

Information technology and information system in reengineering

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Infračná technológia a informačný systém v reinžinieringu

Author describes using information technology and information technology (IS/IT) in the reengineering process in this paper. Only companies able to react to the real-world impulses of the volatile environment in the global market and where management will be able to manage the company at the same time can become successful. Process management supported by well design IS/IT is the tool that is able to help in such conditions where it is impossible to reach the necessary improvement within the existing process conditions. The modern IS/IT is the part of every reengineering effort.

Key words: *information technology, reengineering, restructuring, procedural management, global market*

Introduction

It is true that yesterday's knowledge, skills and experience are often worthless when we have to solve the problems of today and tomorrow. To survive, we have to be flexible and able to find relevant information in real time. Only on the basis of this information we have a chance to carry out the corresponding analysis, to suggest a few alternative solutions and to make the right decision. It is not easy. The time is limited, there is a lot of information that are moreover deposited at number of places and the truthfulness of information is a problem itself.

A successful manager will be able to use IS/IT and ICT applications as a support for decision-making process at all levels of management and also as tool for applications of changes in the company.

IS/IT and reengineering

In the world of competition it is necessary to use methods that can help the company to be ahead of the competitors or to reach them sooner than they escape forever. At the global market we have to use such mechanisms and methods that can simplify seemingly complicated things.

Only the company that will be able to react to impulses coming out from real environment of the uncertain global market, and the management will be able to run the company at the same time, will be successful. The management obviously has to realize particular measures and mainly make particular immediate decisions. These steps are the only real way how to create the future at present.

We should realize that it is not any distant future. This process is already happening and it is spreading very quickly.

Ex.: of this is stock trade, distribution companies, company transformations, the Internet development, etc.

Reversely, the simulation of restructuring unambiguously leads to the imperilment of the company. Those who can produce goods or ensure services in the required amount, quality, time at a marketable price, are at the market and have good background for development.

The global market saturation, hyper competition, very fast development of technologies, at this caused that the importance of the production have decreased considerably, while the importance of the activities supporting the production – IS/IT, marketing and trade, as well as the activities that are directly connected with the customer - have increased. We no longer solve the question of the production, but that of the sale.

These are the activities that play a significant part in the quality of meeting the customer's demand:

- terms of fulfilling the order,
- delivery time,
- the quality of the products,
- the present and the consequent services connected with the product.

These customer's requirements can be met and we can secure the future in this way, if we build up the corresponding system of the company management.

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The traditional division structure turned out to be quite inflexible; therefore the absolute majority of the companies defined their internal processes and adjusted the internal structure of the company inline with them.

One of the most efficient organization structures is a „flat” structure with logically minimum number of hierarchic degrees. The changeover or the origin of the flat organization structure is usually based on the process management implementation. The advance to the company process model you can see on the Fig. 2.

The process management represents a different view of the organization than so called system arrangement dividing the company into plants, departments, sections, divisions see Fig. 1.

