

Article

Project Management Methodology in Regional Self-Government Units

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Abstract: Project implementation is one of the key activities in the process of ensuring development. In public institutions, the challenges in project management are particularly evident. Organizational inflexibility and an inability to adequately evaluate work are particularly emphasized, often creating problems during project implementation. These challenges become even greater if the financing of the project is planned with EU grants or other financial instruments that require great precision and thus exceptional project management skills. This document will present an effective project management model, as well as programs and portfolios in regional self-government units. A methodology has been developed to encourage the transformation of public systems from rigidly functional to project systems. The methodology was tested in Primorje-Gorski Kotar County, Republic of Croatia. An analysis of the quality of implementation of twenty projects has been carried out: an analysis of the final results of ten projects in which the methodology has been applied and of ten projects in which the methodology has not been applied. After conducting empirical research and analysis, the quality of the proposed model was proven at all levels of governance within the public sector. By applying this methodology, significant advances can be made in the quality of realized projects while ensuring the realistic dynamics of this realization and rational financial costs.

Keywords: project management; project portfolio management; planning; regional self-government unit



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1. Introduction

The (regional) self-government unit is the bearer of development in its area. It should ensure (pre)conditions for strengthening competitiveness and its development potential, including through the management of development projects. To ensure optimal spending of budget funds with maximum benefits for the community, it is necessary to define a quality selection (more in the [1]) and management process of regional strategic development projects that are (co)financed from the budget (public money) [2,3].

The success of the project is largely determined by organizational culture, procedures, tools, existing knowledge in the organization and other internal and external factors.

Knowledge of project management, programs and portfolios has been accepted at the EU level. It has been confirmed that the application of appropriate knowledge, skills, tools and techniques has a significant impact on the success of the project's implementation. However, the application of certain determinants of this knowledge is not fully applicable in systems of solid functional organization, such as systems of public administrations (all levels) [4–6].

In public administration, as a rule, there is no relevant project management system. Certain processes are dictated by legal and sub-legal acts. However, in such environments, project management depends on the individual preferences of the leaders of individual organizational units within which the project is implemented. One of the fundamental challenges in the implementation of public projects is the fact that officials/employees

nominated for project management usually work as Control Account Managers (CAM) and not Project Managers. They are not relevant and do not have the authority to make decisions because final decisions are made by their superiors (heads of administrative bodies, directors of administrations, heads of services...) or even higher-ranking officials, deputy prefects, deputy (city)chiefs or state secretaries in ministries at the national level [5].

In the field of public services, there is an active transformation of the focus from organizational management institutions to service processes [7]. Problems in managing projects in the public sector are present at all levels. This may be ascribed to a lack of basic knowledge and unequal treatment of different levels of public administration whilst managing projects, as proven through the author's experience. The implementation of the project approach in the field of public administration requires a radical restructuring of the entire management system, the transition from a process approach to results-oriented activities [8].

Project management strategy in the public sector has attracted the interest of many scholars since the late 1980s, following the growing pressure on governments to abandon bureaucratic organizations in favor of leaner structures. Usually, reengineering project carried out in the public sector provide methodology which is used in process engineering [9].

By analyzing the experiences of regional self-governments in the field of project management, for example, it has been established that there is no unambiguous understanding of the concept of project and project management, program and program management or portfolio and portfolio management. This, in turn, results in the absence of high-quality and expected project results, often presented in the form of delays or price increases in the implementation of project activities. The research presented in this paper stems from the desire to improve the way projects are managed in the public sector. It was preceded by a comprehensive analysis of the available literature and the practical experiences of public administrations, which served as a starting point for the preparation of the research.

The purpose of this document is to present a methodology for the effective management of the project portfolio and program, and ultimately the project itself, which is (co)financed by budgetary funds of local and regional self-government.

This document aims to offer the optimal methodology for the management of project portfolios, programs and projects in the public sector through theoretical and practical research. The presented methodology is tested and proven in real life through a presented case study in Primorje-Gorski Kotar County, Republic of Croatia.

The paper is organized in five logically related parts. After the Introduction, the theoretical framework is presented in the second part, followed by an descriptive and detailed analysis of the used secondary data and used scientific methodology in the third part. After the results of the research and discussion in the fourth part of the study, the conclusion is reached in the fifth part.

2. Theoretical Background about Project Management

Processes in organizations can be divided, given the way they are organized, into continuous and one-time processes [10] (pp. 3–35).

Commonly, one-time processes in organizations are designated as projects [10,11].

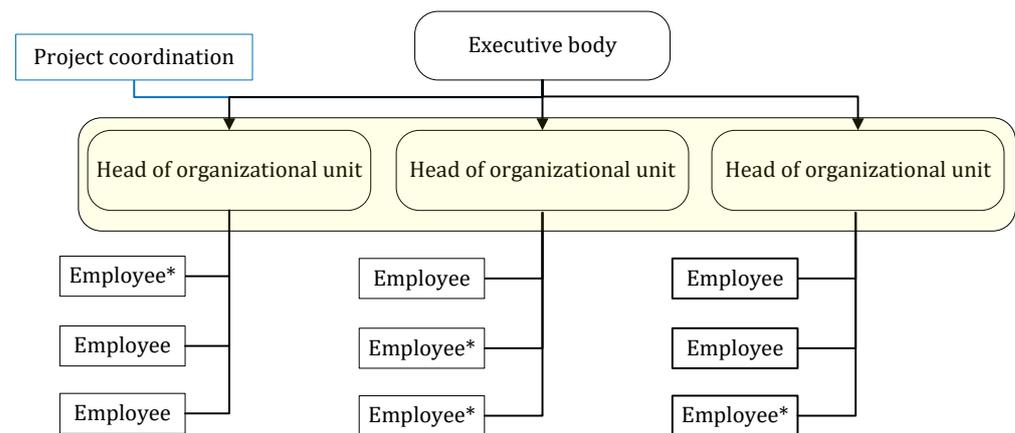
Project management is a complex job that involves maintaining a balance between project goals, constraints and changes throughout the project lifecycle. In doing so, all organizational competencies, knowledge, skills, techniques and tools are used to achieve the requirements of the project through an optimal relationship in the context of limited conditions scope–price–time–quality. It covers project management and implies not only the management of individuals or groups but the completeness of basic project activities such as planning, organizing, motivating and controlling. It is applied through the application of logically grouped project management processes consisting of five process groups (initiation, planning, execution, supervision and control, and project closure) [10].

