

Weak Signals for Strategic Intelligence

Anticipation Tool for Managers

Humbert Lesca and Nicolas Lesca

ISTE

 **WILEY**

Weak Signals for Strategic Intelligence

Weak Signals for Strategic Intelligence

Anticipation Tool for Managers

Humbert Lesca
Nicolas Lesca

ISTE

 **WILEY**

First published 2011 in Great Britain and the United States by ISTE Ltd and John Wiley & Sons, Inc.
Adapted and updated from *Les signaux faibles et la veille anticipative pour les décideurs* published 2011
in France by Hermes Science/Lavoisier © Lavoisier 2011

Apart from any fair dealing for the purposes of research or private study, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the publishers, or in the case of reprographic reproduction in accordance with the terms and licenses issued by the CLA. Enquiries concerning reproduction outside these terms should be sent to the publishers at the undermentioned address:

ISTE Ltd
27-37 St George's Road
London SW19 4EU
UK

www.iste.co.uk

John Wiley & Sons, Inc.
111 River Street
Hoboken, NJ 07030
USA

www.wiley.com

© ISTE Ltd 2011

The rights of Humbert Lesca & Nicolas Lesca to be identified as the authors of this work have been asserted by them in accordance with the Copyright, Designs and Patents Act 1988.

Library of Congress Cataloging-in-Publication Data

Weak signals for strategic intelligence : anticipation tool for managers / Humbert Lesca, Nicolas Lesca.
p. cm.

Adaption and rev. of: *Les signaux faibles et la veille anticipative pour les decideurs*. 2011.

Includes bibliographical references and index.

ISBN 978-1-84821-318-0

1. Strategic planning. 2. Management. I. Lesca, Nicolas. II. Lesca, Humbert. III. Title.

HD30.28.L457 2011

658.4'72--dc23

2011031444

British Library Cataloguing-in-Publication Data

A CIP record for this book is available from the British Library

ISBN 978-1-84821-318-0

Printed and bound in Great Britain by CPI Group (UK) Ltd., Croydon, Surrey CR0 4YY



Table of Contents

Introduction	xi
Chapter 1. Concepts, Issues and Hypotheses	1
1.1. Introduction: governance and radar	1
1.1.1. Steering the ship	1
1.1.2. Corporate governance and strategic decision-making	2
1.1.3. The ship's radar (radio detection and ranging)	6
1.1.4. The organization's "radar", a tool for its governability	6
1.2. The organization's environment and its governance through a "storm"	8
1.2.1. The ship, the ocean, and any danger to be faced	8
1.2.2. The enterprise, its environment, uncertainty, hazards, and opportunities	9
1.2.3. Scrutinizing and interpreting the environment.	13
1.3. Anticipation (act of looking forward).	15
1.3.1. Anticipating: definition and examples.	15
1.3.2. Do not confuse anticipation with forecasting	17
1.3.3. Anticipation and scenario-based prospective: possible complementarity	21
1.3.4. Anticipating odd events, discontinuities, anomalies, etc.	22
1.4. Anticipative information: two types.	23
1.4.1. Definition.	23
1.4.2. Difference between strategic information and day-to-day management information.	23
1.4.3. Two types of anticipative information.	24
1.5. Weak signals	25
1.5.1. Definition of a weak signal.	26
1.5.2. An example of weak signal as the trigger to a warning	27

1.5.3. Should we prefer a “strong” but backward-looking signal, or a “weak” but forward-looking signal?	29
1.5.4. Conversion, transformation of a weak signal into an early warning signal	33
1.5.5. Should we refer to a “signal” or a “sign”? Intentionality of the sender	34
1.5.6. Weak signals... or decoys, deceptions, and information asymmetry	35
1.5.7. Characteristics of a weak signal: “stealthy information”	36
1.5.8. Sources emitting weak signals: examples	40
1.6. Detecting weak signals	43
1.6.1. Individual intelligence (in the Latin sense of the word): a definition	44
1.6.2. Cognitive style of a person	44
1.6.3. Individual cognitive biases	45
1.6.4. Fear	47
1.7. Interpreting, amplifying and exploiting weak signals to support strategic decision making	47
1.7.1. Need for collective intelligence (CI) for interpreting weak signals	48
1.7.2. CM: justification and definition of the process	50
1.7.3. Definition of CI as the emergence of CCM	57
1.7.4. From CCM to knowledge management	58
1.8. Puzzle® method for the operationalization of CCM	59
1.8.1. Issue: why the puzzle metaphor?	60
1.8.2. Definition of the Puzzle® method	62
1.8.3. Fundamental hypotheses of the Puzzle® method	67
1.8.4. Work group and CI	69
1.9. Global VASIC process for detecting, recognizing and utilizing weak signals	69
1.9.1. Targeting of anticipative scanning and information sources	72
1.9.2. Tracking and individual selection of weak signals	73
1.9.3. Escalating information, collective/centralized selection and storage	74
1.9.4. Dissemination and preparation of information for CCM sessions	75
1.9.5. Animation	75
1.9.6. Measurements: performance indicators of the VASIC process	76

