THE CONCEPT OF MULTI-HIERARCHICAL ASSESSMENT OF PROCESS ORIENTATION IMPLEMENTATION – PRODUCTION ORGANIZATION EXPERIENCE

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Purpose: The main objective of the article is to present the concept of assessing the level of an organization's utilization of its potential for transformation towards process orientation, using a practical implementation example.

Design/methodology/approach: The structure of the research procedure was based on the theoretical assumptions regarding the methodological procedures involving development of a model of process maturity assessment. Such research methods as bibliometric analysis, systematic literature review, participant observation, opinion survey and semi-structured interview were used to achieve the research objectives formulated.

Findings: The value of the article entails the combination of quantitative and qualitative methods to determine an organization's propensity for transition towards higher levels of process maturity. This effect has been achieved using a method of multi-hierarchical process maturity assessment. It has been determined that the organization under examination is at the second level of process maturity, although many of the elements diagnosed show third-level process maturity potential. An authorial research method has been additionally verified, as well as the examined organization's real and utilized potential has been determined, which constitute the basis for assessing the level of process maturity.

Research limitations/implications: inability to fully objectify the research results obtained.

Practical implications: The article shows the basis and the method for identifying the examined company's real and utilized potential of process maturity as well as for determining the level of process maturity, based on which the company's strategy towards a higher level of process maturity can be formulated.

Originality/value: The unique nature of this article lies in the proposed method of multi-hierarchical assessment of an organization's process maturity. In order to deepen the interpretation of the results obtained from a quantitative study, qualitative research was used. This allows development of a strategy for achievement of higher levels of maturity.

Keywords: BPM maturity, process management, process orientation, maturity model.

Category of the paper: Research paper.

1. Introduction

To ensure in order to evaluate and analyze an organization's potential for its transformation towards process orientation, a concept of defining and dimensioning the category of a 'potential' on two planes of its occurrence was adopted. The first is the plane of the potential utilized, while the second – the plane of the company's real potential. For the purpose of this article, the notion of a *potential* has been defined as set of an organization's elements determining its goal and strategy implementation opportunities, which include: the company employees' intellectual and executive capabilities, its organizational system, information and communication technology, culture, recognition and anticipation of the market conditions, as well as its financial capabilities and knowledge management. It has been assumed that the potential utilized is contained within the sphere of the real potential. The difference between these spheres is determined by the state of an organization's unused opportunities for implementation of process orientation into its system in a full dimension of such process organization determinants as teamwork and knowledge management, high employee empowerment, implementation of a market mechanism within the organization, focus on the process as an object in the construction of an organization's functioning system and structure, as well as customer perspective processes design viewed in external and internal terms. Estimation of the potential utilized allows to determine the current level of an organization's process maturity. Determination of the real potential allows development of a strategy for implementation of solutions enabling a higher level of process maturity than the current one. To deepen the diagnostic value of the analyses performed, a multi-hierarchical perspective was adopted for the assessment of both categories of potential. This means that the empirical investigation covered all the management levels specified within the organizational structure of the company under analysis. It was also assumed that the lowest assessment level identified should be used to estimate the entire organization's level of maturity, since, according to some researchers, groups develop a certain level of collective effectiveness, which affects various task performance. It has been found that the stronger the perception of collective efficacy, the higher the group's aspirations and its motivational commitment to undertakings (Bandura, 2001). In other words, the sense of collective efficacy may be related to the utilized and the real potential; for the lower the sense of efficacy, the higher the aspiration to maintain the potential utilized, rather than to achieve the real potential.

Adopting the above assumption, the Authors of the article begin with the commonly accepted axiom that an entire organization's efficiency is determined by the efficiency of its weakest link (i.e., the weakest utilized potential), nevertheless, most commonly, due to a lack of awareness of the scale of the problem, companies are not able to utilize that potential so as

to increase their operational efficiency[1]. In essence, organizational management also entails the strive to equalize these potentials, by minimizing the difference between the utilized and the real potential. The greater the difference, the greater the range of an organization's unutilized real potential. The measurement of an organization's process maturity level, provided that it is diagnostic in terms of the actual state, should therefore constitute a tool for managing the potential (utilized and real) towards its constant harmonious growth and balance. In the method described in this article, the Authors have assumed that the level of process maturity is defined by the potential utilized with the awareness of the need to activate it towards reaching the real potential.

The research problem was formulated in the form of a research question: What are the factors supporting and limiting an organization's transformation towards process orientation?

The main objective of the article is to elaborate a concept of utilized and real potential assessment, so as to determine the level of process maturity in an organization. The main objective was assigned sub-objectives, intersecting at three planes: theoretical-cognitive (TO), methodological (MO) and empirical (EO). TO1: Review of process maturity models and the methodological procedures used such model design. TO2: Review of the research on the assessment of process solution implementation. MO: Presentation of a method for multi-hierarchical measurement of an organization's potential for transformation towards its processization. The measurement is intended to define possible strategies for transformation towards a process organization. EO: Presentation of the research results obtained via application of a multi-hierarchical measurement method.

2. Systematic literature review

Process maturity is identified in this article as a state in which an organization consciously discounts the benefits of BPM and BPO implementation. This means that it does not refer to the maturity of individual processes or the architecture thereof, but to the assessment of the degree of process solution implementation in all the subsystems of an organization.

