

Basis for the Development of a Project: Planning

By Germán Bernate

All private or State Enterprise works on a permanent basis with projects. Thanks to them develops products or services offered by the national or international market: conceivably that projects that leads must be of optimum quality. To achieve this Manager should focus its efforts in the key Trilogy: plan, direct and control. Successful companies incorporate among its employees to those who must exercise as managers and as seen with all the aforementioned trilogy zeal.

In all countries of the world the situation is identical, Eastern enterprises and Westerners, as Eliyahu Goldratt said, they have a common goal: to make money and provide optimal service to its customers. Similarly the State enterprises also have the same objectives: provide optimal care to the taxpayer and to the extent possible good results that are reflected in the good service to the people.

The above implies that employees and officials who work as managers must be know any methodology that supports them to develop this work. In Western culture it has a methodological guide of the Project Management Institute (PMI) the mentioned methodological guide based knowledge into five basic groups: initiating, planning, executing, monitoring and controlling and finally closing.

1. Initiating

In general to start a project you have a contract or a work order. To start the project is must develop a Project Charter. Therein it is stated: the work to be performed (scope), the available budget, the base schedule, communication system to be used between the stakeholders, agreed start and closing dates and the schedule of milestones.

All of the above described at a high level. It is then necessary to identify each and every stakeholder or groups of people involved in the project. It is essential to inform providers along with the names of the people who care for them and their data such as phone and email. Same information is required for all members of the company participating in the project; they are added to the position and physical location in the company.

2. Planning

Americans admire the Japanese for the good quality of their products and the best services that offering to customers. Some surveys have found the secret of these successes: planning. Any project they invest 50% of the mentioned project planning time and the other 50% in the execution. Spanish-speakers have another perception of the work. They invest 10% in planning and 90% in implementation. In developing a plan

that is only the basics, necessarily are incurred many mistakes which ultimately end up delivering poor results that customers rejected over and over again and that should be re worked, i.e. missing the time and money that this includes. This is the difference between those who work well and those who do poorly.

Planning should be developed in ten dimensions: scope, schedule, budget, quality, human resources, communications, risk, acquisitions, interested and finally the integration of all of the above. Below we describe each and every one of them. Each size it will have its own plan with its own baseline, and each of them will be called subsidiary plan. The planning of each and every one of those mentioned is done in parallel, there are no precedence constraints. The 'Project Plan' that collects all the subsidiary plans is made at the end. It is vital to develop the risk management plan as early as possible.

1) **Scope**

Scope refers to the product or service we are going to develop. The first thing is to gather the requirements and characteristics of the product or service expected. Defined and documented all the needs of stakeholders for the purpose of fulfilling the objectives of the project. The next step is to define clearly the scope of the product or service; it generally develops gradually and must comply with the recorded in the minutes of the Project Charter.

You must include the product acceptance criteria and sets what are the records that must be processed to verify the above. It is essential to consider clearly what the project deliverables are: these include both the final product and service as the preliminary results, such as reports and documentation developed during the project. These can be described in very detailed or general form.

The exclusions of the project point to what is alien to it and that it is out of reach and that therefore no it will be included in the results. The restrictions should be listed and detailed so that does not fit any error possibility. The best-known constraints are the budget, which shall not exceed and dates imposed by the customer such as the start date and the closing date.

In a similar manner shall be dispatched all the assumptions of the project, an example: it is assumed that at the start of the project it has the budget, properly trained employees with the time you have available for the project. And work facilities such as desks, computers, among others.

The work breakdown structure (WBS) is a process that allows you to subdivide the deliverables and the work of the project into components smaller and easier to handle. It is a hierarchical decomposition and is broken down into as many levels as they deemed necessary. When you work with mature groups that have experienced the level of

breakdown is small, but, on the other hand when working with novice team's breakdown has to be much more detailed.

The project manager is vigilant of each of these elements. The lowest level of the WBS called a work package. In general a package must be programmed, controlled and funded and one person is responsible for it. The WBS can become very large and therefore it is desirable to use some tool of computation that will assist the person concerned in the development of the same. The foregoing meets the scope, also called subsidiary scope plan.

2) **Schedule**

Here are all the processes that are required for the project to finish on time and compliance with the provisions of the contract in this way. It begins with the definition of the activities, and this is to identify all the specific actions that must be performed to produce the deliverables of the project.

Then these activities are put in sequence in such a way that all relationships lead to bring the project to a successful conclusion. Then estimate the resources needed for the development of activities and defined the type and quantity of materials, people, teams or any provision required to execute each activity. It is the estimate of the duration of the activities, is set approximately the number of periods of time needed for each activity with the estimated resources, these durations vary according to who run them. The same activity may last three days when he is in charge of a widely experienced person or a week when that does it is an apprentice.