1.10. Conclusion	79
1.10.1. Results on completion of Chapter 1	79
Chapter 2. Detecting, Recognizing and Corroborating a Weak Signal: Applications	81
2.1. Recognition of a weak signal: examples	82
2.1.1. A lady heading up the purchasing function at a car equipment manufacturer? How bizarre!	82
2.1.2. When a weak signal is displayed on a sign in the street!	88
2.1.3. A research center at EADS: why Singapore?	90
2.1.4. Danone	93
2.2. Making a new weak signal reliable	95
2.2.1. Reliability of the information source.	95
2.2.2. Comparing the weak signal with other information obtained previously	95
2.2.3. Consulting with an “expert”	98
2.2.4. Feedback from the animator to the gatekeeper who provided the weak signal	99
2.3. Conclusion	101
2.3.1. Result	101
Chapter 3. Utilization of Weak Signals, Collective Creation of Meaning: Applications	105
3.1. The Roger case: should we fear this new entrant to our industry? (the banking sector)	105
3.1.1. Issues for Roger as a company	105
3.1.2. Context	106
3.1.3. Codexi.	106
3.1.4. Information to be used.	107
3.1.5. Conduct of the collective work session	107
3.1.6. Results.	115
3.2. The case for “valorizing CO ₂ as a commodity”: a preliminary study for the selection of a new strategic direction	119
3.2.1. The main problem: how to “give birth to an idea” within the Board of Directors (BoD)?	119
3.2.2. Challenge: arousing the interest of the BoD	120
3.2.3. Preparing for the session (which will prove to be the first session).	120
3.2.4. Background of the experiment (first session)	121
3.2.5. Conduct of the session (first session)	123
3.2.6. Second session, three months later	127
3.2.7. Conclusion and post-scriptum	131

3.3. The Danone case. The ministry is worried: are there signs showing that companies will destroy jobs over the next two years? Could Danone leave France?	132
3.3.1. The issue at hand	132
3.3.2. Fresh interest in weak signals	133
3.3.3. Background: lack of cross-disciplinarity	133
3.3.4. Organization and conduct of the experiment	134
3.3.5. Targeting of a field of study	134
3.3.6. Selection of Danone as an agent	135
3.3.7. Conduct of the CCM experiment	135
3.3.8. Conclusion at the close of the last session: huge plausible risk on the horizon!	144
3.4. The Opel case: initiating collective transversal intelligence to aid strategic decision-making	147
3.4.1. Issues and background.	147
3.4.2. CI.	148
3.4.3. Organizational context	148
3.4.4. Preparatory step upstream of the first CCM session	149
3.4.5. Conduct of the CCM session.	151
3.4.6. Conclusions	161
3.5. Conclusion	163
3.5.1. Results.	164
Chapter 4. Preparation of Weak Signals for Sessions in Collective Creation of Meaning: Applications	169
4.1. Introduction: two starting situations.	169
4.2. The Roger case (continued): how are the news briefs used in the Roger CCM session prepared?	170
4.2.1. Preparation of the news briefs used in the CCM	170
4.2.2. The search for raw data: a substantial task	171
4.2.3. Extraction of news briefs: a time-consuming, delicate task	171
4.2.4. The Internet trap	172
4.3. CO ₂ valorization case: automatic search for “news briefs”	174
4.3.1. Guiding idea: “FULL text” distillation	174
4.3.2. Steps in the search for “possible weak signal” news briefs	175
4.4. The Danone case: preparation of the weak signals	181
4.4.1. “Manual” search	181
4.4.2. “Manual” extraction	182
4.4.3. Automatic news briefs search and extraction	183