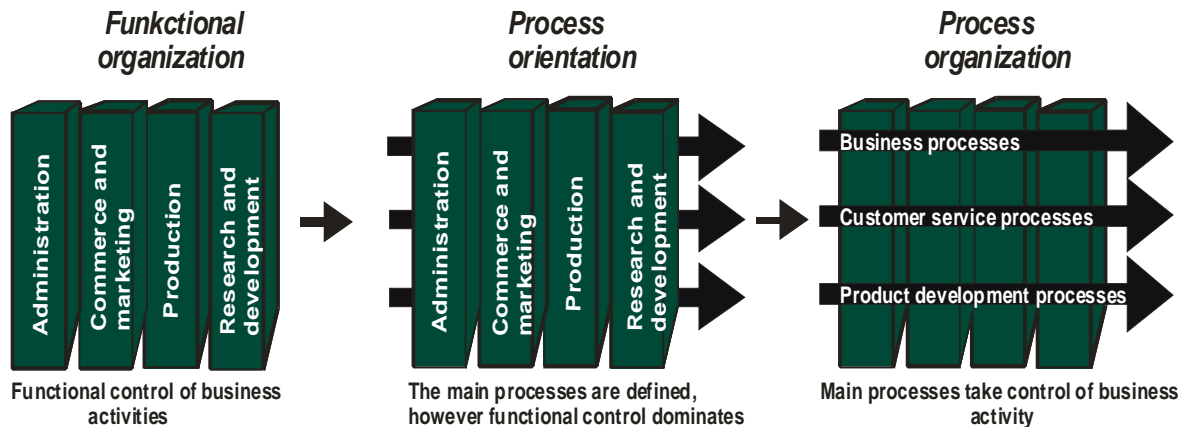


Fig. 1. Difference between functional and process management [7].

Within the traditional system structure, each subdivision has its own agenda and responsibilities. In this model the subdivisions tend to create barriers around them, mainly communication and information ones, so called enclosed information hooks arise that there are no concern for the company's management and they just increase paper handling. This phenomenon is a time function connected with the system company management. It is characteristic for the most of large companies and mainly of the state institutions. Then the quality of the activities that are important for the prospering company is low or on continually decreasing level.

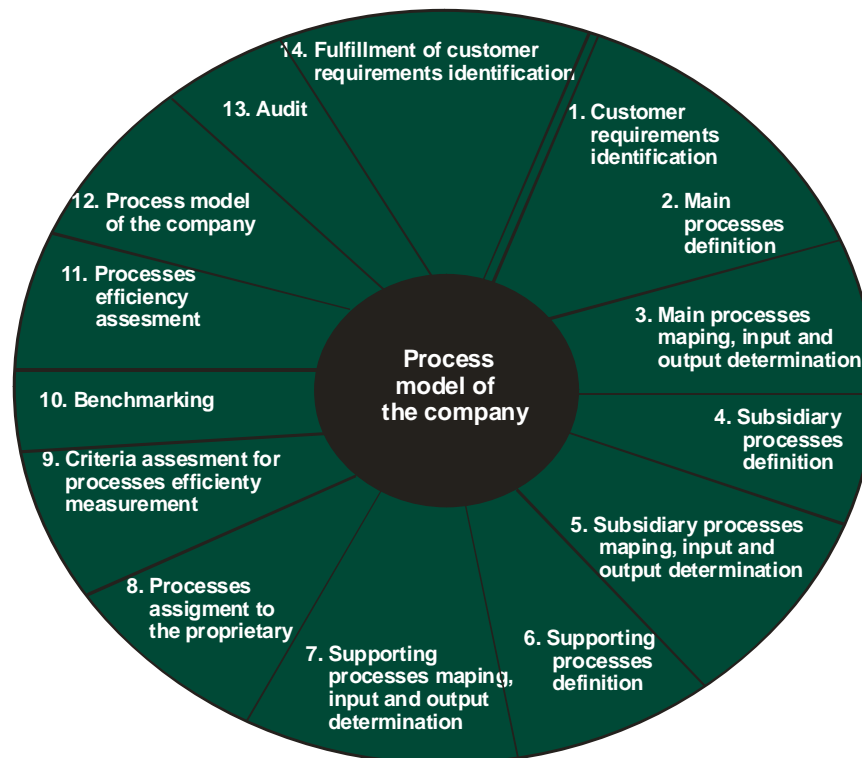


Fig. 2. The advance to the company process model.

The office work costs that are included in the management are causelessly high. This phenomenon can be identified mainly by a view from the outside. Inside the company there is usually satisfaction and the conviction that there is no other way. The peak is the information system implementation in the above mentioned management system that does not meet the market demand. Consequently, information system processes a considerable set of data and information that are not of any concern for the support of the management's decision-making and do not impact the process of creating added value.

For the company process management means to take notice of its processes, to control and improve them continually.

Process management is realized by process teams that are self-controlled teams to a certain extent. The ordinary employee often starts to play a part that was previously reserved for the managers. However, the experience shows [7] that if the members of the teams are not well trained beforehand, then they do not approve themselves. In practice it results in holding long discussions without explicit focus and definite conclusion, they are not able to lead the teams and the result is the failure of the process management project (reengineering).

