Theory and Practice of Business Process Management[#]

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Aim of Paper

It is common knowledge that the process management is exploited in many branches of production, non-productive and tertiary sphere and its common principles are valid in all branches identically. This fact we can support and specify with our researches (see below).

BPM versus BPR

I'd rather start with the principles. The managers even in renowned magazines are often confronted with several similar terms and concepts that may be confused or at least its correct content and principle ma be misinterpreted on the basis of inaccurate information. What do the terms **Business Process Management** (BPM) and **Business Process Reengineering** (BPR) mean? What is their application in practice? In this subhead we would like to acquaint you briefly but precisely with these terms and their content.

From the point-of-view of the management and Business Process Management development the authors such as King, Fingar, Smith (Fingar, Smith, 2003) etc. offer various conceptions to comprehend the connections and differences between them. For instance, King distinguishes four development waves BPM (King, 2003).

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He mentions in his publications:

1. **the first wave of BPM** – it was concentrated on constant improving of the processes and it penetrates in many ways the philosophy of TQM (Total Quality Management) – the philosophy that leads to increase in productivity and simultaneous increase in quality and decrease in looses caused by disqualitative production and rise in customers' satisfaction. TQM is thus systematic and consistent application of several methods within the company organization clearly concentrated on quality and customers' satisfaction. One of the many pillars that this philosophy and trend in quality management stand on is the fact that the focus is on the process of continuous improving of company processes. (Kaizen).

2. **the second wave of BPM** – the orientation on Business Process Reengineering – or just shortly Reengineering is regarded as the second wave, which is the trend of the management heading towards essential, radical and fundamental change of the organization of applied work procedures or technologies. Achieving not incremental but radical rise of the organization productivity is the awaited result.

3. **the third wave of BPM –** the author means the activities leading to creation of the process orientated organization. We can say that it is application of main component procedures or process management to which belong (Tuček, 2006):

   - the key process determination including appointing of process possessors and customers;
   - within the process description their mapping and process maps formation (company process model) for recording of process system management;
   - the application of process maps (models) for cost intensity evaluation and increase of their efficiency;
   - continual process improvement and measuring of their efficiency;
   - the quality is understood in the enterprise mainly as demand for quality standards that lead off the process model;
   - information technologies considered to be the process support in the enterprise;
   - while process model creates the basis of the process management the strategy management is comprehended as the peak of the "pyramid" of the process management;

- the competence management is comprehended as the system enabling to fill the roles in individual processes (both management and key processes) by such people that have appropriate knowledge and abilities for them.

  E.g. Hejduk then mentions as crucial (Hejduk, 2003):

- the process model;
- the constantly improved processes – procedures for optimization and improvement of the processes;
- the strategy management;
- the competence management;
- the quality management.

4. **the fourth wave of BPM** – is the complex of activities heading towards achievement of competitiveness based mainly and exclusively on the processes.

It is essential to adduce also other authors for better understanding of differences and links between BPM and BPR; e.g. Scheer when he applies this managerial trend he recommends to implement the process management in the organization first and then to focus on reengineering processes on the basis of specific priorities of the organization (Scheer – Kruppke – Jost – Kindermann, 2006). According to whole range of authors e.g. Robsona and Ullaha (1998) or consulting companies: IDS Scheer, AP Partner Consulting a.s. (Karmazín, 2006), Plaut Consulting Czech Republic etc. consistent realization of several steps is recommended for increase in process productivity of the company. These three authors agree on this fact in large measure.

This procedure can be defined as following:

- endorsement of fundamental rules within the process management application;
- formulation of the sense of such project;
- identification and endorsement of crucial factors of the prosperity;
- identification and endorsement of individual types of company processes;
- simulation of individual types of company processes (according to crucial prosperity factors) with the application of process teams – creation of process map;

- determination of process priorities;
- measuring of process efficiency;
- optimization of company processes;
- furthermore the projects of reengineering processes often follow according to individual scenario.

