SOCIAL INNOVATION IN COLOMBIAN COMPANIES THROUGH DESIGN MANAGEMENT

Emilio Jiménez-Ibáñez, Begoña Jorda-Albiñana, Jimena Gonzalez del Rio Cogorno, Teresa Magal-Royo

Institute for Sustainable Entrepreneurship, Universidad EAN, El Nogal Branch, Cra. 11, Nº 78-47- 2808 Bogotá, Colombia. Phone: +(571)593-6464 jejimenez@universidadean.edu.co

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LA INNOVACIÓN SOCIAL EN LAS EMPRESAS COLOMBIANAS MEDIANTE LA GESTION DEL DISEÑO

ABSTRACT

Social innovation (SI) emerges in any country in the world as part of the progress that is made by companies and services seeking to improve the social needs of the users in their immediate environment. This has involved adapting new processes and methodologies in the creation of new products and services for society, where planning and design management need a directed empowerment. Social innovation and empowerment need a catalysing agent that becomes a facilitator for the knowledge that may be created and that guides companies in the development of new products and services of social nature. The application of techniques that are based on Design Thinking are the starting point of a new design management model adapted to the problems of companies that want to innovate in the socially responsible sphere for the society, the environment, and the individual itself. The article reflects on the need to propose a new model of integrated tutoring for the management of Design and social innovation in enterprises (SMEs) and how it has been successfully implemented in Colombian companies.

KEYWORDS
Social Innovation (SI), empowerment, design management, Design Thinking, SMEs, Colombia.

RESUMEN

La innovación social, (IS) surge en cualquier país del mundo como parte del progreso realizado por las empresas y servicios que buscan mejorar las necesidades sociales del usuario en su entorno más próximo. Ello ha implicado adaptar los procesos y metodologías en la creación de nuevos productos y servicios para la sociedad, donde la planificación y gestión del diseño necesita de un empoderamiento dirigido. La innovación social y el empoderamiento necesitan de un agente catalizador que se convierta en un facilitador del conocimiento creado y que oriente a las empresas en la creación de nuevos productos y servicios de carácter social. La aplicación de técnicas basadas en el Design Thinking son el punto de partida para la creación de un modelo adaptado a la problemática de las empresas que quieren innovar en el ámbito de lo socialmente responsable para la sociedad, el entorno y el individuo en sí. El artículo reflexiona sobre la necesidad de plantear un nuevo modelo de tutorización integrada para la gestión del Diseño y la innovación social en empresas, (MYPIMEs) y de qué manera ha podido implementarse con éxito en empresas colombianas.

PALABRAS CLAVE
Innovación social, empoderamiento, gestión del diseño, Design Thinking, MIPYME, Colombia.

1. THE COMPETITIVENESS OF SMES IN COLOMBIA

The trends in consumption set the initial point of possible growth of productive sectors and companies. These must be adapted to the needs of the market from a strategic position based on innovation and systemic methods for creating new products and services. The knowledge of these aspects marks a turning point for the companies and their survival in the current market of Colombian enterprises (CONPES, 2008; 2016; Montoya et al., 2010).

In general, SMEs are the development engine of most emerging economies in Latin America and have become the industrial strength of many countries in the region: *"[...] SMEs are the most important source of employment generation, while production is for large enterprises. Their size brings disadvantages such as their isolation, the difficulty for technological change, low bargaining power, low productivity, low income, and little capacity for productive reinvestment, which prevents this sector from being competitively inserted into the process of globalization and technological change [...] (Montoya, Montoya, & Castellanos, 2008 :62).*

The potential for Latin American enterprises to strengthen and expand into new markets in the coming years involves innovation and creativity (Oppenheimer, 2015). The SMEs in Colombia are called to implement innovation models or else, they will end up disappearing either because of the dynamics of the competition or the emergence of new business models led by entrepreneurs who are eager for new clients and willing to give everything for success.

The reports by the National Council for Economic and Social Policy (CONPES by its abbreviation in Spanish) about Colombia in 2008 and 2016 showed the need to create a system for planning, monitoring, and evaluating the productive development instruments that would help to solve the lack of knowledge in the field of market opportunities and management of enterprises that are identified by the values related to competitiveness, science, technology, and innovation (CONPES, 2008; 2016). In 2013, the National Federation of Merchants in Colombia had already indicated that there was a change in the consumption trends of the Colombian population, based on the following factors:

- The consumption of products with an added value related to the environment.
- Awareness in the use of new services related to the health of the individual (healthy food restaurants, relaxation centers, gym, etc.).
- Development of closed urban centers.
- The advancement of telework as a new method of working from home.
- Search of the technological connectivity for the constant communication of the user, in his environment and beyond the social networks.
- Development of new family patterns that imply new ways of living together and living in the urban environment.

These characteristic aspects that define the current consumption trends have implied the necessity for changing or updating enterprises in Colombia that need adapted methodological guidelines that allow, on the one hand, to apply innovation in products and services in the current world, and on the other, to enhance the closest social and human aspects.

In recent years, the Institute for Sustainable Entrepreneurship of Universidad EAN, the Ministry of Commerce, Industry, and Tourism of Colombia, and the Colombian Confederation of Chambers of Commerce (CONFECAMARAS by its abbreviation in Spanish) have carried out different studies and fieldwork on the management of the Design of Products and Services with Colombian enterprises. The results that were obtained have allowed defining a new model of integral tutoring for the management of the development of new products and services that are adapted to the current necessities of the Colombian business fabric, from innovation and creativity.

