



A methodology of technological foresight: A proposal and field study

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ABSTRACT

The study of one's own business future is a distinctive element of a business strategy. Innovative companies are aware of weak signals coming from the periphery and of trends in their industry, and they monitor the coherence between weak signals and trends (the external perspective) and strategic direction (the internal perspective). The literature today does not provide well-framed and complete methodologies for assessing the coherence among trends, vision and products. Therefore, the authors propose a methodology called "the methodology of future coverage", which measures how much the strategy oriented to the future effectively covers trends and megatrends. In other words, it helps to check the contents and the coherence of the firm's vision and products and those of the trends that will have relevance for the future of the industry, and this process supplies firms with supplementary information on how to improve. The authors tested this methodology and exemplified its use via the Eurotech case study, employing longitudinal analysis. The methodology can be useful as a tool for diagnosing the coherence between trends and company strategy. Moreover, from a dynamic point of view, it can be used as a tool to check on the company's progress in following up on trends by adapting its strategy over time. Finally, the methodology can be also used as a tool for cross-comparison of the "level of future orientation" among companies in the same industry.

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1. Introduction

Literature widely recognises *future studies* as a fundamental element of every strategy [1]. In its vision of economic trends, since the 1980s, it [e.g. 2] has highlighted the relevance of forecasting, but this point is equally true for technological trends (innovation, technology transfer, new products and applications, etc.), cultural and sociological trends (demographic changes, the evolution of consumer tastes, etc.), and political trends (the evolution of norms and regulations, etc.), as underlined by many scholars, among them Porter [3]. Porter highlights that the aim of the strategy is the acquisition and maintenance of competitive advantage in the company's sector, defined as extended competition. This is then a *problem of understanding and developing scenarios for handling industry competition*. Moreover, trends and weak signals detection becomes even more of strategic importance in a context of turbulence [4]. In fact, searching for new opportunities, the innovation-oriented companies need not only to analyse past mistakes or comprehend the "market of today", but also detect the possible scenarios involved in the "market of tomorrow". *This implies the importance to scan the periphery [5], to catch weak signals, monitor trends and subsequently analyse the firm's present and potential future paths.*

Given the importance of foresight and forecasts, the problem is now their integration into the choices and decisions of the company [6]. Every company faces the challenge of adapting to its environment and thereby either surviving or failing [7]. The aims of the company system change in response to external environmental factors and internal development factors. An organisation is in fact a complex adaptive system that works depending on expectations and modifies its behaviour as a consequence of learning from its environment, from competitors' behaviour, from the evolution of the industry, etc. *Strategic fit*

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