From the point-of-view of the long term we can divide the change to process management into two stages:

1. **Short-term, quick stage (in the order of month),** that has as task the setting of surroundings for process management in the society (so called process simulation) and the realization of changes:

   - in strategy;
   - in processes;
   - in organization structure;
   - in motivational system;
   - in information technologies.

2. **Long-term stage (proceeds in the order of several years) we can call it the stage of improvement and it covers:**

   - acceptance of new way of management by employees;
   - changes in company culture;
   - essential continuous process improvement.

Why BPM?

Furthermore, in this article we would like to outline the reasons that make the companies interested in implementation of process management, because accurate evaluation of the reasons that lead the companies to application of the components of the process management in their daily practice, were the subject of realized researches published. The main aim of the process management is to develop and optimize daily development of the company in the way that define the work process as an integrated sequence of activities in the company, where each process has its inputs, outputs and responsibilities.

This way of management defines personal responsibility for the process and for each activity, it adjusts the system of measuring of process efficiency and it follows and evaluates each process.

These activities must be realized (implemented) so that:

- the production quality given by measured parameters was observed,
- available resources were utilized optimally,
- the company efficiency was continuously increased according to known and measured criteria.

BPM thus automatizes the company processes and it is able to ensure them the necessary flexibility. There exists the whole range of the reasons for introduction of process management but the practice of both the productive and non-productive companies and organizations shows the following basic reasons that decide in favor of the process management. These sure belong to them:

- the necessity of reaction to basic changes in the company surroundings,
- the necessity of change in the company organizational architecture,
- the assistance in exclusion of those processes that do not bring value for the customer,
- reasons for necessity of integration (e.g. connection of operations, incorporation of the customer to the process of producer, supplier to the process of producer),
- the intention of certificating the system of quality management according to ISO 9001 (Tuček, 2006).

Contributions to introduction of process management are indisputable. Among the most important belong:

- transparently and efficiently functioning processes;
- process oriented organizational structure supporting the process efficiency;
- reduction of continuous periods, cost cutting;
- ability to react flexibly (high competitiveness);
- functioning system of measuring and evaluating;
- motivation and engagement of employees with extending knowledge;
- functioning continuous process improvement.

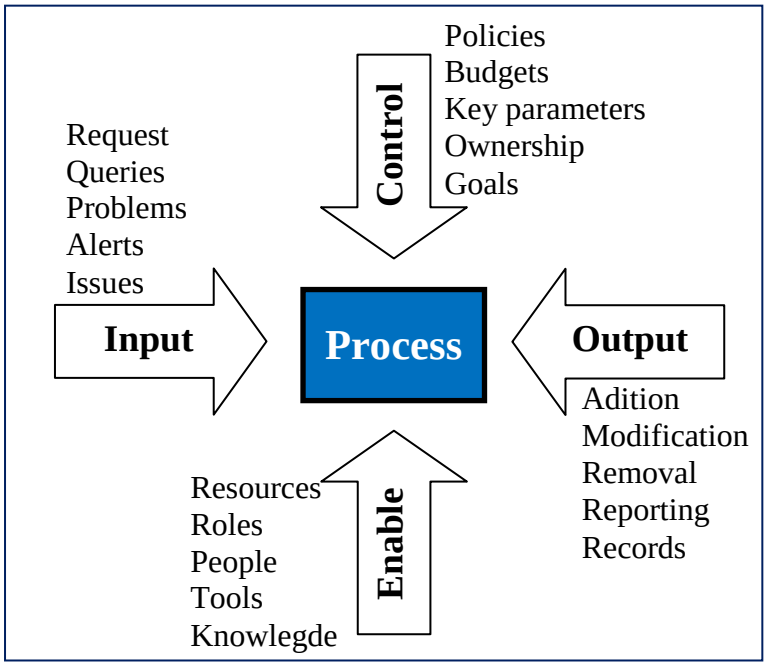
Some representatives of consulting firms e.g. Michelfeit (IBM Global Services) assert that different state of process management implementation (or different standards) temporarily does not enable to share completely

the resources and it requires to dedicate some resources to individual customers (Michelfeit, 2006). It also offers solution that enables to avoid these disadvantages during monitoring of the attributes mentioned in Fig 1.