With the entire above schedule is developed. It analyzes the sequence of activities along with the duration resources and restrictions that may exist. Here again it is desirable to work with a productivity tool. When a project is small and 20 activities work programming is reasonably simple and can be done with a simple list, where for each activity, set the name of the same, the person who runs it, the duration and cost, and this works well.

But when we are talking about a project involving 2,000 activities it is little less than impossible carry it by hand. At this time the use of a tool of productivity, as a result of the foregoing is imperative, the schedule management plan or subsidiary schedule management plan is developed. Reports are prepared and to facilitate the reading of the interested parties, lists with the overview of the activities and milestones lists are produced.

Sets schedule baseline. This is developed taking into account the network's schedule. Start and end dates are entered in it. In addition are the agreed milestones. By extension, there is a 'Base line' for all dimensions and they are integrated into the Project Plan. The project team approves the multi-tap line and will work to meet the stated there.

3) **Costs or budget**

The project manager is responsible for the costs involved in the same, therefore should be monitored with professional zeal all the costs and to ensure that they are within the budget. The first management consists in estimating the costs and this, is an approach to determine what are the financial resources needed to carry out the project.

The next task is to draw up the budget. In it add all the estimated costs in individual activities or work packages. Sets budget Base Line.

It is necessary to define the level of accuracy with which we will work, the accounting department develops its management independently to the work of the project manager and the accuracy of them is always 100%. The project sets the level of accuracy and this may be in thousands, millions or billions. For example, a Government budget establishes and controls billions. Units of measure are set and they may be in hours, days or weeks and are defined at the level of resource.

Control thresholds help to the monitoring of the performance of the costs; you can set different thresholds, for example, an agreed amount or a percentage of deviation from the line base of the plan's costs. Rules are established to measure performance: one of them is the earned value. It integrates measurements of scope, cost and schedule to assess and measure the performance and the progress of the project.

Defines an integrated base line, against which performance is measured. The basis of earned value, is in the measurement of the following: a - planned value, which is the authorized budget; b earned value, which is the job that actually has been completed in terms of approved budget, this can't be higher than the approved budget and finally; c - the real cost, i.e. the costs incurred up to the date of registration.

It is necessary to monitor variations with respect to approved base line: variation of the timetable and the variation in the cost. These values are converted into efficiency indicators to reflect the cost and timing of any project, this allows comparison with other project or a portfolio of projects. There is the index of performance of the schedule and the cost performance index, with them is set if the project is on time, or if it is late. With the foregoing prepares cost plan or the budget, also called subsidiary plan costs.

4) **Quality**

Every contract is agree the quality level and the degree of the same. The quality requirements are verified during the planning or standards that must be observed for the realization of the product or service and must be documented in the form so that it can demonstrate compliance with them. The quality plan must include at least the following:

- a) Analysis cost benefit: the main benefits of implementing a quality system are to decrease the amount of re processes and achieve better productivity with reasonable costs and greater stakeholder's satisfaction.
- b) The cost of quality analysis: the cost of quality includes all those costs that are incurred during the life of the product investments to avoid compliance with the requirements and to assess the opportunity of said product or service requirements and prevent non-compliance with them and prevent Kickback. The costs for failure can be internal or external.
- c) Comparative studies: these involve comparing the actual or planned practices of this project with other affordable projects that allows you to identify best practices and generate coming improvement.

The quality plan also called subsidiary quality plan must be as a result of the above.

5) Human resources

In this process are identified and documented the roles required in a project of responsibilities and skills required to play a role. An interesting tool is the so-called "Organization breakdown structure (OBS)"; it describes the organizational structures and jobs.

Theory of the organization: project manager must learn the theoretical and actual functioning of organizations and understand the various functions required across enterprise. It is interesting to study any management book. This is complementary to the formation of the project manager.

The human resources plan or subsidiary human resources plan is develop. A very important function of the project manager consists of the appropriate conflict management. In any human activity, conflicts are inevitable, in general can be due to lack of resources or by not appropriate schedule definition or just the personal styles of the people involved. Basic rules of team work and the rules governing it should be established.

The definition of roles minimizes the number of conflicts, it is important to remember that the differences of opinion are legitimate and allows greater creativity and better decision making. When eventually the differences become negative, the members of the team are responsible for resolving them, of course under the guidance of the project manager. There are six techniques recognized in the PMBOK for the conflict resolution.

- Withdraw or escape: not to take any action in a situation of conflict.
- Soften or reconcile: to focus on the points on which everyone is agreed and minimize the differences.
- Consent: Search solutions that all parties consider that they have won.

- Force: Impose its own discretion at the expense of everyone else.
- Collaborate: Add many points of view from several perspectives and try to reach a consensus the commitment.
- Confront or resolve problems: solve the problem by examining alternatives and find an attitude of mutual concession and an open dialogue.