Unfortunately we can find that this is happening in most companies that should have aimed at the implementation of process management.

Process control ceonected with IS/IT

Process control connected with IS/IT enables the companies to make much better use of the thought and knowledge potential of their workers that would not be revealed in case of functional control.

Modern information technology is a part of every reengineering effort and its important co-creator, because it enables to carry out reengineering of the company processes. However, it is not enough to engage computers to solve the present company problems, so that reengineering is carried out on an automatic basis. Using information technology in a wrong way which can entirely block reengineering [4, 5, 6].

Reengineering does not mean only all sorts of the company reductions, lowering the number of workers and lowering the costs at any cost. The present conception of reengineering means mainly the efficient company growth and its fundamental principle is the access from outside indoors, namely from the customer to the processes within the firm and eliminating those processes that do not bring any value to the customer. It is the customer who decides about the value of the products and services, therefore it is necessary to listen to him and pass the information to the whole organization.

Here the role of IS/IT is irreplaceable, it creates the necessary information infrastructure for this process, concisely called the nerve system of the company by Bill Gates [1]. This system, besides other things, makes it possible to achieve so called enterprising accuracy, which is the ability of the company to offer the customer just what he wants based on the unambiguous price-setting [2].

IS/IT will bring a positive effect if it is designed and constructed as a part of the whole control system, not as an isolated tool. If we want to manage a company successfully, we have to improve the whole control system, not only one of its parts.

Ex.: organization structure or the information system see Fig. 3 benefits [3].

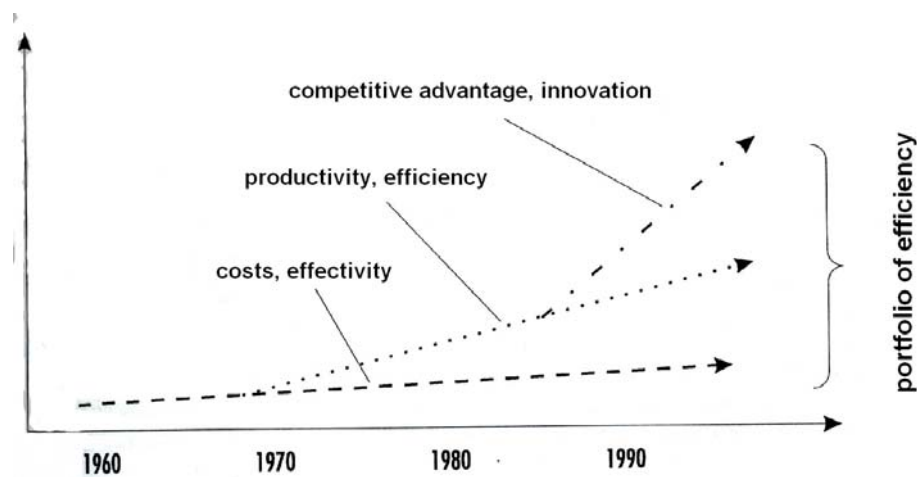


Fig. 3. Generic portfolio of benefits IS/IT [3].

The extent of the IS/IT application is obviously dependent on the extent of the change in enterprising resulting from this application. The more extensive the change, the higher the expected benefits.

Modern database technology makes it possible to handle a wide range of information that was reserved only for the management in the past. When the accessible data is combined with easily used tools of analysis and modelling, the workers of the first line suddenly have very qualified decision-making tools. Then it is possible to make much prompter decisions and the problems can be solved as soon as they appear.

Software support for the process modelling

At present there are a lot of software products, enabling the process visualization and modeling. At present, one of the most accessible ones is the Microsoft product MS Visio V. This programme only enables process visualizing see Fig. 4. Perhaps the best known and most frequently used product for the process visualization and modeling is the IDS Scheer product Aris enabling both visualization and modeling, as well as analyzing and optimizing the processes. Each activity is evaluated by a time period and financial costs, so that the course of the processes could be modeled.