However, the organizations often remain in mid-way. During the implementation, the organizations often entrust employees, who are responsible for individual processes, with the processes management. They are called the process holders. However, in a routine operation the company does not use service of these process holders and does not change from the traditional linear managing model to Matrix organization that is required in a process approach.

There exists a whole range of reasons. One of them is the fact that the traditional linear vertical managing structure characterized by existence of individual divisions is enrooted very much and despite obvious deficiencies it is still applied most often. However, it also has such disadvantages as higher separateness of individual divisions, lower coordination, they often work for the head of the division not for the customer, and decision process is slow.

Fig. 1: How to Avoid Some Mistakes in Implementation of PM



Source: Michelfeit (2006)

If the process management and matrix organization are established well the change heads to increased cooperation and aimed satisfying of customer's needs. The traditional linear managers do not disappear but they become more suppliers of resources mainly quality instructed people for processes and their holders. These instructed professionals then hold responsibility for course, measurement, evaluation and optimization of entrusted processes (Michelfeit, 2006).

The methodology of creation and following strategy realization is very demanding field because strategy processes have their specific features that differ them from tactic and operative management. The same applies according to some sources to process approach (Šmída, 2009; Prosci, 2006) in case that the changes are made unsystematically and are considered to be done when the organization structure is changed and it is called process structure although in reality the old one works. That superficial procedure leads to chaos start and to precipiteness of enterprise collapse. Specific problem, that refers to traditional companies and relates to inability of manage changes or implement process management, lies on the fact that the enterprises are not capable to realign from production orientation to orientation on customers. This could not and cannot be reached only by creating marketing and sales department and rest of the enterprise performs as it was orientated on production. There still exist barriers among individual operative departments that cause inefficiency, delay, disquality, and customer needs disregard.

The benefits of Process Management from the Czech enterprises` managers point-of-view

Within the overall context of my research, I have understood the aspects of Process Management (PM) to mean: a view and standpoint on the problems and issues related to the management of enterprises` processes (i.e. Business Process Management) and this includes such areas as aims, factors, components, support as well as the benefits of Process Management itself.

I subdivided this complex piece of research into the following fields:

- The aims and factors of PM,
- The components and principles of PM,
- The SW support for PM,

- A breakdown and ranking of the integral processes, and …,
- The benefits of PM.

In this paper, I mainly concentrate here on presenting the main results of the last-mentioned research area, i.e. where I evaluate the benefits of PM from the managements of Czech enterprises` point-of-view. The results are shown as a summary of all of the companies (respondents), of which there were 132.

These (132) managers see the greatest influence of the exploitation of PM components in the fields of cost reductions for a concrete process (or processes), or else the concrete measurability of values and improvements in relationships with external customers within the context of the enterprise as a whole. These managers mainly see the role of PM in the future – and this is clearly demonstrated in view of the low agreement value (about 0.6)[1], as being important for[2]:

- the functioning of continuously improvements to processes;
- meeting deadlines (i.e. maintaining precise deliveries of supplies as the consequence of flexible reactions to customer requirements);
- the effective functioning of processes;
- gaining new orders;
- the creation of a functional measurement and evaluation system;
- reducing the laboriousness (amount of work involved) of individual operations.

As it is clear from Fig. 2 the shortening of interim production times, achieving greater employee motivation and personal engagement, or the reduction of their numbers in an enterprise are considered to be benefits managers are most likely to track by the introduction of PM methods.

Among other effects that only rarely came up in the study, was for instance the stabilization of an enterprise on its market, or the re-acquisition of customers.

