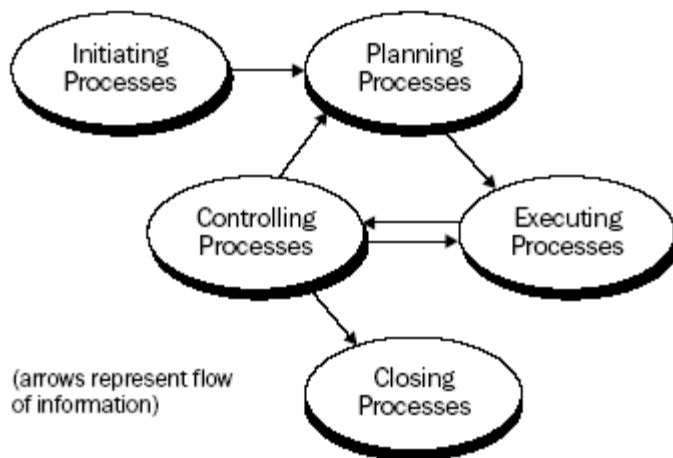


**Infrastructure Project Initiation**

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**PMBOK**

This chart, illustrating the 5 processes of PMBOK, helps us understand the proper way of managing an infrastructure project, from the initial stages of a project, through its conclusion. The most important starting points of any project are the development of a project charter (including roles and responsibilities) and a preliminary scope statement. The project charter defines the scope, objectives, and overall approach for the work to be completed (Mantel, Meredith, Shafer, Sutton, 2005). It is a critical element for initiating, planning, executing, controlling, and assessing the project.

It should be the single point of reference on the project for project goals and objectives, scope, organization, estimates, work plan, and budget. In addition, it serves as a contract between the Project Team and the Project Sponsors, stating what will be delivered according to the budget, time constraints, risks, resources, and standards agreed upon for the project. A project that does not have a formal project charter can lead to much confusion, as people really do not understand the fundamental objectives to the project, nor the principles on how it would be managed. The document itself should also consist of appropriately defined scope and responsibilities.

The purpose of defining roles and responsibilities is to provide the project team members with a clear definition of expectations for their participation and the participation of their teammates. The goal is to provide well defined and communicated roles and responsibilities. It is imperative to provide a clear and comprehensive roadmap for all roles. In this way, specific roles are assigned accountability for leading, participating and/or reviewing the work products produced as part of the development

lifecycle. Using PMBOK methodologies, after the Charter has been signed off by the Project team, a scope statement is then developed, from which all future changes in the project are managed.

The Scope Statement provides a documented basis for making future project decisions and for confirming or developing a common understanding of the project scope among the stakeholders (PMBOK, 2004). As the project progresses, the scope statement may need to be revised or refined to reflect approved changes to the scope of the project. The scope document is a dynamic document and is perhaps the most important document of the entire project, as it outlines all project objectives, which are then to be signed off by the entire project team. Only after these two documents have been completed, then a project plan can be put together and developed. Too often, the first document produced in a project plan, is the project plan itself. There is a lot of pressure from others to produce a project plan as the initial document, though a project is bound to be haunted with problems without an official charter and scope.

The Project Manager has the most important role of all within the project. The methodologies used may be impeccable but if the PM is weak or the structure of his role is weak, the Project will not be as successful. A project manager must be flexible enough to deal with change as the project progresses, and also not lose it when unpleasant surprises come up during a large infrastructure project implementation. This person must be able to work with nearly every individual in the organization, from the most technical IT person, to the business people, to the functional types that do the actual work. They must possess the ability to learn extremely fast, because they will need to understand business issues in areas of the organization with which they may not be familiar with. A project manager must also be very disciplined. This person must be able to envision the project end game, and then hold the entire organization towards that end. This means bringing other team members back on track when problems develop and also making tough decisions understanding that those decisions will upset some and please others. More than any other trait, they need a thick skin.

There are also various degrees in which a project of this size can be defined in terms of its overall structure.

There are three ways in which a project can be structured. They are:

- Functional
- Matrix
- Projectized

A functional project is defined as a classic hierarchy, in which each employee has a single superior, and then employees are organized by specialty and work accomplished is specific to that specialty. This is the most difficult assignment for a project manager, as they lack the authority to assign resources and must acquire people from other functional managers. When this occurs, the priority can be viewed lower than operations by the function manager. In these types of organizations, the project manager must often appeal to senior management to resolve issues at all levels. A matrix project is defined as a blended organizational structure. Although a functional hierarchy is still in place, the project manager is recognized as a valuable position with greater authority to manage the process and resources. Within this structure, one can have a weak, balanced or strong matrix. In a weak matrix, the PM reports to a functional manager that also manages the day-to-day work. In a strong matrix, more power is given to the PM, as he usually reports to a Project Management Office (PMO). A projectized organization is one where there is no defined hierarchy. Resources are brought together specifically for the purposes of the project. People assigned to the project work only for the PM for the duration of the project. This is the preferred method of a structure for any PM, though as a practical matter, he should probably hope for a strong matrix implementation. A Project org chart is also a key element in this process and helps illustrate at a high level the nature of the project organization.

In a large infrastructure systems project, it is essential that the business objectives are clear. Those objectives should be defined in the Project Charter and Scope. They must be enforced so as to prevent the "never ending project" syndrome. This occurs when constant scope changes are made, which cause confusion among project team members. The primary focus of scope management is on defining and controlling what is the project.

The project manager needs to work with the other departments and the sponsors of the project to clearly define the project scope. If it is not clear, then required work can be missing which can jeopardize the project success. It can also hurt the budget, as scope changes always affect the budget in infrastructure project implementations. To prevent scope creep, the project charter and scope statement must be clear. All project requirements must be clearly defined, documented and signed by the users and senior management. Clearly define change control procedures and hold everyone to them. Tight change control procedures may end up causing tension between the project team and those who do not get changes they want. Ultimately, though, the project can't be successful if the project team is trying to hit a constantly moving target.

### References

Mantel Jr., S. J., Meredith, J. R., Shafer, S. M., & Sutton, M. M. (2005) *Project Management in Practice*. Hoboken: John Wiley & Sons.

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