Analysis of the importance of business process management depending on the organization structure and culture

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Abstract–the present survey mainly aims at analysing determinants of possibilities of improving processes in an organization. The early fragments of the study are devoted to a theoretical analysis of determinants of the process management and its connection with the project management. Then the assumptions of the survey on the impact of the organizational structure and culture on possibilities of applying business process management were presented. The verification of theoretical deliberations and survey assumptions is included in the last part of the article presenting the initial results of the obtained survey and the resulting conclusions.

Key words–business process management, organization structure, organization culture.

I. INTRODUCTION

THE basic objective of the present article is an attempt to define the meaning of the organization structure and culture for the purposes of streamlining the business process management within it. Numerous Polish and foreign publications [1], [2], [3], [4], [5], [6], [7] define process management in the wide and narrow scopes. The wide scope shows it as a discipline comprising activities identifying, evaluating and analysing the existing processes performed in an organization and their fit for accomplishment of strategic objectives of the organization, It is the base for improvement, optimization, modification or designing new processes (within projects). In the narrow scope – it is a formalized sequence of systematic, measurable steps concerning management of individual business processes in the organization by means of: intuition, explicit and tacit knowledge, inborn and acquired skills, internal (e.g. employees) and external (e.g. customers) stakeholders; theoretical – methodical solutions in the scope of management (change, quality, time, scope, budget management) and related social sciences (economy, sociology, psychology) etc., tools for analysis and tools for process improvement as well as implementation techniques together with process innovations and projects introducing change on the enterprise level; information technologies – supporting the processes, modelling and designing the organization and allowing design and implementation of IT systems using the process management solutions in the management practice of the organization set in a specific economic environment; oriented and changeably (dynamically) conditioned by: the organizational structure (bidirectional relation structure - processes – more efficiently implemented in a proper organizational structure allowing to monitor, analyze and improve the processes; a specific strategy of the organization (relation structure -

processes – more efficiently implemented than through competition on a given market), where proper relations result from combining the results of the processes with Key Performance Indicators (KPI); the organizational structure – with the possibility of questioning the inviolability and optimum of the present state, which serves a basis of a possibility of improving the organization, including also transferring and distributing tacit knowledge through a social component of corporate portals and sharing it with other employees of the organization.

From the practical point of view the relations between processes and projects are also essential. At present determinism, explicitness and statics in defining features and results of projects move towards probability calculus, indeterminacy and dynamism. In theory the span between two basic kinds of activities recognized in the contemporary organization: projects and processes should increase. After all projects were defined – as unique, one-time undertakings requiring proper preparation – while processes are repeatable and may be subject to automation or become routine activities. The main difference is the fact that processes are performed permanently and by nature are repeatable, although they can proceed in an unpredictable and changeable way depending on impulses coming from their environment, and projects are performed when new needs occur, and each of them is totally different. But relations between process management and project management have bilateral dimension. On one side process management is treated just as a technique of streamlining project performance. But on the other hand – in a sense – projects are subsets of processes – they are all processes that we could define as non-routine (change-oriented), innovative, pragmatic, burdened with a big risk and unique. This results from peculiar similarities – both kinds of activity are performed by marked out teams of people, determined by specific and limited in time resources, following the rule of planning, steering, supervising and controlling particular acts. This in turn makes the changes within process management have a direct impact on project management. Projects are performed in order to improve the existing processes, create totally new processes and solve specific problems connected with the necessity to change processes (isn't it a component of process management?). In each organization there are both process and project activities. Contrary to its classic definition, projects basically do not end. Each end of one project is the beginning of another, in essence they sometimes create a never-ending cycle of

Recipient's requirements (quality, usefulness, efficiency, functionality, ergonomics, etc.) project risk degree

Time

Inside the internal pyramid, an area of solutions acceptable after extension of basic project parameters

