

IMPLEMENTATION OF THE PROCESS MANAGEMENT CONCEPT IN SMALL AND MEDIUM-SIZED ENTERPRISES

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Purpose: The aim of this study is to answer the question of whether the surveyed companies, belonging to a group of small and medium-sized enterprises that have recently undergone changes in the area of production logistics, have moved in the direction of implementing process management and, if so, to what extent this concept has been successfully implemented.

Design/methodology/approach: The subject of the study was 7 companies. The study used a questionnaire method, which was administered to 21 people. The questionnaire consisted of 15 questions in the form of affirmative sentences (statements) with answers using a 5-point Likert scale.

Findings: The survey shows that, when implementing process management in the companies under study, there is a definite deficiency in the dissemination of the new concept to all employees, group work and exchange of experiences, as well as the implementation of new decision-making paths, the concept of the internal customer and, finally, a change in the whole company's system of values.

Research limitations/implications: The survey was conducted among small and medium-sized enterprises and therefore does not include the perspective of large companies.

Practical and social implications: The survey has the potential to contribute to a better understanding by companies of the directions which changes are taking and the direction which these changes may take. It will help to increase companies' process awareness and thus, in the long term, help them to achieve a better competitive position in the market.

Originality/value: This study belongs to the current research on process management. In view of the subject of the study, which comprised small and medium-sized enterprises that have recently undergone changes in the area of production logistics, specific new conditions have arisen in these companies that require more detailed analysis.

Keywords: process management, reorganisation, production logistics.

Category of the paper: research paper.

1. Introduction

Among the many management methods and concepts present in the literature and also in the services that consulting companies have been offering for a number of years, the concept of process management, which derives from a process orientation, comes to the fore.

The process approach consists of viewing an organisation as a set of interrelated processes that aim to deliver value to the customer. Focusing on processes allows companies to better organise work, standardise activities, optimise resources and continuously improve efficiency. Consequently, companies can react faster to changing market conditions, increase the quality of their products and services and achieve better business results. This approach contrasts with the functional approach, which sees primarily 'departments' performing different types of functions. Each department focuses on its own tasks without, as it were, gaining a comprehensive perspective. The process approach puts business processes at the centre. It is an approach which holds that processes in an organisation are interrelated and intermingle, and that the whole organisation is a dynamic system. The purpose of the whole system is to satisfy the needs of the customer, and under the system processes can be planned, measured and managed. The process approach is very common, and can be applied in basically any field of activity, including non-commercial ones, such as in administration (Wieczorkowski, 2015) or in universities (Maciąg, 2016).

Process management appears to be very fashionable, but in practice it does not deliver the promised and expected results because it is considerably difficult to implement. It also happens that companies undertake to implement changes and, although the chosen direction is towards process management, the intended goal of major process maturity is not fully achieved. The aim of this study is to answer the question of whether the studied companies, belonging to the group of small and medium-sized enterprises that have recently undergone changes in the area of production logistics, have taken a direction towards the implementation of process management and, if so, to what extent they have been able to implement this concept.

2. Process management

There are nowadays many models of business management, but there is some consensus that process management, also called process orientation, is one of the most widely and frequently used and appears to be a dominant paradigm in management (Romanowska, Trocki, 2004). As a method, it has already reached a certain level of maturity and is widely described in the literature and is also present at universities in study programmes and conferences. The number of practical applications of the method is also growing (Krosan-Przywara,

Zgrzywa-Ziemak, 2011). Its popularity is understandable, as it has many advantages. Since the 1990s, it has begun to be seen as a cure for the problems of organisations that were performing poorly as a result of increasing customer demands. Process management is characterised by customer orientation, a comprehensive view of the organisation, monitoring of lead times, product and service quality, rational cost generation and increased flexibility, which are all aimed at achieving competitive advantage (Brajer-Marczak, 2012).