4.4.4. Conclusions on the “CO ₂ valorization” and “Danone” cases using the Approxima prototype	184
4.5. Software modules for assisting in the automatic search for news briefs	185
4.5.1. Lookup table of characteristic words for the field being explored. Continuation of the “CO ₂ valorization” case	185
4.5.2. Enhancing the anticipative- and characteristic-word bases	188
4.5.3. Semantics problems: synonyms, polysemes and related matters.	190
4.5.4. Software enabling “event searches”	194
4.5.5. Integration platform for commercially available software modules	194
4.6. Conclusion	196
4.6.1. Result	196
Conclusion	199
Glossary	203
Bibliography	217
Index	227

Introduction

Why take an interest in weak signals? Weak signals are a means of helping managers of businesses (or other organizations) anticipate, in order to make strategic decisions in the context of a turbulent environment that requires them to “see things coming early enough”. Numerous recent examples in the world of industry and finance, as well as in the public sector, have shown that this ambitious objective is more pressing than ever, given the characteristics of the economic, technological, social, and political environment. The central concept is that of a “weak signal”, the first *concrete example* of which is provided at the very beginning of this book.

How should we go about it? A concept is not sufficient *to act*; it is not operational. This book chiefly proposes actionable knowledge, that is, *a method and some tools* to search for, identify, and interpret weak signals. These were gradually constructed within the scientific context of CNRS and university research. They have been applied and validated in the field on numerous occasions.

NOTE.— The phrase “weak signal” has been retained for historical reasons; we are actually dealing with early warning signals, harbingers of changes that matter to the decision-maker.

I.1. Introductory example: a surprising encounter on the corner of an alley: Tata

The following is narrated by A, a sales engineer employed by the German car manufacturer X, who is passing through Cuneo (Italy).

Cuneo is a city in Piedmont of which few foreigners have heard, including non-Piedmontese Italians. Still, this city and its province are rather wealthy: agriculture, viticulture/enology, many SMEs in various industries. It is certainly not seen as a “showcase” by Italians or foreigners. And yet...

1.1.1. Sales engineer A, on a July 2006 morning

“Departing entirely from habit, I go through one of Cuneo’s side streets, in a rather remote district, to go and visit someone who has been hospitalized in that neighborhood’s hospital. As I am about to cross the street and enter the hospital, a shop sign catches my eye, a Tata sign.

Surprised, I cross the street again to have a closer look at it. It is a Tata car dealership. I cannot resist going in to look around. The premises are quite small, with three cars on show. The attendant looks at me and smiles politely.

I ask:

- “Have you been here for long?”
- “It’ll be a year in a few days.”

I go out of the shop and, finally, into the hospital opposite. My mind is quite intrigued.

I remember, as any European very well knows, that Fiat has been on the brink of economic disaster, arguably in a worse situation than its European peers/competitors.

On leaving the hospital, I deliberately pass through the Cuneo business park in search of a Fiat dealer. I go in and, after a short while, I ask the store manager whether he is aware of the Tata brand being present in the city:

- “Yes”, he replies.
- “That’s a new competitor for you, right?”
- “Yes, but we’re not overly worried. Tata is unknown to Italians. In fact, I doubt that shop will survive much longer, especially in that location!”

- “Didn’t the management at Fiat express any concern?”
- “No, neither concern nor anything else. They have other fish to fry.”

I.1.2. Salesman C (from the German car manufacturer X), late August

Having had a chat with A on a train during August, C declares: “I know someone in Turin who works for Fiat. I’ll ask him about Tata, with caution ... he holds a high-ranking position.”

A few days later, C telephones A: “I spoke to my pal in Turin. He was a bit embarrassed with my question, and then he said that Fiat was aware of Tata’s presence in Cuneo (Fiat’s foremost province) and that it was actually a good thing, which Fiat wished for. But he asked me not to talk about it, and he wouldn’t say any more.”

I.1.3. Financial executive B (an employee of the German car manufacturer X), some four months later

“I read in my daily paper that Fiat is doing better now, toward the end of 2006.

In an interview excerpt, Sergio Marchionne, the head of Fiat’s automobile arm, said in reply to a journalist’s query that Fiat favors a strategy of *ad hoc* alliances with businesses that are likely to share specific competences which Fiat lacks. He mentioned Ford by way of example.”