Quality
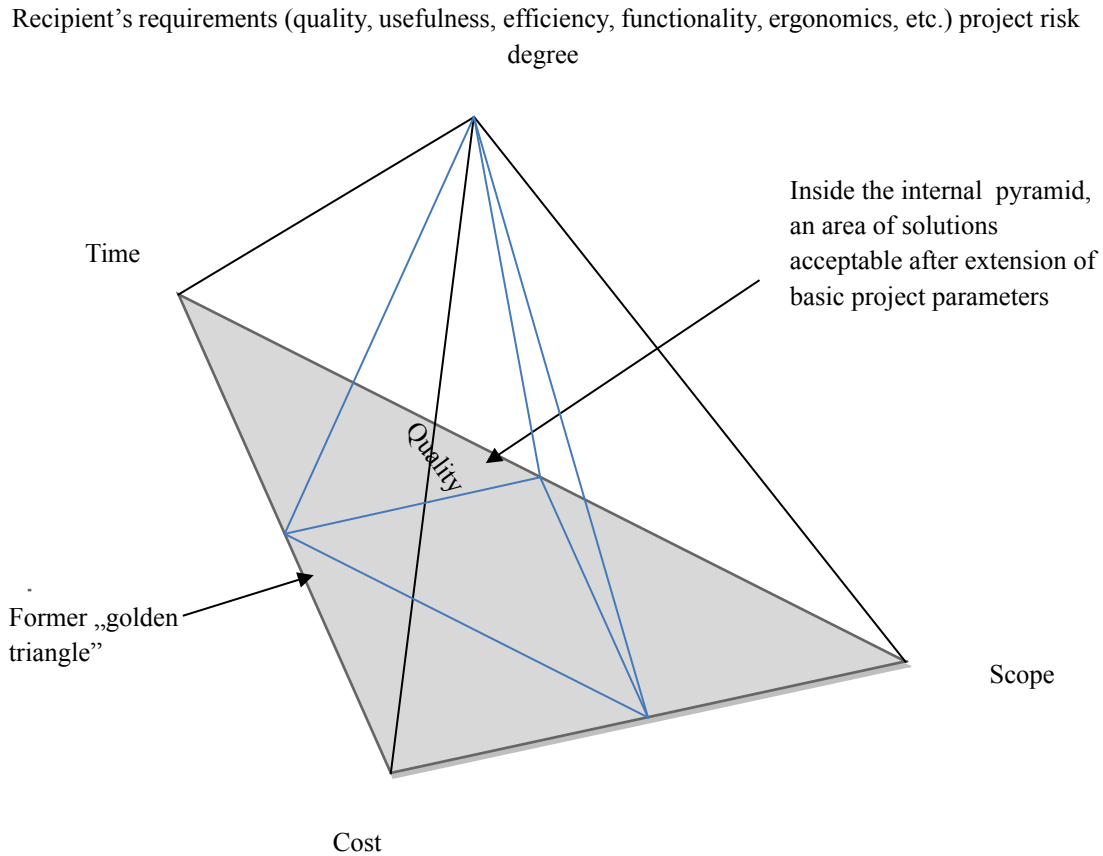
Former „golden triangle''

Scope

Cost

Fig. 1. The area of acceptable combinations of basic project parameters and its extension
Source: own study

projects, which cannot be even named as subprojects because we never know – if only due to uncertainty and high risk – in which direction end users' requirements will develop. But the most symptomatic for project development is the fact that essentially methodologies of project management were in their classic version created, generalized, „toughened'', standardized so as to the best possible extent normalize processes occurring in the project. So the paradox – as it shows – consisted in the fact that they got closer and closer to methodologies of process management, as they strived for operating standard rules of solving non-standard problems, which tried to standardize them (that is change into processes) through far reaching formalization.