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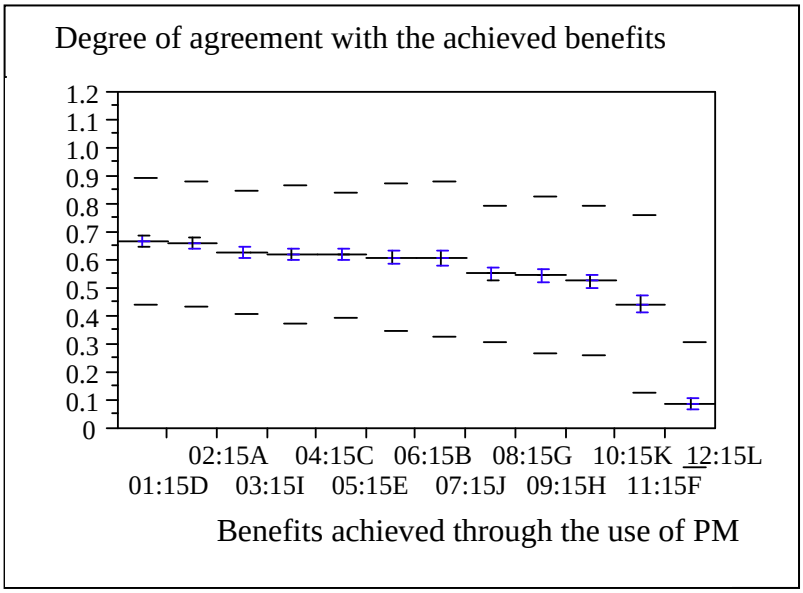
[1] The value 0 expresses: NOT AT ALL; 0.25 – MORE OR LESS NO; 0.5 – CAN`T SAY UNAMBIGUOUSLY 0.75 – MORE OR LESS YES; The value 1 – I AGREE IN FULL (with this statement).

[2] The individual benefits are ranked in descending order from the greatest degree of significance according to the Tables in Fig. 2.

In the case of large-scale enterprises, according to the respondents` responses, these showed a greater degree and level of the benefits achieved – and this was true for all seven of the above-mentioned areas, beginning with reductions in costs for a concrete process (or processes) and finishing with reductions in the amount of work required for individual operations.

Fig. 2: Benefits Achieved Through the Use of Process Management



Reliability Intervals (used for the reliability of estimates $1 - \alpha = 0.95$)

Tab. 1: Benefits achieved through the use of PM

	Average	Lower	Upper
01:15D – Cost reductions in processes	0.664773	0.62575	0.70380
02:15A – Improving relationships with external customers	0.657197	0.61833	0.69607
03:15I – Functioning permanent improvements in processes	0.626894	0.58910	0.66469
04:15C – Meeting delivery deadlines	0.621212	0.57883	0.66359
05:15E – Effectively functioning processes	0.617424	0.57928	0.65557
06:15B – Acquiring new orders	0.607955	0.56276	0.65315

	Average	Lower	Upper
07:15J – Creating a functional measurement and evaluation system	0.606061	0.55845	0.65367
08:15G – Reducing the laboriousness of operations	0.551136	0.50901	0.59327
09:15H – Shortening the production through-put time	0.545455	0.49734	0.59356
10:15K – Increasing employee motivation	0.526515	0.48007	0.57296
11:15F – Reducing employee numbers	0.443182	0.38827	0.49809
12:15L – Other effects	0.085227	0.04657	0.12389

Source: own research

The evaluation of one of the questions in the questionnaire (on quantitative research) helped in the clarification of the critical factors for the success of similar projects in the course of the implementation of PM. From Fig. 3 it is clear where and in what (Czech) managers (and PM project coordinators in enterprises) see the greatest barriers to the implementation of PM. The results show that managers do not give greater weight to the evaluation of barriers in the course of the realization of process management in their enterprises, but rather do give greater weight to the acceptance of new company personnel management (control) principles – and this is reflected by the value of 0.52, which however expresses a not unambiguous influence. Other factors were indicated as being "rather insignificant" (with values ranging between 0.20 – 0.47). These are the following sorts of barriers:

- insufficient mastery of the automatization of the tracking of results through the use of IS/ICT;
- poorly-working teams;
- poorly defined approaches and procedures for projects;
- insufficient or inadequate support from management;
- the orientation of PM projects only on resolving the reward systems within an enterprise.