When analyzing the publications on process maturity measurement, it can be noticed that these works concern both theoretical aspects, entailing existing literature reviews, and empirical aspects, incorporating specific research methods. The theoretical studies analyzed involved scientific reviews (Van Looy et al., 2010; Van Looy, 2013) and evaluation (Britsch et al., 2012) of the process maturity models available, including the ranking thereof by common element

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[1] *Example*: By investing in employees, the real potential (RP) can be increased, nevertheless, without changing the system in which they are operate, the potential utilized (UP) remains the same. Overestimation is the difference between the sets of RP and UP. Only from the perspective of the requirements associated with the building of a process-characterized organization the RP can be determined.

identification (Pidun and Felden, 2010), as well as developed guidelines for organizations to consider when implementing process innovation (Vlahovic et al., 2010; Van Looy, 2013). Other studies examined the factors affecting achievement of process maturity (Rotaru et al., 2009) or those based on which organizations can develop the competencies needed for this endeavor (Looy et al., 2014).

The empirical studies analyzed were conducted using quantitative and qualitative methods. The change in the intensity of the research approaches is noteworthy. In the early period (prior to 2015), quantitative research predominated, followed by a greater use of qualitative methods. The quantitative methods used included questionnaire surveys (opinion polls), conducted on large samples. They were intended to identify the important stages in and the critical success factors determining the achievement of higher levels of process orientation, or to show a relationship between process maturity achievement and such various organizational system elements (Păunescu and Acatrinei, 2012) as intra-organizational collaboration (Niehaves and Plattfaut, 2011) and the management style (Novotny and Rohmann, 2015). It has been indicated that, as process maturity increases, network collaboration and extra-organizational orientation develop (Rohloff, 2018). Researchers have also attempted to identify the limitations of process maturity models (e.g., Radosavljević, 2014). On the one hand, it has been noted that the models enable achievement of higher performance, associated with economic effects (Cleven et al., 2010), while on the other, the models' validity has been questioned, because, according to some researchers, they did not include all the organizational factors relevant for achievement of process maturity (Niehaves and Plattfaut, 2011). In addition to quantitative studies, which are characterized by generalization of the issue of process maturity, qualitative research, deepening the knowledge in this area, was carried out as well. It has been noted that quantitative studies are focused more on the process modeling practices, rather than on the persons involved in implementation initiatives (Rohloff, 2018). These studies aimed to identify the relationships between process maturity and leadership, and to report on the experience of process implementation and harmonization in organizations (Feldbacher et al., 2011). By that, individual paths to process maturity have been shown (Van den Bergh and Viaene, 2012). The key success factors, such as the role of the structural and resource base and of the process owners has been highlighted as well (Trkman, 2013; Valenca et al., 2013), including the process owners' prominence (Reijers and Peeters, 2010) and their changing function as an organization reaches process maturity. It has been observed that the management style changes to a more democratic one in organizations entering higher levels of process maturity; perhaps due to greater involvement of other organization members in process implementation and improvement (Houy et al., 2011). In the last decade, the existing business process maturity models began to be modified and adapted to the individual needs of industries and then organizations. In this way, the models developed allowed diagnosis of organizations' actual situation in terms of process management, providing information on what the next steps in maturity assessment for each of the factors analyzed should entail (Okręglicka et al., 2015).

As such, the studies became more individualized in terms of organization and industry types, with focus on development of models, which function as, so to speak, roadmaps that can guide organizations, e.g., health care entities, towards a certain level of process maturity (Mens and Ravesteyn, 2016; Schriek et al., 2016). The business process maturity models constituted a basis for construction of individualized models. Methodologically, the case studies were supported by the Delphi method, with the participation of experts representing the fields associated with the scope of the examined organizations' activity (Mens and Ravesteyn, 2016). As a result, the business models proved applicable to public organizations as well. The process maturity model began to be combined with other methods, such as the SIX Sigma (de Boer et al., 2015). By synergizing the process maturity model with supporting approaches, organizations can determine the best strategy to improve business performance. It has also been noted that additional factors, such as organizational culture and the organization members' attitude towards process implementation, are necessary for achievement of process maturity. Motivation systems, adequate process management and process maturity achievement trainings, availability of skilled personnel, the methods of management, IT, strategic alignment, i.e., alignment of strategy and goals with process management, turned out to be the key elements (Christiansson and Rentzhog, 2019). Attention has also been drawn to differences in the perception and implementation of process maturity models, not only among but also within organizations, i.e., between the management and employees (De Waal et al., 2017a; de Waal et al., 2017b). It has been found, that in addition to the resources, leadership, and culture, "process resource and knowledge" capabilities and achievement of the same level of different stakeholders' process maturity are also important for successful implementation initiatives, especially when it comes to customer focus (de Waal, et al., 2017b). Additional key determinants of process maturity are process measurement, process control, and process resources.

3. Materials and methods

3.1. Characteristics of the examined entity

The organization examined has been operating for 70 years. Its genotype activity is focused on the production of specialized clothing for uniformed services. The organization's external customers are public sector entitles, located both in Poland and abroad. The clothing production is individualized for each customer and requires very high levels of flexibility in the preparatory, design and manufacturing processes (full customization of the products manufactured, including adjustment of the clothing sizes to individual users). Assuming the criterion of employment size, the organization examined was classified as a large enterprise

(over 250 employees), with three hierarchical levels. It should be emphasized here that, due to the scope of its activities and the confidentiality issues, presentation of detailed company characteristics has been deliberately limited.

3.2. The maturity assessment model used

The review and analysis of the literature on the broadly defined BPM (Business Process Management), BPO (Business Process Orientation) and the associated research methodologies enabled indication of a gap, consisting in the scarcity of studies focusing on multi-hierarchical maturity level assessment.

