



Company Transformation as a Precondition for Becoming a Player in the Global Market

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1 INTRODUCTION – HYPOTHESIS

The current trends in the world economy, including global IT development, has led to more and more enterprises leaving the narrow confines of functioning on a local market and have become global players. Thus, the global market, that for many years used to be available only for a chosen few, has now become open for a wide range of enterprises due to modern methods of management and IT support. Only enterprises, where development is connected with global market can count on staying afloat in international business. The business enterprise, wishing to become and remain competitive on the global market should meet a number of conditions. Amongst others it should:

- Possess a modern management infrastructure adjusted to supporting its global-market activities and utilizing global IT resources.
- Possess a well-known and appreciated brand, as well as well developed distribution and service networks,
- Have such products or services, which are unique and in demand in respect to their quality and usefulness values,
- Possess competences enabling activities in many countries of the world, in conjunction with local partners.

In order to meet the above-mentioned conditions, the business enterprise must not only have adequate financial resources, assets and staff but, first and foremost, an efficient management system.

On the basis of our own research and analysis of the relevant literature, we are putting forward a hypothesis that states, that in order to gain a competitive edge, a company should have such management systems that enable prompt reactions to emerging opportunities, as well as to existing and potential risks.

The draft hypothesis presented may be detailed towards a more specific statement that traditional organizations are unable to be competitive in the new conditions (no matter how it would wish to). Traditional organizations, based on hierarchical structures, are not able to utilize the opportunities offered jointly by globalization and IT, as well as protect themselves against the risks that accompany, and emerge with, globalization. That is why, a transformation process should take place within them. The creation of a flexible problem-oriented organization, instead of an object-oriented hierarchical organization, seems promising. An organization that meets such conditions is frequently named in relevant literature [Gareis-2000] a project-oriented organization. In the first part of this paper we wish to present some methodical problems, specifically the application of reengineering and X-engineering approaches to the transformation of an organization. The second part is devoted to the analysis of the effects of, and barriers to, such a

transformation with a practical example of an organization that has undergone such changes.

2 THE TRANSFORMATION OF AN OBJECT-ORIENTED ORGANIZATION TO A PROBLEM-ORIENTED ORGANIZATION - REENGINEERING AND X-ENGINEERING APPROACHES

Traditionally, organizations are organized as object-oriented. Their structure is rigid rather than flexible. That is why it is criticized in the relevant literature as an organization that is unable to keep abreast with the changes taking place. The master of metaphor, P. Drucker [1988], wrote that a symphony orchestra is a good model of a modern organization. In the same way that an orchestra is a collection of professional employees in an organization working under a conductor's guidance. It is the classical object-oriented approach. Each musician is a narrowly-specialized performer. They are supposed to play just as indicated by the conductor. An Orchestra plays in a stable condition, that is unless the light goes off suddenly and the musicians shall be deprived of instructions as how to play the best a specific fragment of the score. That is why a modern organization, as shown in examples by Mintzberg and Van der Heyden, [1999], as well as Robbins and De Cenzo [2001], must be flexible and adjust to continuously changing situations. The role of the Internet as a medium eliminating distance between decision makers also grows significantly [Caincross-2002]. If we continue to use metaphors, a more suitable is example that used by Hammer [1996], namely that modern organizations resemble sport teams. The sport team plays in an ever changing situation. The organization of a sport team and the structure of its management are similar to the organization and structure of a process-focused enterprise.

An analysis of contemporary knowledge about management methods and techniques, as well as experience [Kisielnicki-2002, Kisielnicki & Grochowski 2001, Sroka- 2002] up to now indicates that reengineering and X-engineering approaches are most promising for proposed flexible problem-oriented organization (POO).

Reengineering is the method that permits continuous perfection and rationalization of an organization. It focuses on keeping the organization modern, efficient and effective. Reengineering is defined as a continuous process, with the objective of the organization reaching perfection [M.Hammer, S.Stanton 1995]. Since perfection is not attainable, it is essentially a process, without end. The final result of the reengineering approach is a satisfactory product, more perfect than previous ones.

