Chapter XII

Using Groupware to Build a Scenario-Based Early Warning System

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ABSTRACT

Scenario analysis has been used as a technique to support strategy formulation for several decades. During scenario analyses, the effects of different possible futures (scenarios) on the performance of an organization are assessed. Moreover, actions are formulated to deal with these effects. This analysis may help organizations to prepare themselves to take effective actions when one of these futures manifests itself. A scenario approach to strategy formulation depends on intelligence gathering: one should (1) have relevant environmental information to build effective scenarios, and once a set of scenarios has been defined, one should (2) continuously monitor the environment to determine in what direction the
future is moving. The usefulness of scenario analysis to focus intelligence activities—specifically the direction and analysis stages of the intelligence cycle—has been noted by several authors (e.g., Ellis, 1993; Tessun, 1997). In this chapter we will focus on scenario analysis as a tool to support the direction stage. In particular, scenario analysis may lead to a set of relevant early warning variables. Specific attention will be paid to the role of ICT tools (specifically groupware tools) to support the construction of scenarios and to derive a set of relevant early warning indicators.

INTRODUCTION

Without timely, accurate and actionable information about the environment of an organization, formulating, monitoring and reformulating strategies would be very hard. The process of gathering and analyzing environmental information is often referred to as competitive intelligence (cf., Kahaner, 1997; Cook & Cook, 2000; Fleisher & Blenkhorn, 2001). Competitive intelligence is usually described as a process consisting of four stages (cf., Sammon, 1986; Vriens & Philips, 1999; Kahaner, 1997). In the direction stage the information about the environment needed for strategy formulation is determined. In the collection stage the sources containing the required information are determined and the information is collected from these sources. In the analysis stage, the information is analyzed to determine its strategic value. If the information is of strategic significance, it is forwarded to strategic decision-makers in the dissemination stage. Although this process has always been important, due to several developments (e.g., globalization, increased speed of business, rapid technological development, political changes, increased competition; cf., Kahaner, 1997; Cook & Cook, 2000) the need to structure this information process is increasing. Many organizations have, for instance, built so-called intelligence units institutionalizing the process (e.g., Prescott & Fleisher, 1991). And, to support intelligence activities, a large set of tools and techniques has been developed (for overviews see Kahaner, 1997; Fuld, 1995; Powell & Algaier, 1998).

An important distinction regarding intelligence activities is that between a reactive and a pro-active mode of intelligence gathering (e.g., Hannon, 1997; Vriens & Philips, 1999; Gilad & Gilad, 1988). In a reactive mode, intelligence activities start after some (strategic) problem occurs (e.g., the emergence of a new competitor, the launch of a new product, or the introduction of a new technology). Strategic decision-making based on this kind of intelligence can
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