Due to the possibility of changing certain parameters, it is customary for the project management plan to be repeated and progressively elaborated throughout the project's lifecycle.

2.1. Organizational Structure as a Basis for Defining the Project Cycle Management Model

Models of organizing business activities vary concerning the needs of different organizations. As a rule, three basic organizational forms (functional, matrix and project organization) are recognized with several variations [10,11].

When analyzing the organizational system in the public sector, it can easily be determined how, as a rule, it is organized in terms of functionality (Figure 1). A classical functional organization is a hierarchy in which each employee has one clearly defined superior. Employees are grouped according to specialties, such as infrastructure, economy, health, education and finance, at the highest level. In doing so, each department within the organization performs its project work independently of other departments.



* employees assigned to project activities

Figure 1. Functional organizational structure. Source: [5].

In some cases, fundamentally functional organizations can create a special Project Team to manage a strategic (critical) project. Such a team can have many characteristics of a project organization project team. The Project Team may include permanent staff from different functional departments, may develop its own set of operating procedures and may operate outside the standard, formalized reporting structure [3,12].

Increasing complexity of the activities requires management practices and tools that assure an efficient use of resources. In this context, a Project Management Office (PMO) can be of great value [13], and within organizational structures, a Project Management Office (PMO) is often formed. It represents an organizational body that has been assigned various responsibilities related to centralized and coordinated project management. The responsibilities of a PMO can range from the functions of providing support related to project management to the actual responsibility of direct management of a project. The specific form, function and structure of the PMO depend on the needs of the organization to which the Office provides support. It can be independent, or these jobs can be taken over by one of the existing departments in the organization. This organizational unit must be positioned high enough to be able to influence the operational work of other departments participating in projects.

According to [14], it is possible to segment the roles of PMOs into three levels: strategic; tactical; and operational. The scope of work performed by the PMO may vary from organization to organization and primarily depends on what purpose the PMO was established for based on types of projects: engineering and construction, information systems/information technology, business processes, and new product development. Categorization systems of PMOs have the potential to support the organizational design of PMOs in organizational context, structural characteristics, functions and performance [15].

The project management model also depends on the management structure of the organization. The question often arises whether it is better to adapt the existing organiza-

tional structure to the requirements of the project as a “foreign body” or whether it is better to organize the project within the framework of the existing organizational concept. Most theorists prefer the second approach to the first.

The project organization works best when [12]

1. Work can be defined with a specific goal and deadline;
2. The job is unique or somewhat unfamiliar to the existing organization;
3. The work contains complex interrelated tasks requiring specialized skills;
4. The project is temporary but critical to the organization;
5. The project cuts across organizational lines.

For most project participants, the project needs to be an organized and structured business routine, and the organizational form of the project is virtual (which is easily achievable with today’s information level). Projects must be properly allocated and delegated. It follows from the above that the introduction of effective project management models in public administration makes sense only when it is not centralized, or localized, but occurs at the level of the whole system. In this sense, the aspiration is to organize a system in which the ability and competence of project management will be developed. In doing so, it is important to recognize at the operational level the body that will lead projects operationally (Project Manager, and if necessary, a Project Team).

2.2. Regional Self-Government Project Implementation Framework

The administrative division of states at the EU level is heterogeneous. Administrative organization ranges from a minimum of two levels (national and local) to a maximum of four levels of government (national, regional, provincial and local). Although regional and local self-governments have different powers in different EU countries, it applies to each of them that they carry out their activities directly or indirectly through several agencies, institutions and companies in public (co)ownership. Generally, everyone takes part in nominating programs, projects and activities based on strategic development documents (development and spatial plans) in their budgets [16].

To consider the overall possibilities of optimal management of projects, programs and project portfolios in regional self-governments, it is necessary to look at the overall framework for project implementation, primarily in the domain of legislation, international standards [14] and strategic documentation, given organizational structures and powers of regional self-government units. It is important to take into account the fact that public administration is very complex, fragmented and heterogeneous in terms of organization, and all changes require proper preparation with a large dose of motivation towards results [17–19].

3. Materials and Methods

More insight into improving the efficiency of project implementation in public administration is provided here below by a concrete example of organizational structure and defined attributes that can lead to the desired project management efficiency. In addition to the basic theoretical knowledge, an example of the implementation of the proposed methodology in the organization of work of Primorje-Gorski Kotar County, Republic of Croatia, was presented.

3.1. General Provisions of the Implementation of Organizational Changes in Public Administration

Implementing an effective project management system in public administration (the so-called projectification of the public sector) is very complex, with many factors that slow down or even block changes [20–22]. Defining the model of project management in public administration is an integral part of the wider issue of restructuring public administration into public management. Scientific research on the consequences of projectification in the public sector has been surprisingly limited. Partly, this is due to the fact that project management has been confined to engineering and business management [23–26].

The doctrine of public management (in the process of managing public administration) has been intensively developed in the last twenty years and is based on the introduction of practices and benchmarks from the private sector with an emphasis on efficiency and effectiveness (and especially on the cost component) [12,27]. The projectification of public administration, however, does not represent a profound organizational change but rather introduces a new mindset with potential long-term effects. Through the projectification of activities, public administration, rather than being occupied by routinized behavior, makes itself an instrument for strategic purposes and signals clearer than before that it actively performs a political agenda [28].

Organizations that decide to increase their efficiency in project management quickly realize that they cannot implement this initiative without two essential elements:

- Clear assignment of responsibility by the highest management for the implementation of the initiative;
- The introduction of organizational standards (methodology) for project management.

In doing so, the leading/managing project methodology may, in a broad sense, contain the following elements [12]:

- Standardized professional vocabulary and concepts related to project management;
- Appropriate organizational structure—e.g., role and powers of the Project Management Office, possibly the introduction of a Project Committee that supervises all projects, etc.;
- Processes and working procedures—with defined inputs, outputs, methods, controls, execution order, forms and roles;
- Standardized roles and responsibilities—in particular, the powers and responsibilities of project managers, sponsors, heads of departments when their subordinates are engaged in projects;
- Standardized measures of project success;
- Rules of decision-making in typical situations;
- Project documentation forms;
- Information system and tools—for the evaluation of project ideas, project planning in the temporal and financial domain, monitoring of project execution, collaboration of team members, project quality management, monitoring of time and money spent, reporting to management, risk management and other processes—a repository of knowledge and experience from previous projects;
- Rules for monitoring and rewarding performance;
- Rules for the career development of project managers.