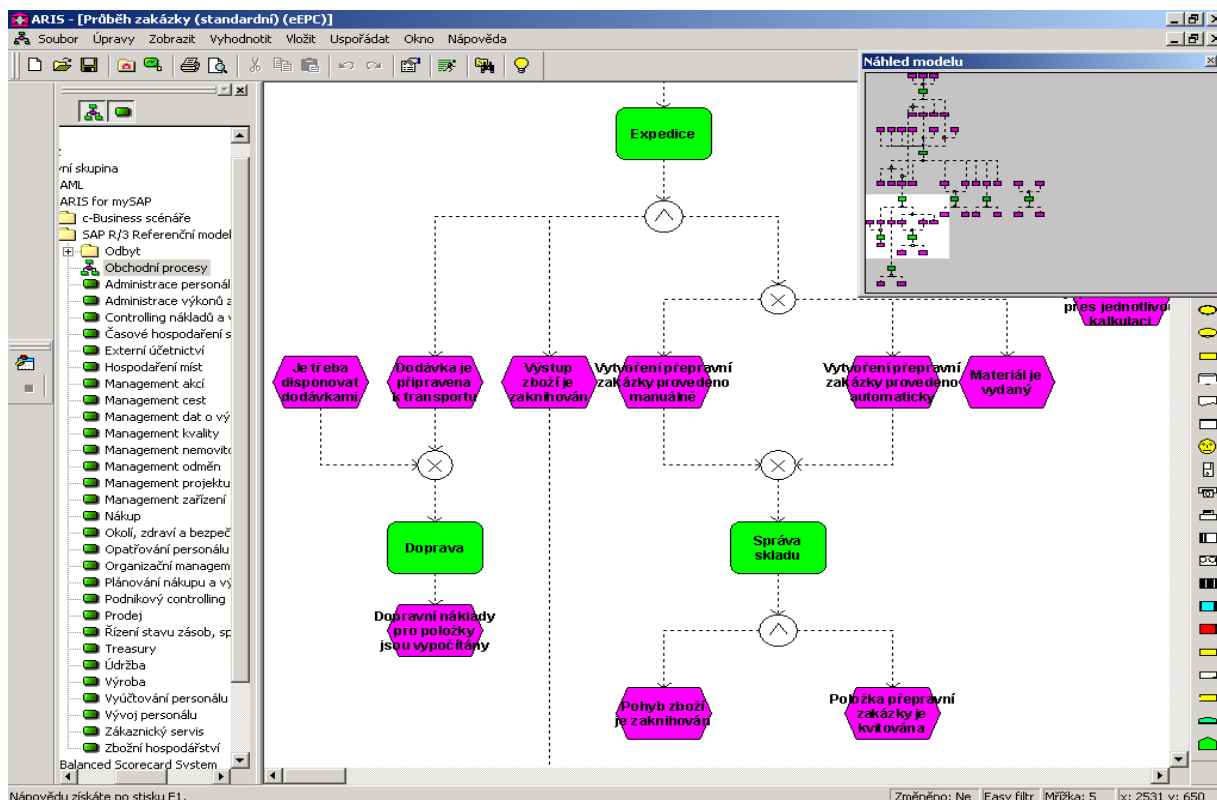


Fig. 3. Preview of screen of ARIS [7].

Conclusion

It is not enough only to implement computers at the present problems and wait for automatically running reengineering. And more, the bad using-application of IS/IT can block up the process management. IS/IT brings the positive effect only if is designed as a part of the whole system. When we can successfully manage any company we have to improve the whole system not only some chosen parts. Measurement of the assets of application IS/IT obviously depends on the expanse of the change in the business which we will make or allow by this application. To carry out reengineering can be successful only when it is done according to a clearly defined, customer and future oriented strategy. This is the only way to choose the principal processes, which are important in enterprise, and which must be followed preferentially. It is important to come up that we made the serious steps in this project like: Determine the company's policy.

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