

# Process Approach in Public Sector Institutions and Governance – a Formality or a Necessity?

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## ABSTRACT

In the context of state administration institutions, including institutions of direct administration, there are increasing attempts to improve their quality and efficiency. Thus, it is important that public institutions carry out their processes with quality, despite any political changes in state administration. The issue also relates to how often public institutions fulfil the planned indicators and with what accuracy they are fulfilled. Therefore, proper planning and use of resources is at question.

The aim of the paper is to determine the place of a process and of the process approach in a public institution and the process approach's ability to improve process management in a public institution and the operation of a public institution's quality system.

The research includes the application of the scope review method, systemic qualitative literature review method, Agile approach and impact-effort matrix. The paper first addresses the methods used for a theoretical understanding of process management approaches, process approach and processes, then continues to their analysis. Afterwards, the paper assesses the possible solutions in a test institution and through a test process, including by providing universally applicable proposals for improving the quality and efficiency of process management and functioning of a quality system in a public institution.

**Keywords:** quality system; quality system development; public institution

## 1. INTRODUCTION

This paper addresses an issue that in the context of state administration institutions, including institutions of direct administration, there are increasing attempts to improve their quality and efficiency. In the Latvian system, this was previously exhibited by the "Public Administration Reform Plan 2020" [1], which includes various measures to do that. However, the State Audit Office of the Republic of Latvia [2] has concluded that, although the reform has been implemented, it has not achieved the desired effect in public administration. A new plan has been developed and is being implemented, but the debate about its success is still open. Thus, it is important that public institutions' processes are carried out qualitatively, despite the changes taking place in the state administration as a whole.

The issue also connects to how often public institutions fulfil the planned indicators and with what accuracy they were fulfilled. In Latvia, on average planned indicators are met in 56% of cases, while the fulfilment of indicators determined with values compared to the defined values was on average 14 % in 2019, 2020, 2021 and 2022 [3]. Therefore, proper planning and use of resources is at question.

In the light of the aforementioned, it could be concluded that, in the context of public administration institutions, including

institutions of direct administration, it is possible to make improvements in their operations in order to increase their efficiency and thus optimize the use of the resources (including financial resources) allocated to them.

However, research regarding public sector governance and institutions is limited mostly to applicable quality systems as such and research regarding their development in this particular context is scarce [4]. The aim of the paper is to determine the place of a "process" and of the "process approach" in a public institution and the process approach's ability to improve process management in a public institution and the operation of a public institution's quality system.

The research includes the application of various methods and approaches: the scope review method and systemic qualitative literature review method are used for understanding the concepts of a "process" and a "process approach", while the Agile approach and the impact-effort matrix are used to develop proposals for mitigating the identified deficiencies and improving the quality system and processes management.

The paper first addresses the methods used for the theoretical understanding of process management, process approach and processes, then continues to their analysis. Afterwards, the research assesses the possible solutions in a test institution and through a test process, including by providing universally applicable proposals for improving the quality and efficiency of process management and functioning of a quality system in a public institution.

## 2. RESEARCH METHODS

To gain a common understanding of the concepts and definitions used, the analysis of concepts and terms was carried out. The scope review method was used to gain an idea of process evaluation and individual aspects of the process.

However, considering the importance of process elements in the context of this paper, the method of systemic qualitative literature review, or qualitative content analysis, was used to analyse the concept of "process". Thus, in-depth research was conducted, which resulted in a detailed understanding of the elements that make up the process.

At the beginning of the selection of scientific publications (see Figure 1), a search of the term "process elements" in the *Scopus* database found 2432 scientific publications.

A number of exclusion criteria were used to evaluate these publications: irrelevant document types (that objectively would not provide a comprehensive, reasoned or reliable analysis of information), unfinished publications (to ensure that the analysis carried out in the framework of the study is based on finalized documents), *Open Access* (Green) publications (to ensure that the analysis is based on verified information), publications outside the scope of "Business, Management and Accounting" (to align the research closely with the scope), and publications irrelevant to the research issue.