The introduction of the project management methodology must evolve on existing good practices within the organization [29–31]. The emphasis should be on continuous minor changes while constantly monitoring the results achieved (instead of trying to introduce revolutionary changes that will provoke resistance from the organization). In doing so, the project management system must build on other management systems in the organization (both in technological and procedural terms).

3.2. *Primorje-Gorski Kotar County Organizational Framework*

The Republic of Croatia is divided into 20 counties and 555 local self-government units (cities and municipalities), of which the capital city Zagreb has county authorities. Counties, as regional self-governments, are governed by directly elected County Prefects with Deputies as the executive body and County Assemblies as representative bodies of citizens (they are elected in elections every four years). The Prefect, with his team, proposes and the County Assembly decides on the basic strategic documents of the County, such as the spatial plan, development strategy and annual budgets [32]. These acts also nominate basic projects that are to be implemented in a particular area.

The operational implementation of activities in counties is carried out through administrative bodies that are functionally (sectorally) organized. There is no legal basis for

determining the organizational structure of administrative bodies [5]. For example, the organization of work in Primorje-Gorski Kotar County is carried out through 11 administrative bodies, as shown in Figure 2. Given that this is a functional organization, each of the administrative bodies monitors the work of companies and institutions founded by the County in its field of activity. In doing so, most public projects are operationally implemented through these companies and institutions, while administrative bodies monitor the legality and efficiency of their work. Since 2012, by the best world practice [33,34], a special administrative body has been formed in the Primorje-Gorski Kotar County, which, among other things, has a Project Management Office. Its main task is to define the methodology of project implementation within the public structure and, if necessary, to actively engage in the implementation of complex and financially more demanding (strategic) projects for the County.

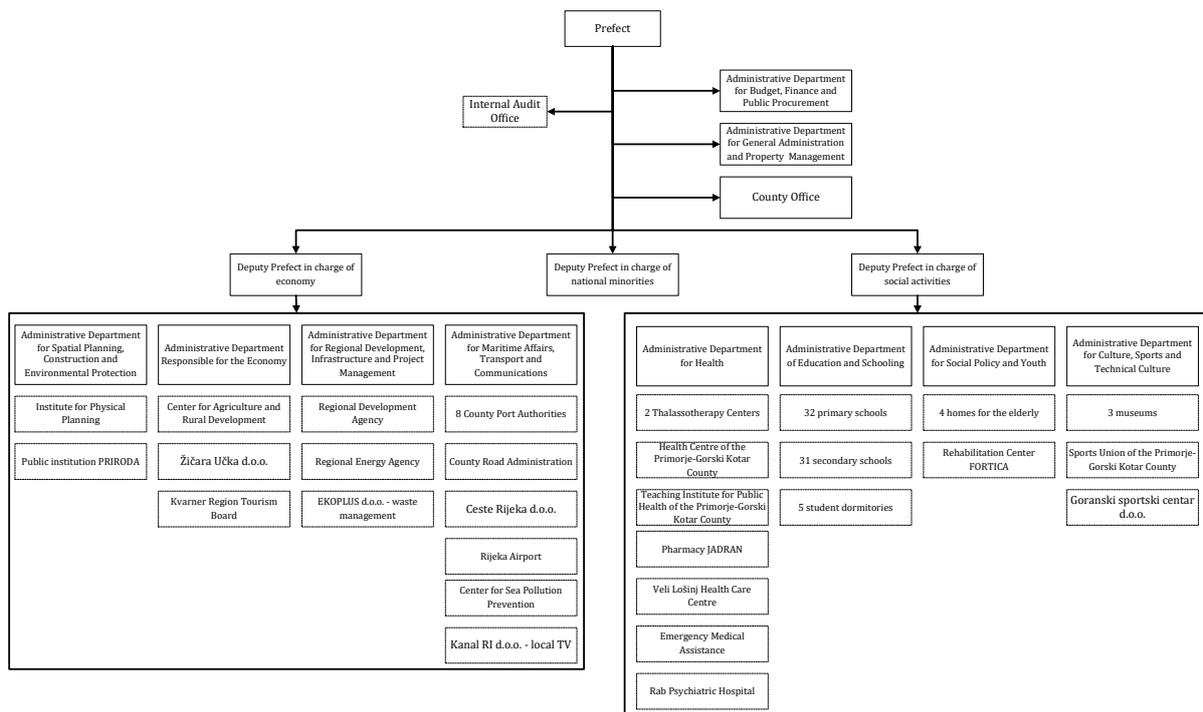


Figure 2. Primorje-Gorski Kotar County organizational structure. Source: prepared by authors.

Concerning the given organizational structure, it can be discerned that within regional structures

- The Prefect manages the total project portfolios of regional self-governments;
- Department heads manage sectorial project programs and portfolios;
- Officers manage specific projects for which they are in charge.

In doing so, the responsibilities for the execution of tasks are vertically arranged under the management level.

3.3. Primorje-Gorski Kotar County Development Project Preparation Organization

Figure 3 shows the general structure of the projects, with regard to the institution responsible for their implementation. Concurrently, projects that the County does not implement itself are classified into “Other strategic public projects” and “Strategic projects of private investors”. “Other strategic public projects” refer to projects implemented by the state and local self-government units or their institutions. Here, in the implementation of this group of projects, the regional self-government can provide certain assistance, part of which is presented in Figure 3.