Following the theoretical study, models of organizational process maturity were selected, based on the following criteria: their applicability for objectivized assessment (assessment by process symptoms), model development on the basis of the methodological assumptions for maturity model design, their high level of operationalization, identified as the number of the empirical studies implemented, and the possibility of model adaptation to the specificity of the organization under examination.

As a result of the analysis of 69 models of process management maturity, described in the work of (Felch and Asdecker, 2020), a multi-criteria model of process maturity (MMPM) was selected (Sliż, 2018). Furthermore, the Sic Core Elements of Business Process Management, developed by M. Rosemann and J. vom Brocke (2015), were used for selection of the maturity model used in the empirical study. The results of this part of the assessment are presented in Table 2.

Table 1.
Identification of the BPM core elements for possible examination using a quantitative method and the MMPM model

Factors	Capability areas	Quantitative study using the MMPM* model
Strategic Alignment	Process Improvement Planning	X
		X
		X
	Strategy & Process Capability Linkage	-
	Enterprise Process Architecture	X
		X
	Process Measures	X
		X
		X
	Process Customer & Stakeholders	X
Governance	Process Management Decision Making	X
		X
	Process Roles and Responsibilities	X
	Process Metrics & Performance Linkage	-
	Process Related Standards	X
		X
	Process Management Compliance	-

Cont. table 1.

Methods	Process Design & Modelling	-
	Process Implementation & Execution	**X**
	Process Monitoring & Control	**X**
	Process Improvement & Innovation	**X**
		X
	Process Program & Project Management	-
Information Technology	Process Design & Modelling	-
	Process Implementation & Execution	-
	Process Monitoring & Control	-
	Process Improvement & Innovation	-
	Process Program & Project Management	-
People	Process Skills & Expertise	**X**
	Process Education	**X**
	Process Management Knowledge	**X**
	Process Collaboration	**X**
		-
	Process Management Leaders	-
Culture	Responsiveness in Process Change	**X**
	Process Values & Beliefs	-
	Process Attitude & Behavior	-
	Leadership Attention to Process	**X**
	Process Management Social Networks	-

*X – possible to assess, - impossible to assess.

Source: own elaboration based on: (Rosemann, vom Brocke, 2015).

As Table 2 shows, the MMPM model enabled assessment of 24 out of the 39 capability areas. The level characteristics of the MMPM used are shown in Table 2.

Table 2.
Characteristics of the maturity assessment model used

Level	Description
Level 1 – an organization showing weak symptoms of a process approach	The organization is characterized by the elements dominant in the functional approach to management. The multi-level, vertical, hierarchical structure prevents horizontal preorientation. In the long-term dimension, there are no single symptoms that could indicate a change in management orientation. The term 'process' is not used in the organization, or it is equated with the notion of a task.
Level 2 – processes have been identified and formalized	As a result of a formalized process architecture in the organization, decisions are made regarding the necessity of formalized process measurement. At the second level of maturity, symptoms indicating the measurement of main processes are visible. The simultaneous orientation towards tasks and results prevents comprehensive process measurement. The term 'process' is used correctly in the organization.
Level 3 – processes have been measured	In an organization characterized by the third level of maturity, processes are identified and formalized or explored. A process assessment measurement system is additionally designed and implemented, taking the level of external customer satisfaction into account. Symptoms indicating that the management decisions are made based on the process measurement system designed can occur at this level.
Level 4 – processes are managed	A process organization, in which all the criteria specified, indicating a correctly identified, formalized and measured process architecture, have been met. Such organization is focused on the search for new solutions resulting from the attempt to flexibly respond to external impulses. Managerial decisions are oriented at the process-generated effects and the compatibility thereof with customer needs and expectations. A system of external and internal training improves the inter-employee knowledge transfer. The leader role desired is to manage the diffusion of knowledge in the interdisciplinary teams established and oriented at task execution and problem solving across the entire organization.

Cont. table 2.

Level 5 – processes are under improvement	An organization of this level is characterized by continuous process improvement. As a result of process measurement and the improvement generated by all employees, the organization seeks new areas of added value generation. An internal marketization mechanism is implemented in the organization. Process management is based on the results of the measurement system designed, with particular emphasis on the assessment of the level of customer satisfaction, from an external and internal perspective. Based on an analysis of the process effect, corrective actions are taken, aimed at continuous process improvement, based on the customer requirements.

Source: Own elaboration based on (Sliż, 2018).

It needs to be emphasized here that for an organization to be categorized as one at a higher level of maturity, it should meet all the previous-level criteria.

3.3. Assumptions of the multi-hierarchical method for assessment of an organization's process maturity

As part of the study, the Authors designed a research method which allows a holistic view of an organization and enables assessment of the utilized and the real potential, from the perspective of the organization participants at all organizational levels – (multi-hierarchy).

The following formed the basis for the research method design:

1. The assumption that organizational reality is not so much objectively given and independent of the actors inhabiting it, but rather is socially constructed, in accordance with the significance assigned to it by the various actors of organizational life. In other words, organization members assign certain significance to their practices, imagine the goals, tasks, and the course of the processes in a specific way. One of the conditions which can differentiate the perception of organizational reality is the employee position in the hierarchy.

2. The diagnosis (resulting from the above assumption) that the existing research methods (based on the literature review) mostly do not meet the criterion of objectivity and holistic view of process maturity in organizations, which is manifested by:

   - the incomplete/purposeful/convenient selection of the respondents in the organization examined,
   - the narrowing down of the number of respondents to 1-2 persons from the organization under examination,
   - the construction of research tools examining the respondents' subjective feelings regarding the maturity level achieved by the organization,
   - the lack of a broader view, in terms of the organization's potential to move towards a higher level of process maturity, through the prism of the broadly understood organizational culture.