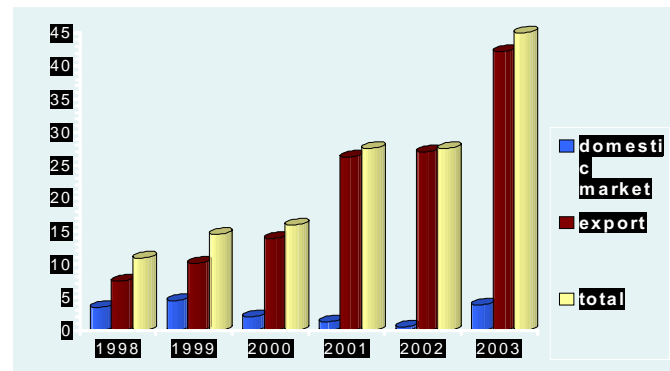
Many mistakes made in a management system, would never happen if BPR (Business Process Redesign), or reengineering, rules were applied at the appropriate time. That is why specialists in reengineering concentrate on building the procedures and mechanisms enabling the continuous pursuit of perfection in an organization. Reengineering, understood as perfecting an organization has been known for a long time. Its applications are widespread. The X-engineering principles formulated by Champy [2002] are an extension of reengineering. Reengineering concentrates on the internal problems of the organization itself, whereas X-engineering is a set of management methods and techniques, with the objective of combining various processes, in order to achieve economic effects and create new value(s) for all involved in the processes. It is an approach that goes beyond the internal processes of a business company and concentrates on perfecting the processes that link it with its clients and suppliers. This approach is very strongly connected with the Internet and related technologies. According to Champy [2002], by using X-engineering the enterprise gains not only in terms of rationalizing its own processes but also on X-engineering in its partner companies. In our paper we shall concentrate on the changes that relate to the improvement of organisational function and the work of its personnel. According to the rules presented in the relevant literature, especially the indications in papers by Champy [2002], Hammer [1996], Brilman [2000] and from the authors' own experience, the following rules were used to transform the organization presented later into a problem-oriented organization (POO):

1. Maximizing of the process approach for presenting organisational functionality.
2. Elimination of processes that are performed two or more times. Such repetition raises costs, as well as leads to obtaining differing data (information).
3. Elimination of the operations which do not contribute any new value(s) to specific procedures. In practice, a decision is frequently communicated to organizational units, which provide no significant contributions to the specific matter. The information channels and, consequently, the time of process realization, become longer, as well as raising a higher potential for errors to occur in information transfer.
4. Application of IT, especially the Internet and Intranet solutions, in organizational management systems.
5. Liquidation of information jams. A mismatch of individual links may occur in the information transfer chain. And the link with the lowest throughput causes delays, as well as leading to unused potential in all links that are connected.
6. Conversion of sequentially executed processes to parallel execution mode. The objective of applying parallel actions wherever possible, is pursued. Tasks executed at the same time take less time than if conducted consecutively.
7. Change in the location of organization units. In a target situation organizational units realizing the same process should be physically located as close as possible to each other. Using computer networks reduces this inconvenience but it does not fully remove its negative effects.
8. Defining priorities, i.e. realization of the 30-to-70 rule. Practice shows that 30% operations determine 70% of an organization's activities. The most significant activities should be identified and solving them should become the focus first of all.
9. Process simplification and standardization.
10. Employing commonly used TQM and project management methods in managing the transformation and consolidating the positive modes of behavior of the organization's members.

3 THE TRANSFORMATION OF TRANSSYSTEM AS AN EXAMPLE OF ORGANIZATIONAL ADJUSTMENT TO GLOBALIZATION REQUIREMENTS

Activity on the global market, where customers demand innovative, unique solutions adjusted to individual needs and the realisation of many undertakings in a prompt and timely manner, would not be possible for 'Transssystem' without its transformation from an object-oriented

Figure 1. History and development of Transssystem. Company turnover in EURO.