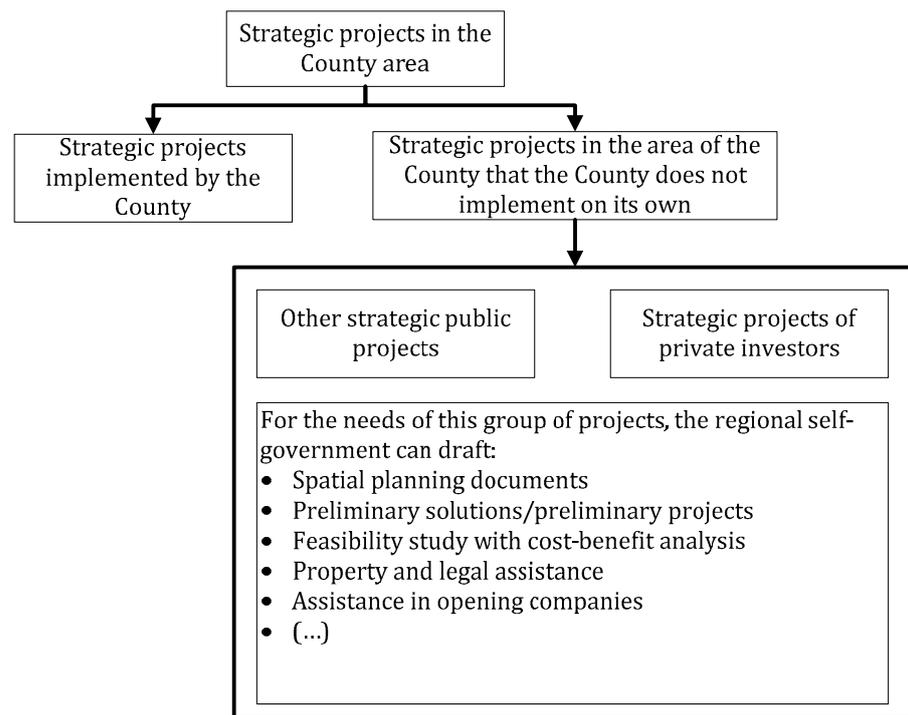


Figure 3. Strategic Projects in the County area. Source: prepared by authors.

3.4. Preparation of Regional Strategic Projects Implemented Directly by Counties

One of the prerequisites for the quality operational implementation of development programs is to ensure the possibility of the active implementation of projects with the help of specialized regional institutions, such as institutes for spatial planning, regional development agencies, regional energy agencies, etc. [35,36].

In order to integrate all regional stakeholders into the system of implementation of capital regional projects, a project implementation system consisting of seven basic phases was designed (Figure 4). Concurrently, the phases of project implementation must be carried out in sequence, without skipping individual phases. Within each of the phases of project implementation, along with the developer of the development project, there are also County institutions which can contribute to the preparation and realization of a particular phase with their specific competencies. The role of the administrative body, which has the role of the PMO as well as the regional development agency and the institute for spatial planning, was particularly emphasized [10]. The Project Management Office primarily participates in the selection of projects and the definition of the holders for the implementation of a particular project for both the implementation and the supervision of the established methodology during the implementation of the project. In addition to spatial planning, the Institute for Spatial Planning can participate in the development of conceptual designs/projects and in obtaining building acts for buildings of interest to the County, according to the special requirements of the Prefect and the relevant administrative bodies (which must provide clear technical guidelines for the dimensioning). In parallel with the technical preparation of projects, for projects whose financing is intended to be secured through EU funds, activities are initiated on the preparation of projects for financing from EU funds in which the regional development agency provides active assistance. In projects for which EU grants are secured, the regional development agency continues to assist in the procedures of reporting about the projects to EU intermediary bodies while the project holder carries out the technical part.

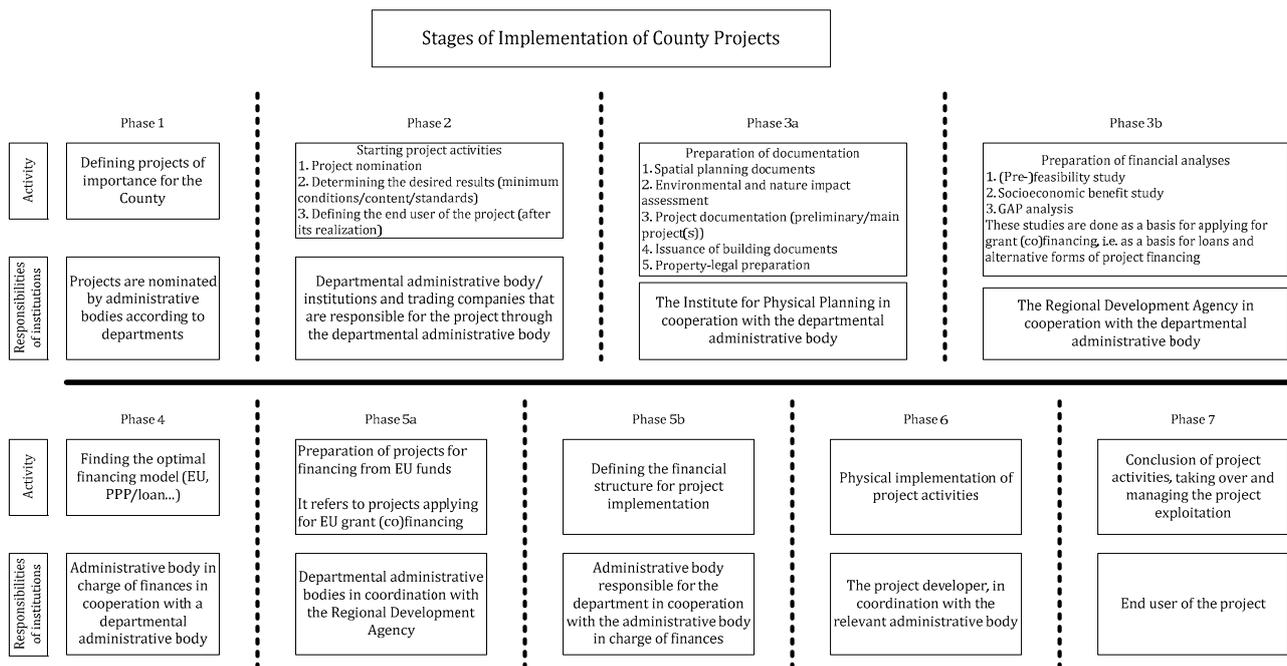


Figure 4. Phases of project implementation in Primorje-Gorski Kotar County. Source: prepared by authors.

