

# IMPLANTATION OF THE STRATEGIC WATCH FUNCTION IN A CEMENT FACTORY : Case of the SCIMAT-Algeria

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## Abstract

The competitiveness of industrial enterprises- is not anymore to be demonstrated and everybody knows that the technological innovation is a determinant factor for the survival of the enterprises; however this factor makes default for the enterprises in developing countries.

The innovation, which stays as an infranchissable barrier, is at the same time the cause and the consequence for a relative absence of technological factor in the outgoing strategies of these enterprises. But, with the massive penetration of technologies of information and communication within the life of the enterprises, a new approach of technological transfer maintains these enterprises for loast technological developments in their activities area, to identify the different surrounding risks and to discover opportunities.

The strategic watch, which have the choice place within the new approach, will be the object of this paper, where we will propose a step of implantation of this activity within an Algerian cementary which is know as an industry of technological transfer «key in hands».

**Keywords:** competitiveness, innovation, strategic watch, Algerian cement factory, technological transfer.

**Résumé** – La compétitivité des entreprises industrielles n'est plus à démontrer et tout le monde s'accorde que *l'innovation technologique* est le facteur déterminant pour la survie des entreprises. Mais force de constater que c'est aussi ce même facteur qui fait défaut pour les entreprises des Pays En Voie de développement (PVD).

L'innovation, qui reste la barrière infranchissable, est à la fois la cause et la conséquence d'absence relative du facteur technologique dans les démarches stratégiques de ces entreprises. Mais, avec la pénétration massive des Technologies de l'Information et de la Communication (TIC) dans la vie des entreprises, une nouvelle approche du transfert de technologie permet aux entreprises de se maintenir au fait des derniers développements technologiques dans leurs secteurs d'activités, d'identifier les différentes menaces qui les entourent et de découvrir les occasions à saisir.

La *veille stratégique*, qui occupe une place de choix dans cette nouvelle approche, fera l'objet de cette étude où l'on proposera une démarche d'implantation de cette activité dans une cimenterie algérienne qu'est connue comme étant une industrie à transfert de technologie « clés en main ».

**Mots-clés** – compétitivité, innovation, implantation, cellule, veille stratégique, cimenterie algérienne.

**Palabras claves:** competitividad, innovación, reloj estratégico, fábrica argelina del cemento, transferencia tecnológica.

## Introduction

It is known that the industrial race has been intensified these last years. This intensification has for causes [1], [2]: the internationalization of the economy and the integration of new information and communication technologies

For facing this race, which has different forms; the industrials have developed factors called for competitiveness to allow their enterprises to be more competitive. Among these factors, the enterprise anticipative capacity which is in the origin of the birth of a new function named “strategic watch”.

The strategic watch is of a great interest for Algerian enterprises especially when they signed the association with the European community and after the entrance to the world organization of commerce.

For this reason, the strategic watch becomes an important topic for the Algerian enterprises for which they must give a particular attention especially in the Transfer of Technology<sup>1</sup>.

In fact, although the availability of the technology, it requires a qualified personels and responsables who know when to use it.

In general, three strategies are used in a technological transfer named as: technology initiative, adaptive and creative strategies [3].

Otherwise, It is known that problems of technological transfer will use more within the first strategy. Among them, we can underline bad technological choice, bad functioning and problems of organization...

However, developing countries have clearly demonstrated that the technology is near to those who organize, in an intelligent manner, its TT and master its access even-though the important technological ruptures, in the cycle of the technology, increase and accelerate [4]

The strategic watch allows a technological transfer to succeed because it lays to all its classical cycle which includes [5] ways and instruments of technological transfer, purchases and sales, the technological agreement, process of adaptation and engaged research. The strategic watch concerns, also, recent forms within a technological transfer which include not only, alliances and fusion essentially based upon technology, but also programs of **R&D** and development projects.

This vast field of action of the strategic watch, and for the succeeding a technological transfer has conducted us to propose a step of implantation of this activity within an Algerian cementery which is known as an industry of technology transfer «Key in hands».