Due to the above reasons, the notion of a project success at present evolves towards an evaluation exceeding the classic, narrow triangle of balance between costs, time and scope [8]. The point of view of a user – project recipient and his/her way of seeing the project is taken, both in internal projects (in which both persons performing the project and its recipients are employees of the same organization, in which the final product of the project remains), and external projects (products performed for stakeholders from outside of the organization, e.g. customers and may be a source of

income of the organization producing them). The extension of the „golden triangle'' itself by the fourth parameter – requirements – characteristic for process management – causes also extension of possibilities of making decisions in the scope of its implementation (each decision is described by four sorted out parameters (time, scope, costs, requirements), not by three parameters as before). And the relations between those parameters are becoming – as it seems – non-equivalent – recipients' requirements are superior to other parameters. If we additionally introduce a fifth parameter, which is the quality (one of the component of user requirements) – the number of allowable solutions will again narrow, which will affect multidimensionality of a project and the close connection of a user's requirements with a specific quality level. Not all solutions acceptable within a project and conforming to the user's requirements may meet the assumed quality

standards, and thus the process management (cf. Fig. 1). So changes of relation between project management and process management are affected by their surroundings (environment). The environment, in which projects are implemented, splits into [9]: economic (prices, customs duties, taxes, exchange rates, interest rates, economic policy, markets, economic development degree), legal (legal system, its adjustment to the conditions of implementation, licenses),

technological (technological development, technological state in an organization, quality standards), organizational (organizational structures, management style, managerial staff and employees' skills and knowledge, functionality of the organization, project management method), psychological, (culture, opposition to changes, innovation degree, performance and execution safety) and political (geo-political factors, developmental tendencies, alliances, trends). And here another important issue emerges. The success of a project in the classic perspective and the success of a project in the contemporary perspective (and its management) resulting from practise significantly differ. In the classic perspective (treated this way by many studies) the success is not to exceed costs (and the best thing - execution of the costs), full conformity of the schedule with performance dates and conformity of the performed scope of work with the one specified in the project. Adding the end user's (recipient, customer) point of view means adding to the success evaluation criteria the issue of customer satisfaction with the obtained product or service. Adding a dynamic environment – decrease of a risk of failure, efficiency, effectiveness, flexibility, adaptivity, functionality, etc. And these are evaluations very close to an evaluation of a success of a proper process management in an organization. And very strongly influences them. In streamlining the processes the fact that individual organizations may be at different levels of progress in the scope of process management should also be taken into account. To evaluate this level most often the CMM model (Capability Maturity Model) is applied, which recognizes five basic stages of maturity to process management: first (initial – where processes are not defined at all), second (repeatable – processes were identified in selected departments of an organization and are performed); third (defining) – processes are known in the whole organization and are performed, fourth (managed – conscious use of process management by managers, manifested by collection of data on efficiency of stages of the process and the process as a whole), fifth (optimization – managers and employees monitor on a continuous basis efficiency of processes and introduce necessary modifications). An attempt to introduce process management to an organization, which has not been properly prepared – lacking suitable organizational resources and competence – may result in a failure. Going through each of the organization process maturity levels in this model is an undertaking requiring both extensive knowledge in the scope of process management and using tools dedicated to this purpose and an established and strong internal support centre combining those two elements, for the whole organization, which is e.g. the so-called Process Competence Centre.

The analysis of the results obtained by the Standish Group [10] indicates very practical determinants of the success of project management, and thus of related process management: customer's commitment to the project implementation, project's managerial staff (sponsor) support, clear business objective of the project (specified requirements in the light of existing limits), optimized project scope (adjusted to performance capability), methodology of flexible planning (agile) instead of traditional one, an experienced and competent project manager, proper management of project budget, educated human resources, formal methodology of running the project and standard programming tools and infrastructure.

Among the success factors the „soft" and procedural factors predominate. So it seems that the survey concerning the human and cultural factors as well as the organizational structure as possibly having the most essential impact on organizational improvements, in this situation may be to the fullest extent legitimate.

II. SURVEY ASSUMPTIONS

The survey is divided into three parts:

− defining the significance of business process management (BPM) in an organization,

− identifying roles and significance of organizational units dedicated to BPM, for the needs of the survey named Process Competence Centre (PCC),

− defining cultural aspects of process approach implementation.