Taking into account this methodology further strengthens cross-sectoral cooperation, within which each regional institution must contribute as much as possible in the development project's preparation phase. The testing of the aforementioned methodology (project implementation system consisting of seven basic phases) has been carried out in practice, and its effectiveness is proven through the full integration of all regional capacities in the implementation of projects. A positive step forward is particularly present in the professional specialization of the holders of individual phases of implementation, which increased the quality of project preparation and, therefore, the implementation of project activities.

3.5. Primorje-Gorski Kotar County Project Implementation Methodology

Defining the developer of a development project is a fundamental step in the project implementation process. As a rule, county administrative bodies or institutions/companies in (co)ownership of the regional self-government that implements the project are appointed as Project Developers. In special cases, in particularly important projects, project institutions may be formed that are put in charge of the implementation of the project and its subsequent exploitation.

The procedure is the key decision-making factor. The quality of the project selection process directly affects the quality of the project's results [37]. It is of particular importance that a transparent evaluation and selection process is carried out for development projects to be implemented [38]. For each project to be accepted for operational implementation before making an investment decision, one must define:

- Functional and enforcement requirements (general and specific objectives);
- Applicable requirements of laws and regulations (legal and other legal bases);
- Where applicable, information originating from previous similar projects, namely the origin and indicators underlying the calculations and assessment of the resources required;
- The manner and funds for the realization of the development project with the development of the financial plan and performance indicators (overview of all the costs in the preparation, execution and exploitation of the development project for at least 5 years);
- Other requirements relevant to the development project.

In the process of deciding on the acceptance of the project for implementation, its complexity, structure and significance for the organization are analyzed. Given the above, according to the complexity of implementation, three project levels are recognized, as follows [38]:

- Development projects;
- Development projects of a higher level of complexity;
- Development projects with a high level of complexity.

The head of the departmental administrative body determines the level of the project's complexity based on the scope of the project (one or more components), the estimated value of the project, the number of partners in the project, the source of project financing and the like. Typically, all capital projects worth over EUR 2 million as well as projects consisting of two or more phases or buildings are automatically nominated as development projects of a higher level of complexity. Projects of a high level of complexity are projects that meet the requirements of projects of a higher level of complexity but are financed with grants from EU funds that require special administration or are implemented in partnership (e.g., with the state or local self-government units). Projects of a high level of complexity are also considered to be all projects worth more than EUR 5 million.

Given the complexity of the project, the head of the budgetary departmental administrative body may propose, and the Prefect appoints, the Project Manager, the Project Team consisting of the leader and members and/or the Coordination Team. In doing so, special attention is paid to achieving an environment that is motivating, encourages cooperation and encourages excellence and staff participation in team development activities. The project team is usually larger than is actually needed. In order for the methodology to work, teams should have a limited staff of three to nine people [39]. The success of a Project Team is primarily influenced not only by the timely selection of a project manager in the initial phase of the project, but primarily by selecting a suitable person who has professional skills, methodological and procedural skills, social and communication skills, the ability to integrate and self-manage, and therefore has potential and is able to lead people. The successful implementation of project management in the public administration sector was significantly associated with people, a change in their thinking and their approach to work [40]. The project managers in the public sector face team management challenges, such as the inability to clearly link performance and reward; compensation systems that are biased towards longevity; and the inability to select project team members based on their expertise [41]. When appointing members of a Coordination and/or Project Team, it is necessary to take into account their interests, relationships with each other, knowledge and experience. Then, based on the above, it is necessary, through the decision on the establishment of a Project Team, to

- Assign individual responsibilities and duties of each member of the Project Team;
- Establish communication channels;
- Consider organized activities as a priority to avoid difficulties in initial operations;
- Ensure provisions for the program and financial control of the development project's implementation;
- Define processes to implement project activities with as little disruption as possible to daily, ongoing tasks.

Public administration employees but also external experts may be appointed as the leaders and members of project teams if the head of the budgetary competent authority assesses that his/her participation in the development project is particularly important.

The Coordination Team consists of heads of administrative bodies involved in the development project, managers of institutions/companies that are implementing or for which the project is implemented and interested stakeholders important for the implementation of the development project (e.g., local units, alliances, associations, etc.). It is determined that the mandatory Head of the Coordination Team is the Deputy Prefect who is entrusted with performing tasks within the scope of the budgetary competent administrative body.

The role of the Deputy Prefect is also crucial in the work of the Coordination Team, given that he/she is hierarchically superior to the heads of administrative bodies. In case of need, he/she can lead the Coordination Team meritoriously and efficiently.

For a development project of a higher/high level of complexity, the Prefect may, by a special decision, require the assistance of the Administrative Department for Regional Development, Infrastructure and Project Management. This requires the role of the Project Management Office. He/she can be appointed as the Head of the Project Team and appoint the head of the department to the Coordination Team.

Possible steps for project implementation activities, which are used in Primorje-Gorski Kotar County, Croatia, are shown in Figure 5.