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<sup>1</sup> For recall, the TT is a set of exchanges of knowledge and the ability. This exchange takes place between parts: exporter and consumer of the technology. The technological transfer is not, always, guarantee because of interests that is different between these two parts.

## Materials and methods

In this section, we recall some briefly aspects dregs to the strategic watch in order to situate our proposition.

### *Legal aspects linked to strategic watch*

It is known that the strategic watch is the result of enterprises competitiveness. In this context, the Algerian regulation incitates our enterprises to be competitive. This competitiveness passes, logically, by levelling (up of) our enterprises. It is for these reasons laws;

decrees and rules have been set up [7]:

- ✓ Law n° 99-11 of the 12/29/1999 finance law for 2000: article92 on the creation of special account of affectation n° 302-102 titled “promotion fund for industrial competitiveness”.
- ✓ Executive decree n° 2000-192 of the 07/16/2000 fixing modalities of funds functioning: this text institutes a national commity of industrial competitiveness headed by the Minister of industry and had its representatives from seven (7) ministerial departments and a representative from the Algerian chamber of commerce and industry.

This commity is in charge: to elaborate procedures of file presentation, to fix the conditions of helps, to determinate the nature and amounts of these helps as well as enterprises performances assessment.

- ✓ The interdepartmental decree of the 08/06/2001 (ministries industry/ finance) which precise modalities of fund evaluation, define the beneficiaries from fund help (industrial enterprises and those of the services linked to industry public or private which respond to conditions of eligibility fixed by the commity).
- ✓ The interdepartmental decree of the 12/12/2001 (Ministries Industry/Finance) determining the nomenclature of fund spending and receiving. This text define the eligible action from fund help:
  - The initiated actions by the Ministry of industry for the environmental enterprises amelioration,
  - The engaged material/immaterial actions by enterprises in the plan of levelling up in terms of production equipments, metrology and training equipments to install in place a systems of management for information, quality safety...

The main objectives to level up Algerian enterprises are [7]: the equipment modernization, the amelioration of organization systems of management and production systems, the income of productivity means to master the real cost and the development (training, quality and certification, marketing and research of new makers and finally alliances and partnerships).

The following figure regroups these objectives.

