

**RECOMMENDATIONS TO PROJECT MANAGEMENT
METHODOLOGY APPLIED AT UNIVERSITIES BASED ON
EXPERIENCE OF HIGHER EDUCATION SCHOOLS IN WARSAW
AND FUNDING INSTITUTIONS REQUIREMENTS**

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The goal of this paper is to seek answers to the questions: how projects are implemented at Universities and how they should be implemented? The paper analyses project management methodologies adopted in the Polish Universities in the context of university specific rules and laws. Lessons learned from project implemented at these Universities were gathered and then recommendations for effective project management at universities were formulated.

Keywords: Project, Project Management, Methodology, College, University, Institution funding the projects

1. Introduction

In the recent years there is a growing interest in adopting project management, PM, approach to increasing number of activities in increasing number of institutions. This trend is well rationalized by the benefits of using PM in particular in the case of implementing a relatively large number of undertakings conducted simultaneously. This in turn stimulates growing attention paid to the various methodologies of PM, particular to methods of planning, management and progress monitoring.

The growing interest in PM is also in higher education sector, with universities becoming more extensively engaged in variety of projects, both of R&D nature and also aiming at improvement of widely defined university infrastructure. It should be noted, however, that unlike business entities, universities have much less flexibility in adopting PM strategies because of some intra-institutional constraints (the need to preserve academic freedom) and because of the rules imposed by the funding agencies. Thus, it is important to find a PM strategy applicable to possibly all projects implemented in a given university, as the way to diffuse potential tensions and assure high effectiveness of PM.

The aim of the present paper is to critically analyse factors which determine methodologies of PM adopted in some Polish Universities. The results of analysis are subsequently used to discuss possibilities of improving PM system at higher education schools.

This article is based on the thesis of the first author [4].

2. Research Methods

The results obtained in this paper were based on Desk Research, DR, and the information acquired in In- Depth Interviews, IDI. The IDI Interviews were conducted with representative of units engaged with projects. The DR part included publications, textbooks, and books on commonly used PM methodologies, project portfolio management, risk management, management of project structure and management of change and communication.

The analysis covered also legal and formal requirements imposed by the funding agencies, in particular in the context of so called Horizon 2020 of European Union. Finally, internal regulations imposed by Rectors at the universities selected for evaluation, were taken into account [1], which define procedures for project initiation and implementation.

The purpose of IDI is to improve knowledge of research topic, by asking questions about the explorative. Proper selection of respondents in qualitative research is a prerequisite for the success of any research. Qualitative selection of participants should be always directed by the aim of the research conducted. Participants should possess knowledge and experience in order to provide the information needed to answer the research questions. Therefore, precise determination of the object and purpose of the study is crucial for the proper determination of criteria for selection of respondents.

IDI events were of exploratory nature [3] and were used to deepen understanding of the PM system in a given university and expectation/requirement of the funding bodies. Such events were organized with the following institutions:

1. Medical University of Warsaw (WUM)
2. Warsaw University of Technology (PW)
3. Kozminski University (ALK)
4. The National Centre for Research and Development (NCBR)

3. Review of the methodologies of PM at the Universities

Most of the universities for many years have been working in the form of projects. In part they are financed by external funds: both EU and national. These are public funds and must be spent in the right way, so it must be used a model of conduct that is transparent and controlled.

The conducted interviews indicate that each of the investigated universities has suitable arrangements describing the specifics of the project - the required documents, the scope of activities, determine the assignment of responsibilities for specific design tasks. They also regulate issues of financial affairs in the project, while specifying who can decide whether an individual can apply for the funds to implement the project or whether it must make its own contribution to the project.

At **Medical University of Warsaw (WUM)** are three units engaged in PM. Research Department of Central Administration, dealing mainly with the project financed by National Science Centre (NCN0 of fundamental nature. Department of International Collaboration is mainly involved in international projects, among other under Erasmus+, CEEPUS. There is also Project Office, established in 2008, which disseminates information on calls for proposals, builds inventory of the projects and provides assistance in implementation, including projects completion reports.

At WUM usually the function of research project leader is bestowed to that person who was responsible for submitting the project proposal. In the case of infrastructural projects, the decision with regard to the project leader is made by the Rector Office. Research project leader enjoys full autonomy in deciding about the research related matters. Financial aspects are supported by an expert from Project Office.

Since 2014, the University implements integrated system of management, with sub-system dedicated to PM. Currently the new system is tested and the staff undergoes training. By the end of year there will be one tool available for management of all projects conducted at WUM.

At **Warsaw University of Technology (PW)** PM is delegated down to the appropriate Faculty or Institute. The Central Administration monitors progress in projects and offers support in formal matters.

As in the case of WUM, projects are led by the researchers who had been responsible for preparing proposals. Infrastructural projects are managed by the Central Administration, directly by the Chancellor or a person designated, from relevant unit of the Administration.