The identified limitations of the methods applied can greatly influence the ultimate assessment of process maturity in the organizations under examination. When designing the maturity research methodology, the Authors of this work adopted the need to objectivize (as much as possible) the measurement as well as a cross-sectional/multi-hierarchical diagnosis of the organization's potential for processization as the study criterion. Hence, the following has been proposed as part of the study:

- a two-stage research process using quantitative (survey questionnaire) and qualitative (in-depth individual interview) methods,

- quantitative research, conducted at all hierarchical levels, and non-random selection with purposive selection, using the following criteria: the position held (managerial - non-managerial) and the functional area,

- development of a research tool allowing for an objectivized assessment of process maturity/process orientation/the potential for processization, based on the respondents' indicated symptoms rather than their subjective evaluation

- adaptation of the research tool to the specifics of individual hierarchical levels.

The quantitative survey was focused on determining the current state of the organization – the level of the organization's utilized and real potential, from the perspective of different groups of organization participants: the managerial personnel and the executive staff.

The qualitative study using an individual semi-structured in-depth interview aimed to:

- determine the reasons for the symptoms indicated at different hierarchical levels, which are difficult to investigate via quantitative research;

- complement the quantitative research by indicating specific examples (for the researched organization only) of the behaviors associated with the symptoms declared (diagnosed),

- complement the quantitative research results perspective, which is particularly important when the research results vary (and/or are ambiguous) for individual hierarchical employee levels in the organization,

- enable identification of the organizational culture manifestations (e.g., values, expectations, actual behavior), often unrealized and/or unarticulated by the organizational participants, which can support or hinder the change towards organization processization,

- facilitate – owing to the above –formulation of a strategy for transition towards processization.

In order to classify the organization within an appropriate level of process maturity (i.e., to properly interpret the results obtained from the quantitative survey), the study required a necessary reference to the individual, but collectively mediated, significance assigned by the employees to their functioning in the organization. In other words, the quantitative study was complemented by an interpretative perspective. The complementarity of such an approach

allowed for more holistic and in-depth analysis of the organization, the conditions of its functioning, and the processes implemented. The data collection methods and techniques in such conceived research are open-ended, soft, uncategorized, and sensitive to the unpredictable individual interpretations provided by the survey participants. As such, this part of the research entailed individual in-depth interviews involving general indications of the topics which, in the first stage of the research, became as the subject of the conversations carried out with the organization members, and constituted the empirical material subjected to further empirical analysis in the next stage. 21 such interviews were conducted (including managerial – 14 and executive – 7 positions).

The issues raised during the interviews concerned both the employees' process awareness and their perception of the organizational reality.

The number of the interviews results from the rules applicable to this type of research, which indicate that the pool of the significance assigned by a given, relatively homogeneous group of respondents (1 organization) becomes saturated after 20 interviews (Marton, 1988), provided that the researcher constructs the group of the interviewees in a purposeful manner, trying to maximize its diversity, which was the case in this part of the research. The survey was conducted with individuals representing all managerial levels. Gender, age and functional balance was ensured. All interviews lasted between 40-60 minutes. They were then transcribed and analyzed using S. Kvale's seven steps of interview analysis. Following the consecutive steps of material reduction, 3 categories emerged, describing process implementation and standardization, process management and process improvement in the organization under examination. Each category consisted of subcategories. This part of the study enabled identification of the potential barriers in the organization which can impede its transition to higher levels of process maturity. In the final part of the study, possible interpretive clues regarding the organization's potential level of maturity were proposed.

The multi-stage research process was designed taking the study objectives/research hypotheses/research problems into account.

Ultimately – the research consisted of two stages:

Stage 1. quantitative research using the research tool developed, incorporating the managers' perspective (N = 23), and executive employee quantitative research using the research tool developed (N = 30),

Stage 2. qualitative research using the individual in-depth interview method (N = 21; including 14 executives).

4. Results

4.1. Quantitative research results

The results described are presented in distribution by the level in the organizational hierarchy, with division into two groups of respondents, i.e., representatives of the examined organization's managerial personnel and employees (implementers of the main and auxiliary processes) (Table 3).

Table 3.
Descriptive statistics of quantitative survey results using the MMPM model

QU #	BPM core element (Factor/ Capability area)	QU in the research questionnaire	Employees N=29			Managerial personnel N=23		
			Most common value	MIN	MAX	Most common value	MIN	MAX
Levels 1 and 2								
1	Governance/ Process Related Standards	Does the organization utilize an ISO quality management system?	5	3	5	5	3	5
4	Strategic Alignment/ Enterprise Process Architecture	How do you define the business process in the organization?	3	0	5	5	1	5
8*	Strategic Alignment/ Enterprise Process Architecture	Which of the processes listed are implemented in the organization?	5	0.75	5	5	0.75	5
9	Strategic Alignment/ Enterprise Process Architecture	Do you have access to the documentation (procedure description/ graphic process flow map) regarding the process in which you are involved? (E)	0.5	0	0.375	0	0	5
	Methods/ Process Implementation and Execution	Is there a description, model or a graphical flow map of the process activities in the organization? (M)						
Level 3								
2	Governance/ Process Roles and Responsibilities	Which of the organization roles listed does your supervisor require you to fulfill? (E)	2	0	5	5	0	5
	Governance/ Process Roles and Responsibilities	Which of the roles listed you require most of your subordinates? (M)						
3	Governance/ Process Management Decision Making	What are you held accountable for by your supervisor? (E)	4	3	5	5	3	5
	Governance/ Process Management Decision Making	Your managerial activity is oriented at: (M)						
11*	Methods/ Process Monitoring and Control	Which of the following measures are used for process assessment?	2	0	5	1.5	0.5	3.5

Cont. table 3.

