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METHODOLOGICAL STEPS FOR PROJECT GUIDELINES INTENDED FOR THE DEVELOPMENT OF THE AIRPORT IN THE VICINITY OF ŠIBENIK CITY

Ana LAZAROVSKA[1], Osman LINDOV[2] and Verica DANCEVSKA[3]

· [1]Atlantic International University Honolulu, Pioneer Plaza, 900 Fort Street Mall #905, Honolulu, HI 96813, United States

[2]Faculty of Traffic and Communications, Zmaja od Bosne 8, Sarajevo 71000, Bosnia & Herzegovina

[3]Faculty of Technical Sciences, Makedonska Falanga 37, Bitola 7000

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ABSTRACT

This research aims to enhance airport infrastructure development in Croatia by focusing on the establishment of a training and school airport near Šibenik, integrating modern design principles and addressing functional needs to support aviation education and training while promoting regional economic growth. This chapter focuses on the theoretical characteristics of project management throughout the project cycle, emphasizing their relevance to the sustainable development of airport infrastructure within the context of transport economics. The case study of an airport near Sibenik serves as a critical foundation for proposing a universal model that integrates airport infrastructure, project management, and metrological steps for integration. Key elements such as legal frameworks governing air transport development are evaluated to ensure the model's applicability and effectiveness within the Croatian air transport system, demonstrating its potential as a viable approach for enhancing sustainable airport operations.

KEYWORDS: project methodology, project management, XLPM methodology, goals, principles, evolution, implementation

1. INTRODUCTION

This excerpt from post-doctoral dissertation examines the interplay between transport economics and sustainable development, focusing on the evolution of airport infrastructure and air traffic in the Republic of Croatia, particularly in the context of international integration and environmental sustainability. It identifies a significant gap in theoretical and practical research in transitional economies, especially regarding factors crucial for developing transport systems, including air traffic. By diagnosing current issues, prognosticating future trends, and recommending therapeutic interventions, the study aims to establish an optimal model for cost-benefit analysis. This model is

designed to facilitate Croatia's integration into the European transport system, ultimately enhancing its air traffic capabilities and contributing positively to sustainable development. The hypothesis posits that by enhancing the structure and organization of the traffic system, including air traffic and transport operators, Croatia can significantly influence its transport economy in alignment with sustainable development goals. This strategic improvement is expected to elevate the quality of airport infrastructure in Croatia, enabling it to compete more effectively with that of other advanced European countries.

The formulated scientific hypothesis suggests that air traffic and airport infrastructure are crucial for state development, impacting the international transport economy and sustainable growth. Through detailed case studies, such as the proposed sports-school airport near Sibenik, we can assess infrastructure efficacy, align it with international regulations, and analyze its integration into broader transport systems, especially within European corridors. Utilizing transport economics theories, including legal frameworks and cost-benefit analyses, offers insights into enhancing Croatia's position in the European transport framework while advocating for sustainable practices that can be applied to various airports globally. The research focuses on the development of airport infrastructure as a critical element for advancing aviation, balancing profit maximization with social acceptability and sustainable practices. It raises pivotal questions about stakeholder expectations and the capability of airport infrastructures to meet those expectations through collaborative relationships with the environment, while employing cost-benefit analysis as a strategic tool. By leveraging the theory of equilibrium, the dissertation aims to explore innovative ways of gathering valuable insights that enhance organizational skills and align with sustainable development goals, thus establishing a framework to measure the dynamic interplay between airport infrastructure and its broader context, ultimately highlighting the importance of reputation and information flow in achieving competitive advantages and effective change management.

2. PROJECT ACCORDING TO XLPM FOR THE CONSTRUCTION OF A COMMERCIAL AIRPORT NEAR THE CITY OF SIBENIK

To project a sports-school and commercial airport near Šibenik using the XLPM (Extended Life Cycle Project Management) framework, the plan should include a comprehensive feasibility study, stakeholder engagement, and community impact assessments. Key phases would involve defining project objectives, conducting site evaluations, securing necessary permits, and designing the airport infrastructure to accommodate both sports facilities and educational programs. A robust risk management strategy should be implemented to address environmental concerns and funding challenges. Throughout the project, continuous monitoring and evaluation should be established to ensure adherence to the timeline and budget, while facilitating collaboration between architects, engineers, and local authorities to achieve sustainable development goals.

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2.1 DETERMINATION OF THE FINAL CAPACITY OF THE AIRPORT IN THE VICINITY OF SIBENIK CITY

The planning and positioning of the Šibenik airport considers various crucial factors, such as flight types, anticipated usage levels influenced by demand, weather, and air traffic management, while prioritizing sustainable development to ensure future growth without compromising environmental integrity. The selected location aims to address environmental sustainability, economic viability, and socio-political needs at both regional and national levels, ultimately determining the airport's capacity based on established structural elements, runway specifications, and navigational conditions to meet current and future aviation demands while minimizing risks of operational failures.

2.2 THEORETICAL CHARACTERISTICS FOR PROJECT MANAGEMENT THROUGH THE PROJECT CYCLE IN FUNCTION OF THE SUSTAINABLE DEVELOPMENT OF AIRPORT INFRASTRUCTURE WITH EQUILIBRIUM THEORY

Successfully addressing the complexities of project implementation in aviation demands a proactive approach to manage rapid technological evolution and competitive pressures, which are critical for meeting industry needs such as swift market delivery, high-quality infrastructure, and reliable business outcomes. New entrants often struggle to navigate the fast-paced changes and the substantial investments necessary, increasing their risk of failure. Therefore, fostering a thorough understanding of project dynamics, bolstering resource readiness, and ensuring strong stakeholder collaboration are essential for mitigating risks and achieving successful outcomes in this challenging environment.