I.1.4. Post scriptum

December 2006

Fiat and Tata Motors announced in sequence a few months later, namely in December 2006, the setting up of their jointly owned subsidiary, which represents a 665 million euro investment (source: *Les Echos*, 12/15/2006, p. 18).

August 2010

Tata *Motors* discloses its wish to reinforce its alliance with Fiat in the field of trucks as well as automobiles (source: *La Stampa*, 08/13/2010, p. 25).

I.2. Conclusion

Through this introductory example, we have pursued the following objectives, with regard to the reader:

- to arouse the reader’s interest in this book;
- to offer an intuitive approach to the concepts of anticipative information and weak signal;
- to provide an example of what will hereinafter be referred to as “information originating from field people”.

Chapter 1

Concepts, Issues and Hypotheses

1.1. Introduction: governance and radar

Let us begin with a metaphor, namely the radar, and its likeness, that is, the detection of weak signals by the enterprise.

Generally speaking, *governance* denotes the art of governing, whether it is a country, a company (*corporate governance*) or indeed a ship [LES 08a]. In the latter, the main instrument of governance happens to be the rudder. In the following, we shall be comparing the business to a ship in order to introduce the concept of a “weak signal” in the most illustrative way possible, as that concept constitutes the core of this book. Let it be noted that, in the remainder of the text, we will use the word “enterprise” in a very general sense. It will refer to all forms of organization, including industrial, commercial or service companies; government bodies (ministries, etc.); local authorities; public bodies (for example Family Allowances Funds), etc. [LES 02b]. The examples given originate from research projects performed by our team in those different types of organizations.

1.1.1. *Steering the ship*

The principal objective assigned to the ship’s captain is to accomplish the mission assigned to him/her and to reach the destination safely. This has always been and still remains true. In order to fulfill that objective, the ship and its crew need a good captain. A good captain possesses human qualities

and technical competences suitable to his/her role. Such human qualities include, among others, humility (the opposite of arrogance), the ability to scrutinize his/her environment, including but not limited to the sea, also to listen to crew members, to exercise curiosity, vigilance, and *scanning*, to demonstrate anticipation and responsiveness. However, the captain is not the only one involved in enabling the ship to accomplish its mission. So is the ship's owner. Is he/she prepared to ensure that the ship is in good condition and properly provided with suitable instruments? Let us now venture a metaphor and attempt an analogy with the enterprise.

1.1.2. Corporate governance and strategic decision-making

The word "governance" refers to a way of exercising and sharing power among various stakeholders, as well as defining its strategy. Strategy, in turn, designates the formulation of a policy for the enterprise (its objectives, structure, and operation), defined on the basis of its strengths and weaknesses, on the one hand, and taking into account the threats and opportunities identified in its environment, on the other hand. The term "governance" refers among other things to the process of designing the strategy and to the means utilized for governing: various instruments, decision rules, relevant information, supervision and monitoring, relationships and responsibilities established between the managers, the directors and the shareholders, where applicable.

The word "strategic", applied to a decision regarding corporate governance, means that the decision has the following characteristics:

- it is made in a situation of uncertainty, of incomplete information, in a complex, variable/mutating environment (as opposed to "all things otherwise being equal");
- it is not recurrent, therefore the decision-maker is relatively deprived;
- the decision-maker does not have experience-proven models (they cannot resort to "turnkey" mechanisms);
- it may have far-reaching (favorable or adverse) consequences that could jeopardize the survivability of the enterprise;
- it is systemic (many elements with many intra- and inter-organizational relationships);

– the environment is complex (great many elements and relationships);

– the environment is changeable, volatile, altered by discontinuous evolutions. It is turbulent in the sense specified by Emery and Trist: “the dynamic properties arising not simply from the interaction of identifiable component systems but from the field itself (the “ground”). We call these environments *turbulent fields*. The turbulence results from the complexity and multiplicity of the causal interconnections...” [EME 65, p. 19];

– lastly, the *choice of the time* when the decision is made, and more importantly implemented, may have a decisive influence on the success [SCO 73].

EXAMPLE.– “In 2001, the entry of the first competitor onto the local market came as a surprise, especially as our company was experiencing quality and stock-out problems. That was the perfect time for the competitor to penetrate the market. We hadn’t seen it coming...” The manager of an SME in Tunis.