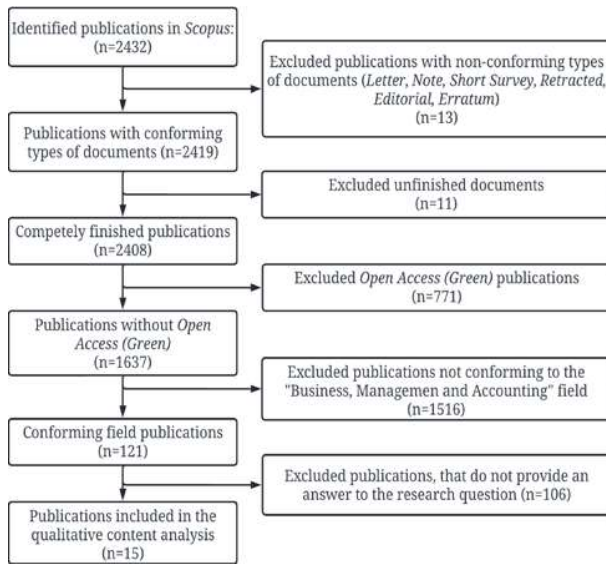


Figure 1. The selection order of the scientific publications  
[created by authors]

The results of the qualitative content analysis provide a significant contribution to the practical application of the research conclusions since the services provided by the state administrative authorities are not typical services provided in a commercial environment, and they typically cannot be unified.

### 3. PROCESS MANAGEMENT, PROCESS APPROACH AND PROCESS

#### System and Process Management

By analyzing processes, it was concluded that every process can be viewed from different perspectives. One approach is to look from the prism of a given process, forming and applying it only within the boundaries of the process in question. However, processes can also be viewed from a broader perspective – from the perspective of the immediate environment of the process in question and from the perspective of the overall ecosystem of the process.

One of the approaches to the overall ecosystem perspective is a holistic approach or a joint approach. It is not widely used among organizations, including for risk management purposes, which are typically interdisciplinary [5], [6]. The scientific literature also emphasizes the role of a holistic approach in the day-to-day activities of an organization, including promoting and developing its activities both internally [7], as well as in working with clients and stakeholders [8]. Likewise, a holistic approach can make a strategic contribution to cost management [9].

Deficiencies in the performance of interlinked activities can also be observed in public administration institutions. The literature stresses the importance of a holistic approach to the exchange of data held by public administrations to ensure successful crisis management [10]. At the same time, this approach is essential for eGovernment. To be successful and innovative, eGovernment needs to be able to integrate technological, organizational, user-friendly and process-specific dimensions [11].

Consequently, no difference is found in understanding a holistic approach according to the environment – in the private or public sector. But it is clear that in the case of a holistic approach, an organization or institution must evaluate all the elements within its framework as a whole.

By expanding a holistic approach to process evaluation, it is possible to apply a system approach. One of the manifestations of the system approach is system thinking. It is defined several times in different ways, but all definitions have unifying elements – interrelationships, interactions, and a single structure [12].

The system approach in public administration can be very useful and effective, but not in all cases [13]. In other words, it is not a panacea and will not be a solution to fundamental problems if it is not fully implemented, nor is it applicable to problems that need to be tackled immediately.

Consequently, it was concluded that the application of the system approach must be assessed extremely carefully so that it actually achieves the desired objective with reasonable resources.

With the development of modern technologies, the ability of systems to evaluate processes is also developing. For example, *Process-aware Recommender systems (PAR Systems)* are based on three elements – monitoring, forecast analysis and prescriptive analysis – when evaluating processes [14]. As part of this, in order to assess a process, it has to be assessed in several dimensions – scope, extent (delivered and received), accuracy of execution, effectiveness, application, context and cost [15].

The approaches to process evaluation discussed above have certain differences, as outlined in Table 1.

Table 1. Comparison of process management approaches  
[created by authors]

	Description	Result	Advantages	Dis-advantages
Holistic approach	Processes are evaluated from the perspective of their mutual interaction with other processes	Evaluated process in terms of the processes affecting it	Related processes included; Reduces costs for ensuring processes	Requires more resources; Environmental factors are not taken into account
System approach	An approach that evaluates processes from the prism of their overall environment	Assessed process considering the processes affecting it and other environmental factors	Broad scope; Considers related processes; Considers influencing factors; Optimizes resources in the long term	Not applicable to immediate problems; Full implementation is required for the effect
PAR Systems	The process is evaluated in different dimensions, identifying the influencing factors, but not analyzing them in depth	The process is evaluated in different dimensions, identifying the surrounding context	Identifies the context of the process; Evaluates in detail the various nuances of the process	Does not evaluate surrounding factors

As can be seen from the comparison made above, these approaches are not mutually exclusive, but complementary. In particular, the *PAR Systems* approach is applicable in a narrower scope, applying it primarily to a specific process, while being aware of the environment, but without carrying out an in-depth assessment of it, while a holistic approach is applicable in cases where the assessment is to be carried out in a broader scope. In a sense, however, the widest scope is ensured by the system approach, which evaluates the environment of interaction or the location of processes as such. In view of the above, it is concluded that in the evaluation of processes, it is essential to evaluate not only the process itself but also its role in the overall system of processes, especially within the organization.