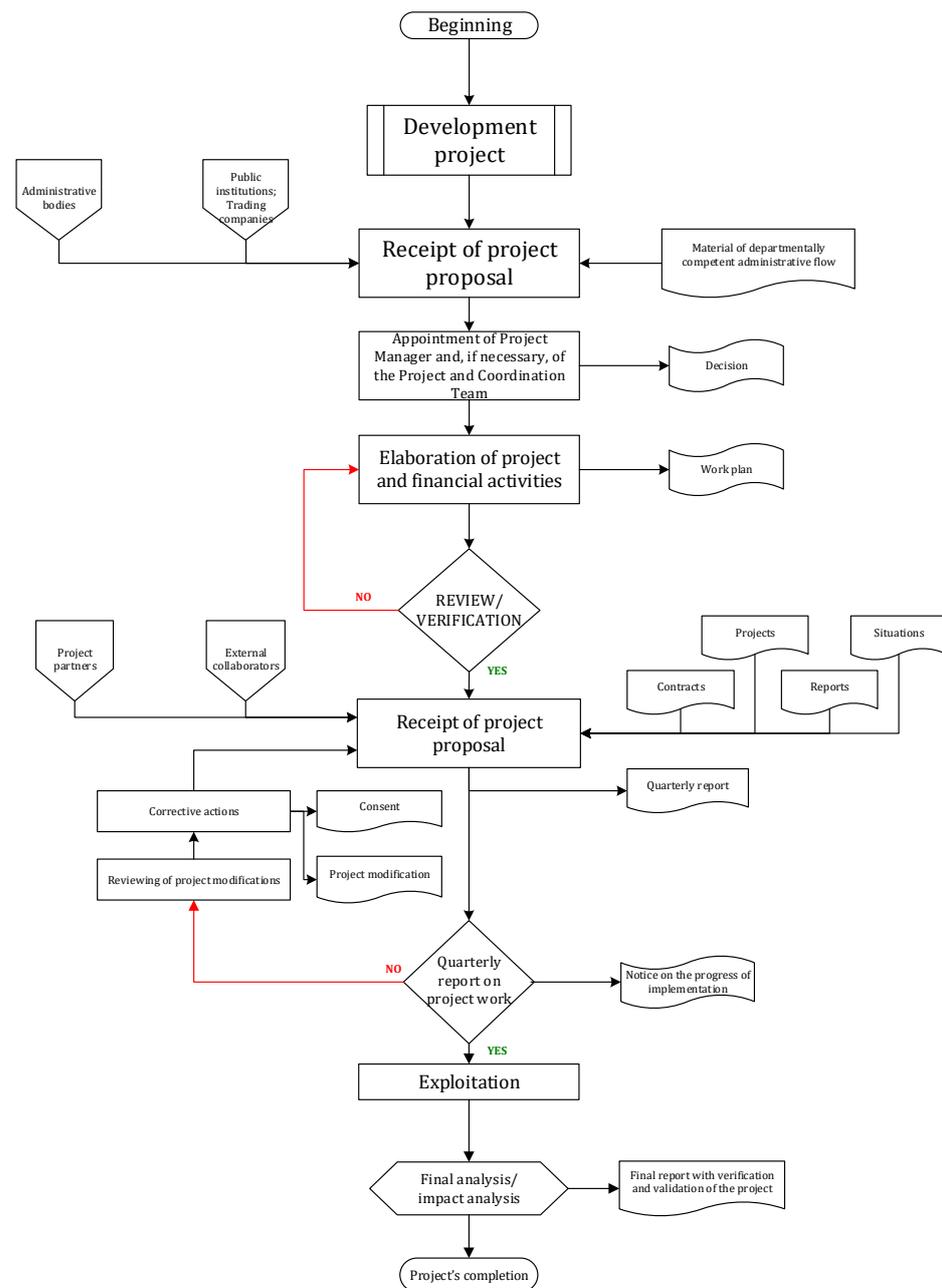


Figure 5. Primorje-Gorski Kotar County project implementation activities. Source: prepared by authors according to [38].

3.5.1. Tasks of the Project Manager and Project Team

Public sector project managers work in an environment which very often is not familiar with results-oriented project management and are constantly dealing with political interference in the management of projects and the challenges of working with political appointees [42]. Because of this, a Project Manager is a person appointed by the organization implementing the project in order to achieve the project objectives. Its role differs from the head of the organizational unit or the head of the operation. Usually, the head of the organizational unit is focused on the managerial supervision of one administrative area, and the heads of operations are responsible for some aspect of the core business activity. Depending on the organizational structure, the Project Manager may be responsible to the head of the organizational unit [43]. In other cases, the Project Manager may be one of several project managers accountable to the program or portfolio manager who is ultimately responsible for enterprise-level projects. In this type of structure, the Project Manager works closely with the portfolio or program manager to achieve project objectives and ensure that the project plan is in line with the superior program plan [18,38,44,45]. Choosing the appropriate project management methodology is the most important prerequisite for the realization of project goals [18].

The Project Team Leader is authorized to set individual tasks and deadlines to be executed by each member of the Project Team, i.e., to the holder of the implementation of a particular activity within a particular development project.

Work performance is influenced by numerous factors: financial, operational, social, technical, quality factors, environment, etc. [46], which must be considered by the Project Team.

The Project Manager or Project Team are responsible for the complete, timely and legal implementation of the development project in all its phases (preparation, implementation, reporting and completion) according to the Table 1.

The Project Manager or Project Team Leader is obliged to actively coordinate the implementation of each project activity in such a way to at least

- Define clear holders of a particular activity and their obligation to report to the Project Manager or Project Team Leader depending on the dynamics of the development project's realization;
- Verify the procurement plan and compliance with the dynamic development project plan for each of the activity holders;
- Actively participate in procurement procedures (co)financed by the holder of the development project and evaluate the objectivity of the bill of quantities when procuring works, as well as assess the reality of prices when procuring goods and services;
- Actively participate in the selection of supervising engineers and regularly monitor the situation in the construction log if necessary for the implementation of the project;
- Participate in the preparation of contracts for the implementation of a particular activity taking into account the deadlines of realization, quality of realization and compliance with plans and functional requirements;
- In the event of unforeseen and additional works and in case of delay, seek explanations from designers, supervising engineers and contractors and conscientiously make the necessary decisions.

3.5.2. Tasks of the Coordination Team

The tasks of the entire Coordination Team are as follows:

- Organizing and coordinating the implementation of the development project at all stages and by all activities;
- Cooperation and organizational support and coordination of all stakeholders involved in the development project's realization;
- Proposing a financial plan and model of the development project's funding source;
- Proposing a dynamic plan for the annual realization of the development project;
- Risk identification and monitoring;
- Monitoring and controlling the timeliness of the implementation of project activities.

Table 1. Responsibilities of the Project Manager and Project Team.

