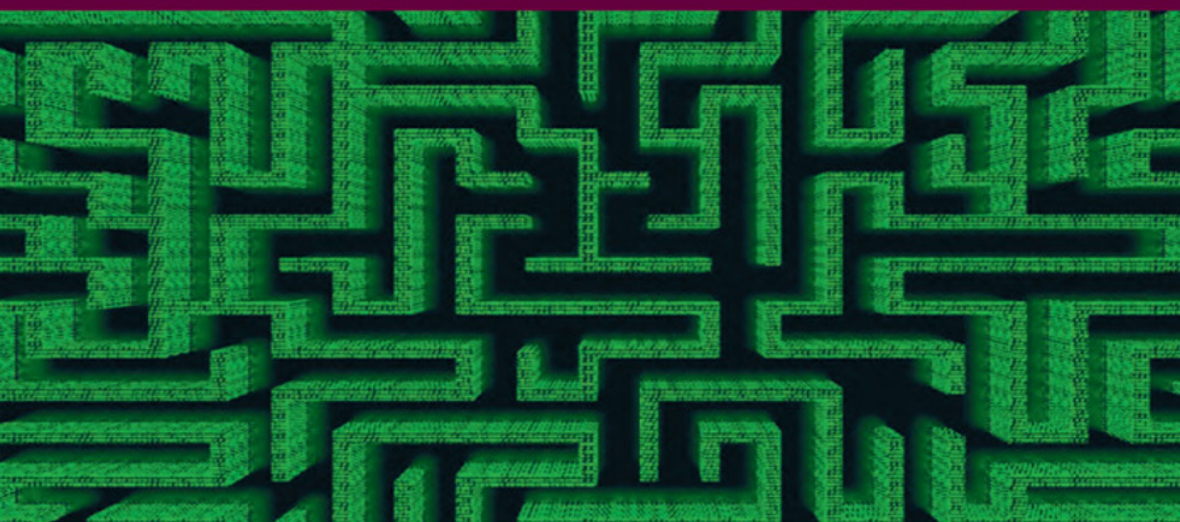


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Strategic Decisions and Weak Signals

Anticipation for Decision-Making

Humbert Lesca and Nicolas Lesca

ISTE

WILEY

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Introduction

VERBATIM I.1.– (transcription of recordings made during consultancy visits to organizations).–

“How can we detect any potential weak signals within big volumes of digital data? How do we interpret the weak signals thus brought to light? How can we train people in the organization to perform this type of task?”

In other words, the question is “What actionable knowledge (methods and computer-based techniques) would you recommend for serving the aforementioned purposes?”

I.1. Anticipative strategic scanning

The study of the exploitation of weak signals in organizational strategy is a challenging business, and one which has only been being practiced in organizations surprisingly recently. The concepts involved are relatively numerous, and the definitions given for such concepts may well vary from one author to the other. The real-world application of these concepts is rarely touched upon in the existing body of literature, and this gaping lacuna is a hindrance to the development of *anticipative strategic scanning*, in commercial companies and public organizations.

Therefore, this book aims to introduce working methods and computer-based systems to facilitate experimentation and operational implementation. Chapter 2 of the book presents the state of the art on the topic, gleaned from the publications of academic researchers. Chapter 3 then gives a presentation of three operational systems and looks at the case studies for their application.

The “scanning” of an organization’s environment to aid in *strategic decision-making* is not really a new idea. The precursor was, undoubtedly, set by F. Aguilar, with his book *Scanning the Business Environment*, which was published in 1967 [AGU 67]. Then, after a period of relative silence on the subject, a clutch of articles and books were published around the early 1980s, such as *Managing Strategic Surprise by Response to Weak Signals* by H.I. Ansoff in 1975 [ANS 75]. Thereafter, there were few new publications on the subject until the late 1990s. A new wave of publications began in the early 2000s and has continued steadily ever since. One of the major reasons for this is the rapid progress of online data-mining technology.

Paradoxically, “environmental scanning” and anticipative strategic scanning have not yet become as widely used in companies as might be suggested by the high number of academic publications on the subject. The explanation for this paradox probably lies in the following two facts:

– The considerable progress in information-seeking technology has led to a real problem of *information overload* both in private enterprises and public organizations; managers are rarely well prepared for *anticipative scanning* of the business environment.

– There is, as we have just seen, an over-abundance of raw information (data), but techniques to *make sense* of these data are not progressing at the same rate, leading to situations of *information overload*. Furthermore, in the area

of education, practically no institutions or universities have introduced training courses in the area of anticipative strategic scanning and the use of weak signals in strategic decision-making.

At present, the techniques for mining raw data are continuing to progress faster than techniques and expertise (particularly those relating to the detection and interpretation of weak signals). However, we have clearly seen a proliferation in demand from managers on the ground, including those formulated above or those expressed by the *verbatim quotes* peppered throughout the chapters. It is this demand that this book aims to satisfy.

I.2. Acknowledgments

The innovative systems presented in Chapter 3 are the product of doctoral research projects conducted at the Centre d'Études et de Recherches Appliquées à la Gestion (CERAG), at the university of Grenoble-Alpes, France. Edison Loza Aguirre worked on the TARGETBUILDER project, Alex Buitrago worked on the APROXIMA project and Annette Casagrande worked on the ALHENA project. The authors would like to express their heartfelt thanks and their best wishes for these researchers' work in the future.

The Subject within the Field of Management Science: Concepts and Issues

Management science aims to help managers in making decisions. Such decisions include information of a strategic nature, and they are the basis of "strategic management". Decision-making relies, notably, on the use of relevant information. This information is itself produced by an information system (or several such systems). Hence, strategic management of an organization and the management of the information systems are highly interdependent. The interplay between these two fields is illustrated in Figure 1.1.

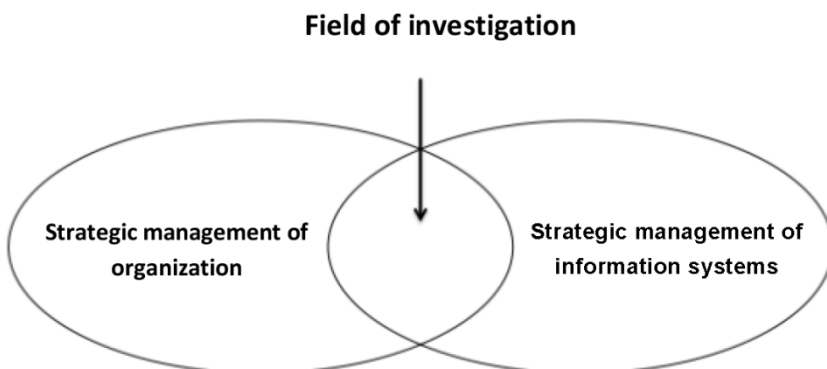


Figure 1.1. *Field of investigation*