

RELEVANCE OF THE COMPETITIVE INTELLIGENCE PROCESS ON THE SPANISH PHARMACEUTICAL COMPANIES

M. Paula Fernández-Arias^a; Pilar Quevedo-Cano^a; Antonio Hidalgo^a

^a Polytechnic University of Madrid (UPM) - Madrid, Espanha

ABSTRACT

It is common to find Competitive Intelligence activities within the high-tech enterprises in particular in the pharmaceutical industry. These companies not only use the process of Competitive Intelligence to act against competitors, traditional aim of the Competitive Intelligence. It is increasingly used to enhance cooperation. The Cycle of Competitive Intelligence (CI) is used both as to extract offensive and defensive intelligence as cooperative intelligence. The paper presents the results of a sample study of 186 Spanish pharmaceutical companies that were asked about the purpose of cooperation in their Competitive Intelligence activities. The results confirm that these are used in the development of business relationships, search for partners, joint research, etc. and that companies bet on these relationships for the future within the Competitive Intelligence.

Keywords: Cycle of Competitive Intelligence; Competitive Intelligence Process; Knowledge Management; Pharmaceutical Sector; Cooperation.



1. INTRODUCTION

Competitive intelligence (CI) is one of the most useful tools for strategic analysis because it provides, analyses and distributes information, the knowledge and intelligence throughout the organization.

In the last years there has been a rising in the so-called Competitive Intelligence in the field of Information and corporative knowledge that has not been accompanied by the same interest in the theoretical basis (Palop *et al.*, 1999; Escorsa *et al.*, 2001; Hidalgo *et al.*, 2002; Postigo, 2001, Tena *et al.*, 2001). Several new trends have emerged in literature that have brought closer, with a better or worse choice, the Competitive Intelligence theoretical frame. But there is still so much to study about how the CI process is and why it works, what types of intelligence we can detect inside the organization, who is the responsible person in charge to perform this work, which ones are the conceptual terms that are used in the different academic papers, the results from the creation and administration of the knowledge and the information that is used, as well as the corporation's intellectual capital, etc.

The importance given to CI has been based on offensive and defensive activities implemented in the company. However, some authors have opened another research line that creates tools to make decisions in other directions. Thus, sometimes the company launches its CI to research the environment and competition in particular with the aim to enhance internal improvements or collaborations with companies (e.g. for open innovation lines).

The Medical College Organisation report (OMC) on the pharmaceutical sector (OMC, 2014) that some actions are recommended to increase the competitiveness of the sector. The OMC says that it would be reasonable to expect a process of concentration and restructuring that promotes partnerships, joint ventures or mergers to create solvent and innovative pharmaceutical companies. It is noteworthy that the research model of the pharmaceutical industry continues to evolve over the last decade, from the classic pattern of R&D to prototype called R&C (cooperation and/or collaboration).

In this sense, the goal of the study is to analyse the behaviour of pharmaceutical companies integrated in the Farmindustria association with the possibility to improve the cooperation amongst them by using CI cycle activities. Five phases are suggested in the process of CI generation to study in each of them the importance of cooperation. The aim is to determine whether cooperation is a purpose in using the CI in a company and, if so, we can expect CI processes to evolve and enhance the relationship networks between companies in the sector.

In this respect, this paper contribution is in the direction marked by The Green Book on Innovation of the European

Commission, where we are urged to accentuate the efforts made to investigate the national practices in the European Union of different methods and specific processes of collection, management, treatment and classification of information that is used in the Competitive Intelligence.

2. THEORETICAL CONSIDERATIONS

The Strategic and Competitive Intelligence Professionals (SCIP) describes competitive intelligence as "the process of gathering ethically, analysis and disseminate reliable, relevant, specific intelligence, timely, foresighted and actionable, regarding the implications of the business environment the competitors and the organization itself" (SCIP, 1999).

However, there are many CI definitions provided by different authors remarking the strategic aspect and the variety of targets with their activities (Cohen, 1997; McGonagle, 1998; Bernhardt, 1994; Hockman, 1999). In this way, as Cohen (1997) *et al.* (1998) say, the Competitive Intelligence is a combination of methods, ethic and legal processes, abilities and behaviours of the competence to obtain a competitive and sustainable advantage to this company.

Bernhardt (1994) defines Competitive Intelligences as "an analytic process that transforms disintegrated data from competitors, industry and market, putting them together to get knowledge that is useful to the strategic planning, related with abilities, intentions, performance and position of these competitors".

