Information and Communications Technology for Competitive Intelligence
by Dirk Vriens (eds)
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Addressing the need for information and communications technology (ICT) tools for competitive intelligence (CI) activities, this book covers conceptual issues such as the relation of strategy formulation, viability, and ICT.

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Introduction

An adequate intelligence function is indispensable for (re)formulating strategies in a world that is getting both "larger" as new markets are opened up and "smaller" as (information and communication) technologies develop to spot these markets and profit from them. To remain viable, organizations need to identify and define their relevant environments, to scan them for opportunities and threats, to use these scans for formulating their strategies, and to act on these strategies. The contribution of business or competitive intelligence to strategy formulation (and implementation) is a key factor for organizational viability.

Because of the importance of business or competitive intelligence (BI or CI) for organizational viability, a lot has been written lately about its goals and main processes (e.g., Fuld, 1995; Kahaner, 1997; Vriens & Philips, 1999; Cook & Cook, 2000). Vriens and Philips (1999), for example, define competitive intelligence as "a process of gathering and processing information about the environment to support the process of strategy formulation." In this definition, the function of delivering relevant "external" information is central. Others, however, see BI as a process that (also) delivers "internal" information to support formulating strategies (e.g., Dresner, 1989). In this latter category, authors point, for instance, to the information provided by means of the balanced scorecard or by data warehouses.

For (re)formulating strategies, both internal and external information (and their integration) is needed. Competitive intelligence seems to be the label, in literature as well as in practice, for a
function in organizations that covers the supply and processing of information for strategy formulation.

Competitive intelligence activities can be supported by information and communication technology (ICT), and most authors agree on the importance of ICT for these activities (e.g., Fuld et al., 2002; Philips & Vriens, 1999; Kahaner, 1997; Cook & Cook, 2000). Several studies show the use of ICT in competitive intelligence activities. Vriens and Hendriks (2000), for instance, show how Web-enabled technologies may enable data-collection. Teo and Choo (2002) give an overview of how the Internet can be used for CI activities, and several authors discuss the possibilities for the electronic 'outsourcing' of search activities (e.g., Kahaner, 1997).

However, in spite of the awareness of the importance of ICT for CI, it remains unclear how the link between CI and ICT should be designed. This link is the main focus of this chapter. The chapter sets out to describe the link between ICT and the process of supplying and processing information for strategy formulation. With such a description, designers of the CI process can select proper ICT support and they can judge whether the employed ICT applications support this process appropriately.

To describe the link between ICT and CI, it is necessary to define the process of strategy formulation—otherwise, it is impossible to determine the contribution of the CI process. Next, it necessary to determine what 'intelligence' is needed in the process of strategy formulation. For us, as for other authors (see e.g., Kahaner, 1997), intelligence as a "product" is knowledge relevant for strategy (re)formulation. We will therefore approach this question from a "knowledge" point of view. If it is clear what knowledge the process of strategy formulation needs, the processes that produce and process this knowledge may be acknowledged. In knowledge management literature, these processes are normally labeled "generation," "storage," "dissemination" and "application" of knowledge (see e.g., Davenport and Prusak, 1998; Achterbergh & Vriens, 2002). Given these processes, the role of ICT in supporting them may be defined. This last step then defines ICT for CI as support tools for the processes in which knowledge relevant for strategy formulation is generated, stored, disseminated and applied.

This chapter reformulates the role of ICT for CI as the role of ICT in the knowledge processes involved in strategy formulation. It seeks to define this role of ICT in four steps. These steps are: (1) presenting a model of the process of strategy formulation, (2) deriving the knowledge relevant for the process of strategy formulation, (3) identify the knowledge processes in which the relevant knowledge for strategy formulation is processed and produced and (4) use the previous steps to arrive at an understanding of the role of ICT in the process of strategy formulation. To deal with these four issues, we organize the chapter as follows. In the following section we unfold the process of strategy formulation. To do this, we use the Viable System Model of Beer (1979, 1981). This is followed with a section discussing the derivation of the necessary knowledge domains for the process of strategy formulation. Next, we describe the knowledge processes that produce and process the relevant knowledge for strategy formulation. The chapter then uses this model to identify ICT support for strategy formulation. The last section will conclude with recommendations for using the model to derive relevant ICT for CI.