation of its potential, or its direct utilisation. Since the development of the business process will result in a sufficient level of potential accumulation to significantly influence the growth of the enterprise’s overall potential, we will adhere to the first strategic direction.

To build up the potential of the core business process ‘Production’, the innovation strategy must focus on analysing and strengthening the strengths of its operations, or on analysing and neutralising its weaknesses. There is no single definitive answer to this question, so everything depends on the focus of the core technology for manufacturing pump units. Production technology can be oriented either towards the diversification of product types or towards their concentration. Both options are appropriate under certain conditions.

Referring to source [4], the use of selected characteristics of the ‘Production’ business process development strategy and their dichotomous gradations can be summarised in the following table (Table 1) of factors that will influence the choice of innovative strategic development.

In this case, the choice of strategy is determined by a point in space defined by the selected characteristics. The interpretation of the results, however, must be discrete; that is, the strategic direction should not simultaneously focus on both the concentration and diversification of pump unit production technology.

Each of the areas/characteristics for selecting the development strategy for business process No. 1 (S_1 – level of competitiveness, S_2 – orientation of the business process towards the external market, S_3 – accumulation or utilisation of the business process’s re-engineering potential) will, in vector form, guide the overall strategy for its development \vec{S} . To analyse the level of influence of factors on each of the vectors, we will employ a number of experts who will assess the influence using a graded scoring scale.

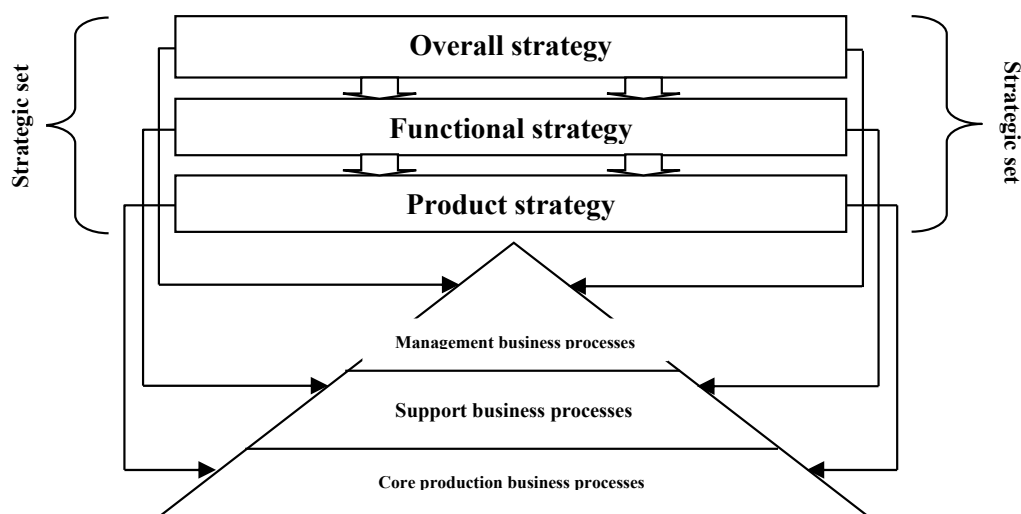


Figure 1 – Template of the strategic set hierarchy for the business processes of an industrial engineering enterprise (constructed by the author based on [3])

Table 1 – Factors influencing the choice of strategic directions for the innovative development of the core business process ‘Production’ at the engineering enterprise PP NTC ‘Promtechkomplekt’ (refined by the author based on [4])

Characteristic	Factors
<i>Competitiveness Strengthening strengths/ neutralising weaknesses</i>	<ol style="list-style-type: none"> 1. Level of technological feasibility of the business process. 2. Level of material support for the business process. 3. Level of staffing for the business process. 4. Aggressiveness of the external environment towards this business process. 5. Attracting investment funds for the further modernisation of this business process.
<i>Production orientation Diversification/ concentration</i>	<ol style="list-style-type: none"> 1. The aggressiveness of the external environment towards this business process. 2. Availability of resources for the operation of this business process. 3. Market share for the type of product manufactured by this business process. 4. Uniqueness of the products of this business process. 5. The potential to gain a competitive advantage in this market segment.
<i>Development potential Optimisation/implementation</i>	<ol style="list-style-type: none"> 1. The market conditions for the products of this business process. 2. The extent to which this business process is capable of further development. 3. The stage of the life cycle of this business process. 4. The aggressiveness of the external environment towards this business process. 5. Attracting investment funds for the further modernisation of this business process.

To ensure the competence of the assessment, the author selected an expert group comprising the company’s management team (5 individuals – the CEO, chief engineer, chief designer, chief technologist, and production manager) and a group of external independent experts (5 individuals) who provide consultancy services on the implementation of re-engineering in enterprises, professionals in this field.