Level 4								
5*	People/ Process Management Knowledge	I would like to participate in trainings which: (E)	0.5	0	5	2.5	0	5
	People/ Process Management Knowledge	What is the desired nature of the trainings intended for your subordinates? (M)						
6*	People/ Process Management Knowledge	How are trainings implemented in your department/division/ team?	0	0	3.5	3.5	0	3.5
	People/ Process Management Knowledge	Training/s in which I participate (E)						
	People/ Process Management Knowledge	Training/s implemented in the organization (M)						
7*	People/ Process Management Knowledge	By participating in internal trainings (implemented by you/ co-workers/supervisors), I gain the opportunity to: (E)	0	0	5	1	0	5
	People/ Process Management Knowledge	Internal trainings (implemented by colleagues/supervisors) in your subordinate department/division/ team involve: (M)						
10	Culture/ Leadership Attention to Process	Which of the following leadership roles (supervisor/team leader, etc.) do you expect most? (E)	3	0	5	3	0	5
	Culture/ Leadership Attention to Process	Which of the following leadership roles do you expect most in your subordinate team/division/ department? (M)						
Level 5								
18*	Strategic Alignment/ Enterprise Process Architecture	Which of the following statements are true about process improvements in this organization?	0.5	0	4.25	2.5	0.25	4.75
12*	Strategic Alignment/ Enterprise Process Architecture	Which of the following services would be more beneficial (e.g., due to higher quality/quicker deadlines/lower price) to purchase from external vendors than to implement in-house at your organization?	0	0	4	2.5	0	3.5
13	Strategic Alignment/ Process Measures	Are your familiar with your organization's internal suppliers/ vendors and customers?	1	0	1	1	0	1

Cont. table 3.

14	Strategic Alignment/ Process Measures	What do you consider when evaluating the inputs received from your internal supplier/ vendor (e.g., data/ information/material/ semi-finished product/tools) which are necessary for your task/operation performance?	0	0	0.5	0	0	0.5
15	People/ Process Collaboration	Can you negotiate the terms with your internal supplier/vendor?	0	0	0.5	0.5	0	0.5
16	Strategic Alignment/ Process Measures AND Process Customer and Stakeholders	Does the organization utilize a system for internal supplier/vendor satisfaction evaluation by internal customer/s?	0	0	2.5	1	0	2.5
17	Strategic/ Process Measures	Does the organization formulate the criteria for quality and quantity valuation of the internal services provided in the organization?	0.5	0	0.5	0	0	0.5
19*	Methods/ Process Improvement and Innovation	Which of the management methods presented find practical application in the organization?	0.5	0	3	1	0	4

* The questions are marked E and M: E – question addressed to employees, M – question addressed to management representatives.
** Questions with multivariate xxx answers.

Source: own calculation and elaboration based on a study carried out in 2020.

Based on the MMPM assumptions (Table 2) and the analysis of partial results, the organization examined has been assigned a maturity level. Figure 1 shows the results of the maturity level assessment with the hierarchical level division adopted.
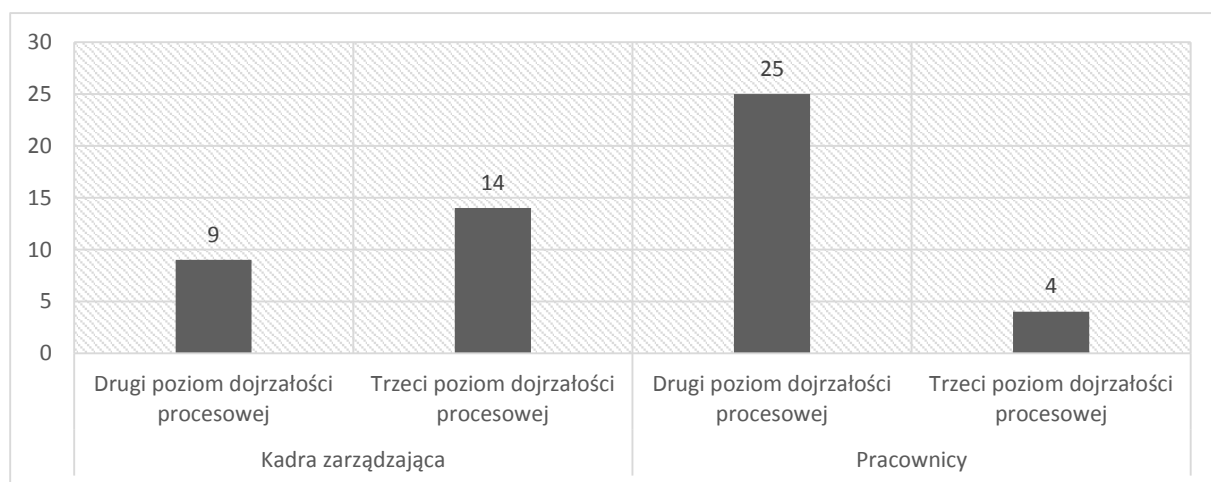

Figure 1. Summary representation of maturity by hierarchical level. Source: own calculation and elaboration based on a study carried out in 2020.

As can Figure 1 indicates, the differences in objectivized assessment of process solution implementation, the greatest dispersion is visible in the group of employees, whose answers, based on the results, allowed the organization to be classified within the second (25) and third levels (4) of process maturity. In the managerial personnel group of respondents, on the other hand, similar results were obtained for the second (9) and third (14) levels of process maturity.

