

# Chapter 12

## Project Management in Portuguese Metalworking Industry

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### ABSTRACT

*Project management is increasingly considered a powerful tool to tackle the challenges of businesses in a globalized economy, where the need for innovation is decisive. At the same time it has emerged as a field of knowledge which has been expanding and studied under various perspectives. In this chapter the authors aim to contribute to the knowledge on project management practices in the manufacturing sector. The results presented here characterize project management practices in the Portuguese metalworking industrial sector. Data analysis from thirty companies show that risk and integration areas are often overlooked in project management and need to be promoted.*

### INTRODUCTION

Traditional bureaucratic management is no longer suitable for companies to remain competitive in the new global market. To face the problems and grab the opportunities of the modern business environment, they need to adopt more adequate and innovative practices. In recent decades, this need for a new approach has led to the growth of project management as a formal area of knowledge, well established in various sectors of activity and studied in the academic world.

Similar to functional management strategy, project management is used to attain a series of business objectives and to perform tasks within a well-defined schedule and budget (Srivannaboon, 2006). It does not apply different methods from those used in normal business activities (Martín, 2008). In fact, the functions in project management are the same as those in any corporate organization chart, the difference

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lying in the philosophy of action, which ought, in this case, allow them to adapt to the discontinuous nature of the activities that characterize projects.

According to Turner and Müller (2003), a project is a temporary organization, to which resources are allocated in order to carry out an interim enterprise, unique and innovative, managing the inherent uncertainty and integration needs, in order to achieve the beneficial objectives of change.

The manufacturing industries' processes consist in creating a product by transforming raw materials, usually the production of a specific item of equipment built for a customer or initiated and funded within the organization for the design and development of a new product, aiming for the subsequent manufacture and sale in quantity. Several functions must be strategically planned, organized, programmed and completed. Facility layout, stock control, cost analysis, production planning and a series of others, fall within the processes of planning, organizing, scheduling and control cycles of project management (Badiru, Badiru, & Badiru, 2008; Lock, 2007; Economist Intelligence Unit, 2010).

The Portuguese metalworking industry provides finished products, as well as technologies, services and equipment for other industrial sectors, playing a central role in the industrial fabric and, consequently, in the economic growth. Consisting mainly of small or medium-sized companies, this sector has a great significance in the whole of the Portuguese manufacturing industry, both in terms of number of companies (21,7% of the total) and personnel (21%), as in gross value added (22,2%) and output products (25,3%) (Gabinete de Estratégia e Estudos, 2010).

As far as Portugal is concerned, some studies have shed light on the practice of project management, particularly in the software development area (Assunção, 2009) and the construction sector (Pilar, 2009). In order to contribute to the knowledge of the subject, this article presents some results of an investigation on the use of project management practices in the Portuguese metalworking sector. It aims at answering to the following questions: what are the most applied methods and frames of references? Which are the most commonly used processes? Which are the knowledge areas which receive greater attention from managers? What are the skills and responsibilities required for a competent project manager? What are the most important aspects considered in the recognition of project success, as well as the most common obstacles in its realization? These results come from the processing of data collected from a survey applied to thirty companies from the sector in Portugal.

## **PROJECT MANAGEMENT**

The PMBOK Guide, published by the Project Management Institute (PMI, 2008) defines project management “as the application of knowledge, skills, tools and techniques to project activities in order to meet project requirements” (p.6). This application is made through the use and integration of processes that ensure the effective course of the project throughout its life cycle.

There are a variety of definitions regarding the number of phases making up the life cycle of a project. However, regardless of size and complexity, the initiation, planning, execution and completion phases are all common in all projects (PMI, 2008). Although sometimes they may overlap, generally these life cycle phases are completed in sequence: the results of a phase provide the basis for the efforts done in the next one. These phases require constant supervision in order to effectively manage, at each stage, the conclusion of an important practical outcome (Kerzner, 2003; Bennett, 2003).

The processes of project management enclose the tools and techniques involved in applying the skills and competences described in the project knowledge areas (PMI, 2008). The PMBOK Guide identifies

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