Activity Phase	Responsibility
Preparation	Participate in the preparation of the multiannual, annual, financial and program plans for the realization of the development project (which includes cooperation with other partners in the development project, coordination of project partners in the field of ensuring appropriate own funds for realization and checking whether the development project can be (co)financed by EU funds and/or other alternative sources).
	Prepare a proposal for a dynamic plan for the annual implementation of the development project by all segments of the implementation of a particular activity and submit it to the Coordination Team (if the Coordination Team was established) for prior confirmation before adoption at the College of Prefects.
Implementation	Monitor the dynamics (program and financial) of the development project realization.
	Monitor all elements of the development project (for example property and legal preparation of land, preparation of project documentation, obtaining all necessary acts for construction and commissioning and monitoring of construction including handover and obtaining a use permit, etc.).
	Promptly indicate the need to implement security measures during the development project implementation, prepare and coordinate meetings of the Project Team and/or the Coordination Team.
Reporting	Prepare and coordinate regular monthly meetings with the development project implementation developers, the head of the budgetary competent administrative body and other partners in the development project.
	Submit to the head of the budgetary competent administrative body quarterly written reports related to the realization of the development project.
	Be obliged to inform the head of the budgetary competent administrative authority and the Coordination Team in writing about all risks that may adversely affect the planned expenditures of the project and shift the planned dynamics of realization, especially those that affect the deadline for completion of construction, obtaining use permits and handover or release into full operation,
	For development projects of a higher level of complexity, inform the Prefect with the consent of the budgetary competent administrative body about all important phases of the project implementation, and at least <ul style="list-style-type: none"> • In the phase of drafting the project task proposal (for development projects for which project documentation is still being prepared), • At the stage of drafting the conceptual project, • At the stage of preparation of tender documentation for construction (main project).
	Once a year, inform the Prefect with the consent of the budgetary competent administrative body about the realized activities and problems in the development project implementation.
Completion	Upon completion of the implementation, prepare a final report stating the total activities and their financial cost, as well as an analysis of the impact and assessment of the success of the development project or its part and inform the Prefect, with written studies at the College of Prefects, of the consent of the budgetary competent administrative body.

Source: [43].

3.5.3. Monitoring the Dynamics and Project Implementation Control

To ensure the achievement of the desired dynamics and quality of project implementation, special attention is paid to reporting on implementation. The head of the budgetary competent administrative body is obliged to include in the work plan of his/her administrative body a development project with elaborate activities planned in the current year. He/she is responsible for monitoring the implementation of project activities. Furthermore, the following controls are carried out in the process:

- Quarterly reports on the work of budgetary competent administrative bodies (more frequently if necessary) and final reports on the development project's implementation;
- Reports on the implementation of the budget of Primorje-Gorski Kotar County;
- Reports on the execution of the procurement plan of Primorje-Gorski Kotar County.

In the implementation of the development project, continuous rational harmonization of all necessary resources and coordination of the performance of the necessary activities

are carried out to realize the development project most efficiently following the rules for project management.

If necessary, and at least once every 3 (three) months, the Head of the Project Team is obliged to report in writing to the relevant department head (responsible for monitoring the implementation of the development project) regarding the activities carried out on the development project. The Head of the Project Team is obliged to inform the Prefect once a year, through the developer of the development project or the budgetary competent administrative body, about the realized activities and problems in the implementation of the development project.

Upon completion of the implementation of the development project, the holder of the development project, personally or through the budgetary competent administrative body, is obliged to carry out an impact analysis and assessment of the success of the development project or a part of it and inform the Prefect thereof with a final report.

4. Analysis and Evaluation of the Application of the Project Management Methodology in Primorje-Gorski Kotar County

The presented methodology for managing development projects was adopted by Primorje-Gorski Kotar County in 2013. Hitherto, the methodology of the application, evaluation and selection of development projects to be implemented by Primorje-Gorski Kotar County was adopted.

Given the very complex organizational structure and the increasingly dominant importance of projects for work, executives have been encouraged to define clear rules when preparing and implementing projects. All this is a consequence of many years of experience in the implementation of public projects in which there were frequent deviations in the dynamics, quality and cost of project implementation.

A comparative analysis of the effectiveness of the implementation of the most significant capital projects before and after the introduction of the described project management methodology was carried out (Table 2). The analysis evaluated the following:

1. Compliance of implemented projects with strategic development documents when proposing their implementation;
2. The existence and quality of (previous) feasibility studies of the project with studies of socioeconomic benefits;
3. The level of documentation based on which investment decisions were made (conceptual project (CP)/main project (MP)/detailed project (DP));
4. The number of appeals received during the conduct of public procurement procedures;
5. Quality of project documentation through analysis of necessary changes in documentation during project implementation (scale of 1–5);
6. Quality of bill of quantities through analysis of estimated prices and prices obtained through public procurement (scale 1–5);
7. Compliance with the agreed dynamics of implementation of project activities (Yes/No);
8. Whether the contracted financial costs were surpassed due to additional and out-of-cost works (if so by how many percentage points);
9. Assessment of achieved project objectives (Yes/No).

Qualitative research has been conducted in the form of structured interviews with officials. A total of 20 projects from different sectors with an individual value of over EUR 1 million were analyzed. Half of the projects were implemented before and half after the introduction of the presented methodology.

By analyzing the collected results of the implementation of 20 projects, where the officials who were in charge of the implementation of the projects were surveyed, it was found that there are certain deviations in the quality of project implementation before and after defining the leadership methodology. In doing so, the projects are presented according to the time of implementation from the earliest to the latest.

However, it was also found that part of the analyzed elements of implementation does not fundamentally differ. This is clear for questions 1, 4, 5 and 9, and they will not be evaluated below.

Table 2. Results of carried out comparative analysis of projects.

Project Reference	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9
Projects implemented before the introduction of the methodology									
1.	Yes	No	CP	0	3	3	No	20%	Yes
2.	Yes	No	MP	0	4	3	No	17%	Yes
3.	Yes	No	MP	0	3	3	No	15%	Yes
4.	No	No	MP	1	3	4	No	20%	Yes
5.	No	No	MP	0	4	4	No	19%	Yes
6.	Yes	Yes	DP	0	4	3	No	12%	Yes
7.	Yes	No	MP	1	3	2	No	20%	Yes
8.	Yes	No	MP	0	4	2	No	18%	Yes
9.	Yes	Yes	MP	0	4	2	Yes	17%	Yes
10.	No	Yes	MP	0	4	2	No	17%	Yes
Projects implemented after the introduction of the methodology									
11.	Yes	Yes	MP	0	3	2	No	15%	Yes
12.	Yes	Yes	MP	0	4	2	Yes	12%	Yes
13.	Yes	Yes	MP	0	4	2	Yes	25%	Yes
14.	Yes	Yes	DP	0	3	4	No	15%	Yes
15.	Yes	Yes	DP	0	4	4	Yes	10%	Yes
16.	Yes	Yes	DP	0	4	4	Yes	−5%	Yes
17.	Yes	Yes	MP	0	3	5	No	−3%	Yes
18.	Yes	Yes	MP	0	3	5	No	7%	Yes
19.	Yes	Yes	DP	0	4	4	Yes	10%	Yes
20.	Yes	Yes	DP	0	4	5	Yes	8%	Yes

Source: prepared by authors.