In the first area attempts were made to define how business process management is perceived by an organization, how this notion is understood and what are strengths and weaknesses of its implementation. Respondents referred to such specific issues as:

− meaning and understanding of business process management (BPM) in an organization (important strategic initiative promoted by managerial staff, essential support for many important projects on a scale of the whole company, support on operating level for medium and small process projects, necessity before implementation of an IT system, studying new possibilities),

− objectives to be achieved by an organization thanks to BPM (create a foundation for development of the whole organization (allow comparison with competition, develop a new organizational structure, improve co-ordination of activities in the company, improve measures and KPI, control risk, increase business process effectiveness, ensure timely delivery of products and services, improve relations with contractors, lower process costs, standardize processes, implement new software, meet employees' requirements for information, try a new approach, introduce new knowledge),

− indication of key processes that require streamlining within a context of income growth (from generic processes list),

− methodologies, techniques and approaches used by an organization: (strategic BPM, Rummel- Brache approach, BPTrends approach, Six Sigma method, Lean - Six Sigma method, Lean method, modelling in BPMN, methods required by ISO, organization's own methods, other),

− subjective perception of organization's process maturity (according to the maturity model based on CMM),

− the extent of implementation of process governance, especially developing (or not) the enterprise process architecture,

− establishing (or not) an organisational unit supporting business process management.

The second area addressed the role and place of organizational structures responsible for construction of the process management system and streamlining business processes, in the scope of the following characteristics: duration of its functioning and its place in the organization's structure; main tasks and services delivered by this organizational unit; resources assigned to an entity dealing with processes; employment of external staff, who deals with the issue of business process management; BPM competence areas required by the organization.

The third area concerned social and psychological factors forming the culture of an organization, such as e.g. defining managerial staff's support for the entity dealing with processes; impact of the entity dealing with processes on the organization's operation; weak points of the entity dealing with processes; strong points of the organizational culture in a given situation.

In each of the defined survey areas a choice was made through marking some proposals from among the ones initially defined by the research team. Moreover, the closed part of the questionnaire ended with open questions, such as: what features should characterize a leader of the team dealing with business processes in an organization?, what features should characterize an employee of the team dealing with business processes in an organization?, what are obstacles in the operation of the Process Competence Centre (PCC)?, what are key support areas for PCC operation?

The survey is at present being implemented by collection of data from the questionnaires filled in via the website www.bpmwpolsce.pl and individual interviews. So far (May 2013) in total more than 50 responses have been collected but the survey is still pending and almost every day new questionnaires are received. The conclusions from selected partial results are presented in chapter three of the present article. The data from the questionnaires were processed by means of IBM SPSS Statistics software. In case of open questions a context interpretation was performed, and then the above-mentioned application was used. A part of the questions in the questionnaire was formulated in a way allowing to compare responses with the results of studies conducted by BPTrends – an American publishing company, whose founders and columnists are experienced practitioners and opinion leaders in the area of business process management, who regularly publish articles and studies presenting the best BPM practices [11]. References concern a part of questions defining understanding and significance of business process management concept and practices in organizations and questions connected with functioning in organizations of special structures dedicated to such activities.

III.   INITIAL RESULTS OF THE CONDUCTED SURVEY
A.   Survey Participants

Almost a half of the survey participants are representatives of the top and middle management (48%). Another major group of respondents (22%) are experts, who – although usually do not manage teams directly, are employees with high expertise and often create standards of operations for the entire organizations. On the basis of the

above results we can state that 70% of respondents are persons with high level of knowledge of the organization and significant impact on its functioning.
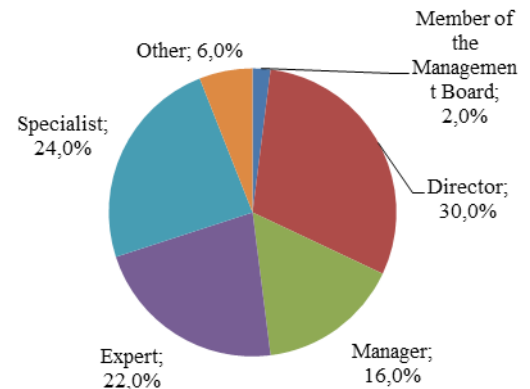
Fig. 2. Survey participants – positions held in an organization
Source: own study