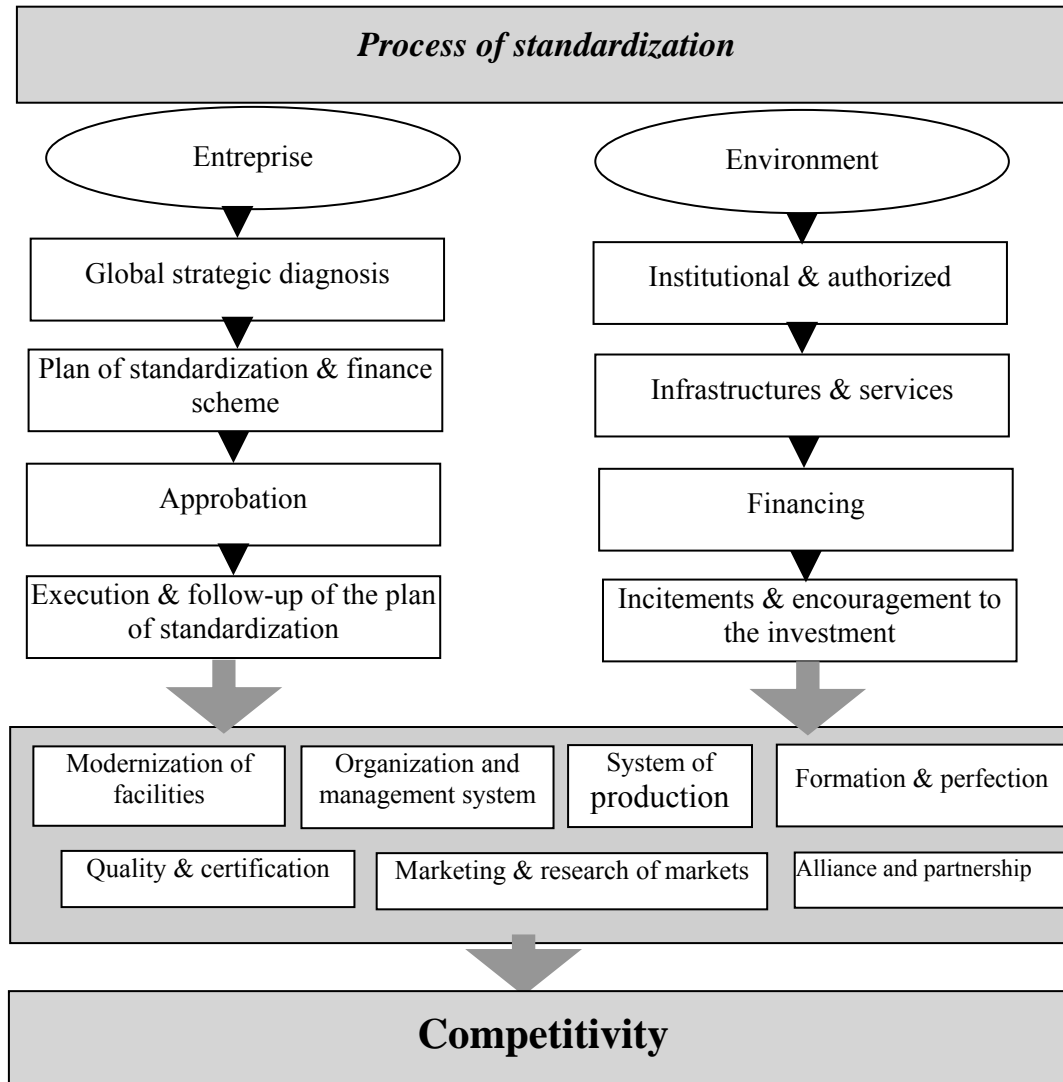


Figure1: Objectives and principle for Algerian enterprises standardization.

### ***Definition and Objectives of the strategic watch***

The definition which we retain for strategic watch is [7]: "strategic watch is a group of techniques which organize in a systematic manner the collection, the analysis, the exploitation of the useful strategic information necessary for the increase of enterprises".

The definition shows also that the strategic watch is the heart of information flux toward which converge and from which

diverge these information fluxes (figure 2). This figure shows clearly strategic watch objectives. The most important are: position of the enterprise within the environment, marking evolutions which may affect the enterprise, proposition of an enterprise repositionable scripts, minimization of active environmental effects of the enterprise, precocious detection of threats and opportunities, taking decisions with a better security and finally ameliorating, developing and widening all the enterprise activities.

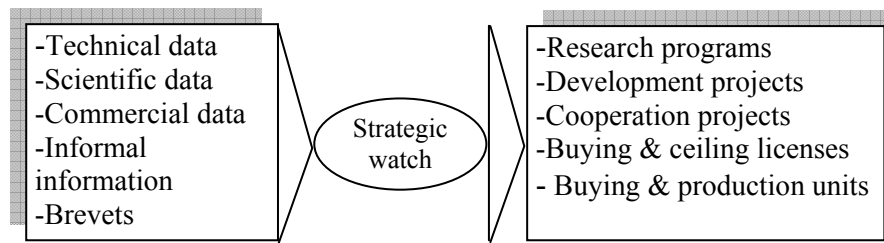


Figure2: *Information flux & strategic watch.*

When examined carefully strategic watch objectives show that the enterprise must act upon its environment to evitate, it is evident that this action concerning the enterprise active environment which must be proceeded by a continuous look-after. This looking-after must be on: enterprise suppliers, the direct and indirect concurrents, customers and norms within the enterprise activity area.

We must note that this given interest to the enterprise active environment should be accompanied by another interest given to the

Inside watch which consist to supervise information inside the enterprise because it is important to all forms of strategic watch within an enterprise.