2.3 PROJECT DEFINITION

The concept of a project is defined by many authors and literature in which different aspects are emphasized in different ways. "A project is a temporary effort or endeavor that is invested to achieve a specific product, service or any other deliverable defined by the scope and purpose of the project. This elaborated determines that the project is carried out only once, with a defined start and end, budget and scope of work to be performed."[1] The project as a problem that requires a solution, should avoid definition in the literal sense of the word, but its meaning should be considered as an interest or goal aimed at improving or developing a new airport infrastructure or any service in aviation that will ultimately have a positive effect on the stakeholders in the project. "A project is a set of related activities determined by the purpose, specifications and technical conditions that must be carried out using resources in a given time with a limited budget."[2] "A project is a specific and limited task to be completed and has a purpose, duration and connection to other projects."[3] “A project is a planned set

[1] Project Management Institute (2013.), A guide to the project management body of knowledge (PMBOK® Guide), 5. izdanje, Pennsylvania, Newtown Square str. 3-6

[2] Kerzner, H. (2003.), Project Management - A systems approach to planning, scheduling, and controlling, 8. izdanje, New Jersey: John Wiley & Sons, Inc, str.2

[3] Meredith, J., Mantel, S., (2009), Project Management A Managerial Approach, 7.izdanje, New York: J. Wiley & Sons, Inc.

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of interrelated tasks to be performed within a specified time period and within specified costs and other constraints."[4]

The fundamental scientific hypothesis is the basis for selecting the elements in the transport economics model, elaborated below:

To develop a new model of transport economics in Croatia that promotes sustainable development in air traffic and airport infrastructure, it's essential to integrate scientific analyses of current transport trends, economic impacts, and environmental factors. This model should prioritize optimizing airport operations by incorporating green technologies, enhancing public transport connectivity, and applying accurate assessment metrics to gauge economic benefits against sustainability outcomes. Additionally, aligning strategies with EU transport policies and sustainability goals can facilitate better resource allocation, community engagement, and environmental stewardship, ultimately fostering an adaptive and resilient air transport system in Croatia.

The theory of equilibrium in transport economics emphasizes the need for a cohesive development of airport infrastructure across Southeast Europe, aiming to achieve compatibility with the European Union's advanced transport systems. Countries like Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Macedonia, and Albania face significant infrastructural gaps that hinder their integration into a unified regional transport economy. To address this, they should pursue collaborative efforts, potentially supported by EU initiatives, to enhance their transport systems through unification, standardization, and technological advancements, thereby facilitating mutual coordination and fostering sustainable development in the aviation sector.

2.4 PROJECT MANAGEMENT

Project management as a codified discipline is a relatively new field that can provide an overview and identify key elements of its development over time. The need for more pronounced structure in construction, manufacturing, and transportation in the past led to the beginnings of project management and project management in the forms we know today.[5] Project management definitions state that project management is the application and integration of knowledge, skills, tools and techniques for overall planning, directing, coordinating, monitoring and controlling all dimensions of a project from start to finish and motivating everyone involved in a production, service or project to deliver results on time, within approved costs, to the required quality and requirements and to the satisfaction of stakeholders.[6] Project management is mainly concerned with coordinating resources and managing people and change including identifying requirements, setting clear and achievable goals, balancing competing demands for quality, coverage, time and cost, adapting specifications,

[4] WebFinance Inc. (2020.) Dostupno na: http://www.businessdictionary.com/definition/project.html (12.1.2020.)
[5] ProjectManager.com, Inc. (2020.) Dostupno na: https://www.projectmanager.com/project-management (12.1.2020.)
[6] Kerzner, H. (2003.), Project Management - A systems approach to planning, scheduling, and controlling, 8.izdanje, New Jersey: John Wiley & Sons, Inc., str.2

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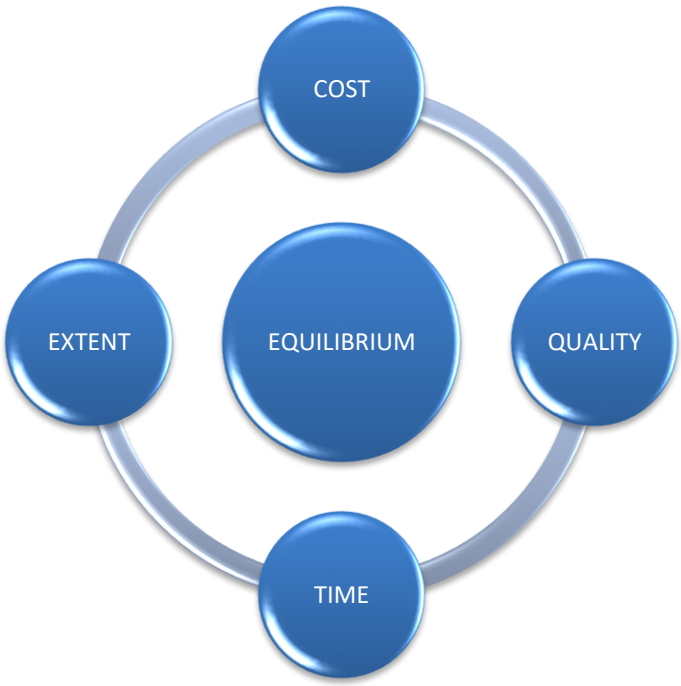
plans, problems and expectations of various stakeholders.[7] Project management defines everything needed to complete the project on time and within budget to deliver the defined scope and quality.[8] Time, budget, coverage, and quality are known as the project balance quadrant which defines the most important aspects to consider when delivering a project.[9] The Balance Quadrant effectively illustrates the interdependence of scope, time, cost, and quality in project management, emphasizing that adjustments to one constraint inevitably disrupt the others. For instance, expanding the project scope typically necessitates additional time and resources, potentially leading to increased costs and variations in quality. Thus, understanding and managing these relationships is crucial for maintaining project balance and ensuring successful outcomes within budgetary limits.[10]



picture 1, Balance quadrant

Source: Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd

The project triangle of time, cost, and coverage has long been a framework for assessing project success; however, this traditional view is increasingly seen as incomplete without considering alignment with business strategy and the clarity of project objectives. Success in project management

[7] Project Management Institute (2013.), A guide to the project management body of knowledge (PMBOK® Guide), 5. izdanje, Pennsylvania, Newtown Square, str. 5-6
[8] Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd. str.2
[9] Williams, M. (2008), The Principles of Project Management. Australia:SitePoint Pty.Ltd. str.23
[10] Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd

requires not only completing tasks within the designated constraints but also ensuring that projects meet actual business needs and deliver tangible benefits. As highlighted by the 2015 CHAOS report, merely adhering to timelines and budgets is insufficient—projects must also achieve satisfactory results that contribute to overall organizational goals. Therefore, organizations should prioritize a strategic approach to project selection and management, focusing on enhancing value, innovation, and stakeholder satisfaction, while effectively managing costs to improve overall project outcomes.