Straight majority of organizations (68%) are big and very big organizations with more than 500 employees, including 26% with more than 5000 employees.
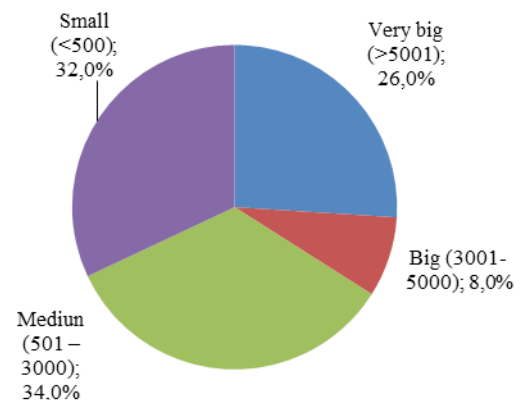
Fig. 3. Survey participants – size of organizations
Source: own study

B.   Significance Of Business Process Management In An Organization

In one of the questions. t respondents were asked to tick one of the presented below phrases – the one that best describes their understanding of the very concept of business process management. The following results were obtained: 32% of the respondents understand business process management as an approach to manage the entire organization on the strategic level; 30% - as an approach for individual process analysis and improvement; 12% - as a cost reduction and efficiency increasing initiative and for 22% this is just a set of information technologies that help manage and automate processes.

We also wanted to know the significance (importance) of the business process management initiatives for organizations: 30% of the respondents defined it as an

important strategic initiative promoted by management, 24% - stated that the process approach was treated as an essential support for many important cross departmental projects; 18% - sees its significance as a support at the operating level for medium and smaller improvement projects; 16% - as the necessity before IT system implementation; for 12% is only testing of a new approach.

Regardless of the above-mentioned way of understanding BPM and its importance, organizations have some specific expectations connected with investing resources in the area of process management. We asked what goals and objectives were set for the process initiatives in an organization? The respondents could mark all expectations and objectives known to them. We obtained the following answers (see Fig.4).

It is noticeable that the answers selected most often contained generally defined strategic level objectives connected with entire organization systems coordination (foundation for development of the entire organisation, activities coordination). The second most often selected were objectives at the business process level (increase of efficiency, standardization of processes) and only later the detailed, specific, implementation level objectives were selected.

In connection with the above it is logical to ask: do organizations know and use tools (methods, approaches, techniques), which will help to achieve the previously indicated goals and will help to bring expected results. It turned out that the best known process related method is BPMN (52% of the respondents indicated that they know and use it)

This is a popular notation used to describe processes at a very detailed level but it is not useful ether at the process level or at the strategic level as it misses many business elements and symbols. As little as 2% of the respondents indicated specific names of BPM methodologies useful for strategic management, further 32% declared using various unnamed methods of strategic process management. (however they did not specify them later in the item „Other, specify”) Awareness and usage of other methods spread out in the following way: Lean (6%), Lean 6 Sigma (16%), 6 Sigma (6%), methods required by ISO (32%), organization's own methods (40%).

So what is the general process maturity level of the surveyed organizations? The participants of the survey were asked for their subjective evaluation of the maturity level in a scale from 1 to 5, corresponding to the levels of the frequently used CMM model applied for process management. This model was selected as there was a solid reference material inter alia coming from regular BPTtrends surveys conducted since 2006. The obtained answers are presented in the first column of the table below and compared with the results of surveys published by BPTrends [11], [12].

In Poland we notice a significantly higher percentage of enterprises, which admit that their organization is at the first stage of maturity, where processes are chaotic and problems are solved ad hoc. We also see a significantly higher percentage of organizations, which place themselves at level 3, where it is expected that organizations have defined their

TABLE 1.
SUBJECTIVE EVALUATION OF THE PROCESS
MATURITY LEVEL

Survey result in Poland 2013	BPTrends world survey results 2012	Definition of process maturity level
36%	22%	Processes function thanks to efforts and creativity of employees. Problems are solved ad hoc and not systemically. There are few initiatives referring to processes.
20%	48%	Processes are being improved, but usually within departments or other organizational units. The most important processes have already been described and improved..
32%	22%	Majority of core and enabling processes are identified, published and improved at the organization level. Process architecture is defined. Processes are measured and monitored systematically.
6%	2%	Process owners are appointed, decisions are based on process measures. Processes are managed in the whole organization.
6%	5%	Processes are systematically improved, process governance is executed.