At the same time, it is crucial to be aware of the circumstances and course of a particular situation. This allows to fully evaluate the individual process, analyzing its execution in several dimensions. Similarly, awareness of the interaction between the process and the possible solution makes it possible to assess whether the scope of the planned activities is appropriate and adequate to address the specific problem situation.

### Process Approach

As determined previously, the understanding of existing processes and their interaction is vital. In light of it, the quality management standard [16] contributes to the application of the process approach. In accordance with the standard, the process approach includes the evaluation and management of systemic processes, which can be achieved by applying the *Plan-Do-Check-Act* cycle.

The above highlights in particular the fact that there is not only one process in an organization or institution. Even in cases where the basic process of an organization or institution is, for example, the provision of a record-keeping service, the organization itself will also have its own record-keeping process as a support process. Consequently, it is inconceivable that there could be only one process in any institution or organization. Thus, there will always be possible interactions between different processes, especially in organizations and institutions where an integrated management system or internal control system (in public institutions) has been established.

Therefore, it is essential to regularly and proactively gain confidence both in the individual performance of each specific process and the absence of quality losses, as well as in the interaction and impact of all processes in terms of quality losses in general. In addition, it is the process approach that ensures the feasibility of the development of the quality system and the ability to adapt to today's fast pace of development, where it becomes almost impossible to regulate all issues in all respects. Accordingly, the process approach provides an opportunity to improve or even develop the quality system "from the bottom up", since it ensures the functioning of the quality system as a whole [4], improving or developing each individual process or introducing new processes unprecedented in the institution.

At the same time, the above-mentioned quality management standard [16] also emphasizes that an important aspect of the process approach is the risk-based approach, which provides for the implementation of preventive actions, analysis of deviations and prevention of further recurrence of deviations. Thus, the risk-based approach resonates with the *Plan-Do-Check-Act* cycle. However, it should be noted that the essence of the risk-based approach is aimed at analyzing the risks of the overall situation as such, and not through the prism of processes. Consequently, the prevention and analysis of risks should be distinguished separately as a general activity.

Therefore, the processes can be assessed not only in conjunction with each other using the *Plan-Do-Check-Act* cycle but also through a general risk analysis (the schematic representation of the environment and interactions between the process and the conditions affecting it above is included in Figure 4).

In the context of evaluating a system and processes, the availability of complete data and the desire to use them are just as important as choosing the right approach. A 2011 study [17] showed that data-driven decision-making contributes to business performance and profitability. But this approach also has a number of risks associated with the general public's misunderstanding of the functioning of this approach, as a result of which decisions made as data-driven are not always perceived as legal and justified [18].

Consequently, when evaluating processes, as well as when selecting the assessment approach to be applied, it is also necessary to carefully assess what data, how much and in which situations it is justified to use. In the light of the findings of the above-mentioned studies, it is essential to assess the circumstances of the situation in question from the perspective of the process within which the decision must be made.

However, it is just as important for decision-makers to consider whether it will be possible to explain their decision in an understandable and plausible way to the addressee of the decision. As a result of an unsuccessful explanation, there is a risk that the addressee of the decision will not perceive it properly or be able to accept it, as a result of which the decision-maker himself will have created new risks, since additional actions will have to be taken to ensure the full application of the decision in practice. Alternatively, the efficiency of the actions envisaged will be jeopardized.

In order to fully apply the process approach to the development of the quality system, it is not enough just to study the broader scope. Equally important is the full understanding of the concept of "process".