Examples of strategic decisions:

– selecting a new supplier (non-recurrent decision) is of strategic importance for an industrial enterprise, whereas placing an order (a recurrent decision) is not of strategic importance. The selection of a new supplier is therefore a strategic decision;

– in the military domain, the choice of a new combat aircraft (for example the Rafale plane) is a strategic decision for a government. It is a huge commitment for the country concerned, in terms of costs, competences, and technology transfer, and that commitment is long-lasting (30 years or more).

EXAMPLE.– An *anomaly*... on the platinum market. For a number of years, the world price of platinum has ceaselessly and considerably increased. This metal is currently indispensable for fuel cells in, among others, electric cars. China is the world’s largest buyer, and thus drives up the price. Meanwhile, in September 2010 a headline in the French newspaper *Les Echos* read: “Anomalies on the platinum market [...] the latter remains very far from its historical highs of March 2008 [...]”.

A warning. Could this anomaly be interpreted as constituting a warning? Might some Chinese automobile manufacturers have found a substitute to platinum? Could the manufacturer BYD be one of them?

The strategic decision-making process is a long chain of steps, each of which requires information about the environment and its evolution. This chain is called *environmental scanning*. “*Environmental scanning* is the monitoring, evaluating, and disseminating of information to key managers within the organization” [AGU 67, p. 1]. “It is an important aspect of strategic management because it serves as” [KUM 01, p. 1] “the first step in the ongoing chain of perceptions and actions leading to an organization’s adaptation to its environment” [HAM 81, p. 299]. In this book, we shall use the phrase “anticipative strategic scanning”.

Governance implies that we know which way to go. In this book, the “pole star” will mainly be sustainable competitiveness or, more specifically, *sustainable competitiveness capability*, at least where the enterprise in the usual sense of the word (or an economic sector, for instance the agri-food industry or the like) is concerned. “An enterprise demonstrates future-oriented sustainable competitiveness capability when it is capable of keeping its status, durably and deliberately, in its competitive, evolving market of choice, while achieving a profit ratio at least equal to the ratio required for its businesses to adapt and survive” [LES 82, p. 13; LES 89, p. 12]. The competitiveness to which we are referring here is therefore a question of mindset, forward-looking approach, motivation, true will, watchfulness, and scanning. However we will also present examples relating to ministries, wherein the objective is different, for example the ability to make decisions at the right time and in the interest of the country.

In all cases, “scanning” means the ability to scrutinize the environment and pay attention to the signals that are picked up, which may constitute early warnings. An *early warning* denotes either formal information (provided as text, by an electronic sensor or otherwise), or sensory information (visual, auditory observation, etc.) which is sensed by a human and leads us to think that a potential, relevant and significant “event” may occur within such a time horizon that there is still time for action.