Central to the process approach is the very notion of a process, defined as a sequence of activities and sequentially occurring actions that result in the transformation of what is at the input of the process on to the outputs. Process outputs can be products or services. The process approach has received multiple definitions in the literature. It is noted that there are terms such as process approach (process orientation), managing of the processes and process management and that they are very often used interchangeably, although this is not necessarily justifiable; however, in the English-language literature the term Business Process Management is used (Bitkowska, 2019). It is rather frequent that process management is not defined but then its characteristics are provided (Nowosielski, 2011). In this discussion, which does not claim to be a meticulous and comprehensive review of all definitions, no attempt will be made to systematise them. However, following Nowosielski, it is assumed here that the concepts of managing of the processes and process management stand in a superior relation to each other: process management should be interpreted more broadly, in the sense of a philosophy and management orientation, as opposed to managing of the processes, understood as a management method. Managing of the processes is found in modern organisations at various levels of maturity, whereas process management is not always the case (Nowosielski, 2008). The process approach involves managing a company by focusing on the processes that make up the day-to-day functioning of the organisation. Instead of managing a company in a traditional hierarchical way, the process approach focuses on the flow of activities that aim to deliver value to customers. This means that the company is managed as a network of integrated processes that have a clearly defined purpose, resources, participants and a way of measuring its performance. It is also indicated that process management can be divided into stages: process identification, process modelling, process implementation and process control. There is also a need to simulate and optimise the process in a given company (Bitkowska, Sobolewska, 2020). However, regardless of the terminological and definitional complexities, certain features of the process approach, present in the idea of process management, can be distinguished. These include:

- analysing the processes involved in meeting customer needs and improving them systematically. Creating customer value;
- group work when improving processes. Staff training is carried out when processes are being implemented. Groups are linked horizontally and vertically. Continuous learning and sharing of experience. Involvement of all employees and shared responsibility;

- intra-company relations: supplier - customer. Concept of internal and external customers;
- flattening of hierarchical structures, decentralisation of decisions, change of organisational culture and value system;
- continuous monitoring of the course of processes and making adjustments to increase their efficiency (Bitkowska, 2019).

The process approach produces many positive effects that have a significant impact on the functioning and efficiency of an organisation. It enables organisations to accurately analyse and optimise each step of the operation, eliminating waste and bottlenecks. The standardisation of processes and the continuous monitoring of their effectiveness allows a high level of quality to be maintained. Processes are more transparent and organisations can more easily identify where changes can be made. A process-based approach is conducive to responding quickly to market changes, new technologies or customer expectations. Processes are described and measured in detail, allowing for accurate monitoring of each stage of the process. The process approach is geared towards delivering value to the customer, resulting in a better response to customer needs and higher quality services and products. It also results in increased customer satisfaction and loyalty and a better reputation for the company in the marketplace.

However, the literature also addresses the problem of implementing process management as it faces many barriers in practice. A variety of classifications with different levels of detail appear here (Yurchuk, 2021). Jagodziński and Ostrowski (2015) review the literature in search of such barriers. They include lack of theoretical underpinning, poor communication, inadequate management style, lack of financial resources, lack of time for implementation, poor IT infrastructure, lack of a clear way to implement the process approach, reluctance and lack of motivation on the part of employees, misunderstandings between employees and lack of support from management.

3. Process maturity

The popularity of the process approach makes the level of process management one of the basic criteria for assessing the quality of business management and should be added to the traditional indicators for assessing organisations (Grela, 2013). Hence, it is referred to as the process maturity of an organisation. It can be understood, for example, as the ability of an organisation, including its processes, to systematically improve the delivered results of its activities (Kalinowski, 2011) or as a state in which it is possible to repeatedly achieve the same process result in relation to predefined key factors (Brajer-Marczak, 2012). Awareness of process maturity allows an organisation to better control, optimise and standardise its activities,

leading to greater efficiency and risk reduction. This makes the organisation more flexible, innovative and able to react faster to changes.

Process maturity is gradual in nature, it can be lower or higher, and companies can continuously reach successive stages of maturity. Individual levels of process maturity form the structure of process maturity models. They constitute the currently very popular ways of assessing process maturity described in the literature. They are developed both by academics, organisations, most often large corporations, and consulting firms that suggest many benefits from their implementation (Brajer-Marczak, 2017). One of the most popular models used to assess process maturity is the CMMI (Capability Maturity Model Integration) model. This model distinguishes five levels of process maturity.