2.5 KEY PHASES OF THE PROJECT LIFE CYCLE

The project life cycle in aviation is a structured approach comprising distinct, time-bound phases that facilitate effective management and oversight. Each phase is marked by specific milestones and checkpoints that align with functional goals and financial criteria, ensuring that deliverables such as equipment delivery, business solutions, and necessary documentation are met within designated timelines. The interrelated activities within these phases may overlap depending on the project's nature, enhancing the ability to plan, manage, and control the project efficiently.

- each phase has a specific goal for manifestation, as a description of the solution,

- to achieve each of the phases, it is necessary to ensure control over certain processes and activities,

- the completion of work from a particular phase can be transferred to the next phase, called a checkpoint in the project.

The general project life cycle consists of four phases:

• Inception (opening),

• Organization and preparation,

• Implementation,

• Closing.

Characteristics of the general structure of the life cycle are as follows:155F

- Costs and requirements increase in the implementation phase and fall sharply as the project ends.

- Each project is unique and its own, which may mean that the number of resources varies individually.

- Risk and uncertainty are highest at the beginning of the project, and decrease during implementation and towards the end of the project.

- The possibility of influencing the final characteristics and success is greatest at the beginning and gradually decreases by the end of the project.

Indeed, while project structures vary by field, airport infrastructure projects benefit from a defined framework that ensures consistency and quality across all phases. This structured approach facilitates meticulous planning and execution, allowing for adjustments tailored to the specific project's needs

while maintaining a focus on achieving the desired outcomes efficiently and effectively. The sequential nature of the project phases is crucial for quality control, ensuring that all aspects are addressed methodically to meet both regulatory standards and stakeholder expectations. In project management, when overlapping phases are necessary, two basic types of relationships can be identified: fast tracking and concurrent engineering. Fast tracking involves completing tasks that are normally carried out sequentially at the same time, which can expedite project timelines but may increase risk and complexity. Concurrent engineering, on the other hand, refers to a collaborative approach where cross-functional teams work simultaneously on different aspects of a project to enhance efficiency and innovation, often employed in product development. Both strategies aim to optimize resources and reduce overall project duration:

- a sequential relationship starts only when the previous phase is completed, reducing uncertainty and improving quality, reducing the possibility of reducing the total duration.

- an overlap relationship that starts before the end of the previous one, is used to reduce the duration for additional resources so that activities can be performed in parallel, which often leads to the risk of repeating the work with changes to the result of the previous phase.

When selecting a work method for a project, it is essential to consider factors like control, efficiency, and uncertainty, allowing for a combination of approaches to optimize project outcomes. The project life cycle typically consists of stages including opening, planning, implementation, and closure, wherein each phase begins with a well-defined concept to establish the project's mission and vision. However, challenges may arise during implementation if the project’s scope and execution strategies are not aligned, necessitating careful consideration of quality, budget, resources, and risks to ensure successful completion.

The project life cycle is divided into phases:

1. Conceptualization and definition is the first phase of the project, defined as the necessary undertaking of preliminary goals and possible means to achieve their goals.

2. Planning involves establishing more formal plans for achieving the initially developed goals by preparing a timeline, budget, and defining the task and required resources.

3. Implementation is the actual "work" of procuring materials and resources, performing, and checking quality.

4. Project closure involves the final activities that usually involve "releasing" resources from the project and reassigning project team personnel.

In the aviation sector, project success hinges on effectively managing resources and aligning project objectives with client business goals throughout all phases of the project lifecycle. While significant focus and effort are often placed on planning and execution, the early conceptualization and definition

stages, despite being shorter, are crucial in ensuring a solid foundation for the project's trajectory. By establishing a competent project organization with strong leadership and employing appropriate methodologies, organizations can enhance their ability to achieve the desired business value, ultimately determining the project's success or failure. This process is aligned with the XLPM methodology for managing and controlling tasks, projects, programs and portfolios, where it integrates a comprehensive methodology for project-oriented operations, distinguishing:

• development projects;

• project management for clients/customers;

• management of internal projects within the organization;

• construction and installation management methodology.

2.5.1 Project initiation phase

The initiation phase, often termed the analysis phase, is crucial for establishing a project's foundation, as it involves assessing the business case, defining the scope, estimating costs and duration, identifying risks, and determining required competencies. This phase is essential for aligning stakeholders on key project elements and objectives, ultimately guiding the project's direction and minimizing the risk of negative outcomes through careful planning and agreement on strategies and timelines.

2.5.2 Project planning phase

"Planning is probably the most important phase of your project"

A major question that has been discussed many times is how much planning is “enough”, that is, where is the limit of effective planning that will provide everything needed for the successful implementation of the project without leading to project “paralysis”. The planning phase bridges the gap between where we are now and where we want to be.

Project planning is the rational determination of a starting point and an end point in order to reach them at the right time, without surprises. The basic components of project planning are:

- Developing a plan.

- Defining the required level of detail for the plan.

- Identifying milestones.

- Preparing various detailed elements of the plan.

- Using available tools for preparing and monitoring the plan.

The project planning phase is crucial for establishing clear success criteria that align with the final business plan, acting as a guiding framework during implementation. If inconsistencies between these criteria and the business plan are identified early, it is vital to make informed decisions quickly to

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prevent unnecessary expenditure of time and resources, ensuring that the project remains aligned with strategic objectives.