### ***General step:***

In a general manner, the strategic watch step consist of two steps [6], [9]: the environment watch-over and the exploitation of the given information (figure3).

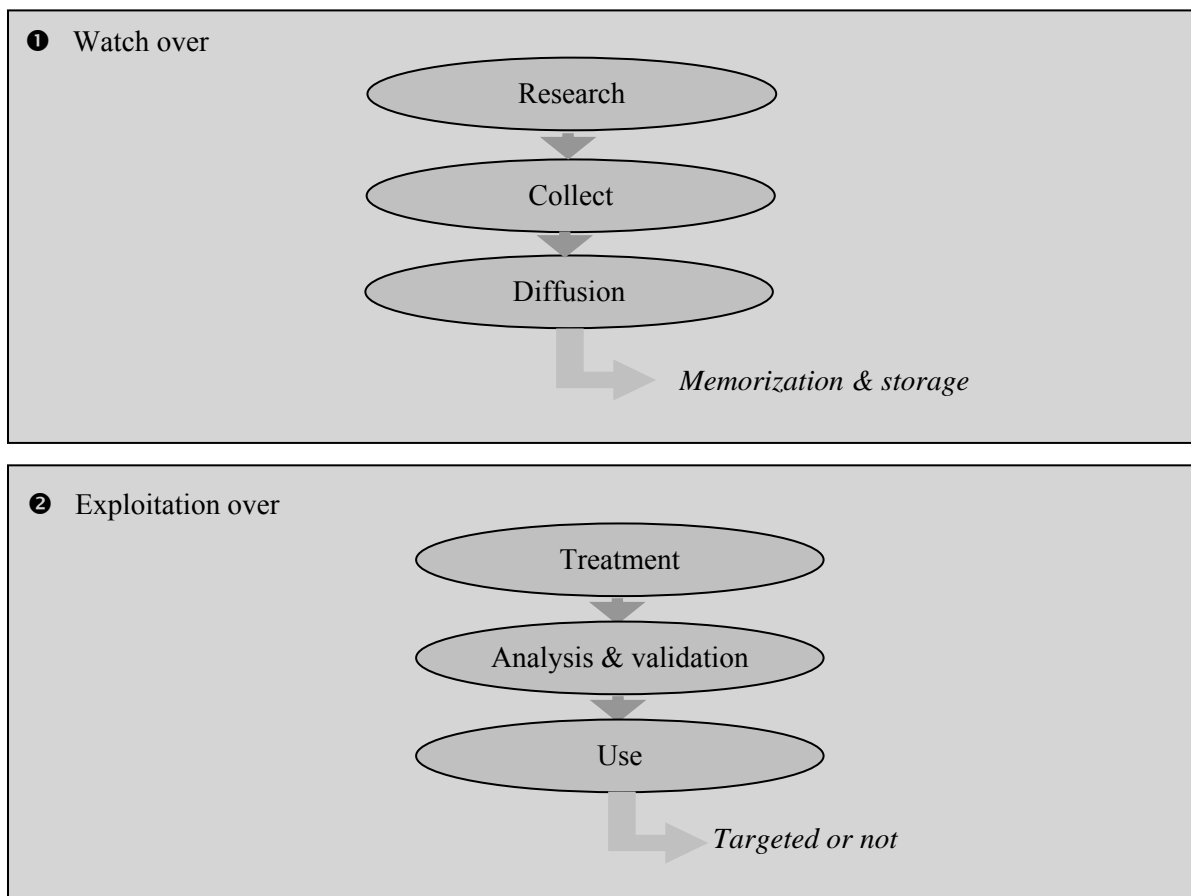


Figure 3: *Classical step of strategic watch [4]*

Answering questions like supports the application of this step: who collects the information? How can we obtain them? Does this operation require a structure within the enterprise? What are the factors of the success and failure of this information collected? Do we have a necessary budget for this collection? Do we have the necessary means to gather this information? Where are the data resources? Under which form can we find them? What is the information? What are the necessary supports? Who want the information? Who will diffuse it from its provisory stock? How can we stock it? Can we undertreat the two steps of the strategic watch?

