Chapter 7
Choice of Maturity Model to Complex Engineering Projects

ABSTRACT
After understanding maturity in project management, it is important to understand how to choose the ideal model for complex engineering projects. This choice will be assigned to the number of interfaces in the project. Survey of stakeholders and how they relate to the enterprise will directly result in the number of such interfaces. Once the maturity model is understood, it will be possible to manage the projects more accurately and increase the chances of success. This chapter will present how interfaces are identified and managed in an engineering and construction project.

INTRODUCTION
This paper discusses the reasons that justify the use of Interfaces Management through a multidisciplinary coordination in industrial projects. It presents a real application case and practical change management. In addition, it makes a recommendation of processes to carry out this management among the several disciplines that compose the industrial projects focusing on the engineering phase (design) of the same. Based on this information, it presents the benefits that the use of the interface management can bring to the industrial enterprises guaranteeing the choice of an ideal maturity model allowing a better management of complex projects.

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Projects for the construction or renovation of industrial plants are usually large and expensive efforts for companies with a high degree of difficulty and complexity. In this way, Project Management techniques are used to increase their chances of success, through a chained and organized administration.

The large number of companies involved in such ventures makes it even more difficult to coordinate the activities that influence and relate, since it must be ensured that information is available as accurately as possible and in a timely manner for use by stakeholders, (which represent those involved in the industrial project in question).

The increasing use of compression of project execution times, in which the engineering phases of the various disciplines that make up the project must occur in parallel with each other, and in parallel with the construction and assembly phases, reducing the risk of even greater serious problems, with damaging impacts for the whole enterprise.

In this scenario, the Management of Interfaces between the different disciplines becomes a factor of great importance for the success of the enterprise through a correct compatibility and adequacy of the engineering documents. The purpose of this article is to discuss the importance of managing the interfaces and recommend a way to do this management appropriate to an ideal Maturity Model in Project Management. The focus will be the design phase of large industrial projects, consisting of documents such as flowcharts, data sheets, layouts, diagrams, typical details, among others.

For the development of the subject of this article, there is a review of the bibliography that shows some references of the literature on Interfaces Management and Maturity of Projects. It then addresses interfaces management in industrial projects and proposes two processes for this purpose.

After these analyzes and discussions, the article presents conclusions about the importance of Interfaces Management in industrial projects and how this can be done through a multidisciplinary coordination.

Figure 1. Processes for interfaces management
Source: Prepared by the author himself
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