6) **Communications:**

In this process are determined the information needs of those interested in the project and set out how to handle communications, who needs what information, when you need it, how deliver you must be set and by whom. Technology that prevails at this time is the exchange of information through emails. Recently have been linked to the use of processing in the cloud, this facilitates the exchange of information among all members of the team. The communication plan will be prepared.

It is important to focus on the definition of the Government for the project. The governing bodies are the Executive Committee and the Technical Committee. The first is responsible for setting guidelines and achieve compliance with the Strategic Plan. The second is related to the day to day operation. It is in permanent contact with the project manager and ensures the fulfillment of the objectives agreed for the project. When working in programs and portfolios mentioned committees extend its coverage and are linked with the groupings referred to in a flexible and timely manner.

The sponsor is typically a high level executive who is very familiar with the Organization's strategy. You can obtain the resources needed to get the project to develop without interruptions or difficulties. He is responsible for the elaboration of the memorandum of association with the support of the project manager.

The project manager is only responsible. All planning rests on their shoulders. You must direct execution solve the problems that arise, resolve conflicts, ensure the fulfillment of what has been agreed in the schedule, comprehensive monitoring of budget. Coordinate quality grade, directing the project team, monitor communications, direct follow-up to the risks and be aware of all purchases and acquisitions. Really is a challenging work.

7) **Risk:**

Here it is described as a project risk management activities to be developed. Whole issue of risk is working in real life in the first draft that is performed on a client. All risks identified reconciles in a repository that is available to all project managers and stakeholders generally.

When you begin a new project explores the repository and already known risks, incorporate then the corresponding analysis to identify new risks. These will be included in the repository as often mentioned.

A staff meeting using brainstorming technique identifies risks that can affect the normal development of the project and are documented with clear expression of its characteristics. Lessons learned documents what has happened both at the level of this project or other projects, that may even be of other customers, who contribute to our learning.

Once identified the qualitative analysis of the same is made. This sets out priorities for appropriate management of the risks. For them is assessed the probability of occurrence and impact on the project.

Then the quantitative risk analysis is made, discussed in numerical form the effect of identified risks on the general objective of the project. Sets risk response plan. SWOT (strengths, weaknesses, threats and opportunities) technique is used.

8) Acquisitions:

It consists of document purchasing for the project decisions, identify possible providers, and specify how to do so. The first thing you must decide is if it is made or purchased the product or service. Then the type of contract that should be signing with suppliers, negotiate delivery times, the quality of the product and the support that will see once received. Prepare the procurement plan or subsidiary procurement plan.

9) Stakeholders management plan:

The plan includes the systematic analysis of the qualitative and quantitative information that request these interested parties. It is necessary to know their interests, expectations and influence in the project. Prepare stakeholders management plan.

10) Integration:

This process prepares the project plan and takes as input all the subsidiary plans that have been mentioned throughout this document. The main tool is the expert's judgment: the knowledge and experience of all your team members.

Looking for that project plan meets all the requirements of the same and is achieved through compliance with all the technical details and management to be included in this plan. It is important to determine the resources required along with their skill and knowledge levels.

At this time planning is finished. Next will be to begin with the execution: it develops simultaneously with monitoring and control.

About the Author



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Germán Bernate is an Electronic Engineer (Universidad Distrital – 1962) and Master in Project Management (UCI University of Costa Rica 2009). He worked 31 years for IBM in Colombia in managerial and technical positions. He worked with NCR Colombia and served as Program Manager and Project Manager. Founder and CEO of Almagesto (2004), a company dedicated to consulting and training in the areas of strategic planning and project management. In 1992 he won the first prize in the fourth edition of Doctor Zumel Literary Contest in Madrid Spain. President of the Board of Teatro Colón for five years (2007-2011). Led the Project Management program at Universidad Piloto August 2008 to December 2009. Parquesoft Director during the period from August 2010 to March 2011. Professor at universities Distrital Francisco Jose de Caldas, Nacional, Javeriana, Pamplona, Tecnológica de Bolívar, Andes, Externado, America and Piloto. Co-founder Colombia Chapter PMI (Project Management Institute) and its president for three terms. Co-founder of the Colombian Association ACGePro Project Management IPMA Member Association (International Project Management Association). He has published several books, including 'El año 2000 al acecho. La crisis del Y2K afectará a su computador, aprenda a controlarla' on the issue of the change of the millennium. In February 2013, published as the book 'Gerencia de Proyectos: aplicaciones en salud'. *Computerworld* Editorial Board Member since 1996 and international correspondent of PM World Today eJournal and PMForum.org from 2007-2011. Contact email: gbernate@cable.net.co