### **Remarks:**

- ✓ the questionnaire is the basis support of all strategic watch steps. Its content is: watch utility? Utility of information to make into account? Organization? Methods and means? Validation? Information collected? Diffusion? Costs?
  - ✓ actors of the strategic watch (watchers) could be: observers, expert/ specialists or decision-markers,
  - ✓ the organization of the strategic watch of a given enterprise must be done under a double mission: technical (choice and development of appropriate methods) and organizational (definition of information flux),
  - ✓ the information sources could be formal or informal:
    - The formal sources, called also “open information”, related to scientific periodic, technical, economical, databank and regulation,
    - the informal sources (or closed information) represented by contacts, personal relations and by the industrial spying,
  - ✓ the strategic watch steps is a continuous informational process (decisional) by which the enterprise listen in anticipative about its environment to be aware of any risks due to environmental evolutions,
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- ✓ the strategic watch conditions of success are summed up in resources: humans, informational, material and software (for the treatment, storage and diffusion).

### **Proposed step:**

The general step presented previously stays valids for the majority of industrial enterprises. However, we must underline the specificity of each enterprise and unit which hope making in place a strategic watch induct an adaptation to the previous step. It is for this reason that we propose a step of strategic watch specific to the SCIMAT.

The step that we propose is composed of three sub-steps (figure 4): the looking-after of the SCIMAT environment, the analysis of the collected informations and synthesis.

The goal of sub-step look-after is to detect information characterizing evolutions of the active environment of the SCIMAT. This look-after requires a set up of research strategy of information. According to their relevance, this information will be analyzed in order to exploit them.

To facilitate the information analyse, this second sub-step is guides by the key questions: Where and when the information is localized? How is it obtained? (Tools to use for the consultation of information sources, formats and information support...). Why is it retained? (Degree of interest, reliability of data, freshness of information, exhaustiveness, vision and the support or experts...). The destination of this information? (Who needs this information? What are the progress projects in the SCIMAT? Who works on what?).

The goal of the sub-step synthesis is to take decision according to the previous sub-step and to diffuse in internal (inside the enterprise). The line in point indicates that some information analysis may reinforce selection information criteria's. In other terms, this line characterizes the information feed back.