Based on the assumption that the entire organization's efficiency is determined by the efficiency of its weakest link, the organization's maturity level has been estimated at level 2.

4.2. Qualitative research results

The primary aim of the qualitative study was to deepen the knowledge on the organization, its operating conditions and the processes implemented. This stage was complementary to the quantitative research and allowed identification of the factors hindering implementation of the solutions leading to achievement of higher levels of process maturity and thus to the company's utilization of its real potential (Table 5).

Table 5.
The organization participants' convictions and their behavior symptoms hindering the evolution towards a higher level of process maturity

Factors	Capability areas	Conviction	Behavior symptoms
Strategic Alignment	**Strategy & Process Capability Linkage**	The basis for decision making and activity entails the conviction about the need to ensure the company's security (including avoidance of business risk) by maintaining organizational and economic stability.	−employee control, centralization of decision making −lack of trust in the employees' competencies −lack of tolerance for error making −lack of readiness to take responsibility for the decisions made (submission of orders for verification, awaiting the company CEO's decision) −avoidance of initiatives and exceedance of the responsibilities specified out of a fear of making errors and facing the consequences
	Enterprise Process Architecture	The conviction that the company's security and its stability can only be achieved through a command & control system.	− employee control, centralization of decision making − lack of trust in the employees' competencies − lack of tolerance for error making − decision about on-site implementation, as it is the most strategic and most important process − delegation of less strategically important activities to cooperators − the cooperator selection is not accidental, as they constitute a securement for the company, also in case of contract deficiency − client involvement in the selection of suppliers and fabrics, price negotiations, pattern delivery to the cooperator − shifting the burden of responsibility from the company to the customer
	Process Customer & Stakeholders	External customer empowerment at simultaneous internal customer objectification. The conviction that organizational life entails a non-zero-sum game; operation based on the principle of gain and loss balance, maintenance of relationships when they are beneficial	−undertaking various types of activity aimed at satisfying external customer expectations −orientation on own activity implementation −lack of understanding of how the effects of work affect the other/subsequent job positions −lack of defined internal customer needs −less involvement in mutual assistance −lack of knowledge sharing −lack of above and beyond activity in terms of one's job-related responsibilities

Cont. table 5.

		Expectation of full acceptance of the existing hierarchy and the roles in the organization	– decisions are made by the company CEO. – employees' job is to obediently perform tasks, while the supervisor's job is to delegate and check as well as make decisions and take responsibility
Governance	**Process Management Decision Making**	The basis for decision making and activity entails the conviction about the need to ensure the company's security (including avoidance of business risk) by maintaining organizational and economic stability.	– focus on familiar and repetitive aspects, e.g., the task scope, reluctance to change – lack of activity beyond what is defined – shifting the responsibilities and tasks beyond the task scope to other departments – in the face of such threats as negative consequences of the decisions and error making; employees and managers choose obedience, in exchange for the care and security offered
		Information is a source of power	– not everyone has access to necessary information – retention of information in departments – information trading – insufficient manner of information provision, information delay – lack of advance information which would allow better preparation for order execution – employees are not fully informed about what is happening in the organization
		The conviction about the need for perfect personal performance (no errors) and the need to constantly prove one's competence and suitability.	– problems are solved within departments – reluctance to share information about failures (error hiding) – in case of problems, the focus is put on human errors rather than on solving the problem within a system/process context
	Process Roles and Responsibilities	Expectation of full acceptance of the existing hierarchy and roles in the organization. The conviction about the need to elaborate the documentation proving the correctness of one's actions	– tasks and responsibilities are defined – authority/power is defined, nevertheless, there is a fear of ultimate decision making – employees enter the role of passive performers, thus avoid the consequences of their decisions – avoidance of exceeding the scopes established and avoidance of process-benefiting initiative undertaking – unknown and unclear powers and roles of the persons outside the department, who, by their actions interfere with the competencies of individual departments; conflicts emerge – employees' perceptions of bout their roles: independence, self-education, awareness, self-control, lack of error making, responsibility for one's actions.
	Process Related Standards		– the ISO expected by the company's customers – documents protect individuals, as they guarantee that the person responsible for decision making and task performance actually carried out those duties

Cont. table 5.

Methods	**Process Monitoring & Control**	The conviction that some areas (functions), e.g., production, are more important leads to a belief that certain areas are more important and thus are given more attention and undergo more intensive measurement, while other are of lesser importance.	– the management's attention and support are focused on the 'important' areas – visible favoritism (e.g., awards) of the 'important' areas – struggle for attention and perceived importance in the organization – lack of a structured and coherent measurement and monitoring system in the organization: e.g., lead time (as a measure) causes conflicts, because it is not present as a measurement criterion in all the organizational areas, e.g., in the technology department, where the orientation towards accuracy/perfection prevails – employee misunderstandings resulting from the bonus systems used (e.g., in the production department, downtime, which sometimes it is caused by the lack of inputs from other departments, is measured) – work effects are measured in the production process only, due to the manager's prioritization of this process
	Process Improvement & Innovation	Innovation is risky. Innovation can lead to errors. Focus on personal/departmental rather than systemic perfection	– lack of willingness to exceed beyond the tasks defined and take risks – acting as a performer rather than an initiator of ideas – putting out fires rather than changing the system – lack of knowledge sharing – improvements on the job position and in the department
People	**Process Education and Management Knowledge**	Knowledge is a source of power	– retention of knowledge within the department – insufficient manner of information provision, information delay – lack of advance information which would allow better preparation for task implementation – lack of joint training which all employees participate in, lack of internal consultations – lack of openness in information sharing – skill outflow from the organization - employees who can perform each task very well are retiring, while those with average level skills remain
Culture	**Process Values & Beliefs**	Task-orientation, strive for predictability and security	– Individualistic behavior; lack of interest in the process as a whole, interest in the activities performed on the job only
	Process Attitudes & Behaviors	The conviction about the need to compete and dominate, so as to gain advantage. The conviction about group division within the organization: 'our person', 'their person', 'ours and not ours', 'old-young', which fosters rivalry and the strive for certain persons' domination over others rather than the cooperation thereof.	– limitation of interest to job position/department – misunderstandings and conflicts, the senior employees' imposition of a way of working triggers resistance and lack of commitment on the part of younger workers – younger workers are protected from being used by older workers from other departments – young employees strive for independence, while older workers strive for power – lack of mutual understanding and openness to one another – formation of clans, which is manifested by avoidance and isolation of individuals and departments – a sense of resignation and inability to change