Through the comparison of these results with the critical factors for the success of PM projects identified by the analysis of PM project

implementations (more than several dozen projects), we were able to identify fundamental inconsistencies between the perception of barriers in similar projects by the managements of different enterprises and their actual state. These differences demonstrate that managers are insufficiently aware of which problems are key issues for the implementation of PM and which are "critical" to the success of such projects.

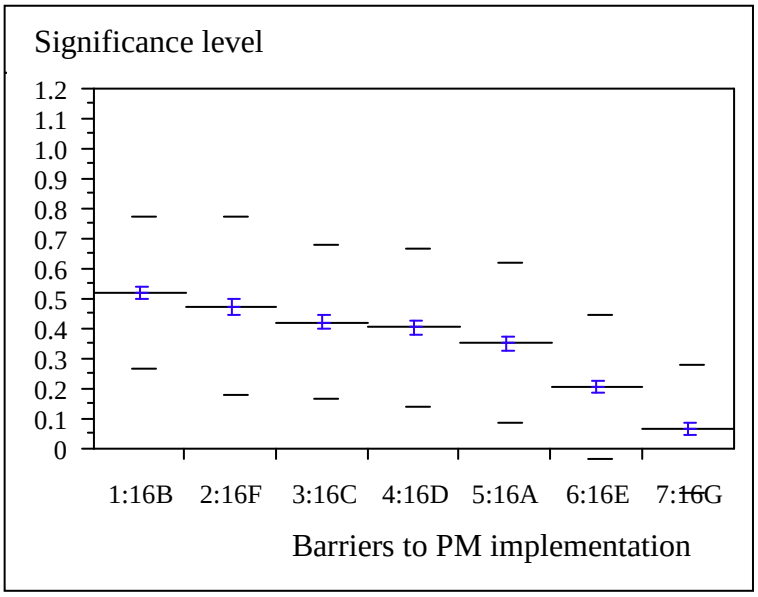
Only rarely did some managers perceive barriers in similar projects or rather, delays in the PM implementation process and the correct understanding of basic PM terminology – like for instance "process owner", or controlling process, etc.

It was not possible to demonstrate that the size of an enterprise had a greater influence on the factual realities which are perceived to be barriers to the transformation of an enterprise's processes to Process Management. As compared to large-scale enterprises, it is only small and medium-sized enterprises that do not see any problems in the coordination of teamwork.

The following factors were discovered to be critical factors for the success of PM projects as identified by the analysis of PM project implementation (more than several dozen projects):

- the implementation of the Process Management project is based on the company strategies;
- the active subvention of the project by the top management;
- the breakdown and elaboration of the PM project solution with clearly identified objectives, including the specification of its aims;
- the phases of the PM project must be methodologically correct and precisely defined;
- a highly competent PM (respectively, Re-engineering) team, who also take into account the existing company cultures.

Fig. 3: Managers' Perception of Problems in the PM Implementation Process



Reliability Intervals (used for the reliability of estimates $1 - \alpha = 0.95$)

Tab. 2: Barriers to PM Implementation

	Average	Lower	Upper
1:16B – Employee acceptance of the new principles	0.520833	0.47696	0.56471
2:16F – Poor mastery of the automatization process	0.475379	0.42413	0.52663
3:16C – Badly functioning teams	0.422348	0.37813	0.46657
4:16D – Errors in the definition of the project approaches and procedures	0.403409	0.35839	0.44843
5:16A – Inadequate support by top management	0.352273	0.30622	0.39832
6:16E – Orientation of the project only on reward systems	0.208333	0.16674	0.24993
7:16G – Other barriers	0.066288	0.02949	0.10308