In accordance with this perspective, project managers should focus on outcomes and deliverables rather than merely the tasks and processes involved in executing a project. Effective project planning should incorporate clear performance metrics and milestones that align with the ultimate objectives. By emphasizing results, project managers can ensure that the team remains engaged with the end goal, enabling better allocation of resources, more adaptive responses to challenges, and enhanced tracking of project success against defined outcomes, leading to greater overall efficacy in project execution. To effectively manage a project, it is essential to break it down into measurable and achievable segments, ensuring a balanced focus that avoids both overwhelm and micro-management. Identifying dependencies among tasks is crucial to highlight gaps where resources may be stretched, while responsible parties should estimate the duration of activities to maintain overall project efficiency. It's important to account for unforeseen circumstances and possible risks, categorizing them by likelihood and potential impact, and establishing clear responses for when they arise. Lastly, a well-prepared project plan should be communicated to the project team and stakeholders, outlining key objectives, assumptions, constraints, and risk management strategies within a defined timeline.

The four critical elements in project planning are:

1. An experienced project team is involved in every aspect of planning.

2. Every project has a project team implementation plan.

3. Comprehensive planning by the project team is one of the most important elements.

4. Effective communication skills of the project team are necessary for successful planning.

2.5.3. Project implementation phase

The project implementation phase combines the concrete work with the outcome of the final result, and the main rule is that each part needs an "owner", i.e. a single person responsible for the part whose responsibility will be carried out. Allocating tasks to individuals within a project team enhances efficiency and improves overall quality by leveraging the unique skills and strengths of each member. This not only ensures that responsibilities are clearly defined, minimizing overlaps and confusion, but also fosters accountability, allowing team members to take ownership of their specific contributions. Moreover, a well-organized distribution of work helps in meeting deadlines and achieving project goals more effectively.

The implementation includes the following four points:

1. Developing a measurement system that provides information on actual progress compared to planned progress.

2. Monitoring the steps to collect information to determine status.

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3. Reporting is the definition in which data is communicated to management and all stakeholders.

4. Initiating action defines how the project team uses the data to monitor progress performance.

To effectively monitor or track progress in a project, consider asking these three questions: 1) Are we meeting the milestones and deadlines as outlined in the project plan? 2) Is the project staying within the allocated budget, and are there any unforeseen expenses? 3) What challenges or risks have emerged that may impact the project timeline or outcomes, and how can we address them proactively? These inquiries enable project managers to assess the current status and make necessary adjustments, ensuring successful project execution.

Status reporting is a critical component of project management that serves to communicate the current project status and its implications to various stakeholders. It consists of three key elements: a standardized format tailored for different management levels, the frequency of reports and meetings to discuss project status, and actionable recommendations for addressing schedule and budget deviations. Effective reports not only highlight existing issues but also provide forecasts that predict the impact of corrective actions. This systematic approach to monitoring and reporting is integral to project control and planning, ensuring that management can respond promptly and effectively to any emerging challenges.

2.5.4 Project closure phase

The project closure phase is crucial for ensuring that all activities are completed and formally documented, allowing for a clear conclusion of the project. During this phase, project teams reflect on successes and challenges, capturing lessons learned to inform and enhance future projects. This process not only aids in recognizing what worked well but also identifies areas for improvement, ultimately contributing to the continuous growth and efficiency of project management practices.

3. PROJECT MANAGEMENT KNOWLEDGE AREA

Project management knowledge areas provide a structured framework of best practices and terminology that align with the various phases of a project, including initiation, planning, execution, monitoring and control, and closure. These areas are categorized into interrelated segments that enhance the project's vertical management perspective, ensuring that each phase is effectively addressed through defined inputs, tools, techniques, and deliverables. Together, these elements form the foundation of successful project management, facilitating coherence and efficiency throughout the project lifecycle.

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Table1, Mapping knowledge areas and project management processes

SCIENTIFIC AREAS	PROJECT MANAGEMENT PROCESSES GROUP				
	Procedures of Initiation	**Planning Procedures**	**Enforcement Procedures**	**Supervision and Control Procedures**	**Closing Procedures**
PROJECT INTEGRATION MANAGEMENT	Development of a Project Charter	Development of a Project Management Plan	Project activity management	Monitoring and control of project activities Integrated change control	Project closure or project phases
PROJECT SCOPE MANAGEMENT		Project Scope Planning Requirements Gathering Scope Definition Creating a WBS Structure		Validation check of the defined scope Validation check of the defined scope Project scope control	
PROJECT TIME MANAGEMENT		Designing a project plan Defining activities Defining follow-up activities Estimating resource activity		Project schedule control	
PROJECT COST MANAGEMENT		Project cost planning		Cost control	
PROJECT QUALITY MANAGEMENT		Quality Management Plan	Quality assurance	Quality control	
PROJECT HUMAN RESOURCE MANAGEMENT		Human resources insurance	Project Team Assembly Project Team Development		

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			Project Team Management		
PROJECT COMMUNICATION MANAGEMENT		Communications management planning	Communications Management	Communications control	
PROJECT RISK MANAGEMENT		Risk Management Planning Risk Identification Qualitative Risk Analysis Quantitative Risk Analysis Risk Avoidance Planning		Risk control	
PROCUREMENT MANAGEMENT FOR PROJECT NEEDS		Procurement planning	Procurement implementation	Procurement control	Closing the procurement
STAKEHOLDER MANAGEMENT	Identification of stakeholders	Stakeholder management planning	Stakeholder engagement management	Stakeholder engagement control	

Source: Project Management Institute (2013.), A guide to the project management body of knowledge (PMBOK® Guide), 5th ed. Pennsylvania, Newtown Square, str. 61

3.1. Project Integration Management

Project integration management is essential for ensuring that various project processes and activities are effectively coordinated and aligned to achieve project objectives. It encompasses the systematic identification of interdependencies among tasks, the integration of resources, and the consolidation of project activities to satisfy the requirements and expectations of clients and stakeholders. By emphasizing uniformity and cohesive management practices, project integration facilitates communication and collaboration among team members, ultimately leading to successful project delivery.

Project integration management procedures include:

• project charter development - the process of preparing a document that formally authorizes the

existence of the project and the project manager to regulate project activities,

• development of a preparatory statement of the scope of project activities,

• development of a management plan,

• knowledge management,

• management and guidance of implementation,

• monitoring and review of work,

• integrated change control and closure.

