Chapter VIII
New Product Development

INTRODUCTION

The articles addressed in this chapter on new product development can be classified in two general categories—papers that address the internal processes that assist or hinder development, and those that focus on factors that contribute to a new product's success or failure in terms of performance and diffusion. We begin with Cooper and Kleinschmidt (1986), who report on the second phase of the New Prod project. Its goal was to examine the nature of the steps that affect the development process and determine how the step-wise structure was modified by the developer companies in order to improve process performance. Clark (1989) looks at project scope, or the extent to which in-house part development affects new product development and overall project performance. The new product development process, as a comprehensive scope of work, is the subject of Millison, Raj, and Wilemon's (1992) discussion, specifically what the tensions and trade-offs are that occur among different functional areas and how they affect innovative product development. Wheelwright and Clark (1992) provide insight into strategies to plan, focus, and control a firm's project development, offering an aggregate project plan that promotes management clearly delineating the roles and steps of each participant's activities. Griffin and Page (1993) offer a practitioner's framework that identifies and coordinates the many measures of product development success and failure, and holds them up against existing measures used by academic researchers. We then move to Souder's (1988) article examining the relationship between R&D groups

and marketing groups, the nature of the problems between them, and the structure of potentially effective partnerships.

The second section of the chapter begins with Cooper's 1979 *Journal of Marketing* article, referenced above in the first section. Here, Cooper presents the results of Project New Prod, which was developed to identify the factors that differentiate successful and failing new products. Mahajan and Muller (1979) continue, providing readers with a review of contemporary new product growth models as a basis for understanding recent diffusion models of new product acceptance, helpful to both marketing managers and researchers. Teece then approaches innovation and new product development from an oblique and strategic vantage point in his 1986 *Research Policy* article, suggesting how common and why it is that innovators find themselves in competition with product imitators who benefit more greatly than themselves. For Mansfield (1986), the question is, how do we better understand how and to what extent different industries make use of the patent systems to promote and protect innovation? Cooper and Kleinschmidt (1986) return to this chapter, this time explaining how product superiority is the number one factor influencing commercial success. For them, predevelopment activities of both technical and marketing natures are critical to success in both product development and diffusion. Mahajan and Muller also return to this chapter, with F.M. Bass (1990), providing their insights on the literature on new product diffusion models in marketing. By taking a sociological perspective and grounding their analysis in people's communicative behaviors, these authors unite Bass's innovation diffusion forecasting model with Mahajan and Muller's earlier finding that the objective of a diffusion model is to illustrate the increases in the scope of adopters and predict the nature of the development of an ongoing diffusion process. Montoya-Weiss and Calantone (1994) add to the literature on new product performance by providing a comprehensive overview of research in this area in an effort to identify, determine, and define the factors of new product performance. Brown and Eisenhardt (1995), besides providing one of the more comprehensive literature reviews and analyses of product development, look at empirical studies of product development that focus on the development project as the element of analysis in order to provide a model of factors that contribute to the success of new product development.

INTERNAL PROCESSES

In 1986, Cooper and his collaborator Kleinschmidt reported on the second phase of the New Prod project in their *Journal of Product Innovation Management* article. The goal of the second phase was to look "closely at the new product process: what happens, how well various steps are carried out, and what impact each step has on