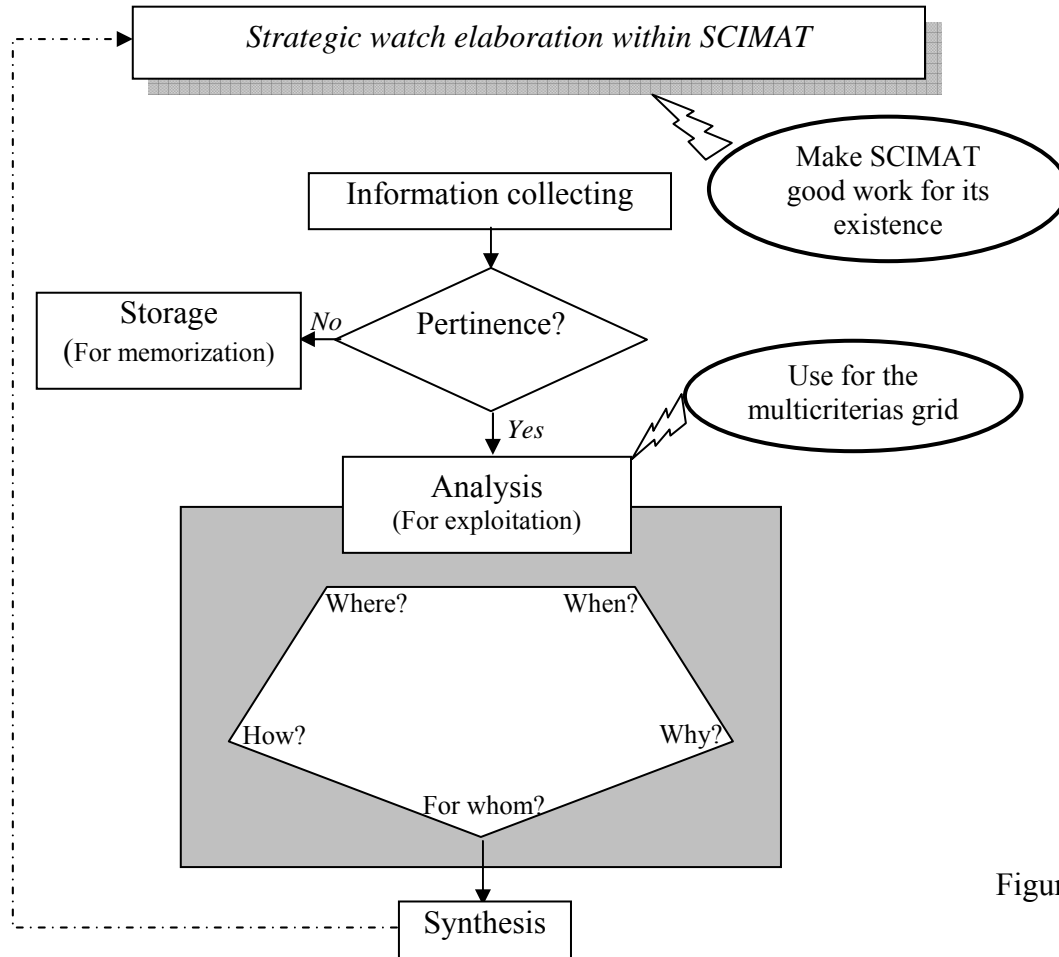


Figure 4: *Proposed step of strategic watch.*



## Results and discussions

This section describes the application of our gait to the SCIMAT.

The first step, which we propose, concerns the collection of pertinent information. This pertinence depends upon interest domains of SCIMAT. For this application, we defined a referential which can filter the collected information to retain only those pertinent. It is here about “cement bags”.

The main reasons of the choice of this referential live in fact that a good cement bag may:

- ✓ preserve the cement quality (known by all customers of SCIMAT),
- ✓ prevent from any environmental aggressions especially rain,
- ✓ preserve the health of workers (who are in direct contact with this product especially when handling),
- ✓ reduce the risk of counterfeiting usually on the market (preserve the cement quality and its weight),
- ✓ preserve the SCIMAT label.

Two axes are necessary for the referential analysis of “cement bags of SCIMAT” [10]: position and technological analysis.

Because Algeria is a importing country of technology, the technological analysis of cement bag is not developed in this application. Also, all nationals concurrent of SCIMAT use the same paper for cement bag. Consequently, the position analyses allow to situate SCIMAT along which its concurrent (nationals in particular).

The position analysis underlines four key parameters which are [3]: the resistance of cement bag, weight, color and information which contains.

The use of the guide questions in figure 4 allow to make a first information analysis (following table):

Table 1: preliminary analysis of the referential «cement bag of SCIMAT» by guide questions:

Where the information is located?	-Customers of SCIMAT. -Construction work.
When is it located?	-In regular period.
How is it obtained?	-multiple information sources (in our case, interviews during our practical work)
Why is it retained?	-It has a direct link with references retained justified previously.
For whom is this information destined?	-Production service. -Marketing service,...

Answers to the previous questions give us a lucid idea about the retained information analysis represented by figure 5.