Project integration management is a crucial discipline within project management that focuses on aligning all aspects of a project, ensuring that plans are meticulously developed, executed, and adjusted as necessary. It encompasses change management, coordination of diverse activities, and thorough problem-solving, making it both challenging and rewarding for project managers. By integrating various components of a project, this field not only enhances efficiency and communication but also inspires innovation and effective decision-making, ultimately driving project success.

3.2. Project Coverage Management

Project scope management is critical for ensuring project success, as it involves defining, controlling, and validating the project scope while clearly establishing boundaries. Effective scope management not only identifies project requirements and deliverables but also implements procedures for tracking changes, which helps mitigate the potential negative impacts of alterations to the agreed-upon scope. By focusing on systematic planning and client acceptance, project managers can ensure that the project outcome aligns with initial agreements, ultimately contributing to smoother execution and client satisfaction.

Important elements in project scope management are:

- Project Scope
- Activities and deliverables to be performed and achieved.
- Business Breakdown.
- The project is hierarchically divided into work packages for completion.
- Acceptance Plan
- Supplements the project plan to the contract outline.
- Criteria in the application specification
- Requirements are expressed in measurable methods.

3.3. Project schedule management

Project schedule management is a critical aspect of project management that ensures timely

completion of project activities by defining, sequencing, estimating resources, and durations of tasks, while also integrating the project's budgetary constraints and the interdependencies among various knowledge areas. Effective schedule management helps in maintaining control over timelines and resource allocation, adapting to changes as needed, and ultimately driving project success by aligning activities with project objectives.

Schedule management is a crucial aspect of project management that encompasses several key processes: defining activities to meet project objectives, sequencing these activities in a timeline, estimating the necessary resources and duration for each activity, and preparing a comprehensive schedule that includes controls for monitoring progress. The ultimate aim is to ensure that every project activity is planned, executed, and adjusted as needed to adhere to time constraints, thereby facilitating successful project delivery.

3.4. Project cost management

Estimating the costs of resources, including people, equipment, materials, travel, i.e. presence at specific locations where work is being done, etc. for calculations that are tracked to keep the project within a given budget. Costing is the summation of estimated costs for individual activities in order to determine the baseline value that determines the budget. Cost control is the influence on the factors that create deviations and control of changes in the budget, which includes: - Influencing factors in the baseline cost estimate,

- Ensuring that changes are agreed upon,
- Managing actual changes,
- Potential cost overruns,
- Detecting and understanding deviations from the baseline cost,
- Relevant changes to the baseline cost value,
- Preventing erroneous, inappropriate, or unauthorized costs,
- Informing relevant stakeholders of approved changes,
- Acting on expected cost overruns to acceptable limits.
- Project cost management, in addition to budget management and control, also includes revenue tracking.

3.5. Project quality management

Project quality management encompasses the systematic processes that define quality policies, objectives, and responsibilities, ensuring that projects meet desired standards. This includes three main components: quality planning, which outlines how quality will be achieved; quality assurance, which periodically checks processes to ensure they meet defined standards; and quality control, which monitors outcomes to ensure they align with objectives. By emphasizing "prevention beyond

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inspection," quality management seeks to proactively address potential issues, thereby reducing the costs associated with correcting problems after they occur. This holistic approach ultimately enhances project performance and stakeholder satisfaction.

3.5 Project resource management

Project resource management is crucial for organizing and overseeing the project team, addressing potential risks to the budget, and ensuring that team members are appropriately engaged in the planning and decision-making processes. This involves early involvement of team members to leverage their expertise, as well as ongoing adjustments to the team composition as the project evolves. Key procedures in human resource management include planning for human resources, assembling the project team, fostering team development, and managing team dynamics, all of which are essential for defining roles and responsibilities to achieve project objectives effectively.

3.6 Project Communications Management

Project communications management is essential for fostering clear and effective information exchange throughout a project's lifecycle, encompassing activities such as communication planning, information distribution, performance reporting, and stakeholder engagement. By selecting team members with strong communication skills and dedicating time to connect with stakeholders, project managers ensure that information is accurately created, shared, and stored, thereby facilitating a cohesive understanding of project progress and issues. Ultimately, effective communication significantly influences project success by aligning team efforts and stakeholder expectations.

3.7 Project risk management

Project risk management is a crucial component of the overall project management process, encompassing planning, identification, analysis, and mitigation of risks to enhance the likelihood of beneficial outcomes while minimizing adverse effects on project objectives. By systematically identifying, quantifying, and controlling risks, project managers can effectively safeguard the project's budget and timeline, ensuring that potential threats are addressed proactively. Though often underestimated, the emphasis on balancing risks is essential for achieving project success and maintaining stakeholder confidence. Risk management encompasses a systematic approach that includes planning how to identify, analyze, and respond to risks affecting a project. This involves risk identification to uncover potential threats, followed by qualitative and quantitative analyses to evaluate their impact on budgets and objectives. Action planning is then developed to mitigate threats and enhance opportunities, while continuous monitoring and control are essential to track identified risks, manage residual risks, and adapt to new ones, ensuring effective execution of risk management strategies.

3.8 Procurement management for project needs

Project procurement management encompasses the processes involved in acquiring goods and services essential for project execution, highlighting that organizations can simultaneously act as buyers and

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sellers under contract. This discipline involves the establishment of contracting procedures, including change management processes, to ensure effective administrative tracking of contracts and orders issued by authorized project team members. Such management is critical for maintaining control over procurement activities and ensuring that project requirements are met efficiently. Procurement management is a crucial aspect of project management that encompasses the entire lifecycle of contracts with external organizations, from procurement planning and issuing bids to supplier selection and contract closure. It involves addressing contractual and legal factors that impact the project budget, including safety, health, environmental regulations, and necessary licenses. Effective procurement ensures that essential goods and services are acquired efficiently, aligning with the project's budgetary constraints and operational goals, thereby necessitating careful decision-making and administration throughout the process.