The information provided to the organization by the CI, properly treated, generates intelligence on which to base strategic planning and decision making and with an impact on organizational performance (Prescot, 1999; Herring, 1999; Ortoll *et al.*, 2010; Antia *et al.*, 2007; Tena *et al.*, 2003).

Knowledge is the basis in which these intangible resources exist in the corporation and it owns some qualities that complicate its imitation and transference (Grant, 1996). This issue will give a competitive advantage in the market to the company that will be able to manage in an efficient way this knowledge. In order to do so, it is necessary to consider its management as a dynamic process where identification, storage, formation and recycling of the above mentioned knowledge in the organization take part.

From this basis, it is easy to understand the importance of Competitive Intelligence. It is shown as a part of this strategy, as a systematized activity that gathers information about the environment and introduces it in the organization to generate knowledge, and in order to be a part in the decision making process. At the same time that CI generates knowledge, it uses the existing knowledge in the

organization and modifies it, complementing and improving it. The modification of that organizational knowledge basis will be available in the core of the company for future needs.

There is no current data in literature on the number of companies carrying out competitive intelligence as a systemic process. Studies in Spain (Postigo, 2001; Infoact, 2001; Cetisme, 2003; Tena *et Comai*, 2003) cannot detail the spread of practice in companies due to the heterogeneity of the analysed organizations.

2.1. CI Cycle

Despite the virtual unanimity on the scientific method being the precedent of the intelligence cycle (Vignettes, 2010), we can say that there has never been agreement on the number, name and specific content of the phases comprising it. However, when analysing the mentioned characteristics and phases, we find in literature some common trends in different authors and communities as well as important differences between them.

It is noteworthy that the positions are not contradictory but complementary (Bernhardt, 1994; Ortoll *et al.*, 2010; Prescott, 1999; Choo, 2002; Lesca, 2006; Arroyo, 2005; Martinet *et Marti*, 1995; Escorsa *et Maspons*, 2001; Ashton *et Stacey*, 1995). Competitive intelligence is a dynamic strategic tool for the survival and growth of the present companies. From the theoretical studies, different phases have been proposed. The need of some logical phases lays in the interest of formalizing and systematizing the CI process (Bernhardt, 1999).

On this basis, the proposed CI is formed by five phases (Figure 1): Planning of resources and activities; Collection and validation of information; Analysis and dissemination of intelligence; Using the results; and Evaluation of process performance.

We will briefly revise these phases:

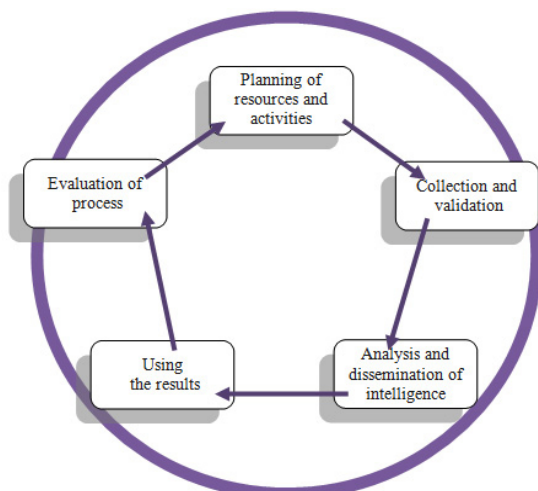


Figure 1. Competitive Intelligence Cycle of five phases
Source: The author own

2.1.1. Planning of resources and activities

Companies need to plan the CI activities bearing in mind the final aim. Sometimes planning needs legal information, tax rate, etc. Others, it needs information from competitors to know what they are and their activities in the sector.

In other occasions the priority is in the information on market changes, products and processes, etc.

2.1.2. Collection and validation of information

At this stage of CI companies evaluate where and under what conditions gather the necessary information to fulfill their need.

Therefore, it is mandatory to know the sources of such information (internal, external, private, public, structured, unstructured, etc.) It is also important to know the existence of controls, validation and verification of sources and information.

2.1.3. Analysis and dissemination of intelligence

At this stage of the process the tools used for data analysis, analysis and control of both the information storage and the needed and generated, are of great importance.

The different ways to broadcast or disseminate the intelligence generated in the organization can be carried out by taking into account individuals or specific group departments (marketing, R&D&I, sales network, general management, etc.), users subsidiaries or from within the organization.

It is also important to know the kind of dissemination that is carried out from the media's point of view (meetings, intranet or other).

2.1.4. Using the results

At this stage it is important to remark the activities focused to sort out problems and analyse whether the company is aware that the CI has managed to solve risky situations in departments, subsidiaries, projects, etc., and if it is expected that the results of the CI serve to sort out different issues.