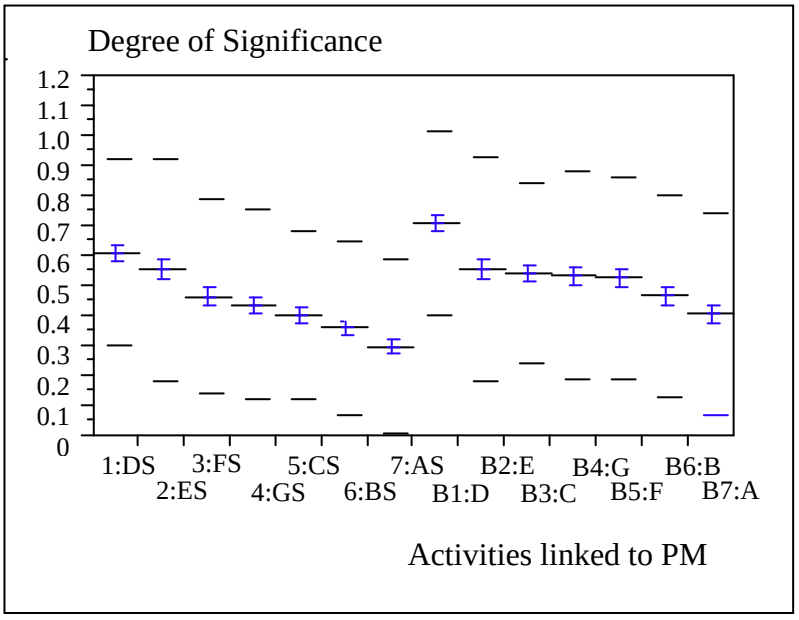
Source: own research

A component of this research study was also in questions whose evaluation indicated the areas and activities on which managers` attentions are currently oriented in the Process Management project as well as on which such areas and activities they are decided upon orienting in the future (approximately within the next 5 years). From Fig. 4 it is clear that currently, the trends in the implementation of PM are oriented more on the area of process optimization, on-going improvements of these processes, and the introduction and implementation of ISO 900X norms.

The following activities would seem to managers (within the context of our summary of the evaluations) as being of less significance and meaning (in order of their – lack of – importance):

- Reimplementation of "Controlling" activities.
- Process-oriented implementation or integration of the IS.
- Reengineering of the knowledge process and the building-up of management competence.

Fig. 4: Degree of Significance of Activities Linked to PM



Reliability Intervals (used for the reliability of estimates $1 - \alpha = 0.95$)

Tab. 3: Activities linked to PM

	Average	Lower	Upper
1:DS – Process optimisation and permanent improvement of the process	0.607955	0.55472	0.66119
2:ES – Introduction and implementation of ISO 900X norms	0.551136	0.48737	0.61490
3:FS – Reimplementation of "Controlling"	0.462121	0.40672	0.51752
4:GS – Process-oriented IS implementation	0.433712	0.37925	0.48818
5:CS – Reengineering the knowledge processes	0.399621	0.35179	0.44745
6:BS – Business Process Reengineering	0.357955	0.30829	0.40762
7:AS – Constructing strategies using the BSC Method	0.295455	0.24533	0.34558
B1:D – Process optimization and permanent improvements to processes (in the future)	0.708333	0.65564	0.76103
B2:E – Introduction and implementation of ISO 900X norms (in the future)	0.553030	0.48854	0.61752
B3:C – Reengineering the knowledge processes (in the future)	0.539773	0.48825	0.59129
B4:G – Process-oriented IS implementation (in the future)	0.532197	0.47287	0.59152
B5:F – Reimplementation of "Controlling" (in the future)	0.524621	0.46663	0.58261
B6:B – Business Process Reengineering (in the future)	0.464015	0.40621	0.52182
B7:A – Constructing strategies using the BSC Method (in the future)	0.403409	0.34572	0.46110

Source: own research

(Czech) managers consider extensive radical changes to an enterprise's processes within the framework Business Process Reengineering – i.e. the restructuralization and building-in of manageable strategies using the BSC Method (only reached 0.29).