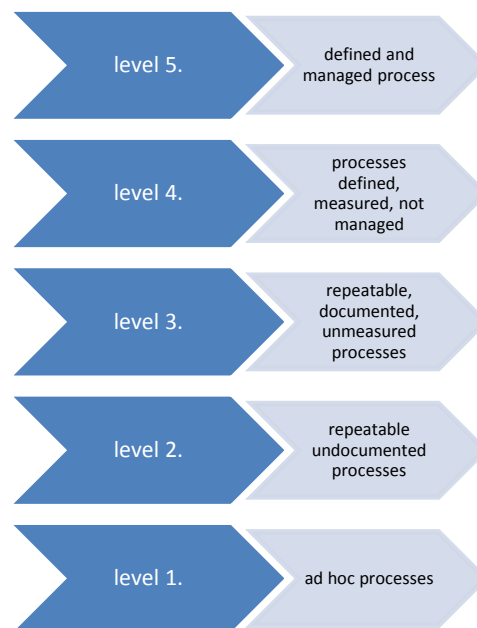


Figure 1. CMMI process maturity levels.

Source: *Dojrzałość procesowa polskich organizacji. Podsumowanie IV edycji badania dojrzałości procesowej organizacji funkcjonujących w Polsce* (2020). www.procesowcy.pl

At level 1, also known as the initial level, processes are random. There is no awareness that the activities carried out in the organisation form processes (processes are not defined), there is no internal customer category, and the dominant management approach is the functional approach. At level 2, the so-called repeatable level, processes are repeatable but not defined, not described and not measured. In organisations at this level, it is noticed that there is an awareness of the processes within the organisation, and the essence of the internal customer is also beginning to be understood. However, the processes are not documented in any way. The next level, level 3, also known as defined, is where processes are being defined and described, but not measured. Here there is full awareness of the processes and they are also documented. At level 4, known as the quantitatively managed level, processes are identified, measured, documented, planned and monitored, but not managed. This means that information from process measurements is not used in management decision-making. At the last, 5th, level,

the so-called optimizing level, processes are defined, described, measured, documented, planned, monitored and managed (Raczynska, 2017).

With reference to, among other things, this model, in recent years, the literature has presented the results of research on the assessment of process maturity of Polish enterprises. Particularly well-known is the report *procesowcy.pl*, which is regularly presented online, however, many such studies as well as studies summarising them can be found. From these studies, Grela draws the conclusion that Polish organisations have a great potential to improve their efficiency by improving their processes.

4. Research hypotheses and methodology

The brief analysis of the state of knowledge on process management in companies presented above allows us to conclude that it is worthwhile to introduce process management in organisations and then to determine the level of process maturity to help companies achieve their goals. At the same time, it is known that this is very difficult in practice and that not all companies are moving towards the introduction of process management. The aim of this study is to answer the question of whether, in the surveyed enterprises belonging to the group of small and medium-sized enterprises where changes are being made in the area of production logistics, it has been possible to give these changes such a direction that it is possible to speak of the implementation of process management. Furthermore, it can be assumed that the implementation of changes in small and medium-sized enterprises has its own specificity. Thus, the following research hypotheses can be formulated:

- h1) changes in small manufacturing companies rather take into account process management within production, they are not directly and firmly moving towards process management,
- h2) process maturity in the companies surveyed is at level 2-3.

The subject of the study was 7 enterprises, including those in the clothing, construction, waste processing (recycling) industries, classified as small and medium-sized enterprises, in which production logistics reorganisation processes have recently been carried out. Some of the respondents with managerial roles were also owners of the companies. Companies that were friends of the authors and to which they had access and who were willing to take part in the study were selected for the survey.

A questionnaire consisting of 15 questions was used, relating to developments indicating the emergence of process management changes recently carried out at the company. The questions in the survey were structured in such a way as to obtain verification of the two hypotheses posed. Some of the respondents spontaneously shared their opinions on the themes raised in the survey, which was taken into account in the interpretation of the results.

5. Research results

Responses were obtained from 21 individuals. The questionnaire consisted of 15 questions in the form of affirmative sentences (statements) with responses using a 5-point Likert scale. For each statement, respondents could choose from 5 responses consisting of a verbal and numerical description, arranged in order from total rejection to total acceptance:

1. strongly disagree,
2. tend to disagree,
3. neither yes nor no,
4. tend to agree,
5. strongly agree.