1991 Establishment of the company

-Sales : Euro 75 000
 -Employment : 14 Persons
2003:
 -Sales : Euro 45 000 000
 -Employment : > 900 Persons

Organizational innovations:

1997: first big project
 2001: project orientation
 2003: company recognised on the market as realizing the big projects

to a project-oriented organization. 'Transssystem' is a medium-sized Polish manufacturer of technological transport systems for the automotive industry. It was the transformation to project orientation that proved the source of the Company's success.

This success manifested itself, amongst others, in 2001 (the year when company transformation was realized) in an increase in sales of over 80% of which 96% was directed towards export markets; the creation of over 500 new jobs and the renewal of production, management and IT infrastructures. It was achieved at the same period when unemployment in Poland rose to approx. 17% and financial troubles in other companies were easy to notice. The growth, started by this project, continues: over 50 projects are being realized in 2003 in 20 countries throughout the world on five continents and in automotive factories of nearly every manufacturer, with a continued rise in turnover by a further 80%.

The effect of broadening project management skills on the turnover in Transssystem is shown in Figure 1, the three moments of rapid growth coincide with the acquisition and utilization of the skills in managing individual large projects in 1997; skills to manage many projects, already after company transformation in 2001; and recognizing these competences of Transssystem by the company's customers in 2003, respectively.

However, attaining these results required at the very start, an answer to the question:

How to transform the company to use the chance of globalization?

For Transssystem, the utilization of this opportunity was connected to meeting the expectations of customers of the automotive sector, who increasingly demand unique and comprehensive solutions adjusted to their individual needs. Additional features of such contracts are the high irregularity of realization in time, which requires great flexibility of the available processing capacities, and localization in various countries.

In recent years the Company has had to deal with a growing number of tasks, in both basic operation activities and at the top management level. Projects become an instrument for implementing organizational changes and the realization of strategy. Company management had to search for an „order and orientation standard” that would support project management at all organization levels. The idea appeared that solutions should be sought amongst companies which realize many projects, (i.e. in project-oriented companies), as it was recognized, that the manner the company functioned, and that of managing it, should be changed.

What was extremely important however, even prior to the commencement of the transformation project, was the diagnosis of the

Table 1. *Statement/summary of project objectives. Source: Materials of the project of the Transsystem company transformation into project-oriented organization.*

Type of Objective	Description of the objective.
SUPERIOR OBJECTIVES (they are the strategic objectives to which attaining the project objective contributes)	Strengthening of competitive position: <ul style="list-style-type: none"> Leader position on the Polish market: minimum 40%, Min. 30% share in deliveries to key foreign customers.
BOUNDARY CONDITIONS	EU regulations: EU machine directive, VOB, industrial safety standard. Polish regulations: labor code, safety regulations, construction regulations, standards. General requirements of the key final customers in relation to PM: Daimler Chrysler, VW, GM, Ford. Utilization of the new IT solutions: Intranet, Internet.

project management state of the company and the definition of objectives that formed the base of the transformation project.

It was shown unequivocally that disturbances occurred in the realization of individual projects. The problems became the more severe, the more complex the projects were and the more coordination that was required, as well as with the growing number of large projects being realized. The consequences of these disturbances were, among others, failure to meet contract deadlines and exceeding budgets. During the periods when a larger number of projects were realized simultaneously, management functions, as planning, organisation and management of people, etc. appeared clearly not adjusted to the situation.

These phenomena were the root cause for the existence of a barrier to the company's growth. They resulted from the following difficulties:

- inability to cope with many market problems, such as the growing complexity of projects and the avoiding of complex tasks by employees;
- the necessity to run activities on many markets, wherever there were customers;
- new mode of work, i.e. work in virtual teams;
- the necessity to realize many projects at the same time (and the employees' unwillingness to accept further projects);
- high quality standard requirements, documented by the latest quality system certificates (ISO 9000 version 2000, VDA 6.4, QS 9000 TES).

All the above provoked disturbing reactions amongst the employees, who protested against accepting new orders, especially those that were difficult and complicated. They believed instead that, it is necessary to develop procedures of realization, scopes of responsibilities and the function(s) of respective departments more precisely; to employ disciplinary accounting to employees realizing the contracts; as well as to change the motivation systems and release part of the salary for the project only after its full completion and clearance. Most of these subjective opinions were the effect of defensive reactions of unequally loaded employees.