### Process

According to the definition contained in the Dictionary of the Latvian Literary Language [19], the term "process" is a "Sequential change of states in the course of development. Continuous movement of close connection developmental stages.", "A set of sequential actions to achieve a certain goal." and "Order of action (in the judiciary): investigation, consideration and adjudication of the case (in court)." As can be seen from the definitions, they are quite general and universally applicable. Accordingly, to fully understand the essence of the process, it is essential to understand the elements of the process. By carrying out the qualitative content analysis, 15 publications were included in the systemic qualitative literature review, and the analysis resulted in 19 codes, which have been used a total of 132 times (see Figure 2).

Considering that as a result of the analysis of scientific publications on the term "Process elements" 19 different codes have been obtained, then for further analysis they were grouped according to their compatibility.

From the resulting codes, "Linking actions", "Path" and "Sequentiality of actions" were considered closely related to each other. Given the nature of the element's codes, they were summarized in the category "Action interaction", thus forming an element of the process that reflects the importance of the interaction of actions. In turn, to codes "Tasks", "Control", "Creation", "Distribution" and "Methods", correspond to the category "Activities", and describe the various aspects that are necessary for the overall functioning to take place – in terms of designing, implementing and passing on its idea. In the category "Data" element codes were compiled that, taken as a whole, indicate a comprehensive scope of the data (includes "Data analysis", "Data objects" and "Data acquisition/issuance"). The category to which the most element codes correspond is the category "Resources", and it combines element codes "Knowledge", "Raw materials", "Financing", "Environment", "Equipment" and "Systems". So, the common constituent of it is the environment for carrying out activities and the means by which those involved in the process can carry them out. Finally, the category "Participants", which characterizes subjects who are involved in the performance of activities in various roles, is formed by the code "Executor" and "Participating party".

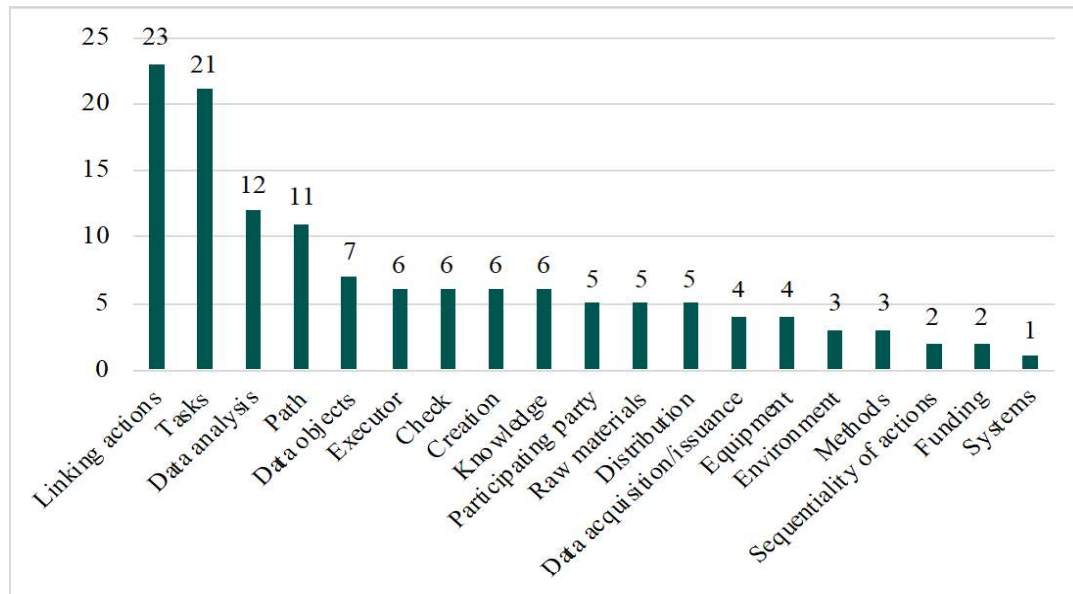


Figure 2. Composition of codes [created by authors]

The review concluded that the process consists of the following elements: data (e.g. [20], [21]), participants (e.g. [22], [23]), activities (e.g. [24], [25]), the interaction of activities (e.g. [26], [27]), as well as resources (e.g. [28], [29]). The greatest emphasis (see Figure 3) is placed on the activities to be carried out and their interaction (58 % in total). Also, significant value is given to the data and resources necessary to carry out activities (34 % in total). By contrast, performers and other actors involved are less decisive (8 %).