Source: own study and [11], [12]

process architecture and key elements of the process management system are implemented. This an interesting result as we take also into account significantly lower (by half) than in the world percentage of organizations, which evaluate their maturity at the preceding level, that is level 2

C. *The Role And Significance Of The Process Competence Centre In Organizations*

On the basis of collected and presented below data, which concern:

− duration of functioning of a process competence center: less than one year -28,6%; 1 -2 years -14,3%; 3 – 5 years - 25% and above 5 years -32%,

− its position in the organisational structure: at the management board – the manager of the process office reports to the management board - 53,6%; in a division – the manager of the process unit reports to the director of the division 39,3%; in a department – the manager of the process unit reports to the director of the department 7,1%,
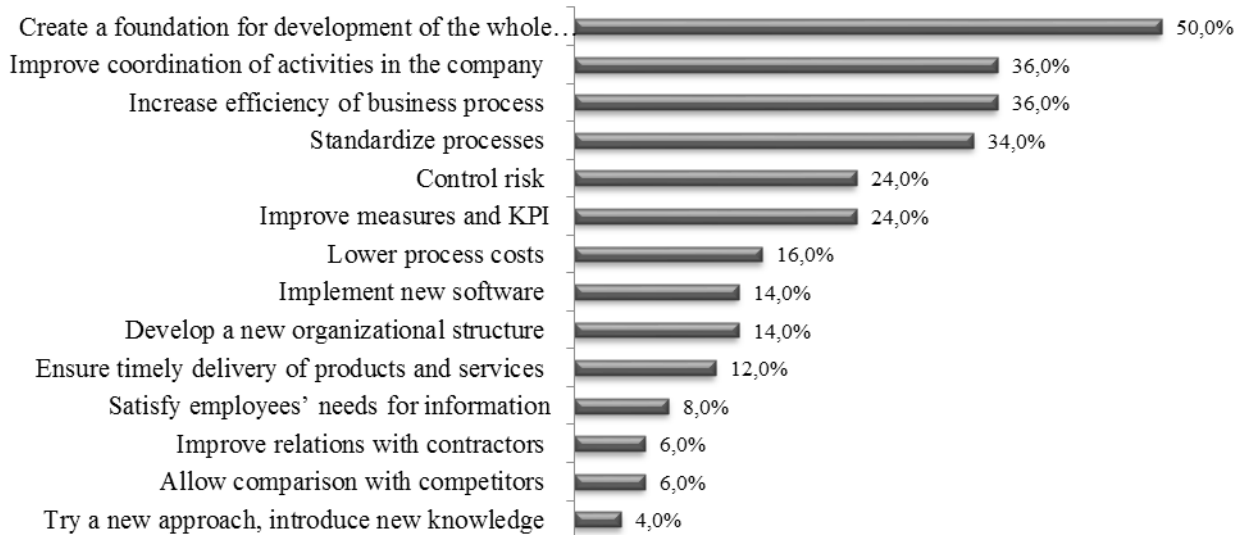
Fig. 4. Objectives to be achieved by an organization thanks to application of methods of process management
Source: own study

− number of employees in this unit: less than 5 employees - 60,7%; 5 – 10 employees - 25%; and 11 – 25 employees -14,3%,

− number of employees in the area of business process management outside this unit: 0 employees -10,7%, 0 – 10 employees 32,1%, 11 – 50 employees 39,3%, 51 – 100 employees -14,3%, more than 10 employees -3,6%,

an image of a typical process competence centre emerges. A statistical process competence centre: functions for less than a year, reports to the management board, employs less than 5 employees but co-operates with a dozen or several dozens (11-50) of persons scattered throughout the whole organization.

Employees of the process competence centre mainly deal with implementation of the following tasks specified in Table 2.