The results of the analysis of the situation, which the Company was involved in, became a basis for further action. When the transformation project commenced, a diagnosis of expectations of all stakeholders groups was undertaken. Following this the objectives of the project were defined, a respective organization was appointed and its structural plan was developed.

The basic objective of the project was to strengthen the competitive position of the Company through globalization. This main objective was then split to all-business-, assets/object- and realization-related goals, and the frame conditions, that these partial goals must meet (refer to Table 1). Table 1 presents examples of the main objectives and boundary conditions, which the transformation project was supposed to meet.

4 PROBLEMS OF TRANSFORMATION, I.E. TRANSITION

from object-oriented to project-oriented organization.

The transformation of the company involved the necessity to solve a number of problems. In addition to scanty information on the subject of project-oriented enterprises, the situation was also made

difficult by a simple lack of experience, as well as the fact that project management skills were not widespread in the Company. When the realization of a current task is in progress, there is not much time left for the implementation of new methods. Therefore, a way had to be found, for anchoring the correct project management methods in the entire Company. It meant a widespread delegation of authority and responsibility to project managers, defining for the entire Company the rules gained from projects realized under contracts for specific work. Such rules were introduced wherever possible. They stimulated activity amongst those employees, who, wishing to earn more, applied for more work. It created good atmosphere for the projects.

What was quite important for the success of this undertaking was the inclusion of project management systematics (i.e. the manner and rules of dividing the entire project into elements, to be used as standard for all projects in the Company) in the new process quality management systems. The method of implementing these systems, the manner of auditing, utilization of feedback information from internal and external auditors ordered the entire project. International advisors, from UNITY AG and DQS, were consulted in the implementation of quality systems on a project management process platform. With their help, the participants of individual processes „mapped” them (i.e. drew diagrams with individual activities within the process, the decisions taken and the flow of information, resources and products) and determined the indices enabling their control. By combining quality systems and project management systematics they managed to create such new teams which cooperated actively in developing joint procedures and operating instructions for action.

A pilot project was then started in order to check the implemented solutions. Its results served for correction of the initial concepts. Individual phases are shown in figure 2.

Changes in Company structure, its rules of action, management support methods and techniques were then anchored into the Company and perfected by means of quality systems based on project management systems. In particular, the internal audits were conducted based on the project management process, in connection with other cooperating processes. The project management systematics were complemented with techniques applied in quality systems, that were particularly important at project commencement phase, such as FMEA (Failure Mode and Effect Analysis), QFD (Quality Function Deployment) and APQP (Advanced Product Quality Planning) [Masing -1999].

It permitted the management of risks, knowledge and claims in a systematic manner and to prevent and correct mistakes at the startup phase of the project, rather than bear their costs at the end of its realization.

It is worthwhile to stress some additional elements that motivated employees to commit themselves to the realization of the Company transformation project. It was a project submitted to the International Project Management Award, which involved project self-assessment by a team, as well as the inspection visit and project evaluation by external assessment experts. The visit was made by international experts in the project management field acting on order of the IPMA (International Project Management Association).