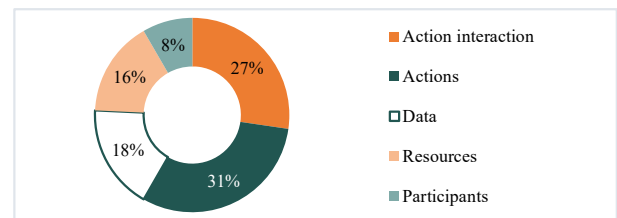


Figure 3. The proportion of the categories [created by authors]

Thus, it is concluded that the “Process” is a set of mutually interacting actions implemented by participants with resources and based on data. In addition, this understanding of the process can be integrated into the above-described environment of the process and the conditions affecting it (see Figure 4).

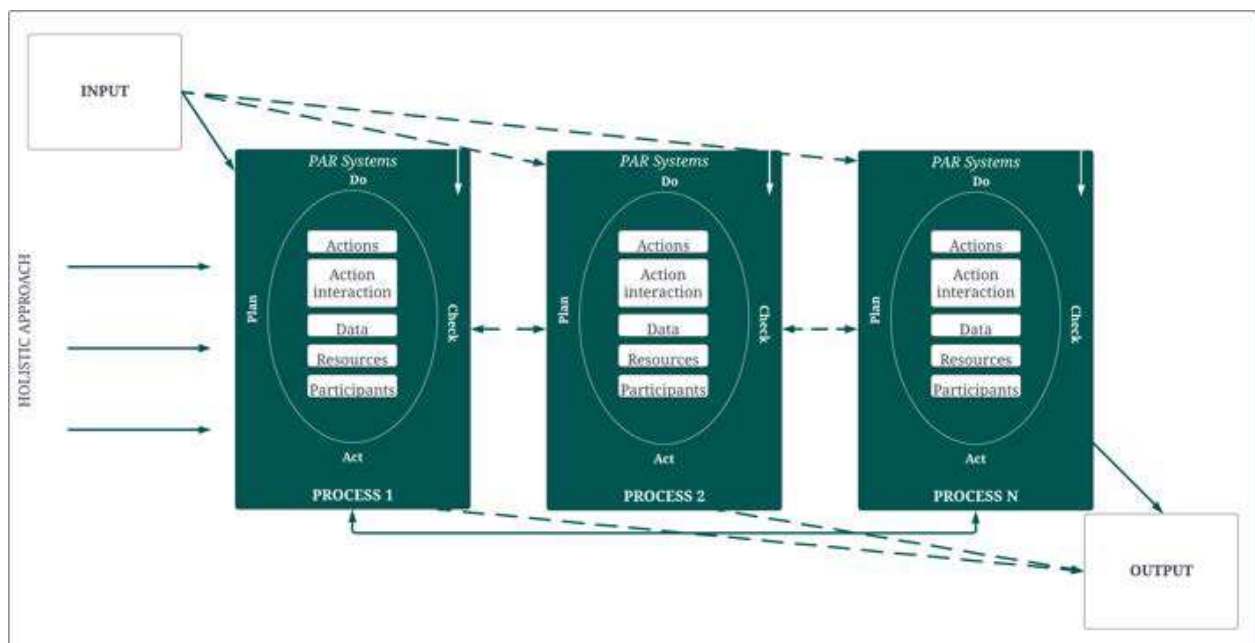


Figure 4. The environment of the process and its influencing conditions with process elements [created by authors]

As concluded above, the interaction of processes with each other and the identified elements of the process are closely interrelated, suggesting mutual integration within the environment. Consequently, attention should also be paid to the integration of processes, which, moreover, are not always purely internal. An essential prerequisite for the integration of external processes is the successful integration of internal processes and relations between participants [30], as well as time-based performance and direct linkage with direct paths to the company's activities [31]. Thus, it can be concluded that the integration of processes is inseparable from their overall environment and that before the integration of external processes, it is essential to successfully integrate not only internal processes but also their interaction with surrounding factors. This encourages, despite the shortcomings discussed above, that the use of a system approach to the evaluation of processes be specifically considered so that the best implementation of the process can be achieved. Thus, all of the above summarizes the views of various authors about the concept of a quality system - which includes the organizational structure, procedures, processes and resources necessary for the implementation of quality management. [4], [32], [33].

#### 4. PRACTICAL APPLICATION OF PROCESS APPROACH IN A PUBLIC INSTITUTION

To evaluate the theoretical conclusions made in Chapters 2 and 3 of this paper, a test institution and a test process were chosen to determine the process approach used for the quality system's development.