3.9 Stakeholder management

Effective project stakeholder management is crucial for successful project outcomes, as it ensures that the interests and concerns of all stakeholders are recognized and addressed. This involves systematically identifying stakeholders, analyzing their influence and relevance, and developing tailored communication and engagement strategies to align their expectations and mitigate conflicts. By fostering open communication and actively managing relationships, project managers can enhance collaboration, reduce risks, and increase overall project satisfaction among all parties involved.

4 SPECIFICITIES FOR PROJECT MANAGEMENT WITH XLPM DEFINED METHODOLOGY

The XLPM methodology is a comprehensive framework for managing projects, programs, and portfolios that combines elements from Ericsson's PROPS and aligns with PMBok standards, offering a structured phase model with defined tools and a unified reporting system. It separates decision points into "tolls" and "milestones," facilitating strategic decision-making for project management and execution. Emphasizing the importance of human factors, including individual contributions, team dynamics, and leadership, XLPM strives to ensure that all participants share a unified vision toward achieving common business goals, guiding projects from concept through to implementation and effective operational management. A business case serves as a critical tool for evaluating the feasibility of an investment by systematically comparing expected benefits against potential risks and estimated costs. This process involves thorough information gathering, assessment, and analysis, allowing decision-makers to weigh the advantages of the venture against its uncertainties and financial implications. By calculating risks and costs, the business case helps to determine whether the proposed investment aligns with the organization's strategic goals and offers a favorable return on investment. The XLPM methodology emphasizes the effective management and control of tasks, projects, programs, and portfolios, fostering a successful project culture shaped by organizational values and informal standards. It highlights the importance of efficiency in work execution, advocating for a

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strategic approach based on the complexity and duration of tasks. Tasks involve simple resource coordination, projects are goal-oriented efforts with specific temporal and budgetary constraints, and programs consist of related projects managed collectively to enhance oversight and effectiveness. In project management, tollgates serve as formal decision points where project sponsors evaluate the project's direction, resource allocation, and associated risks, essentially determining future investments. In contrast, milestones act as checkpoints for project managers to assess whether the expected outcomes have been achieved, allowing for reflection on progress made throughout the project.

Six collection decision points apply to all projects:

TG0 - Decision to start the analysis phase

TG1 - Decision to start planning

TG2 - Decision to establish and implement

TG3 - Decision to continue execution according to the original, revised plan

TG4 - Decision to deliver the results to the recipient and external buyer

TG5 - Outcome accepted, decision to start closure

Before making a decision at each toll gate, the project is thoroughly assessed based on its alignment with corporate strategies, its role within the project portfolio, its progress toward meeting established requirements, and the level of trust and commitment among stakeholders. The project sponsor evaluates business risks against the estimated value and can choose to proceed with the proposed plan, modify the project scope based on new insights, or ultimately reject the business idea while ensuring that the lessons learned are documented for future reference.

4.1. Phases of construction of the airport near the city of Sibenik

Selecting the airport location involves identifying specific ground sites that integrate both construction elements and installed equipment, creating a cohesive technical-technological unit. These construction segments can operate independently or as part of a larger process during various construction phases, with capacity assessments conducted through three distinct phases of development to ensure efficient

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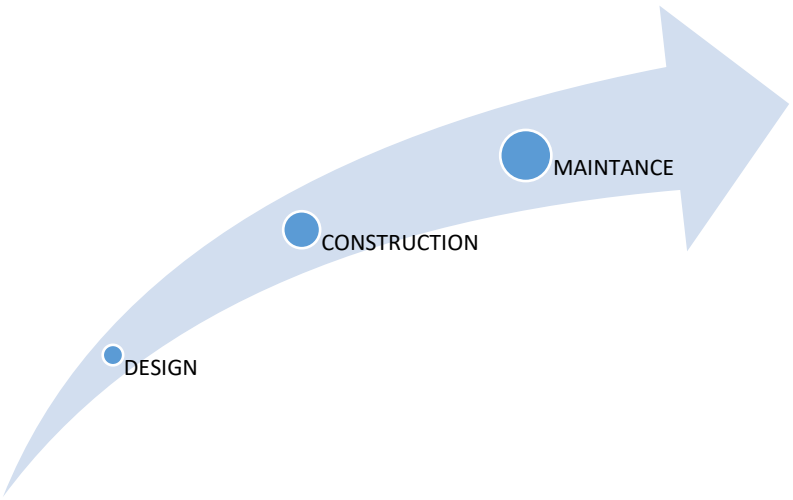
functionality and optimization of resources.



Picture 2, Basic stages in airport construction 335F[11]

[11] author's picture, source: Pavlin, S. : Aerodromi, Sveučilišni udžbenik, drugo izdanje, Fakultet Prometnih Znanosti, Sveučilištu u Zagrebu, 2006.

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Picture3, Sub-phases for design [12]

Design, construction, and maintenance form a comprehensive approach to project management in various fields. The design phase focuses on identifying, analyzing, and addressing fundamental problems while creating a structured solution. Following this, construction encompasses the implementation of project documentation through a series of tasks including construction work, finishing touches, assembly, and equipment installation. Finally, maintenance ensures the long-term reliability and functionality of a facility or project, encompassing routine safety checks, landscaping, cleaning, and infrastructure upkeep to provide a safe and efficient operational environment.

At Sibenik Airport, it is essential for both airport members and users to regularly assess the runway's condition prior to any flights. This process ensures that pilots are well-informed about any potential hazards or maintenance needs, contributing to safe and efficient flight operations.

4.2. Application of the research results and plan of the project itself

The results derived from the airport location study, having utilized real parameters, can indeed be directly implemented in practical scenarios, providing valuable insights and data-driven recommendations for optimizing site selection and operational efficiency.