Figure 2. *Project realization phases.*

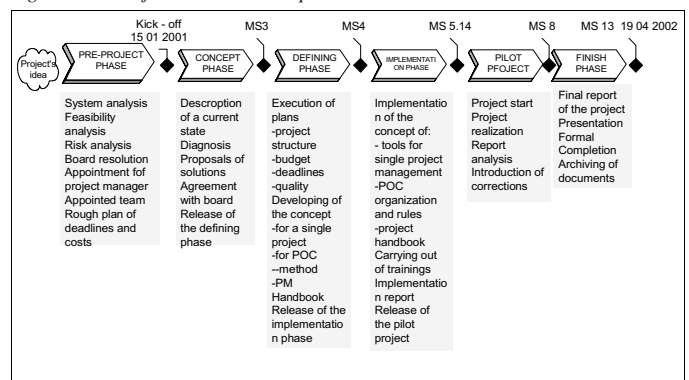
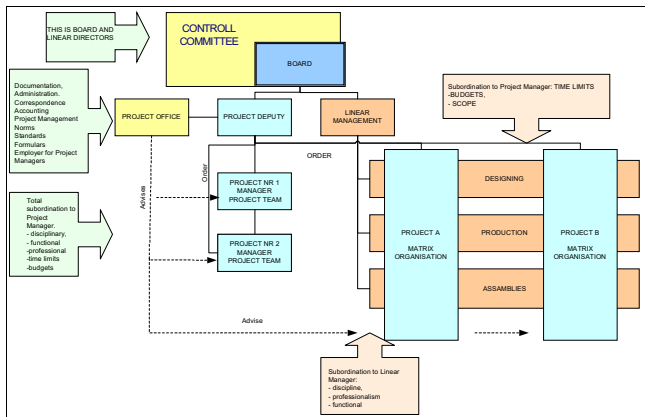


Figure 3. Organizational chart of the Transsystem S.A. company. Source: Company materials.



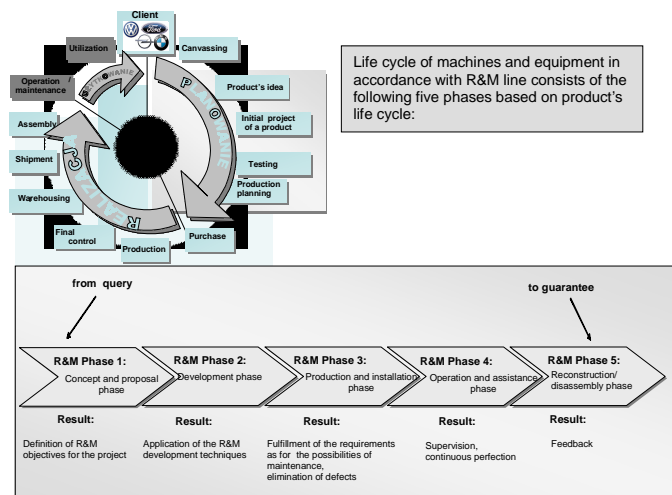
Both the self-assessment process and the report preparation, as well as the visiting process, constituted extremely important factors in employee motivation. The observation of the Company management system from outside, its assessment by judges with international experience, as well as talks conducted in the Company and the feedback report, provided many impulses for correcting management system methods. A crowning moment in these improvement efforts was the granting to the Company of the award for perfect project management (the reorganization of the Transsystem company was described as pioneering work) in June 2002 in Berlin at the World Project Management Congress. It was not only a great experience for the entire team, but also a great marketing event for the entire Company.

5 AFTER TRANSFORMATION – I.E. HOW TO MANAGE AND DEVELOP A PROJECT-ORIENTED COMPANY

An important challenge in a project-oriented company is the creation of conditions for stimulating the entrepreneurial spirit of its employees. It involves providing them with much freedom of actions. Therefore, motivating instruments need to be applied to make employees want to realize projects and act in their Company’s interest. Such instruments comprise, among others: the organizational structure with rules of action, process orientation as well as the IT infrastructure.

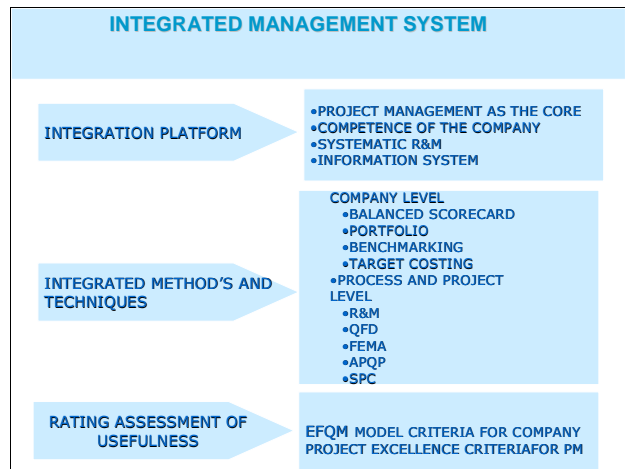
Project orientation manifests itself in a changed organizational structure within Transsystem (currently comprising a steering commit-

Figure 4. Product’s life cycle process in accordance with American R&M directives.