Within a five-year timeframe, it can anticipated that there will be a significant increase in orientation mainly towards the areas of process optimisation and the permanent improvement of processes, because the managers we questioned indicated that these activities will be the most significant ones in the future. We recorded only very small, but across-the-board increases in managers` preferences for other activities associated with PM, i.e. in the fields of:

- The introduction and implementation of ISO 900X norms.
- The reimplementation of "Controlling" activities.
- Process-oriented IS implementation or integration.
- Reengineering the knowledge processes and building-up management competence.

The influence of company size:

The significance and meaning that representatives of small and medium-sized enterprises (SMEs) allocate to the above-mentioned activities is less than that of representatives of large-scale enterprises and is (usually) ranked as being activities of little significance. For large-scale enterprises these currently rank as being of great significance and – especially in the future, this will only continue to increase (see degree of significance: 0.59 – 0.74): these include process optimisation and the permanent improvement of company processes, the introduction and implementation of ISO 900X norms, the process-oriented implementation and/or integration of IS systems, reengineering the knowledge process of the enterprise and the building-in of managerial competence – and in addition, the reimplementation of "Controlling".

In the course of our evaluation of managers` interests, i.e. on which further activities associated with process management they were currently oriented on and which they were decided-upon to concentrate in the future (within an approx. five-year timeframe), we also calculated the p-value when comparing all of the results relating to current and future preferences. These values give the outer boundaries of the degree of significance which would determine whether our working hypothesis (statement) would be rejected. Thus, we can reject the working hypothesis on the basis of chosen alpha level. In order to test our hypothesis, we chose a degree of significance level corresponding to $\alpha = 5\%$. On the basis of the calculated values for this index, we can state that our **results are statistically significant**.

Conclusion

The article presents besides some theoretical basis of Business Process Reengineering (BPR) and Business Process Management (BPM) part of results of research focused on these problems. Presented results show contributions of process management from the point-of-view of the Czech managers. This year we prepare similar research in relevant sample of Slovak enterprises. Inquires show that the implementation of components of process management is an important base on which the decision-making about changes during processes may be built. This way they contribute to meeting the targets of the company and its successful position on market, which is possible only with processes that are carried out as fast and efficient as possible and with minimum costs and high quality.

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ABSTRACT

Traditional model of management is based on hierarchical decomposition of organizational structure. Company is divided on workroom, union, partitions and every formation of his has independent agenda and his responsibility. However the formations often have tendency create about themselves barrier, especially communications and informatics barrier. Compared to that, process management is relatively new view of organization that moves activities of many companies. Process organization tries organizing and managing the work like comprehensive complex, which is of further distributed on individual sub-processes, which are logically linked.

It is known; that the BPM is exploited in many line productions, non-productive and tertiary sphere and his conventions pays in the same way in all lines. This statement I can corroborate thanks to my research results (below).

Within the overall context of this research, we have understood the aspects of BPM to mean: a view and standpoint on the problems and issues related to the management of enterprises` processes and this includes such areas as aims, factors, components, support as well as the benefits of BPM itself.

As it was indicated in the title of this paper, we mainly concentrate here on presenting the main results of the last-mentioned research area, i.e. where we evaluate the benefits of PM from the managements of Czech enterprises` point-of-view. The results are shown as a summary of all of the companies (respondents), of which there were 132.

Key words: Business Process Management; Process Modeling; Business Process Reengineering; ARIS (Architecture of Integrated Information Systems); ARIS Toolset; ARIS Business Architect; ERP (Enterprise Resource System).

JEL classification: O31.