Cont. table 5.

		The conviction about the need to compete and dominate, so as to gain advantage. The conviction about group division in the organization: 'our person', 'their person', 'ours and not ours', 'old-young', which fosters rivalry and the strive for certain persons' domination others rather than the cooperation thereof.	– prioritization of departmental benefits over organizational goals – individual activity – lack of teamwork – lack of consideration for other participants in the organization in terms of employee activity – avoidance of direct communication, focus on e-mail communication – lack of bipartisan joint activity across functional boundaries – silo mentality
	Process Management Social Networks		

Source: own elaboration.

The qualitative study covered both the areas included as well as those omitted in the quantitative study (e.g., the cultural and organizational strategy aspects), which became a vehicle for explanatory information on the existing differences between management and employees regarding their perception of process maturity. It has been found that the undisclosed convictions and cognitive schemas, which hinder the implementation of process maturity solutions and prevent greater utilization of the organization's real potential, are the root of the discrepancies diagnosed.

It turns out that the pursuit of safety and security as well as the lack of acceptance for errors minimizes the willingness to take risks and perform activities beyond the responsibility framework agreed, which can hinder or even prevent the search for new solutions necessary at higher levels of process maturity. Similarly, the focus on maintaining the superiors' control, as well as the acceptance of the hierarchical relationship and the resulting expectations as to the employee roles played, undoubtedly can limit the organization participants' involvement in cooperation and shared responsibility as well as their engagement in the process of authority decentralization.

The third element which exerts a significant inhibiting effect on the organization's development towards increasingly higher levels of process maturity is the conviction that organizational reality entails relationships that are based on competition and achievement of personal rather than organizational benefits. This is fostered by a structure dividing people into functions and work teams as well as by the 'us' and 'them' mindset. This creates an atmosphere encouraging the struggle for recognition, power and higher hierarchy positions, which significantly reduces the flow of knowledge, systemic problem solving and the focus on internal customer satisfaction, which in turn determines the development towards a process-oriented approach.

It should also be emphasized that the factor strengthening the organization during its transition to higher levels of process maturity entails the employees' attitudes, knowledge and experience. In consequence, this would need to be supported by proper design of organizational solutions aimed at development of mutual trust and understanding, which would improve the

internal relations within the organization and thus enable the organization's transition to a higher level of process maturity.

The second reinforcing element are the CEO values: readiness to take risks, the continuous change inherent in processes ('one must move forward', 'better must replace good'), the expectations of oneself and others, honesty.

Summing up, the qualitative research allowed identification of the organizational culture manifestations in the organization examined, which facilitates formulation of a strategy for transition towards the organization's processization. The organizational culture manifestations identified in the company examined have led the Authors to a firm belief that in their current state, they hinder implementation of solutions aimed at a change towards a process organization (even at level III) and largely determine the current assessment of the potential utilized – up to level II of process maturity. In this case, implementation of level III process solutions will be possible after changes in the organizational culture.

5. Discussion

The main considerations resulting from the analysis of the results obtained in the quantitative study, favoring the company's classification at the second level of maturity (Level 2), include the following:

- functional organizational structure,
- informal communication to ensure operational efficiency,
- perceived process boundaries are determined by functional area boundaries,
- lack of process owners,
- too little emphasis on communication between functional areas,
- low level of awareness and identification of supporting processes and their course,
- desired employee role in the convention of the functional approach,
- management activities focused on tasks,
- lack of defined process architecture,
- lack of a consistent system of metrics for the entire process architecture in the organization,
- despite the subjective assessment confirming customer supplier identification in external and internal terms, lack of a measurement system and supporting activities activating market relations within the organization.

It should be emphasized here that the quantitative study was complemented by a qualitative proceeding aimed at deepening the knowledge on the organization and the conditions of its functioning and the processes implemented. As a result, the research has highlighted the barriers preventing classification of the company Zakłady Odzieżowe WYBRZEŻE S.I. at a level higher than the second level of process maturity.

A significant barrier hindering the organization's further development towards its process orientation is the organizational culture resulting from certain socially shared convictions. The most important of these convictions include: the strive for security, stability and a sense of certainty – among both the employees and managers, which is manifested in their characteristic behaviors. The managers strive for a sense of power and control; as such, they adopt a specific style of management based on task setting and subordinates control; they are not interested in sharing the management powers with lower levels of management. The employees, on the other hand, are not willing to undertake activity beyond their assigned duties; they simply do what is expected of them, avoiding decision making and responsibility taking, even within the limits of their positions. The employee attention and intra-organizational relationships are limited to a department or team, which results in a lack of a broader view of what is happening across the organization. Barriers to the flow of information on the positive and negative aspects of performance exist as well. This results in the specific manner in which improvements are undertaken at particular process stages - they entail individual initiatives on the part of those responsible for a given department or the those working in it, rather than a result of teamwork, and thus they ultimately may not be compatible with the rest of the process/es.