2.1.5. Evaluation of process performance

Companies should evaluate the results of the CI cycle to enable process improvement and the necessary adjustments on the planned targets.

It is necessary to evaluate activities flexibility, CI user's satisfaction, improvements in the strategic areas of the organization, etc.

2.2. Purpose of Cooperation and CI

Information has a first magnitude strategic dimension, either as active means of defense-knowing to prevent- or reactive -knowing to attack (Kahn, 2001).



However, authors like Ortoll *et al.* (2010) confirm that the impact of social networks on both information sources and the efficiency of the whole process of competitive intelligence is significant. Thus, several authors have explored the importance of social networks in the process of competitive intelligence (Palop *et al.* Vicente, 1999; Escorsa *et al.* Maspons 2001; Trim, 2004; Michaeli, 2006), especially the importance of networks as sources of information for their members. Some researchers also relate the involvement of network structure on the efficiency of the process of CI (Jaworski *et al.*, 2002).

This job has planned a model that, just as others (Tena *et al.* Comai, 2001; Hussey *et al.* Jenster, 1999) takes into account the purpose of the CI in the company. Two objectives are proposed in the activities of the CI cycle. The company may determine that part or the whole of the CI activity pursue the so called competitor intelligence (for defensive and offensive actions) and can determine how much of the CI is intended for a cooperative intelligence.

There is wide reference of competitor intelligence in literature due to the CI's own nature, but it is harder to find evidence of the second, competitive intelligence for cooperation, partner search, agreements, etc. However, activities taking place in the CI cycle can be used in a broad spectrum of fundamental issues for the development of a partnership (finance, marketing, R&D&I, etc.).

3. METHOD

This job applies a descriptive and explanatory method based on a questionnaire addressed to analyse the CI phases, the targets pursued by the company and the impact on some business results.

In this paper, we expect to adhere ourselves to one sector that is a pioneer in putting in practice CI and that is developing the activities in the Competitive Intelligence Cycle, the Pharmaceutical Industry. In order to do so, a sample of the sector the National Business Association of the Pharmaceutical Industry (Farmaindustria) established in Spain was taken to carry out this study. The group has the vast majority of pharmaceutical laboratories (186 members representing 84% of the prescription market and 42% of the holders of marketing authorizations for medicines).

In the report made by Spanish Medical College Organization (OMC) in 2014 about the pharmaceutical sector, data that shows the frame for intervention of this industry is found. In this sense, in the last 40 years has been the sector with the fastest growth in Europe and in the United States, portraying today a business volume bigger than 3.5 billion dollars (EFPIA, 2011).

The final questionnaire was obtained after several meetings with industry experts (managers, laboratory

owners) area doctors of the company organisation and the sub-department of Farmaindustria. After validating the questionnaire it was sent to all partners in Farmaindustria guaranteeing the confidentiality of responses.

It is important to remark the existing difficulty to draw information from these companies. You have to go through many different filters in order that pharmaceutical companies consider it innocuous to answer questions on the information they use. In most cases legal departments should approve the questionnaires and this may take weeks.

The five CI phases compiling the theory bases of the different authors were laid out. At each stage of the CI cycle, laboratories were asked for different aspects of the interest in cooperation. With the answers to the questionnaire a descriptive analysis of the use of CI for cooperation activities and expectations of pharmaceutical companies was carried out.

4. RESULTS

The results are divided according to the five phases of the CI cycle (Table 1). In the planning phase 65 % of companies stated that they commonly use CI consulting when cooperation activities are intended. Given the competitive nature of the CI it seems that, as stated by Tena *et al.* Comai (2001), the cooperative intelligence has significant purposes for the process.

During the second stage, information collection phase, over 50% of companies answer that they commonly use sources of information from their partners in research projects. That shows the level of relationship that comes to have companies so protective towards the security of their information when it happens to investigate with other companies. There are also a high percentage of companies using information from other subsidiaries of the group at times or on many occasions. Bearing in mind they were asked in the context of CI, it is noteworthy that the percentages of consultation between partners and between subsidiaries of the same group are not far.

In the third phase of the CI cycle, companies declared that 40% send relevant information to the project partners, while only 6.4 % do so to their own subsidiaries. It is remarkable the importance given to the management of information between partners when having a common project. It should be noted that they were not asked for a specific project, but for their usual performance in the context of CI.

The fourth phase, referring to the use of the results, it is noted that 66% of cases frequently use the reports generated in CI in other companies of the same group, but not a regular system as only 10% do so. In both situations described usage decreases when asked for external companies in the same group. Using CI reports between project partners is

also important (40% of respondents), whilst almost 39% never or almost never used them.