The project leader is supported by project team, which usually consists of a person responsible for accounting, public procurement and for information/promotion. On the financial matters the leader is supported by financial division of Central Administration. In some Faculties, there are experts who represent Dean on matters related to funding from European Commission. An attempt has been made at PW to designate one expert to each project. The entire system is, however, very likely to be profoundly changed in view of the upcoming opening of the Centre for Innovation Management and Technology Transfer.

Kozminski University (ALK) was established in 1993 and now is one of the best performing private universities in Poland. Projects at this university are implemented either by Centre of Excellence (CE) or Project Management Office (PMO). The first unit deals with projects funded with external funding, while the second with the ones funded internally. There is also Office Supporting Research Activities, focused on research projects.

Centre of Excellence to a large degree operates based on the methodology of PRINCE 2, which is modified depending on the needs of a given project. The project leader position is usually offered either to the researcher who initiated the application, or to His/her designee.

Project Management Office at ALK runs their own projects and also projects implemented by other units, financed with internal/university funding, primarily aiming at improving the university infrastructure. Usually projects are managed by employees of PMO with relevant professional background. In some cases, experts employed at PMO provide trainings to projects leaders coming out from the other university units.

The case of ALK clearly demonstrates advantages related to the private ownership of the universities in Poland. The decision making path is short and there is ease in mobilizing internal financial resources for implementing a given project, wherever it is needed. This prevents problems with delays in the execution phase and with flow of financial assets.

Main sources of funding for the projects undertaken in higher education institutions in Poland are: (a) statutory money from Ministry of Science and Higher Education and (b) competitive grants won from European and domestic funding

agencies. The latter, competitive funding, is provided by **NCBR** in the case of applied and industry relevant research and by **NCN** in the case of fundamental research. **NCBR** acts also as intermediate organization for European Programmes. Each project financed by **NCBR** is overviewed by one staff member. This person takes the responsibility of monitoring progress of the project financial/legal issues related to the project agreement.

4. The conclusions from the research and recommendations for project management methodologies at universities

Based on the review of practices adopted by a group of Polish Universities for management of projects a number of observations and recommendations can be made, with some of them being particularly relevant to the current **PM** methodology at higher education schools in general.

First, it seems to be a good practise that a special unit is established which offers support at inter-faculty level. In order to assure its efficiency, such a unit should have **clearly defined goals and tasks**. It should also be organized into **sections with well described scope of activities**. In particular, there should be sections responsible for dissemination of the information, offering support to the academics searching for funding and the one with responsibility of preparing financial statements to the progress reports. It should be noted in the context of defining the sections that overloading any group of experts with responsibilities exceeding their capacity is counterproductive. Also, **the design of sections** should agree with the basic specializations of the experts, who are very unlikely to be able to cover whole spectrum of issues of relevance.

The results obtained in this study also show that an important and grossly underestimated matter is **communication**. There is a clear indication that a successful application for project funding requires **efficient communication between the team of researchers who originate the project idea and PM experts who help to turn it into a proposal and later contract with a funding agency**. Collaboration of these two groups is of particular importance in the case of financial aspects, which **require input data from the Central Accounting Division**. Communication between the parties involved can be in many cases significantly improved with adopting appropriate **communication procedures**. Such procedures should provide legal framework for exchanging information between the university units and with external institutions relevant to the process of project preparation. They would certainly help to build an institutional environment supporting efficient project management.

An important observation made in this study is that one of the key elements in management of the projects conducted by the Universities is **handling of contingencies**. This in particular applies to reporting risk relevant events. A good practice in efficient handling such events is to **develop a manual for problems and risks supervision**.

Another important observation based on the results of the study is the need for provision to **monitor and control all projects in a given university with the use of one information system tool**. Otherwise, there is no possibility for simultaneous cross-examining of all projects, which is essential for a proper resource allocation. Also, lack of such a tool hinders efficient use of the expertise acquired in various projects.

Finally, the last recommendation with regard to procedural matters, concerns the need for **the procedure of project definition**. Such a procedure should regulate rules for project scheduling and budgeting. It could be concise and general to the point which would prevent its frequent modifications.

The results of the conducted study clearly show that the key meaning to the system of project management has **university personnel**. This personnel might speed up or delay implementation of the regulations due to both the subjective (e.g. resistance to the change as such) and objective reasons (unclear explanation of the changes needed). Thus it is highly recommended that all new solutions **are consulted with the staff involved**.

Another observation is that the researcher capable to generate excellent project ideas are not able to transfer them into project format. Thus, it highly recommended that appropriate **training in PM** is provided to the research staff at the university and to the students. Universities should consider possibility of offering a special course to the students and to potential projects leaders. The aim of this educational effort should be building PM awareness among the academia and improving skills in commercialization of the research results.

5. Summary

Based on the results of the research conducted the paper presents recommendation to the higher education schools for improving the capacity of the university in project management. The recommendation proposed concern both organizational issues, methodological aspects and training activities.

It should be underlined, however, that the recommendations put forward by no means are of ultimate character. In fact, the PM issues and methodologies should be subject of every day concern with the special focus on the researchers who are the main asset of any university.

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