The employees also show negative perception of the changes that are inevitably associated with process maturity development. It has also been noticed that has not implemented a training system that would develop the employees' competencies and enable knowledge sharing, which would prepare the employees more effectively for the company's undertakings.

It can be said that the organizational culture in Zakłady Odziezowe WYBRZEŻE S.I. is rather preventive, and oriented at protection and preservation of the status quo, rather than promotional, i.e., characterized by readiness for new skill acquisition, which greatly hinders the company's achievement of its real potential. It has been noted that the perception of process maturity depends on the position in the hierarchy of process participants and on the individual level of knowledge as well as the personal values, experience and readiness for decision making.

It has also been found that the organizational participants do use the term 'process' but interpret it differently; there is no designed system of process goals and measures, while the organizational structure is not conducive to ensuring process fluidity.

6. Conclusion

The essential aim of the analytic-diagnostic research conducted was to determine the potential of the examined company's susceptibility to a change towards an organization characterized by process parameters. The realization of this aim is closely linked with the strategy of gradual transformation of the organizational and management system towards a process organization adopted by the Management Board of Zakłady Odzieżowe WYBRZEŻE S.I.

Because this change is of generative evolution character, i.e., requiring transformation of all the system elements, over a certain period of time determined by various conditions, it is essential to recognize the current state, in terms of the company's vulnerability to the pace and scope of possible changes.

In the empirical procedure, as assumption was made that the conditions for a change in the direction desired by the organization should be analyzed taking the levels of process maturity that have been developed and tested in various organizations into account. They are treated as a starting point for determining the possible and feasible changes in the direction desired by the company's Management Board. The levels of the organization's process maturity have been characterized in the details necessary for their analysis under the operating conditions of the organization examined.

The relatively low, i.e., the second, current level of process maturity identified in the organization forces and obliges the Management Board of the organization examined to undertake intensive activity aimed at employee training in different personnel configurations, using different formulas allowing transfer of the employees' ideas, knowledge and views. This procedure should enable different organizational area employees to develop contacts outside the formal scope, as a compensation for the lack of such opportunities in the official and formalized realities. In the light of the research conducted by the Authors, the significance of this category of interpersonal relations is very high in the organization examined, exerting impact of the same significance on its harmonious operation. What is more, outlining the scope of the necessary transformations in the HR capability management systems is crucial for the success of undertakings aimed at a pro-process change in the organization. This particularly refers to the reconfiguration of the motivational system and the design of a qualification and talent management system.

One important value of the article entails the combination of quantitative and qualitative methods in the search for an answer to the question of what the diagnosed organization's susceptibility to its change towards process maturity is. This effect was obtained using the method of multi-hierarchical process maturity assessment. As a result, it has been established that the organization analyzed – Zakłady Odzieżowe WYBRZEŻE S.I., ranks at the second level of process maturity, although it shows a third level process maturity potential in many of

the diagnosed elements. The starting point for the assessment of the organization's susceptibility should therefore entail skillful confrontation of its real potential with its utilized potential, because the margin between those two potentials determines the intensity of the organization's strive towards equalization of the two categories. The fundamental purpose of the organization's activity should entail reduction of the existing gap or acting to maintain it rather than to increase it.

7. Managerial implications

The analytical and diagnostic research on the actual state of the organization's functioning on the various levels distinguished, the effects of which are presented in the results section, allows formulation of managerial implications, which are to serve the purpose of defining a set of the actions and undertakings increasing the organization's potential for a change towards a level of process maturity higher than the one achieved so far.

a. A complete list of the processes necessary to fully describe the organizational space of the company's functioning needs to be identified. This refers to its non-productive activity (auxiliary processes) in particular.

b. A reference flow of the main and auxiliary processes needs to be designed, taking the levels of freedom of the influence on the change of the process structure by the process owners dedicated to the management thereof.

c. A strategy for the company's transition to the third and, in time, the fourth level of process maturity needs to be developed. In the Authors' opinion, this option is realistic in a few years' perspective, after meeting the subsequent conditions of the organization's adaptation to the rules defined at this level of maturity. The relatively good economic situation on the market of clothing production, which the company operates on, is conducive to this process.

d. The prospect of implementing level 3 and, in relatively short time, level 4 process solutions is feasible, provided that all employees are made aware of the principles guiding a process-oriented organization, preferably using a specific example defined on the basis of the system realities of the organization.

e. A new, more precise scheme of the company's organizational structure needs to be developed. A preliminary assessment of the problem in this regard has directed the Authors towards the concept of a matrix (process-function) structure.

f. In the Authors' opinion, diagnostic and analytical work should be undertaken, in order to identify the desired organizational culture supporting the organization's process orientation.

The article's unique value entails the combination of qualitative and quantitative methods to determine the organization's potential for moving to a higher level of process maturity.

8. Future research

The research results presented provide a starting point for further empirical investigations. The next objective is to verify the multi-hierarchical method developed, using a larger sample of other organizations characterized by various core functions. This should be followed by an evaluation of the method proposed, in terms of its usefulness for development of strategies of organization transition to higher levels of process maturity, and verification of the method, to confirm its diagnosticity with regard to the essence of the problem under examination. This means answering the question regarding the extent to which the method developed reflects the reality examined, and the extent to which it reduces the image of that reality.

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