The last phase, performance evaluation, reveals that pharmaceutical companies consider that CI encourages collaboration with other organizations (over 60% agree or strongly agree with this). Regarding the detection of new financial partners approximately 30% said that the CI was not relevant or had minor importance, but 50% said it was quite or very important.

Finally, as to the intention to increase CI resources, willingness was shown to increase resources in the pharmaceutical sector, regardless the current economic situation.

Table 1. Summary of main results

The five phases	
1. Planning of resources and activities	- 65 % of companies stated that they commonly use CI consulting when cooperation activities are intended. - Given the competitive nature of the CI it seems that, as stated by Tena <i>et Comai</i> (2001), the cooperative intelligence has significant purposes for the process.
2. Collection and validation of information	- Over 50 % of companies answer that they commonly use sources of information from their partners in research projects which shows the level of relationship that come to have companies so protective towards the security of their information when it comes to investigate with other companies. - There are also a high percentage of companies using information from other subsidiaries of the group at times or on many occasions. - Bearing in mind they were asked in the context of CI, it is noteworthy that the percentages of consultation between partners and between subsidiaries of the same group are not far.
3. Analysis and dissemination of intelligence	- The companies declared that 40% send relevant information to the project partners, while only 6.4 % do so to their own subsidiaries. - It is remarkable the importance given to the management of information between partners when having a common project. It should be noted that they were not asked for a specific project, but for their usual performance in the context of CI.
4. Using the results	- It is noted that 66 % of cases frequently use the reports generated in CI in other companies of the same group, but not a regular system as only 10% do so. - In both situations described usage decreases when asked for external companies in the same group. Using CI reports between project partners is also important (40 % of respondents), whilst almost 39% never or almost never used them.
5. Evaluation of process performance	- The pharmaceutical companies consider that CI encourages collaboration with other organisations (over 60 % agree or strongly agree with this). - Regarding the detection of new financial partners approximately 30% said that the CI was not relevant or had minor importance, but 50% said it was quite or very important.

Source: The author own

5. CONCLUSIONS

During the study, it is confirmed the use of CI for cooperation in each stage of the CI cycle, that is, the use of CI not only it looks for to defend or to attack.

Farmaindustria’s pharmaceutical companies show that they commonly use other companies’ sources of information, they share the knowledge gained in the CI process with project partners and consider that the CI encourages collaboration with other entities. It should be noted that they were not asked for a specific project but by the usual action for cooperation in the framework of CI.

The main conclusion is that most pharmaceutical companies are committed to sharing knowledge generated during the CI process with other companies, subsidiaries or partners despite such tight controls imposed in the sector when it comes to extracting information in their organizations.

In general, there was a willingness to increase the resources invested in CI in the pharmaceutical sector. It seems that if we bet for cooperation, companies will find in the intelligence process a valuable ally to advance towards their research objectives and growth.

REFERENCES

Antia, K. *et* Hesford, J. (2007), “A process-oriented view of competitive intelligence and its impact on organizational performance”, *Journal of Competitive Intelligence and Management*, Vol. 4 No.1, pp. 5-33.

Arroyo, S. (2005), *Inteligencia competitiva. Una herramienta clave en la estrategia empresarial*, Ed. Pirámide, Madrid.

Ashton, W. *et* Stacey, G. (1995), “Technical intelligence in business: understanding technology threats and opportunities”, *Journal of Technology Management*, Vol. 10, nº 1

Bernhardt, D. C. (1994), “I want it fast, factual, actionable: Tailoring competitive intelligence to executives needs”, *Lond Range Planning*, vol. 27, No. 1, pp. 12-24

CETISME (2003), “Inteligencia Económica y Tecnológica. Guía para principiantes y profesionales”, Dirección General de Investigación, Cetisme, Comunidad de Madrid.

Choo, C. W. (2002), *Information Management for the Intelligent Organization: The art of scanning the environment*. Medford, NJ: Information Today.

Cohen, S. (1997), “Digital Detective”, *Training & Development*, Vol.51, No. 6, pp.16-19

COMISIÓN EUROPEA (2010), *EU Industrial R&D Investment Scoreboard 2010*, available at: <<http://publications.jrc.ec.europa.eu/repository/bitstream/JRC61230/jrc61230.pdf>> Accessed: 08/01/15.