Source: Project Management Manual of Transsystem.

Figure 5. Integration of management methods based on the project management process. Source: Internal materials of Transsystem.



tee and project management office with an advisor to management for project affairs), in project realization rules, outlined in the project management manual, in a number of standards, which facilitate the work of both project teams and Company management, as well as in project culture. Figure 3 presents the organizational diagram of Transsystem after transformation with the tasks of the project management office specified. It stresses clearly the service character of all Company processes in respect to projects.

The organizational structure, presented in Fig 3, reflects the business hierarchy, static ordering of individual job positions and shows the reporting relations in the enterprise.

The dynamic flows, in accordance with business logic, are better visualized by a process diagram.

Process-orientation is a constitutive element of organization, which earns its profits on projects, whereas it meets also the most recent requirements of TQM (Total Quality Management). In Transsystem the processes may be divided into the basic project management process, business management processes, and supplementary processes.

The basic process was built on the basis of the R&M (Reliability and Maintainability) guidelines [Society of Automotive Engineers- 1999], developed for the American Automotive Industry.

This model is used by the Quality Management Systems, QS 9000 TES, mandatory for Transsystem. Major elements of these guidelines are presented in the diagram, Figure 4.

Individual phases of the cycle end with a specific result, which constitutes a “milestone” acceptance element in the project management process in Transsystem.

The project manager defines the financial, object- and time-related objectives for each of the partial processes of the project. The success of the entire project depends primarily on the effectiveness of process functioning, the engagement of their participants, skills of “process owners” as concerns the coordination and supervision over tasks related to many projects. Obviously, the instruments of employee motivation, such as, remuneration for contribution, combination of variable pay factors with such indices as profitability, quality and timely realization, have been utilized here.

In Transsystem, the project management process was applied as a platform for integrating other methods used by advanced Quality management systems. It is illustrated in Figure 5.

In a project-oriented enterprise, the application of IT, based on Intranet and the Internet, plays a significant role. The functioning of the Management Information System (MIS) is essential in the Intranet structure. In Transsystem it was installed on a data-warehouse basis.

The MIS systems enables, in addition to the presentation of general company data, the presentation of information on projects and individual processes. It is a significant instrument supporting company management as far as projects are concerned. It includes comparative

analyses against previous accounting periods, economic value added (EVA), portfolio and trend analyses, project assessment with scaling use, resource planning, as well as traditional financial analysis: ROI, cash flow and cost accounting.

At the individual project level it enables, among others: the analyses of profitability, deadlines, costs and deviations from planned budgets and margins. Access through the Internet, on the other hand, enables communication between all partners engaged in company projects and business processes.

5 SUMMARY

Practically, the project of transformation of Transsystem into a project-oriented organization brought about a number of organizational improvements. It made the company structure more flexible, stimulated entrepreneurship and self-dependence of its employees, as well as improved claim management. The barrier to Company growth was overcome, because Transsystem acquired the capability to manage many undertakings at the same time. Establishing the project process as a basis for integrating other systems enabled all interested partners, including suppliers and customers, to join its realization. Such a solution constitutes a core of the X engineering approach.

The consolidation of the changes that took place in the organization is essential for its continuation and to be able to make the necessary changes. This purpose is served on one part by the changed organizational structure with suitable formal rules of action, on the other part, by caring for the organizational culture that fosters entrepreneurship. It is also useful for the application of TQM auditing techniques, well proven in other companies, where the supervision of newly established enterprise functioning systems is required.

The IT infrastructure, based on Internet, intranet and MIS, constitutes an essential technology for informing all partners engaged in project process realization.

Employing reengineering and X-engineering to achieve corporate transformation to a project-oriented organization shows, in addition to the benefits achieved already and presented in this paper, extensive development potential, and thus it may become a field for further research on perfecting the model presented here in practical applications.

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