The choices made in the questionnaire by the respondents clearly show their focus on systemic and educational activities. In comparison with tasks implemented by this

kind of process competence centre in the world, illustrated by Fig. 5, some fundamental differences can be observed:

1. the Polish competence centres to a significantly greater extent deal with developing rules for the management system, which should not be a surprise as the highest percentage of them is located at the management board and they are expected to build foundations for the whole organization's functioning,

2. the process competence centres in Poland conduct on their own much more training than in other countries,

3. the process competence centres in Poland much less often manage the company's process repository.

The reasons of these visible differences are not subject to an analysis within the present survey. On the basis of our own observations and experience we can suppose that the Polish organizations much less often use IT tools with process repositories but use simpler drawing tools instead and they perform more tasks on their own instead of buying external services (e.g. training).

TABLE 2.
TASKS OF THE PROCESS COMPETENCE CENTRE

| Tasks	Participation in realization
Developing rules for the process management system	71%
Conducting training	67%
Maintaining process architecture	57%
Designing new processes	57%
Process modelling	53%
Developing measures and benchmarking	46%
Management of process repository	42%
Popularization of knowledge	42%
Management of project portfolio	14%

Source: own study
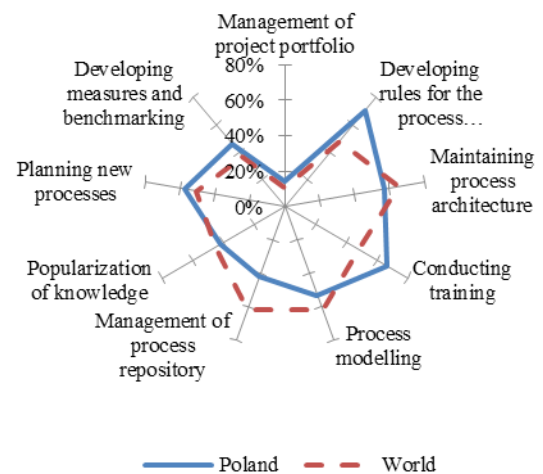
Fig. 5. Comparison of tasks performed by the process competence centre in Poland and in the world.
Source: own study

Another question we asked concerned the impact of the process competence centre on an organization. The answers are presented in Table 3. On the basis of the answers we can state that 32% of the respondents have no impact on the organization or performs fake activities – which is even more depressing evaluation of the situation. This is a surprising result in comparison with just 3% of similar answers obtained in the world surveys. At the same time in Poland merely 7% answered that the process competence centre was very important for the success and co-ordination of activities, which – in comparison with exactly such expectation expressed in answers to preceding questions – shows the competence centres mostly still do not meet the expectations and have not yet worked out a position that could help them succeed in an organization.

TABLE 3.
IMPACT OF THE PROCESS COMPETENCE CENTRE ON AN ORGANIZATION

Choice	Our survey – Poland	BPTrends survey – world
Is very important for the success and co-ordination of activities in the whole organization	7%	20%
Has big impact	18%	23%
Just starts to have the impact	32%	53%
Has no serious impact	25%	3%
Performs fake activities	7%	-

Source: own study and [11], [12]

Another question under the study is management support for the process competence centres. Our survey showed that the straight majority (85%) of the respondents said that the management declared support for PCC, but unfortunately only 46% supports them indeed. For the remaining 39% of the management this is just a declaration not supported by actual activities. Other 7% of management is indifferent, and the following 7% even questions the significance of process competence centres.

The survey ended with open questions, from among which we would like to discuss here the following most essential two:

1. What features should characterize a manager of the process competence centre?

Most often the necessity of a very strong and even charismatic leadership was emphasised. The manager holding this position should be able to think strategically, long term and in a holistic way, understand system dependencies, and at the same time should be able to speak in an operating language on details of processes, in order to be credible for line employees. The need of perseverance and consequence was emphasized many times as a necessary characteristics of the PCC manager.

2. What to the greatest extent would help to achieve results by the process competence centre?

The most required is knowledge, resulting also from experience, concerning the way the process organization function. Especially a thorough knowledge is needed, as well as the skill to persuade the advantages of accepting the process approach. The respondents equally often mentioned the need for official support and personal commitment of the organization's management (which in turn confirms the Standish Group's survey).