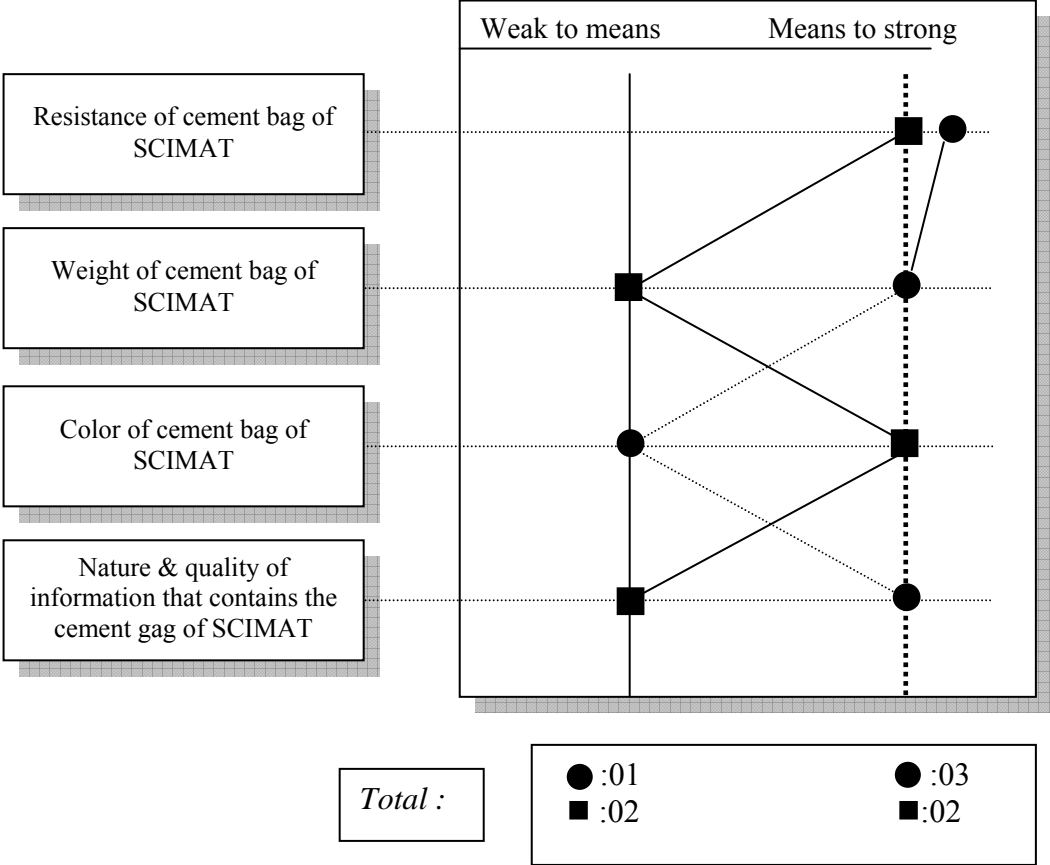


Figure 5: Analysis of the referential «cement bag of SCIMAT».

The exam of this analysis shows that:

- ✓ Symbols ■ and ● represent, successively, the SCIMAT and its potential concurrent (Hamma Bouziane cementry, Algeria),
  - ✓ scores in bottom of the table, allow, not only, to position SCIMAT in report of its concurrent in the same activities, but, also, to position it in face of risks to be confronted,
  - ✓ managers of SCIMAT can define a most adequate concurrent strategy: of *market domination* by the cost (help suppliers and customers to reduce their costs or means to increase costs of their concurrent), of *differentiation* (quality, serviability, facility of payment...) or of *innovation* (it is the same as the previous but defers in the way that it can found new process such as the eco-conception), as long as the resistance of cement bag is concerned. The majority of SCIMAT customers affirm the good resistance of the packing.
- Nevertheless, the increasing demand on the cement in market has done
- ✓ that the distribution of this product is done in defavorable conditions. Towards this criteria, cement bag is recuperated form the chain at a temperature 40-50° and are directly charged in trucks and wagons). Consequently, the difference in temperature between bags and the sheet metal of carriers entails the humidification of places from where the cement bag is fragilised
  - ✓ the majority of SCIMAT customers affirms say that the weight of the cement bag is lower to 50 kg. two reasons are in origin of this deficit: the first is relative to the non respect of the cooking process (ensachage problem) and the second is relative to the tricking,
  - ✓ the majority of SCIMAT cement users know bags of SCIMAT by their color without reading the contained information,
  - ✓ many don't know SCIMAT have the ISO-9000 certification (although this information is on the bag cement). There are several reasons for this ignorance. The most important is that information is masqued by other informations on the cement bag (particularly, the information on the weight of the cement bag that doesn't reflect the reality).
- The analysis of the retained information allows us to:
- ✓ *diffuse* the information : on the basis of results of this analysis, the information may be diffused to concerning services (commercial and production services),
  - ✓ *take decision*: we propose to managers of SCIMAT to take decisions upon:
    - foresee a cement storage in an appropriated place before its delivery,
    - plasticization of cement bags to avoid:
      - breaking of bags,
      - preserve the health of workers (problems of dusts when charging on trucks and wagons),
      - tricking.