For the purpose of this paper, a test institution is a public institution in Latvia, that is publicly funded and does not carry out any manufacturing, production or other activities aimed at profit gains. The institution's main clientele includes groups of target audiences, not individual clients.

The quality system of the test institution operates through the internal control system and the management of processes and, therefore, a proper and efficient course of processes is highly crucial.

The test process relates to one of the test institution's main functions; it has main steps to be carried out, but each process is individual and mostly does not repeat itself.

To minimize the effects of the shortcomings and to develop the quality system, proposals were based on the Agile approach;

since public institutions typically have a wide range of competences, and thus it is clear that approaches based on *Top-Down* thinking would not work, as top management would objectively not be able to devote sufficient attention to the execution of each individual process in each case. Thus, the Agile approach, which is a way of thinking first enshrined in the so-called Agile Manifesto, and is based on four values enshrined in 12 principles [34], was applied to develop possible proposals. However, since the test process is not a programming activity, the twelve Agile principles were adjusted, while keeping in mind the Agile approach's four values (see Table 2).

Table 2. Application of the principles of the Agile approach in the context of the test process [created by authors]

The essence of Agile principles	Expression of the principle in the scope of the study
1. Customer satisfaction	Our highest priority is to consider the wishes of our customers, ensuring the development of a quality project in a timely manner.
2. Variable requirements are supported	We support changing demands, even late in development. Agile processes use change to benefit project quality.
3. Regular delivery of progress	Deliver the project often, from a couple of weeks to a couple of months, preferring a shorter time frame.
4. Continuous collaboration	The developer and the participants involved must work together every day throughout the project.
5. Motivated individuals	Build projects around motivated individuals. Give them the environment and the support they need, and trust them to get the job done.
6. Face-to-face conversation	The most effective and efficient method of conveying information to the development team and within its framework is face-to-face conversation.
7. Software that works	The project that works is a key indicator of progress.
8. Sustainable development	Agile approach processes contribute to sustainable development. The developer and the actors involved should be able to maintain a constant pace indefinitely.
9. Technical excellence and good design	Continuous attention to technical excellence and good design improves agility.
10. Simplicity	Simplicity is essential.
11. Self-organizing teams	The best project comes from the actors it developed and involved.
12. Regular efficiency increase	The team regularly thinks over how to become more effective, then tune in and adjust their behavior accordingly.

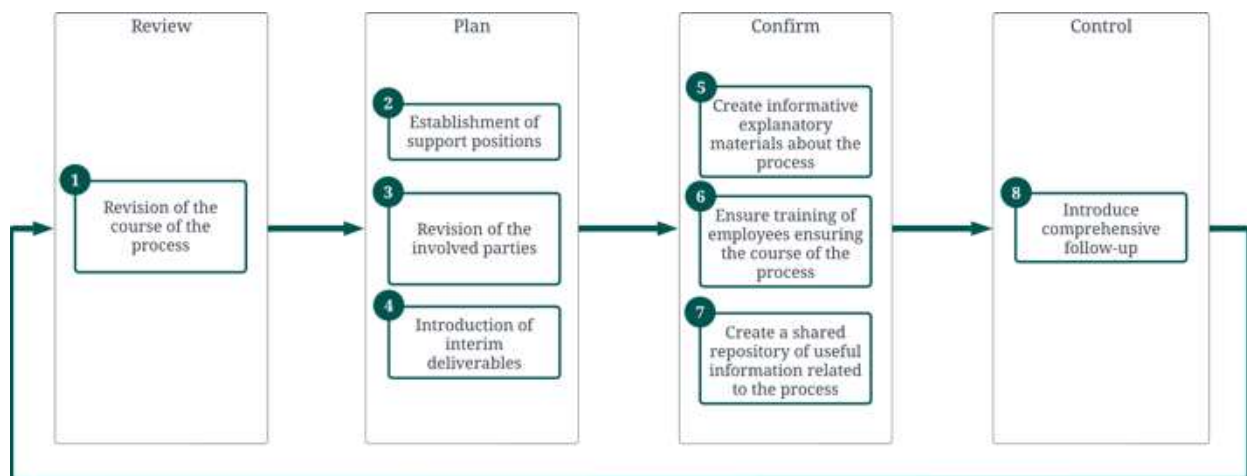


Figure 5. Proposals for the development of a quality system [created by authors]



Based on the adjusted Agile principles, 11 proposals were designed to improve the course of the test process. As a result of the implementation of the proposals, with an investment of € 4,154.52 and 73 hours in the first year and an investment of € 2,820.74 and 14 hours in the second year, it is expected that there would be 4.12 % less redundancies in the process, which would result in 13.07 % less costs. Most proposals are applicable to other the development of a quality system (see Figure 5).