On this basis, a weighted average was calculated for each statement obtaining information on the strength and direction of attitudes towards each statement. The responses are presented in Table 1.

Table 1.
Questions, content of questions and weighted averages for each question

N°	Question/Response	I strongly agree	I tend to agree	Neither yes nor no	I tend to disagree	I strongly disagree	Weighted average
Q1	The changes were necessary	81	14.28	4.76	0	0	4.76
Q2	As part of the changes carried out, processes were identified in our company	47.61	47.61	0	4.76	0	4.38
Q3	As part of the changes carried out, we were shown how to manage processes (how to plan, design, measure and implement them)	47.61	38.1	14.28	0	0	4.33
Q4	As part of the changes made, practically the whole company has changed	0	9.52	9.52	81	0	2.28
Q5	The changes were driven by the need to adapt to customers in order to create customer value	42.8	42.8	9.5	0	4.76	4.14
Q6	We worked as a team to improve processes in our company	4.76	33.33	9.52	52.38	0	2.95
Q7	When implementing the changes, employee training was carried out	81	19.04	0	0	0	4.8
Q8	We worked in groups and each group was free to communicate with other groups	4.76	28.57	9.52	57.14	0	2.8
Q9	Implementing change was about constant sharing and continuous learning	23.8	23.8	4.76	47.61	0	3.2
Q10	All employees were involved and all were responsible for the changes being made	14.28	19.04	9.52	57.14	0	2.9
Q11	Since the introduction of the changes, we have introduced the concept of the 'internal customer' - we know who the internal customer is and how important it is	9.52	9.52	0	42.8	38.1	2.09
Q12	The hierarchical structures in our company have been changed, there are fewer 'tiers' and the organisational structure is flatter	14.28	71	0	14.28	0	3.85

Q13	Decisions are now taken not centrally but at lower levels	9.52	47.61	4.76	28.57	9.52	3.19
Q14	The system of values in the company has changed	4.76	4.76	9.52	33.33	47.61	1.85
Q15	We are continuously monitoring our company's processes and continuously making adjustments to increase efficiency	14.28	47.61	4.76	33.33	0	3.42

Source: own elaboration.

The first question examined whether respondents perceived a need for change in their businesses at all (Q1). Overall, more than 95% of respondents felt that changes were necessary. The result is not surprising, as the survey was conducted specifically in the companies where reorganisation had already taken place and the need for it had been decided earlier. The aim was to improve quality or efficiency and, in some cases, to introduce a new product. Some shortcomings were therefore identified in the companies as well as the need to address them. It should also be mentioned that, in many cases, the changes were dictated by the wish to reduce customer complaints.

In the next step, respondents identified the scope and nature of the changes made (Q2, Q3). Again, more than 95% of respondents felt that processes had been identified in their companies as part of the reorganisation. This means that those carrying out the changes were able to make middle-level managers (sometimes the managers themselves were the ones making them aware) aware of the direction and basic idea of the changes, i.e. the concept of process as the basic orientation in action. Slightly fewer respondents (85%) felt that the changes carried out showed them how to manage processes, i.e. how to plan, design, implement and measure them. Only 3 people had no opinion on this (14.28%). This may indicate that while the respondents are aware of the new concept and its essence, the specific process management activities made it a bit more challenging for them.

The responses to the next question revealed the extent of the changes carried out (Q4). Only 2 people (9.52%) felt that the entire company had actually changed as a result of the reorganisation. As many as 81% were of the opposite opinion. This is an extremely important observation, as it proves that process management is very difficult to carry out to such an extent that it covers the entire organisation. In the companies surveyed, changes and process management extended to production logistics. This confirms Nowosielski's observation that it is the area of production logistics that is most predestined to implement process management.