## Conclusion:

The intensification of the industrial race in terms of cements and other linked products may impose to cement factory the capacity to be anticipative.

Having this capacity requires the information of a strategic watch cell within SCIMAT.

At the international level, such a cell is subordinated to the respect of norms as AFNOR-X 50-053. This is what confirms its good integration as a function within the architectural organization of the enterprise. Therefore, we suggest that SCIMAT should have a strategic watch cell.

The feed back of this integration concerns the SCIMAT information system (figure 4).

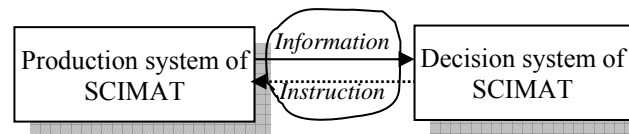


Figure 6: *Possible integration of strategic watch cell within SCIMAT.*

The information system of SCIMAT, which, if we introduce the function strategic watch, becomes an evolved information system.

We must not that the succeed of integration of strategic watch cell within cell the information system of SCIMAT is conditioned by: the implication of human resources responsible, the mobilization of SCIMAT means, the implication of experts extra-SCIMAT, training and the personal information of SCIMAT.

## References

- [1] *Books*- Baumard Ph., *Stratégie et surveillance des environnements concurrentiels* (Masson Edition, Paris) 1991.
- [2] *Symposia/ Conferences*- Madoeuf B., Organisation de la recherche industrielle par les entreprises multinationales : qu'elle place pour les pays en voie de développement ? In *Intl Conf MATHTECH' 98* (Sfax' 98, Tunisia) April 1998,1-15.
- [3] *Research report* – Djeghdjeh A., Djebabra M. & Mouda M., Ergonomic survey in a transfer of technology (Research project n°5 of J0501/03/09/03. University of Batna- Algeria), June 2005.
- [4] *Symposia/ conferences*- Djeflat A., La fonction veille technologique dans la dynamique de transfert de technologie: rôle, importance et perspectives (Day of study on the strategic watch to the service Algerian enterprise, Algiers) June 2004, 1-25.
- [5] *Symposia/conferences*- Damou M., La veille technologique au service des entreprises algériennes (Day of study on the strategic watch to the service Algerian enterprise, Algiers) June 2004, 1-13.
- [6] *Books*- Dou H., *Veille technologique et compétitivité* (Dunod Editions, Paris) 1995.
- [7] Web Internet- <http://www.mir-algeria.org/miseaniveau/dispojuri.html>
- [8] Web Internet- [http://www.agentintelligent.com/veille/veille\\_stratégique.html#définition](http://www.agentintelligent.com/veille/veille_stratégique.html#définition)
- [9] *Books*- Jakobiak F., *Pratique de la veille technologique* (Editions d'organisation, Paris) 1991.
- [10] *Books*- Desvals H. et Dou H., *Veille technologique* (Dunod Editions, Paris) 1992
- [11] F. Zoufriha- A. Djeflat, *Industrialisation et TT dans les pays en développement* (Publisud- Paris) 1985.