For Question 6, it is clear that there is a time trend of the disproportion of estimated and contracted costs. The same is not associated with the quality of documentation, but with the fact that during the period there were significant dynamic changes in the prices of construction works (especially concrete and steel), which very often resulted in discrepancies between the conceptual and the contracted price. For this reason, this indicator will not be further analyzed either.

From the answers obtained, it is clear that by using the methodology for all projects, a feasibility study was made with an assessment of socioeconomic benefits, and for 50% of the projects, the tender for works was conducted after the preparation of the detailed project and detailed bill of quantities.

In 60% of projects, the agreed dynamics of project implementation were fully respected, as opposed to only 10% of projects without the application of the presented project management methodology. In addition, it was shown that the application of the methodology on average increased the value concerning contracted works by 9.4%, previously amounting to 17.5%, i.e., it was 86% higher compared to additional costs with the application of project management methodology in public administration.

As a result of the conducted comparative analysis of projects, a significant increase in the number of implementation projects (5:1) has been marked, which contributes to an easier and more accurate control of the costs and quality of the projects being implemented.

The wide circle of stakeholders involved in preparing and implementing projects at the regional and local levels often causes a lack of specialized knowledge in managing the project cycle. The results of the research indicate that with the application of the presented methodology, both the preparation of the study and project documentation as well as the implementation of project activities have been improved. Moreover, significantly better and more detailed analyses of projects' financial and economic profitability have been demonstrated, as well as significantly greater participation in the implementation of projects based on which public procurement procedures are carried out.

Furthermore, significantly smaller deviations from the contracted dynamics of project implementation and a significantly lower proportion of costs for additional and unforeseen works were determined. The aforementioned is a result of the established project management system in the public sector, which is reflected in the continuous professional monitoring of project implementation by the Project and Coordination Team.

The results of the research prove the possibility of quality management of project activities in public administration with a strict functional organization. The key is to formally involve all regional stakeholders with specific knowledge throughout the entire project's life cycle, i.e., from planning to implementation and operational use. The presented methodology suggests seven basic phases of project implementation. Considering a large number of activities and programs implemented by the regional self-government, the need to recognize the three fundamental levels of project complexity has proven to be extremely important. This approach enabled the automatic recognition of the most complex projects and thus highlighted the need to monitor their implementation. A project team is typically formed for projects of a higher level of complexity, whilst for the implementation of the most complex ones, an additional level of management is established, i.e., a coordination team. Whilst implementing the presented methodology, it has been determined that the successful functioning of the project and coordination team requires clearly defined operational responsibilities as well as the responsibilities of each of the team members. This evades potential ambiguity in the tasks for each of the members of the mentioned teams. Such a nominated management structure ensures the continuous professional monitoring of a project's implementation. The last important element of the methodology refers to the way of reporting on the status and dynamics of the implementation of project activities according to different management levels. It is particularly important that the reporting on project implementation is implemented within the usual procedures for reporting on the work of administrative bodies on a quarterly and half-yearly level and does not represent an additional burden for the project manager, which is extremely important in the public administration system.

The successful implementation of the presented methodology in the public administration system is conceivable only through the continuous implementation of minor changes with constant monitoring of achieved results.

This approach to project management is common in private (project) organizations, but not as much in public administration systems. The value of the presented methodology is reflected precisely in the proven possibility of implementing the most up-to-date knowledge of private sector project management in the public sector. The most significant step forward in the application of the presented methodology is reflected precisely in the possibility of its implementation in the default procedures and rules of the usual work of the public sector. It has been proven that the application of this approach significantly improves the quality of the implementation of projects in the public sector and thus the transformation of public administration into public management.

5. Conclusions

Implementing project management in public administration is very complex, with many negative factors that slow down or even block changes. To implement the project approach, a simple and effective method is needed that will give quick results and provide guidance for future progress. The methodology/organization presented in this document

covers the entire life cycle of the project. It has been tested through a period of ten years in the work on Primorje-Gorski Kotar County.

The testing of the proposed methodology was carried out through a comparative analysis of twenty capital projects according to nine basic indicators, where ten projects were carried out before and ten after the adopted methodology. The research results have shown that the qualitative results of the implementation of projects have stayed the same in terms of part of the indicators. These are the compliance of the implemented projects with the strategic development documents, the number of appeals received during the conduct of public procurement procedures, the quality of project documentation through analysis of necessary changes in documentation during project implementation and the assessment of achieved project objectives. However, a comparison of other indicators shows a significant improvement in the quality of project implementation in all its segments. At the same time, the most significant improvements were observed in the implementation of projects within a contracted period, where no deadlines were extended. Equally significant improvements were observed in respect to the expected cost of project implementation. Projects guided by the application of the presented methodology resulted in a 50% lower average price increase compared to other projects. Based on the conducted and presented research results, it can be concluded that the proposed methodology has been fully proven in practice.

To ensure the full implementation of the proposed model, it is necessary to adjust the roles and responsibilities within the organizational structure of public administration (by amending or adopting certain laws, provisions, regulations, etc.) in such a way as to define the roles and responsibilities of the Project Manager within the organization. In this way, the heads of departments remain hierarchically superior to Resource Managers (field experts) who allocate resources to projects based on the priorities of a particular project (full-time or part-time). In addition to defining the roles and responsibilities of the position of the Project Manager in public administration, it is necessary to define the roles of team members on projects depending on the priorities of the projects. This may ease the daily routine workload imposed on an individual team member so as to not hinder him from working on a particular project.

When reaching a conclusion on a significant increase in the quality of implemented projects by introducing the presented methodology, it must be taken into account the fact that at the same time the Republic of Croatia joined the European Union and part of the projects were implemented with (co)financing of EU grants. This is the reason that the use of clear conditions and rules of implementation are prescribed, so this also contributed to a significant increase in the quality of project implementation.

Given the above, it can be concluded that with the implementation of the proposed methodology, a greater efficiency in the implementation and in the subsequent exploitation of development projects can be achieved, thus a greater contribution can be made to the dynamic development of the region.

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