The answers to the next question (Q5) proved that the second important element of the concept - customer orientation - was understood in the surveyed companies. More than 85% of respondents 'rather' or 'strongly' agreed with the statement that the changes were driven by the company's need to align with customers in order to create value for them. While prioritising the customer is not a new concept, and has been in business practice for a long time, the survey found that respondents are aware that customer orientation needs to be improved all the time. Group work scored slightly worse according to respondents (Q6). More than half of the respondents (52.38%) disagreed with the statement that group work took place during the company's processes. 38.06% of respondents agreed with this statement. Similarly,

only 33.33% of respondents confirmed that they worked in groups during their shifts and each group was free to interact with other groups (Q8). However, group work is an important element of process management. The lack of group work is a sign that the changes carried out in the companies were not of a process management nature: there was most likely no exchange of experience between groups, and perhaps not everyone was involved in the changes. This may be slightly surprising, as to the next question, regarding the giving of training to employees (Q7), all respondents answered that training was given in their companies as part of the reorganisation. This could mean that the training was either one-off events or targeted at specific groups between whom no cooperation developed. Thus, it becomes clear that not all employees were involved and an atmosphere of shared responsibility was not created. This statement is confirmed by the answers to the next two questions (Q9, Q10), in which 47.61% of the respondents disagreed with the statement that the implementation of change was based on continuous exchange of experience and continuous learning, and 57.14% disagreed with the statement that all employees were involved and all employees shared the responsibility for the changes made.

The respondents were also not convinced by the concept of the 'internal customer' during the course of the changes (Q11). Only 19.04% of respondents agreed with the statement that the internal customer has been talked about and is important since the introduction of change in the company. Thus, while the concept of the customer is well-known and its prioritization is recognised (Q5), seeing the internal customer is still not a common approach. From the point of view of the process management concept, this element is extremely important, so its absence may mean that the principles of the concept have not been introduced.

In the companies surveyed, organisational structures were restructured as part of the reorganisation, flattening them out and eliminating some of their levels. This was noted by as many as 85.28% of the respondents (Q12). This fact is somewhat understandable, as changing organisational structures was one of the main elements of change in the surveyed organisations. However, it turns out that changes in organisational structure entailed changes in the way decisions were made only according to 57.13% of the respondents. The remaining 38.09% disagreed with the statement that decisions are now made not centrally but at lower levels (Q13). This could mean that the changes in organisational structures have not been carried out in a way so as to shorten the decision-making path and move decision-making to lower levels, the culture of the organisation has not changed, which is after all the domain of the process approach.

Only 9.52% of the respondents believed that as part of the changes carried out in the organisation, the system of values in the company had also changed (Q14), and as many as 80.94% disagreed with this statement. Thus, if it is assumed that process management is a holistic concept, encompassing the entire enterprise, including its system of values, then it can be concluded that, in the case of the surveyed companies, not all the assumptions of this concept have been implemented. Also, another element of the concept, i.e. the constant

monitoring of the course of processes and the introduction of adjustments to increase their efficiency, has not been fully introduced in all the surveyed companies, although here as many as 61.89% of the respondents indicated that processes are constantly monitored (Q15).

The analysis of the weighted average results obtained on the Likert scale makes it possible to order the elements of the process approach according to the extent of their implementation in the surveyed companies.