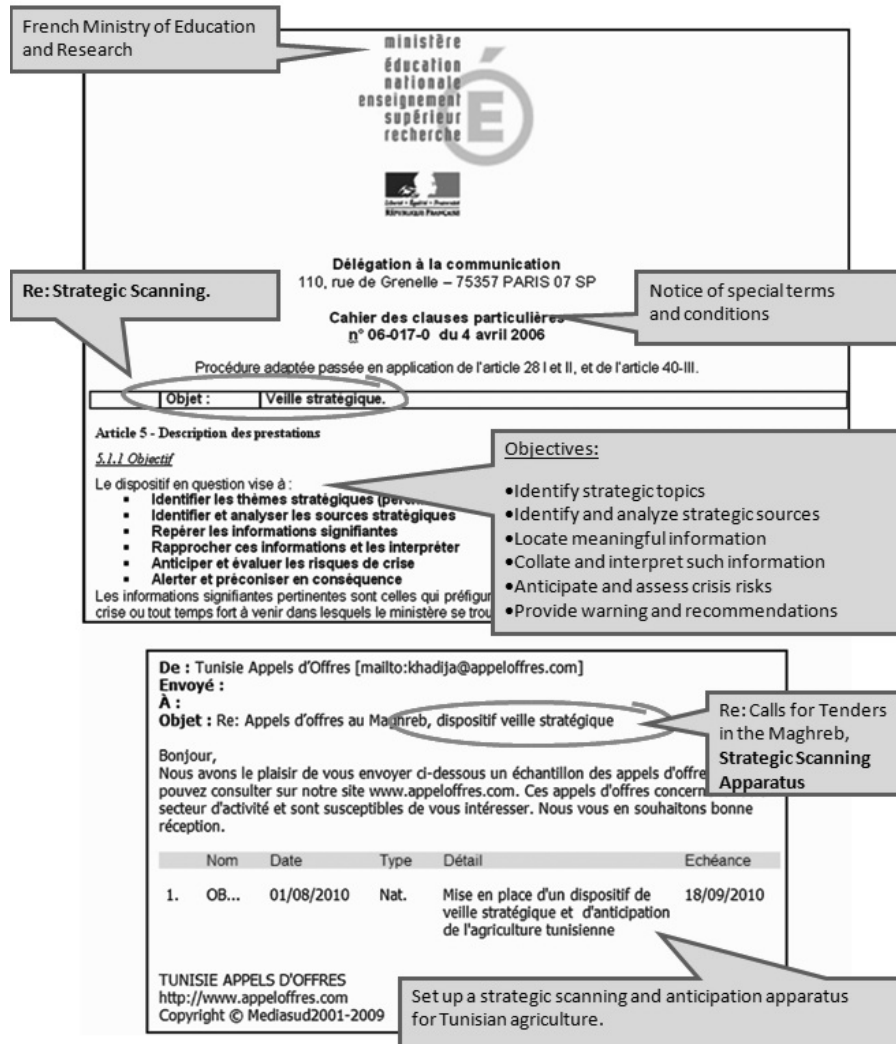


Figure 1.1. Examples of calls for tenders for setting up an anticipative strategic scanning apparatus

This is termed “warning-mode” scanning [LES 03b]. In other words, a sustainable competitiveness capability is not compatible with confessions such as: “We didn’t see it coming!”, especially from business leaders or boards of directors, or from managers in the economic sector. Consider the following examples.

EXAMPLE 1.—“Stock markets seem to be generating tornadoes much more often than would be expected from observing *past movements* [...] The markets appear to generate more of those sudden stock hurricanes, at least much more frequently than the observation of past movements would suggest. Investors and managers will therefore have to learn to live with the ‘Deans’, the ‘Katrinas’ and the like, that sweep the financial world and generate volatility in various asset classes” (source: *Les Echos*, 08/23/2007, p. 23).

EXAMPLE 2.—“Crisis communication from the establishments concerned has been focused on irrational disturbances in the market and on the liquidity crisis. It has not dwelt on the responsibility of managers who invested in the asset class in question and *did not see anything coming despite the forewarning signs*” (source: *Les Echos*, 09/10/2007, p. 38).

1.1.3. *The ship’s radar (radio detection and ranging)*

In order to be able to accomplish its mission, *adapt to ocean conditions* at all times, and arrive safe and sound, any ship nowadays has a tool that serves the captain (and therefore the ship’s governance): the radar (typically several of them). Conning the ship takes into account, on a continuous basis, the signals supplied by the radar and the interpretation thereof. We might say that the governance of the ship relies, at least for a large part, on a tool provided by the ship’s owner and on the human technical skills available on board. Thus, at any point in time, competent people watch the sea and remain alert. That was not the case for the Titanic, which was not equipped with radar. And we all know what became of the Titanic, a brand new ship! Back to our metaphor, we now propose to look at enterprises. Do they possess a tool that could be likened to radar?

1.1.4. *The organization’s “radar”, a tool for its governability*

Countless authors, in whichever language, have compared the business leader to a ship’s captain, the ship being, in this metaphor, an organization and the crew being that organization’s staff. Such a metaphor was suggested by Aguilar as early as 1967. Why not take the comparison a little further and derive some new, simple but fruitful, avenues of thought?

Thus, regarding businesses, a number of English-language authors explicitly use the word “radar”. These include, for example, Narchal: “Business Environment Scanning (BES) System consists of a set of radars to monitor the important events in the environment which may create opportunities or threats for the organization. [...] A good BES system will receive the weak signals and generate early warnings for the organization by developing a set of scenarios indicating the effects of these events on the organization” [NAR 87, p. 97].

An organization’s radar is, in fact, the instrument that allows it to observe its environment, perform constant scanning, pick up signals that may serve as an early warning to the business’s leaders and provide them with the necessary elements for decision making. Under such conditions, managers can make the decisions warranted by the situation, and make them early enough to avoid potential catastrophe. In other words, organizational radar, referred to above as a *BES*, and below as an *Executive Information System*, is the instrument of vigilance.