We will quantitatively determine the priority strategic direction for the development of the core business process using a total score, taking into account the weighting W_i and the normalising factor K' (Formula 1). The results of the calculations are presented in Table 2.

$$S_i = \sum_1^k K'_k \times W_i \quad (1)$$

The author considers the ultimate aim of this study to be the determination of the vector of overall strategic

development of the core business process ‘Production’ following its re-engineering (Figure 3). The total length of this vector will be:

$$|S| = \sqrt{0,83^2 + 1,025^2 + 1,725^2} = 2.17$$

The above value of the development vector’s length is a weighted average estimate of the directions for the further strategic development of the core business process, which will serve as a general guideline for the management of the ‘Promtechkomplekt’ enterprise, on the basis of which the management will make decisions regarding adjustments to the strategic plan.

Conclusions. In accordance with the objectives set by the author of the article, certain conclusions can be drawn regarding the research. Namely:

1. An analysis of the scientific issues addressed in this article has shown that the practical implementation

Table 2 – Summary table of the calculation of the priority of the strategic direction of innovative development for the updated ‘Production’ business process (calculated by the author based on experimental research)

Strategic direction	Average rating of influencing factors K	Normalised impact factor K' (K/10)	Overall assessment of the direction
S_1 <i>Competitiveness</i> $W_1 = 0.5$	7.3	0.73	$(0.73+0.72+0.64+0.79+0.57) \times 0.5 = 1.725$
	7.2	0.72	
	6.4	0.64	
	7.9	0.79	
	5.7	0.57	
S_2 <i>Production orientation</i> $W_2 = 0.25$	7.9	0.79	$(0.79+0.9+0.67+0.43+0.53) \times 0.25 = 0.83$
	9	0.9	
	6.7	0.67	
	4.3	0.43	
S_3 <i>Development potential</i> $W_3 = 0.25$	5.3	0.53	$(0.9 + 0.86 + 0.98 + 0.79 + 0.57) \times 0.25 = 1.025$
	9	0.9	
	8.6	0.86	
	9.8	0.98	
	7.9	0.79	
	5.7	0.57	

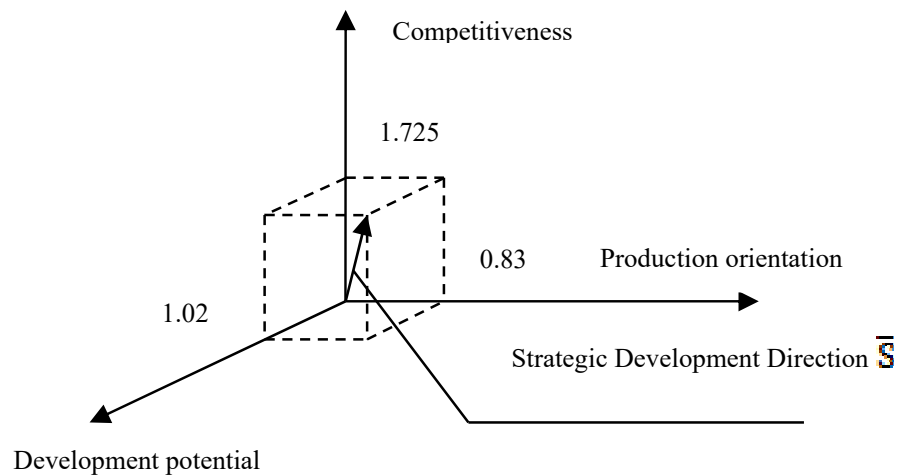


Figure 2 – Geometric model of the strategic development vector of the core business process ‘Production’ following re-engineering (constructed by the author based on experimental research)

of re-engineering at an industrial enterprise is always accompanied by significant difficulties due to the global nature of the transition processes.

2. The author has systematised a strategic set that corresponds to the hierarchical level of all business processes at an industrial enterprise.

3. With the aim of maintaining the effective state of the ‘Production’ business process following the implementation of re-engineering, the author has justified the choice of its

priority direction for further strategic development using the expert assessment method.

4. The expert assessment led to the conclusion that, for this business process, the optimal direction of development is to enhance competitiveness by strengthening strengths and neutralising weaknesses, which in the medium term will provide competitive advantages for the products manufactured by the machine-building enterprise ‘Promteckomplekt’.

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ПІДТРИМКА КОНКУРЕНТНОЇ ПЕРЕВАГИ: СТРАТЕГІЧНІ НАПРЯМКИ БІЗНЕС-ПРОЦЕСІВ ПІСЛЯ РЕІНЖІНІРИНГУ

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Одним із найактуальніших питань у наукових дослідженнях щодо реорганізації промислових підприємств залишається питання подальшого розвитку бізнес-процесів після реінжинірингу. Виклик полягає у здатності підприємства підтримувати радикальні зміни, досягнуті завдяки цим процесам, та спрямовувати їх до стабільного зростання. Функціонування бізнес-процесів до та після реінжинірингу суттєво відрізняється, оскільки система працює в абсолютно новому напрямку зі зміненими функціональними та вихідними потоками. У цій статті далі розвивається методологічний підхід до визначення пріоритетних стратегічних напрямків розвитку бізнес-процесів під час реінжинірингових змін, який, на відміну від інших, враховує експертну оцінку зростання потенціалу всіх видів промислових підприємств в результаті організаційно-економічних трансформацій.

Ключові слова: *бізнес-процес, реінжиніринг, стратегія, стратегічний розвиток, оцінка.*

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