EFPIA (2011): The Pharmaceutical Industry in Figures. European Federation at Pharmaceutical Industries and Associations. Available in: <<http://www.efpia.eu/>>



documents/52/61/The-Pharmaceutical-Industry-in-figures-Edition-2011> Accessed: 26/12/14.

Escorsa, P. et Maspons, R. (2001), *De la vigilancia tecnológica a la inteligencia competitiva*. Prentice Hall. Madrid.

FARMAINDUSTRIA (2013), Memoria Anual.

Grant, R. M. (1996), *Dirección Estratégica. Conceptos, técnicas y aplicaciones*, Ed. Cívitas, Madrid.

Herring, J.P. (1999), "Key Intelligence Topics: A Process to Identify and Define Intelligence Needs" *Competitive Intelligence Review*, Vol. 10, Nº2, pp.4-10.

Hidalgo-Nuchera, A.; Iglesias-Pradas, S. et Hernández García, A. (2009), "Utilización de las bases de datos de patentes como instrumento de vigilancia tecnológica", *El profesional de la información*, Vol.18, No. 5, pp. 511-518.

Hockman, D (1999): "What is Competitive Intelligence?", *Grand Rapids Business Journal*, Vol. 17, No. 33, pp. 3-5.

Hussey, D. et Jenster, P. V. (1999), *Competitor Intelligence: Turning Analysis into Success*, Wiley Series in Practical Strategy, Ed. Wiley.

INFOACT (2001), *InfoAct-Información para la Acción*. European Comisión.

Jaworski, B. J.; Macinnis, D. et Kohli, A. (2002), "Generating Competitive Intelligence in Organizations". *Journal of Market-Focused Management*, 2002, No. 5, pp. 279-307.

Kahn, D. (2001), "An historical theory of intelligence", *Intelligence and national security*, Vol. 16, No. 3, pp. 79-92.

Lesca, N. et Caron-Fasan, M. (2006), *Veille anticipative: une autre approche de l'intelligence économique*. Paris: Hermes science publications.

Martinet, B. et Marti, Y-M. (1995), *L'intelligence économique. Les yeux et les oreilles de l'entreprise*. Les Editions d'Organisation, Paris.

McGonagle, J. (1998), *Protecting Your Company Against Competitive Intelligence in the Digital Age*. New Jersey.

Michaeli, R. (2006), *Competitive intelligence: strategische Wettbewerbsvorteile erzielen durch systematische Konkurrenz-, Markt- und Technologieanalysen*. Berlin, Heidelberg: Springer, 2006.

OMC (2014), *Informe sobre el Sector Farmacéutico Organización Médica Colegial de España*. Consejo General de Colegios Oficiales de Médicos de España.

Ortoll Espinet, E.; López Borrull, A.; Canals A.; García Alsina, M. et Cobarsi Moraes, J. (2010), "El papel del capital social en la inteligencia competitiva". *Revista General de Información y Documentación*. Vol. 20, pp. 213-223.

Palop, F. et Vicente, J. M. (1999), "Vigilancia Tecnológica e inteligencia Competitiva". Su potencial para la Empresa Española, Fundación Cotec. Available in: <http://www.navactiva.com/web/es/descargas/pdf/avtec/potencial_vtec.pdf>.

Postigo, J. (2001), "La inteligencia competitiva en España: una encuesta sobre su utilización por parte de las empresas exportadoras". *El profesional de la información*, Vol.10, Nº 10, pp.4-11 .

Prescott, J. E. (1999), "The Evolution of Competitive Intelligence: designing a process for action", *Proposal Management*, Spring, pp.37-52.

SOCIETY OF COMPETITIVE INTELLIGENCE PROFESSIONALS (SCIP) (1999), "List of the CI cycle as published". Available in: <<http://www.scip.org>>. Accessed: 10/11/2005.

Tena, J. et Comai, A. (2003), "La inteligencia competitiva en la planificación estratégica y financiera" *Harvard Deusto Finanzas y Contabilidad*, nº 56, pp. 30-37

Tena, J. et Comai, A. (2001), "Los propósitos de la inteligencia en la empresa: competidora, cooperativa, neutral e individual", *El profesional de la información*, Vol. 10, Nº 5, pp. 4-10.

The Green Book on Innovation - *LIBRO VERDE DE LA INNOVACIÓN* - (1995) European Commission.

Trim, P. (2004), "The strategic corporate intelligence and transformational marketing model", *Marketing Intelligence & Planning*, Vol. 22, No. 2, pp. 240-256.

Vignettes, M. (2010), "El Ciclo de Inteligencia: naturaleza y alternativas", *Inteligencia y Seguridad*, No. 8, pp. 113-136.