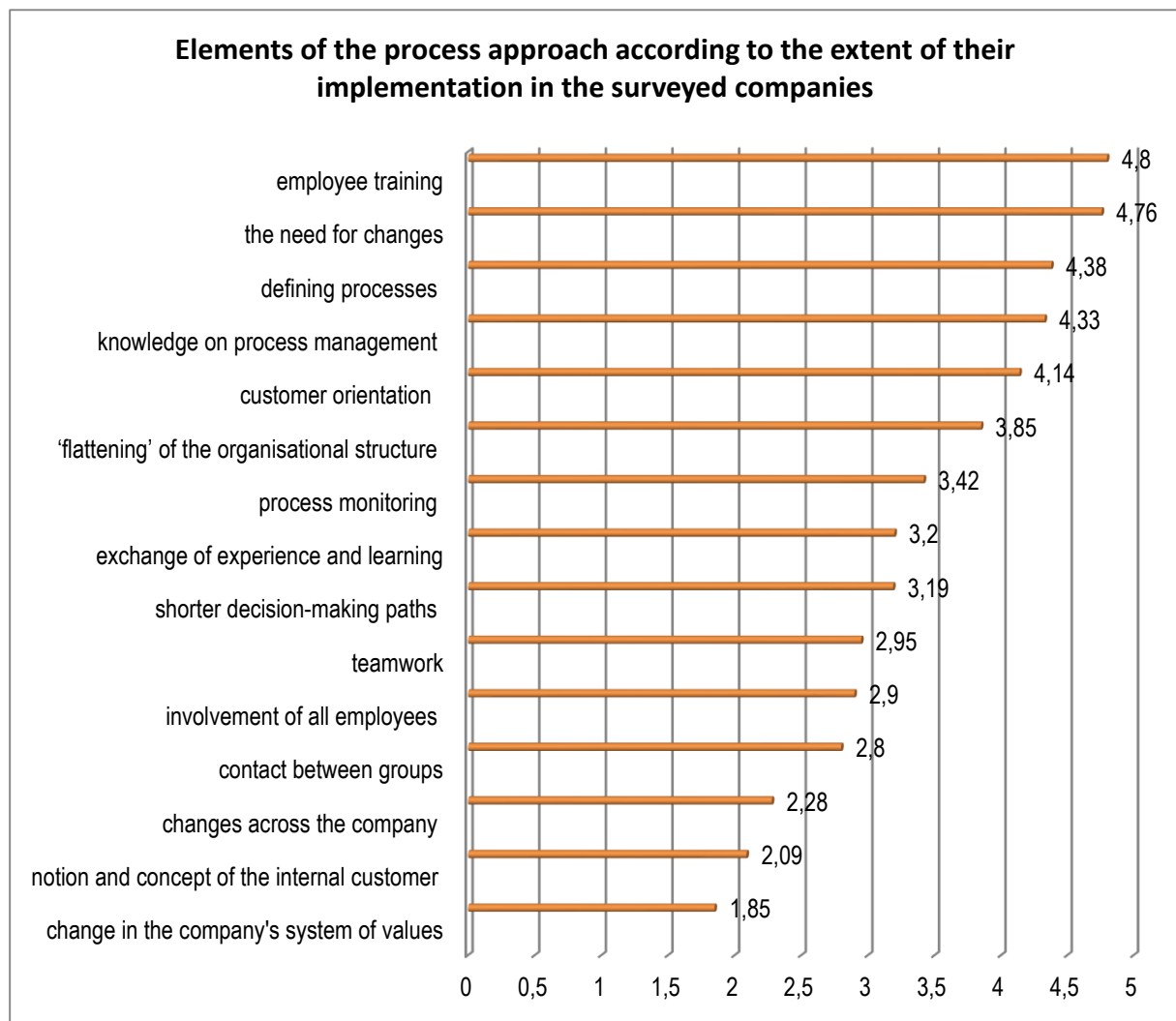


Figure 1. Elements of the process approach according to the extent of their implementation in the surveyed companies.

Source: authors' own elaboration.

The most widely adopted element appeared to be employee training (4.8). This is understandable, as they were a prerequisite for the introduction of change in companies, and an essential element of the change. Indeed, without employee training it would be impossible to transfer knowledge regarding the new order. It is also important to note that there was a rather widespread acceptance of the reorganisation processes introduced (4.76), which indicates that enterprises were not prejudiced against it, but rather showed a positive attitude, which is, after all, a prerequisite for the implementation of process management.

The identification of processes in the surveyed companies (4.38), the transfer of process management knowledge (4.33) and customer orientation (4.14), i.e. key elements of process management, can also be regarded as having been introduced successfully. Changes have been made to organisational structures, aiming to flatten them out (3.85) and also process monitoring is being carried out (3.42). Other elements of process management have been introduced to a slightly lesser extent. Experience sharing and learning (3.2) and short decision paths (3.19) have not been introduced extensively. Group work (2.95), the involvement of all employees (2.9) and the contact of groups with each other (2.8) were almost completely failed to be introduced. There has been almost no success in introducing the concept of the 'internal customer' in companies (2.09), and certainly no change in the companies' systems of values.