These proposals (as-is or with slight adjustments) are transferable to any process. In the interests of adequate use of resources, revision of the course of the process provides allows to keep the process streamlined at the point in time, instead of keeping it as it was, therefore ensuring the part of revision. The creation of support posts is universal enough to be able to be applied almost identically to every process. Similarly, the proposal to review the participants to be involved in the process and the introduction of interim deliverables are applicable with minimal changes for individual processes. Thus, these proposals form the planning section as a whole. In order to strengthen the conditions created as a result of planning, actions should be taken to strengthen employees' knowledge of the process they apply. At the same time, the provision of controls and reviews is subject to a comprehensive follow-up and review of the progress of the process, respectively.

To fully identify not only which of the proposals could have the greatest impact, but also allow to immediately assess the complexity of the implementation of the proposals. As can be seen from Figure 6, the aforementioned proposals have a wide variety of impact and effort.

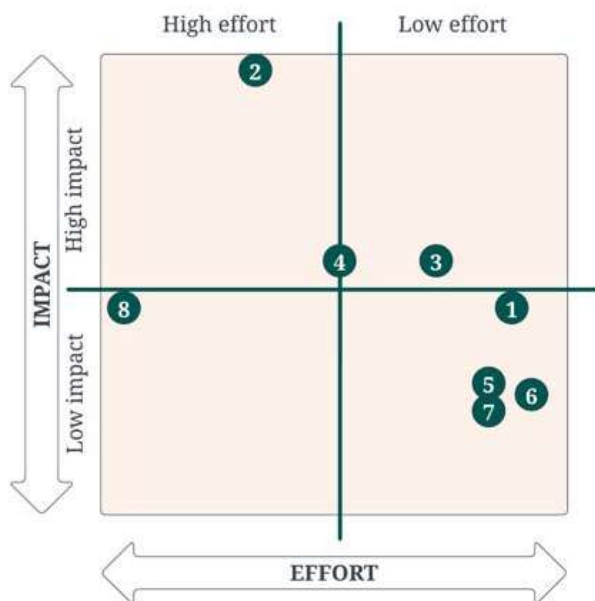


Figure 6. Impact-effort matrix for the universally applicable proposals [created by authors]

Given the broad scope, it is clear that in order to fully achieve the objective and eliminate or reduce the shortcomings, all proposals must be implemented as a complex and interrelated set of proposals.

## 5. CONCLUSIONS

Based on the literature review, it was concluded that the essence of the process approach defines a four-part focus of the process (*Plan-Do-Check-Act* cycle) in an inextricable connection with

the processes as such and their interaction with each other, as well as the conduct of a general risk analysis. Similarly, awareness of the correlation between the process and the possible solution makes it possible to assess whether the scope of the planned activities is appropriate and adequate to address the specific problem situation. Data-driven decision-making can facilitate a process approach, but it needs to be carefully evaluated.

Additionally, systemic qualitative literature review concluded that the greatest emphasis is placed on the activities to be carried out and their interaction (58 % in total). Also, significant value is given to the data and resources necessary to carry out activities (34 % in total). By contrast, performers and other actors involved are less decisive (8 %). Thus, it can be concluded that a "process" is a set of mutually interacting actions implemented by participants with resources and based on data. In addition, this understanding of the process must be integrated into the process approach and evaluation.

The integration of processes is inseparable from their overall environment, and before the integration of external processes, it is essential to successfully integrate not only internal processes but also their interaction with surrounding factors. This encourages specifically consider the use of a system approach to the evaluation of processes so that the best implementation of the process can be achieved.

As indicated by the analysis carried out regarding the proposals, their implementation would certainly ensure a more effective course of the process and optimized use of resources. However, since public institutions' quality systems are typically comprised of internal control systems and process management, the additional aim of an improved course of processes is an improved quality system.

Therefore, the process approach in public governance and institution is a necessity and not a formality to ensure an effective quality system.

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