These and other answers collected during our survey show an image typical for a situation of introducing cultural changes in an organization, where employees' knowledge, belief and attitude play the key role and decide about the success or the failure of a new undertaking.

IV. CONCLUSIONS

Business process improvement initiatives are frequently key projects within an organization – they are managed using project management methods and principles. However the nature of a business process is best recognised and captured by business process management methods. Project management and process management complement each other How does the two approaches interact?

We claim the conjunction point is the newly defined "requirement definition" point at the top of the project management pyramid, which adds the new perspective on traditional project management triangle (scope, cost and time) as described in the previous sections of this paper.

Process management methods are the most suitable for defining the requirements for process improvement projects. The more matured process management the better requirements definition in the project. Therefore it is important to be aware of process maturity of the enterprise, how well it understands its process, how systematic is its view on a business processes how does its culture supports process approach. By combining the process and project methods organisations increase their chances for project success and avoid the situation when improving one process has an adverse affect on other processes

From answers to our survey, it could seem that the strategic understanding of BPM as a holistic system for management of the entire organization predominates. However, if we take a closer look on the results, and refer them to three levels of organization's efficiency described by G. A. Rummler and It A. P. Brache [13], [14] who distinguish the following levels: strategic level, process level and job level – then we find that understanding BPM as an initiative of cost reduction (12%) and as implementation of information technologies (as much as 22%) refer usually to a local management on the job level or even are limited to the area of IT tools. We then state that the interpretation of the concept of business process management spread out more or less evenly among three levels of organization management. There is an equal probability that a person asked by us will classify BPM as an element of strategic management or operating management at the process level or narrowly understood management of the implementation level.

Again it seems that the biggest percentage of an organization (32%) initiates process projects as strategic initiatives at the top management level, thus having

fundamental significance for the whole company's functioning. Not until we set the declared values again at the above referred [13], [14] three level of efficiency, we will be able to for almost a half of surveyed organizations (for 46%) BPM projects have local significance (18%) or are a necessity before implementation of an IT system (16%) or are an experiment and survey of new possibilities (12%).

As research shows organisations expect o lot from the process approach and those expectation refer rather to effective planning of the organization wide systems than to solving specific problems. Taking into account ambitious and system expectations of BPM projects, weak recognition of methods, which could be used for achievement of own objectives, is noteworthy. In connection with it is reasonable to doubt whether organizations will be able to achieve these objectives by means of recognizable and presently applied tools. Probably in most cases – unfortunately not.

The world results show gradual building of process maturity according to the scheme of inverted funnel, that is lower and lower percentage of companies at the following higher and higher levels. In Poland we can observe a leap to the third level. We may propose a thesis that the reason behind this is superficial understanding of system elements characteristic for level three and thus the easy placing home organizations at it. Though also in the world results we can observe a similar, yet smaller, „optimistic leap" but it concerns the fifth level. It is possible that here again we deal with too superficial and unrealistic evaluation of process maturity. As this is a question about a subjective evaluation of the situation, we can suspect that the „leap" phenomenon is more connected to the respondent him-/herself than the very situation of the organization. The issue whether it is connected with the respondents' aspirations or the superficial understanding of the levels too distant from the majority, or whether it results from other reasons – is to be studied in further surveys.

At the same time in Poland merely 7% answered that the process competence centre was very important for the success and co-ordination of activities, which – in comparison with exactly such expectation expressed in answers to preceding questions – shows the competence centres mostly still do not meet the expectations and have not yet worked out a position that could help them succeed in an organization

Summing it up. How well are Polish organisations prepared to derive improvement project requirements from their expertise on business process management?

Probably not too well yet. Business process management has become a popular topic and objectives and expectations towards these initiatives are set high, however the awareness of methods and real managerial support is not there yet. We will need more education and awareness building before business process management methods will be used to define requirements for improvement projects so that project management skills and techniques are used to their full potential to bring process improvements to organisations.

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