6. Conclusions

The study can therefore be considered to have confirmed both research hypotheses (h1) and (h2) set out in the introduction. The changes carried out in the companies mainly involved production processes, however, the changes did not go beyond this area (h1). Admittedly, it was noted that it is the process that lies at the heart of all activities, the focus was successfully shifted to the process, and general acceptance was achieved among employees for the new way of thinking. Unfortunately, the new approach has remained in the realm of declarations and concepts, which also manifests itself in the way the organisation is talked about. The research hypothesis (h2), according to which the surveyed companies are at level 2 or 3 of process maturity, was also confirmed. In most cases, processes are repeatable, documented but not measured or, if measured, they are not managed. However, it should be made clear that this aspect has not been studied very intensively and, in order to obtain an accurate assessment of process maturity, the study would have to be repeated with a focus on the process approach in particular. If the changes carried out are analysed in terms of the introduction of process management in companies, it should be noted that the basic problem here is precisely their being limited to the field of production. What is definitely lacking is the dissemination of the new concept to all employees, group work and the exchange of experience, as well as the implementation of new decision-making paths, the concept of the internal customer and, finally, a change in the system of values of the entire enterprise. The question of the reasons for this state of affairs, i.e. the barriers that have emerged during implementation and the methods by which they can be overcome, remains open for further research.

References

1. Bitkowska, A. (2019). *Od klasycznego do zintegrowanego zarządzania procesowego w organizacjach*. Warszawa: C.H. Beck.
2. Bitkowska, A., Sobolewska, O. (2020). Zarządzanie procesowe z wykorzystaniem wiedzy w polskich przedsiębiorstwach. *Przegląd Organizacji, Vol. 1*.
3. Brajer-Marczak, R. (2012). Efektywność organizacji z perspektywy modelu dojrzałości procesowej. In: P.R. Antonowicz (Ed.), *Zarządzanie i Finanse, Vol. 10, Iss. 1*. Sopot: Wydział Zarządzania Uniwersytetu Gdańskiego.
4. Brajer-Marczak, R. (2012). Podejście procesowe w organizacjach – wyniki badań. *Nauki o zarządzaniu, Vol. 3(12)*.
5. Brajer-Marczak, R. (2017). Bariery upowszechniania modeli dojrzałości procesowej. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, Vol. 463*.
6. *Dojrzałość procesowa polskich organizacji. Podsumowanie IV edycji badania dojrzałości procesowej organizacji funkcjonujących w Polsce* (2020). www.procesowcy.pl
7. Grela, G. (2013). Ocena poziomu dojrzałości procesowej organizacji. *Nierówności społeczne a wzrost gospodarczy, Vol. 35*.
8. Jagodziński, J., Ostrowski, D. (2015). Bariery we wdrażaniu podejścia procesowego w przedsiębiorstwach w Polsce. *Zeszyty Naukowe Wyższej Szkoły Bankowej we Wrocławiu, Vol. 15, Iss 7*.
9. Jurczuk, A. (2021). Barriers to implementation of business process governance mechanisms. *Engineering Management in Production and Services, Vol. 13, Iss. 4*, pp. 22-38.
10. Kalinowski, T.B. (2011). Modele oceny dojrzałości procesów. *Acta Universitatis Lodzianis Folia Oeconomica, Vol. 23, Iss. 258*.
11. Korsan-Przywara, P., Zgrzywa-Ziemak, A. (2011). Zarządzanie procesowe. In: M. Hopej, Z. Kral (Eds.), *Współczesne metody zarządzania w teorii i praktyce*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
12. Maciąg, J. (2016). Zastosowanie podejścia procesowego w zarządzaniu publicznymi szkołami wyższymi – wyzwania teorii i praktyki. *Nauka i Szkolnictwo Wyższe, Vol. 1, Iss. 47*.
13. Nowosielski, S. (2011). Orientacja procesowa w organizacjach. Rozważania nad skutecznością wprowadzania. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, Vol. 169*.
14. Nowosielski, S. (2018). Zarządzanie procesami jako współczesna koncepcja zarządzania: istota i problemy wdrażania. *Przedsiębiorczość i Zarządzanie, Vol. 9, Iss. 2*, pp. 17-26.
15. Raczyńska, M. (2017). Modele dojrzałości procesowej organizacji. *Acta Universitatis Nicolai Copernici, Vol. 2*.

16. Romanowska, M., Trocki, M. (2004). *Podejście procesowe w zarządzaniu*. Warszawa: SGH.
17. Wieczorkowski, J. (2015). Analiza wykorzystania podejścia procesowego w zarządzaniu jednostkami administracji publicznej. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, Vol. 243.