[12] author's picture, source: http://en.wikipedia.org/wiki/Sustainable_development

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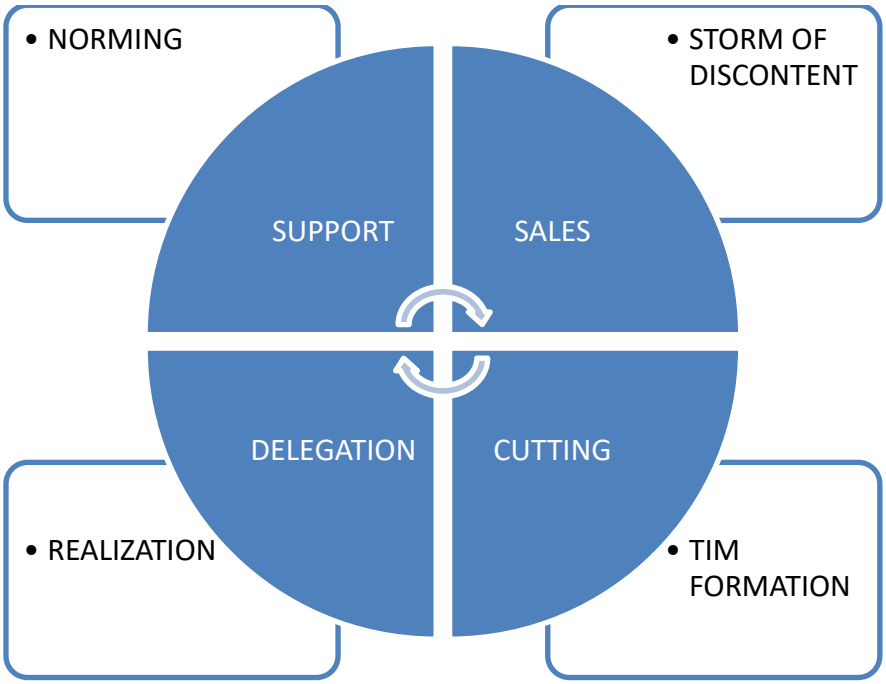

Picture 2, Implementation plan

The implementation plan will encompass four key sub-headings:
1) Objectives and Goals, outlining the desired outcomes and targets;
2) Resources and Budget, detailing the necessary resources, including personnel, materials, and financial considerations;
3) Timeline and Milestones, providing a schedule for activities and critical checkpoints; and
4) Monitoring and Evaluation, establishing metrics for success and methods for assessing progress throughout the implementation process. The effective implementation of the Sibenik airport construction project hinges on carefully selecting a diverse team with complementary skills and experiences, fostering collaboration to resolve conflicts and ensure productivity, and collectively addressing and solving problems throughout the project phases. Clear communication and a shared commitment to finding solutions are crucial, ultimately leading to a successful project completion that merits recognition and rewards for all team members involved. This plan plans to build a sports airport in the area north of the city of Sibenik.

5. CONCLUSION

The research concludes that investment evaluations in the aviation sector must comprehensively consider financial, economic, and risk aspects of airlines and airports, emphasizing the importance of analyzing both "with project" and "without project" scenarios to understand potential scenarios of air

traffic cessation. Key indicators for investment assessment include net present value and internal rate of return, while a social perspective should encompass all monetarily quantifiable elements to accurately reflect the impact of investments. The influence of external factors, particularly in developed countries, is minimal, yet these factors are crucial for shaping appropriate economic frameworks in transport, particularly concerning Croatia's natural and human resources. Continuous monitoring of external factors is essential to develop effective instruments for data collection, legislation, and protective measures against transport's environmental impacts.

The proposed construction of a sports airport near Sibenik is strategically justified due to favorable topographic, meteorological, and environmental conditions, with initial plans for a grass surface runway allowing future development and expansion. Despite the inherent uncertainties in cost-benefit analyses and the challenges of liquidity affecting operational performance, the projected increase in sales relative to costs over the next five years indicates positive operating profit growth and potential investor interest. Effective project management, staff education, and proactive decision-making are essential to mitigate risks and align the airport's development with sustainable growth objectives while addressing the financial constraints related to debt and liquidity.

This elaboration emphasizes the importance of project management throughout the project life cycle, particularly in the context of the proposed development of the Sibenik Airport in Croatia. It discusses the calibration of predictive risk models for assessing potential obstacles and their consequences, noting limitations stemming from inadequate flight data access. By comparing the established project life cycle with the XLPM methodology, the dissertation aims to provide a structured approach to project management that enhances collaboration amongst stakeholders and incorporates sustainable development principles. Ultimately, it highlights the critical role of effective planning and communication in navigating the complexities of project execution to ensure success and mitigate risks, particularly in the aviation sector.

Indeed, effective aviation project management is crucial for optimizing the development of airport infrastructure, encompassing sports, educational, and commercial uses. Identifying gaps in current practices offers significant opportunities for research and innovation that can enhance efficiency, sustainability, and safety throughout the entire project lifecycle. Collaborative efforts among stakeholders can lead to best practices that not only streamline construction processes but also address long-term operational challenges, ultimately elevating the standards of aviation infrastructure development.

Transport economics in aviation encompasses the analysis of air traffic as a vital economic driver for countries like Croatia, emphasizing the urgent need for sustainable airport infrastructure development.

This includes addressing current deficits in airport capacity and aligning with EU directives to promote economic, environmental, and social sustainability. Continuous growth in air traffic necessitates an optimization approach to balance development with the ecological and infrastructural demands of the aviation sector, thereby enabling Croatia to enhance its aviation status while meeting the needs of airlines and travelers.

This post-doctoral dissertation establishes a framework for advancing research on transport economics and sustainable development, particularly focusing on airport infrastructure. Key research areas include the development of methodologies for assessing transport economics at various levels, strategies for enhancing air traffic conditions, and establishing sustainable development goals within the aviation sector. Furthermore, the dissertation emphasizes the integration of air traffic with other transport modalities, the exploration of broader transport economic elements, and the promotion of sustainable practices in airport infrastructure catering to both commercial and sports-school needs. Recommendations for future research involve deepening the understanding of transport economics, modeling air traffic elements to align with international reforms, and appraising the impact of airport infrastructure on the overall transport economy.