Vigilance is another component of corporate governance when it is oriented toward the organization’s sustainable competitiveness. “Vigilance refers to:

- being alertly watchful for the detection of weak signals and discontinuities about emerging strategic threats and opportunities in the organizational environment and [TUS 86];
- initiating further probing based on such detection” [WAL 92, p. 47].

In each of these citations, note the phrase “weak signals”, which we shall consider in more detail throughout this book. Additionally, let us recall that H. Simon (1978 Nobel Prize in Economics) denoted by “intelligence” (*intelligence gathering = search environment for condition calling for decision*) the first stage in his decision-making model. We will see the link that unites the concepts of intelligence and weak signals. We will also see why the adjective “weak” is used and which human skills, as well as methods and tools, are useful in picking up and interpreting a “weak” signal.

To conclude this stage, the reader might ask him/herself the following questions:

- 1) can it be asserted that any organization possesses a scanning apparatus, which might be likened to radar, to assist its decision making?

2) is the organization aware of the need to have, among its staff, men and women who are capable of detecting then interpreting the signals collected by suitable anticipative intelligence means?

If the answers are negative, let us then think about the Titanic and its fate.

1.2. The organization's environment and its governance through a "storm"

Let us briefly revisit the ship radar metaphor to introduce the topic of the organization's environment and its scrutiny. We shall recount, in the final section, the table from Daft and Weick [DAF 84] presented hereafter, in which the characteristics of the environment are set along the ordinate axis while the characteristics of the scrutiny carried out by the enterprise are set along the abscissa axis (*organizational intrusiveness, scanning characteristics*), enabling the reader to locate the domain covered by this book.

1.2.1. *The ship, the ocean, and any danger to be faced*

In order to succeed in its mission and arrive safely, the ship must constantly exercise vigilance and ceaselessly scrutinize its environment, that is the surface of the ocean, but also the latter's depth if necessary, as well as the skies.

What surprises might the ocean's surface have in store? A number of cases may be cited by way of illustration.

It may be an enemy boat or an aggressor ship, for example off Somalia. It might also be a floating object liable to strike the ship and cause serious damage, for example a ship wreck, a "lost" floating mine. It could also be a barely emerging reef, unmarked on nautical charts, or moving sandbanks. Not to mention possible icebergs, as was the case for the Titanic. It might also be thick fog patches that negate all vision. All this can be compounded by the approach of a possible storm, etc. There is therefore a large number and variety of reasons to exercise extreme vigilance and be constantly on the lookout. By analogy, can the same be said of an enterprise?

1.2.2. *The enterprise, its environment, uncertainty, hazards, and opportunities*

The enterprise is not a ship, but it, too, has a mission: to be competitive and survive in conditions that are sometimes very difficult. While the organization's environment is not the ocean, it may be simple or complex, static or dynamic, so that most of the hazards and risks discussed above may be retained by way of analogy. We define the word risk as follows: it denotes the possibility of occurrence of an event that is uncertain or has an undefined time horizon, does not depend exclusively on the will of a person, and is contrary to their expectations or interests. The risk may be accepted, when the person acts in spite of their awareness of that possibility.

The terms generally used to denote the threats that are likely to originate from the organization's environment include: *competition, technological rupture, country-specific national regulations, lack of visibility, volatility, instability, turbulence* [EME 65], *uncertainty, discontinuity* [LES 03a], *fracture, government overthrow, change of majority...* the list does not stop there.

EXAMPLE.– “Our strategy is aimed at becoming, in due course, a major integrated provider of solar power, from the purification of silicon to the installation of panels,” says Philippe Boisseau, director of the gas and renewable energies division. However, in order to reach that objective, Total is obviously banking on developing a *rupture technology* (source: *Les Echos*, 06/10/2010, p. 19).

Let us briefly go over some of those points again, to try and grade the difficulties they raise. We shall limit ourselves to a few examples.

1.2.2.1. *Examples of causes of hazard*

1.2.2.1.1. Competitors

As the word competition is more of a statistical term that designates an anonymous and fuzzy phenomenon, we will refer instead to identifiable competitors. These may be current or potential competitors. There is little point in dwelling for long on the fact that every competitor is likely to constitute a hazard to the enterprise. The attention paid to those should be active and deliberate. But the question becomes less trivial when the following remarks are taken into account: