

Management of operations in projects including planning, organization and control from the beginning to the end of implementation

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Abstract

The project usually arises as soon as the client's need is identified, and goes through all the extensive phases and sub-phases to take its true form and put into operation. The project is divided into two main parts that include Planning and Implementation that are separate in these stages: definition, planning, organization, control, completion. Planning involves a detailed calculation of the project. This includes known facts, admissible facts and risk calculation. Activity model used by IKOMs Planning as a process involves the cost that accompanies it. The manager must strike the balance between cost and benefit. Project control uses data provided by monitoring to bring performance.

- The existing facilities of the economic high school "Marin Barleti" in Gjilan are not sufficient and are not included in the appropriate information technology infrastructure, cabinets, inadequate physical education hall and other libraries in the Existing.
- There is a need to expand the academic space, to create more favorable conditions for learning development and genuine studies.

Keywords: Management operations, project, organization and control, implementation.

Introduction

The objective of this project is the construction of the school facility that will provide comfort in working conditions.

1.1. Specification of goals

- To meet the needs of students, in listening to lectures with a space of about 6000 square meters and adequate technology;
- Library with satisfactory space and fund of literature;
- Room and office for academic and administrative staff;

1.2. Determination of preliminary resources

- The realization of this project requires a relatively high amount of cash investments, which according to a comparative assessment amounts to € 1,322,310.20;
- In addition to money a considerable number of human resources will be engaged in the completion of this project. Special teams will be created and extinguished depending on the stage of work performed;
- Necessary technological equipment and raw material will be provided by subcontractors;

1.3. Identify opportunities and risks

The most significant risks are delays in making payments by the investor, delays in the supply of materials by suppliers, climate. The possibilities of this project consist in securing funds from other donors such as: B.B, IMF, EBRD.

1.4 Planning

1.4.1 Identify project activities, time and cost estimates

The realization of this project consists of a set of activities which are related to the realization of the final goal. As any project risks being delayed in achieving the final result but there is also the possibility of completing tasks before the deadline or planned.

- Optimistic time 600 days;
- Pessimistic time 723 days;
- Real time 664 days;
- Expected time: $E = (O + 4M + P) / 6$ • $E = (600 + 4 \times 664 + 723) / 6 = 663$ days;

Activity	Work day	Date of start of the activity	Date of completion of the activity	Amounts
Project management	663 days?	2/3/2019 00:00	6/12/2021 14:00	1,322,310.20 €
Financial management	663 days?	2/3/2019 08:00	6/12/2021 14:00	1,322,310.20 €
Architect	663 days?	2/3/2019 08:00	6/12/2021 14:00	1,256,010.20 €
Engineer	663 days?	2/3/2019 08:00	6/12/2021 14:00	1,196,340.20 €
Reporting	655.3 days	2/3/2019 08:00	6/3/2021 08:00	58,977.00 €
Realization of the project	655.3 days	2/3/2019 08:00	6/3/2021 08:00	0.00 €
Identification of project activities	663 days?	2/4/2019 07:00	6/12/2021 14:00	1,077,693.20 €
Architectural design of the building	60 days	2/4/2019 07:00	4/22/2019 14:00	4,800.00 €
Evaluation of the necessary spaces of the building	30 days	2/4/2019 07:00	3/14/2019 10:00	2,400.00 €
Designing project plans	5 days	3/14/2019 10:00	3/20/2019 16:00	400.00 €
Cost estimation	15 days	3/20/2019 16:00	4/9/2019 12:00	1,200.00 €
Deciding on the acceptance of the plan	5 days	4/9/2019 13:00	4/16/2019 08:00	400.00 €
Determining staffing needs	5 days	4/16/2019 08:00	4/22/2019 14:00	400.00 €
Job identification	15 days	4/22/2019 14:00	5/11/2019 10:00	1,200.00 €

Activity	Work day	Date of start of the activity	Date of completion of the activity	Amounts
Division of work based on competencies	10 days	4/22/2019 14:00	5/4/2019 15:00	800.00 €

Identification of material inputs	5 days	5/4/2019 15:00	5/11/2019 10:00	400.00 €
Evaluation of bids for the supply of materials	2 days	5/11/2019 10:00	5/14/2019 12:00	872,288.20 €
Opening of the tender	38 days	5/14/2019 13:00	7/2/2019 15:00	20,000.00 €
Acceptance of offers	1 day?	5/14/2019 13:00	5/15/2019 14:00	320,000.00 €
Bid analysis	14 days	5/15/2019 14:00	6/3/2019 09:00	34,131.20 €
Evaluation of bids in relation to each other	10 days	6/3/2019 09:00	6/15/2019 10:00	6,400.00 €
Deciding on the most favorable offers	10 days	6/15/2019 10:00	6/28/2019 11:00	2,000.00 €
Signing agreements with suppliers	2 days	6/28/2019 11:00	7/1/2019 14:00	2,100.00 €
Carrying out works in the construction of the facility	1 day	7/1/2019 14:00	7/2/2019 15:00	126,000.00 €
Rough construction of the building	548 days	7/2/2019 15:00	6/12/2021 14:00	2,400.00 €
Base construction	205 days	7/2/2019 15:00	3/25/2020 12:00	9,000.00 €
Construction of the first floor	30 days	7/2/2019 15:00	8/10/2019 08:00	5,000.00 €
Construction of the second floor	30 days	8/10/2019 08:00	9/18/2019 11:00	96,000.00 €
Third floor construction	35 days	9/18/2019 11:00	11/2/2019 10:00	60.00 €

Activity	Work day	Date of start of the activity	Date of completion of the activity	Amounts
Construction of the fourth floor	40 days	11/2/2019 10:00	12/24/2019 15:00	10,800.00 €
Construction of the roof	40 days	12/24/2019 15:00	2/14/2020 09:00	750.00 €
Installation of building windows	30 days	2/14/2020 09:00	3/25/2020 12:00	1,500.00 €
Measuring windows	77 days	3/25/2020 13:00	7/3/2020 08:00	300.00 €
Production of windows	2 days	3/25/2020 13:00	3/27/2020 15:00	420.00 €
Placement of windows	60 days	3/27/2020 15:00	6/13/2020 11:00	10,000.00 €
Basic infrastructure of electricity, water, heating, IT	15 days	6/13/2020 11:00	7/3/2020 08:00	192.00 €
Installation of pipes for electrical cables	21 days	7/3/2020 08:00	7/30/2020 11:00	160.00 €
Installation of heating pipes	21 days	7/3/2020 08:00	7/30/2020 11:00	200.00 €
Installation of water pipes	15 days	7/3/2020 08:00	7/22/2020 15:00	400.00 €

Installation of pipes for IT cables	15 days	7/3/2020 08:00	7/22/2020 15:00	5,000.00 €
Floor leveling	15 days	7/3/2020 08:00	7/22/2020 15:00	5,760.00 €
Facade of the object inside and outside	15 days	7/22/2020 15:00	8/11/2020 11:00	5,500.00 €
Flattening of the walls	80 days	8/11/2020 11:00	11/22/2020 10:00	300.00 €
Facades	45 days	8/11/2020 11:00	10/8/2020 11:00	300.00 €

Activity	Work day	Date of start of the activity	Date of completion of the activity	Amounts
Staining	20 days	10/8/2020 11:00	11/3/2020 14:00	640.00 €
Door mounting	15 days	11/3/2020 14:00	11/22/2020 10:00	20,000.00 €
Door measurement	12 days	11/22/2020 10:00	12/8/2020 14:00	3,200.00 €
Placement of doors	2 days	11/22/2020 10:00	11/25/2020 12:00	2,500.00 €
Gluing ceramic tiles and assembling sanitary ware	10 days	11/25/2020 13:00	12/8/2020 14:00	16,104.00 €
Tile gluing	80 days	12/8/2020 14:00	3/21/2021 12:00	9,150.00 €
Fill in the blanks	60 days	12/8/2020 14:00	2/24/2021 10:00	8,400.00 €
Sanitary installation	10 days	2/24/2021 10:00	3/9/2021 11:00	51,808.00 €
Functionalization of installations	10 days	3/9/2021 11:00	3/21/2021 12:00	31,083.00 €
Release of electrical and IT cables	48 days	3/21/2021 13:00	5/22/2021 16:00	90.00 €
Connecting plugs, switches, fuses	14 days	3/21/2021 13:00	4/9/2021 08:00	3,200.00 €
Digital meter connection	5 days	4/9/2021 08:00	4/15/2021 14:00	24,000.00 €
Connection of heating radiators	1 day	4/15/2021 14:00	4/16/2021 15:00	32,000.00 €

Activity	Work day	Date of start of the activity	Date of completion of the activity	Amounts
Inventory of the facility	4 days	5/18/2021 11:00	5/22/2021 16:00	3,040.00 €
Placement of benches and chairs in the halls	10 days	5/22/2021 16:00	6/4/2021 17:00	80.00 €
Placement of tables in the halls	10 days	5/22/2021 16:00	6/4/2021 17:00	1,120.00 €
Placement of computers in the IT room	3 days	5/22/2021 16:00	5/27/2021 09:00	800.00 €
Placing bookshelves in the library	10 days	5/22/2021 16:00	6/4/2021 17:00	800.00 €
control	1 day	5/22/2021 16:00	5/23/2021 17:00	160.00 €
Performance control	3 days	5/25/2021 07:00	5/28/2021 10:00	80.00 €

Cost control	3 days	5/25/2021 07:00	5/28/2021 10:00	196,365.00 €
Time control	3 days	5/25/2021 07:00	5/28/2021 10:00	90,500.00 €
audit	3 days	5/25/2021 07:00	5/28/2021 10:00	15,000.00 €
Achievement assessment	7 days	5/28/2021 10:00	6/6/2021 08:00	15,000.00 €
Evaluation of managerial procedures	5 days	5/28/2021 10:00	6/3/2021 16:00	17,500.00 €
Completion of the project	7 days	5/28/2021 10:00	6/6/2021 08:00	20,000.00 €
Acceptance of the project by the investor	5 days	6/6/2021 08:00	6/12/2021 14:00	20,000.00 €
Inauguration	4 days	6/6/2021 08:00	6/11/2021 12:00	3,000.00 €

Fig.1. Identify project activities, time and cost estimates

1.5 Flow of project activities

Activities in construction projects have a certain flow which are determined by the phase in which the project is located. For example, first the base of the building is prepared, then the first floor and so on until the construction or construction of the roof.

1.5.1 Identify critical project activities

- Each project has activities that significantly affect the schedule, cost and delays in achieving goals.
- Any delay in the construction project may cause a project delay. If the architectural project is delayed then the work cannot be started, its absence will delay the whole construction process.
- According to the plan, 663 working days are needed to complete the project.

1.6 Compilation of the project proposal

- Name of the project: Construction of the building of the Faculty of Economics •
- Location: Gjilan;
- Investor: UP and the Municipal Assembly of Gjilan;
- Manager: Agaj Primer;
- Project start date: 03.02.2020;
- Project completion date: 06.12.2022;

1.7 Organization

1.7.1 Determining staffing needs

- The realization of this project requires the commitment of a large number of people, but this does not mean that they will work at the same time.
- Depending on the following activities, special work groups are created and disappear at the end of the activity, this project requires a large number of human resources as a workforce.

1.7.2 Recruitment of the manager

- The project manager will be selected at the beginning in order to follow the whole process development to be in the process of project development.
- The selection will be made taking into account the tasks, responsibilities of the manager and the general skills and abilities to be fulfilled.

1.7.3 Recruitment of the project team

- The selection of teams to be engaged in the project will be made by the project manager based on their professional and interpersonal skills.

1.7.4 Organizing the project team

- With the selection of the manager and the team, predispositions are created to choose a form of organization that suits the type of project. In general, in construction projects, the project structure is applied as an appropriate organizational form.

1.8. Controls

1.8.1. Defining a management style

- The project manager is responsible for leading the project.
- Decision making is centralized and communication is done directly with senior management and subordinates.

1.9. Organization of control

- Project reporting and control will be done on a monthly basis as the project lasts longer,
- This is done in order to control performance, cost and time.

1.10. Preparation of current situation reports

- The reports will provide information on the level reached by the project.
- The reports that will be used in general are routine and periodic reports and reports for special analysis in cases where it is needed.

1.11. Project review

- If there are deviations in the results achieved compared to the planned ones, there is a need to review the project.

1.12. Change management and undertaking corrective activities

- Changes are inevitable but it is important that they do not reach the level to jeopardize the project,
- The participants in the project should be motivated to engage in the direction of detecting deviations as early as possible in order to take corrective steps.

Conclusions

Planning is about a detailed calculation of the project. This includes known facts, acceptable ones and risk calculation. The key to a successful project is in its planning.

Creating a project plan is the first thing you need to do when undertaking a project. A project is successful when the needs of stakeholders are met. As a first step it is important to identify the stakeholders in your project.

Project control is done in order to: track progress-The project manager should have a system of periodic reports that identifies the state of each activity in the project, detects deviations from the plan-when various problems push the project out of the scheme own and take the necessary corrective steps.

- The project ends with its acceptance by the customer,
- In this phase, the project is distributed, the documentation is prepared, the final report is prepared and an implementation review is done,
- Upon completion of the project all appointments of project team members are terminated,
- Formally concludes relationships with suppliers, contractors, customers and other parties.

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