REFERENCES

1. Pavlin, S.: *Aerodromi*, Sveučilišni udžbenik, drugo izdanje, Fakultet Prometnih Znanosti, Sveučilište u Zagrebu, 2006.
2. *Aerodromes, Annex 14 to the Convention on International Civil Aviation*, Volume I, Aerodrome Design and Operations, International Civil Aviation Organization, Fifth Edition, 2009
3. Stolport Manual, *Doc. 9150- AN/899,* International Civil Aviation Organization, Second Edition, 1991
4. Omazić, M. A., Đuričković, A., Vlahov, R. D. (2012.), Povezanost organizacijske strukture poduzeća I uspješnosti projekta, Zbornik Ekonomskog fakulteta u Zagrebu, godina 10, br.2
5. Project Management Institute (2013.), A guide to the project management body of knowledge (PMBOK® Guide), 5. izdanje, Pennsylvania, Newtown Square str. 3-6
6. Kerzner, H. (2003.), Project Management - A systems approach to planning, scheduling, and controlling, 8. izdanje, New Jersey: John Wiley & Sons, Inc, str.2
7. Meredith, J., Mantel, S., (2009), Project Management A Managerial Approach, 7.izdanje, New York: J. Wiley & Sons, Inc.
8. WebFinance Inc. (2020.) Dostupno na: http://www.businessdictionary.com/definition/project.html (12.1.2020.)
9. Project Management Institute (2013.), A guide to the project management body of knowledge (PMBOK® Guide), 5. izdanje, Pennsylvania, Newtown Square

10. Eng. milestone
11. Lewis, J. P. (2007.), Fundamentals of Project Management, 3. izdanje, New York: AMACOM, str.11
12. Slevin, D. P., Pinto, J. K. (1986). The project implementation profile: new tool for project managers. Project Management Journal. 17(4), str. 57–70. Dostupno na: https://www.pmi.org/learning/library/project-implementation-profile-tool-project-managers-5220 [19.12.2019.], str. 170, 171.
13. Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd, str.23-25.
14. Dostupno na: https://xlpm-online.com/en/in/x.in.index.php (9.2.2020)
15. Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd,
16. Omazić, M.A., Baljkas, S. (2005.), Projektni menadžment. Zagreb: Sinergija, str. 200
17. Izvor: McNeil, H. J. & Hartley, K. O. (1986.), Project planning and performance. Project Management Journal, 17(1), str. 36–44. Dostupno na: https://www.pmi.org/learning/library/project-planning-performance-1772 [18.12.2019.]
18. Heerkens, G. R. (2002.), Project Management. New York: The McGraw-Hill Companies, Inc, str. 97-139
19. Williams, M. (2008.), The Principles of Project Management. Australia:SitePoint Pty.Ltd, str. 57-77
20. McNeil, H. J., Hartley, K. O. (1986.), Project planning and performance. Project Management Journal, 17(1), str. https://www.pmi.org/learning/library/project-planning-performance-1772 [18.12.2019.]
21. Williams, M. (2008.), The Principles of Project Management. Australia: SitePoint Pty.Ltd, str. 77
22. Eng. Project performance
23. McNeil, H. J., Hartley, K. O. (1986.), Project planning and performance. Project Management Journal, 17(1), str. https://www.pmi.org/learning/library/project-planning-performance-1772 [18.12.2019.]
24. Williams, M. (2008.), The Principles of Project Management. Australia: SitePoint Pty.Ltd, str. 82
25. McNeil, H. J. & Hartley, K. O. (1986.), Project planning and performance. Project Management Journal, 17(1), https://www.pmi.org/learning/library/project-planning-performance-1772 [18.12.2019.]
26. https://www.projectmanager.com/blog/10-project-management-knowledge-areas (6.1.2019.)
27. https://www.invensislearning.com/resources/pmp/the-10-pmbok-knowledge-areas-a-brief-introduction (6.1.2019.)

28. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.125
29. Lewis, J. P. (2007.), Fundamentals of Project Management, 3. izdanje. New York: AMACOM, str.20
30. https://xlpm-online.com/en/pj/x.pj.ke.int.php (12.1.2020.)
31. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.137
32. Lewis, J. P. (2007.), Fundamentals of Project Management, 3. izdanje, New York: AMACOM, str.20
33. https://xlpm-online.com/en/pj/x.pj.ke.int.php (12.1.2020.)
34. Eng. Work Breakdown Structure
35. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.141
36. Brannan, L. (2006.), Project budgeting using the project management knowledge areas. PMI® Global Congress 2006—Latin America, Santiago, Chile. Newtown Square, PA: Project Management Institute. Dostupno na: https://www.pmi.org/learning/library/project- budgeting-management-knowledge-areas-8132 [1.1.2020.]
37. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.123
38. Brannan, L. (2006.), Project budgeting using the project management knowledge areas. PMI® Global Congress 2006—Latin America, Santiago, Chile. Newtown Square, PA: Project Management Institute. Dostupno na: https://www.pmi.org/learning/library/project- budgeting-management-knowledge-areas-8132 [1.1.2020.]
39. https://xlpm-online.com/en/pj/x.pj.ke.fin.php (12.1.2020.)
40. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.135
41. Lewis, J. P. (2007.), Fundamentals of Project Management, 3.izdanje, New York: AMACOM, str.21
42. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.124
43. Lewis, J. P. (2007.), Fundamentals of Project Management, 3.izdanje, New York: AMACOM, str.21
44. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.122
45. Dostupno na XLPM , https://xlpm-online.com/en/pj/x.pj.ke.comm.php (12.1.2020.)
46. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.136

47. Lewis, J. P. (2007.), Fundamentals of Project Management, 3.izdanje, New York: AMACOM, str.22
48. Brannan, L. (2006.), Project budgeting using the project management knowledge areas. PMI® Global Congress 2006—Latin America, Santiago, Chile. Newtown Square, PA: Project Management Institute. Dostupno na:
49. https://www.pmi.org/learning/library/project-budgeting-management-knowledge-areas-8132 [1.1.2020.]
50. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.134
51. Lewis, J. P. (2007.), Fundamentals of Project Management, 3. izdanje, New York: AMACOM, str.22
52. https://xlpm-online.com/en/pj/x.pj.ke.stake.php (12.1.2020.)
53. Udruga za projekt menadžment, Combines standard glossary, lokalna verizija, hrvatski Verzija 1.1., PMI ogranak Hrvatska, str.92
54. https://xlpm-online.com/en/in/x.in.index.php (12.1.2020.)

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