The research that has been carried out with the enterprises during the last 5 years has allowed to detect that in many cases, the final orientation of the products and services had an important social component due to its repercussion in the area; therefore, they could be determined as projects with a high degree of social innovation in the places where they were implemented (Villa & Melo, 2015).

In consequence, the new model of the double Hexagon takes into account criteria related to design methodologies that are based on creativity such as the Design Thinking and the models whose basic component is the Social Innovation (SI).

For this reason, before justifying what the SI is and the aspects that define it, it is necessary to mention the use of methodologies based on Design Thinking within the process of conceptualization and design in enterprises that allows us to characterize the problem from the innovation in its broadest sense.

Design Thinking is defined as a systemic process based on design methods, where creativity is fundamental and innovation is the objective. In fact, it is focused on the creative development of products and services, the improvement of productive processes incorporating added value, business management, the application of the concept of sustainable social development, and the search for new innovative markets (Schumpeter, 1934; Florida, 2002). It is precisely in the field of sustainable social development where the premises and social objectives of the Design Thinking link with the factors that define an SI project, seeking this implication on the part of enterprises. It is thus considered appropriate that the factors involved in these two methodologies had been taken into account for the characterization of the new Double Hexagon model, which has been proposed as a viable solution to the problem of innovation in SMEs in Colombia.

2. WHAT IS SOCIAL INNOVATION?

During the last decade, design management has become popular as a generic methodology composed of phases or periods that allow designers, engineers, and entrepreneurs to develop a dynamic innovation process adapted to the needs of a project that is to be implemented in a company (Espinach et al., 2014; Westley et al., 2012).

Within design management, we find that the concept of innovation is inherent in any phase of the process and is an interdisciplinary practice that can be carried out within different scenarios and contexts. Social Innovation (SI) also includes the objective of solving social problems of a specific territory or community (Yunus, 2011). In most cases, it implies the need to carry out an adapted learning process that allows empowering people by creating new products applied directly to the community or territory. Social innovations are characterized by:

- **Prior knowledge of the social and economic environment of the area or community.** The application of social innovation in a community raises the necessity to evaluate the business fabric existing in the area. In this way, the existing context is harnessed to promote specific developments of social innovation. In fact, the key to success often focuses on the previous analysis of the available needs and capacities.
- **The improvement of the social and functional conditions of a community or a specific environment.** The creation of new products or services is perceived as an effective social improvement in the short and medium term for the community where it is applied.
- **The need to enhance the empowerment and the control of the innovation process for the benefit of the community.** The community is aware of the necessity they have to develop their own strategies and application methods that adapt to their social needs based on available human capital and the business fabric over which they have direct or indirect access. This gives them an initial empowerment that allows communities to take the initiative and get involved in the process and achievement of the project.
- **The application of guided and/or supervised methodologies that allow control and efficiency in the achievement of the social project that is carried out.** This is essential to guide the development

of the social project in an unfavorable environment or that has little knowledge of the concept of social innovation in itself. The definition of management models and the application of systemic processes allow the communities that apply it to know what their initial objectives are and where they should go to achieve them, including validation and monitoring phases throughout the process. This aspect becomes fundamental for the change of awareness in front of a problematic of conventional design where the functional and commercial aspects are higher and demanding at the economic level.

Among the most outstanding systemic models, we can find the ones proposed by Murray, Caulier-Grice, and Mulgan, who introduced a six-step model as an initial frame of reference for social innovation projects at an international level. Each of these steps emphasizes the support or interdisciplinary training that is necessary to carry it out successfully (Murray, Caulier-Grice, & Mulgan, 2010) (See Figure 1).

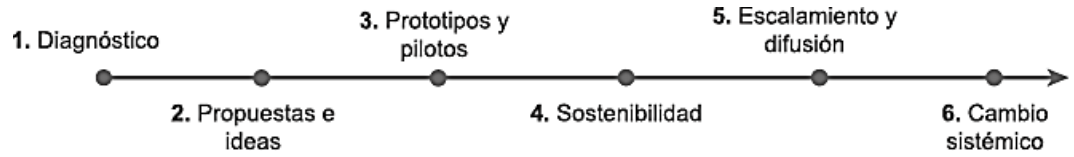

Figure 1: Stages of the Social Innovation process, (Murray, Caulier-Grice, & Mulgan, 2010)

Buckland and Murillo raised one of the first approaches in the evaluation for the decision making in an SI project that is adapted to the problems of enterprises in Latin America. In their proposal, they show innovative aspects such as the Intersectoral collaboration of the regional productive fabric or how to make it sustainable and replicable in other business environments with similar characteristics (Buckland & Murillo, 2014) (See Figure 2).

Figure 2: Stages of the Social Innovation process in Latin America, (Buckland & Murillo, 2014)

In their book Social Innovation in Latin America, authors like Domanski, Monge, Quitiaquez, and Rocha proposed a circular model where empowerment was included as a determining factor for the realization of this type of project (Domanski et al., 2016:53), and that was summarized in the following objectives:

- Disclose the basic concepts that determine if a project can be considered as an SI project or not.
- Strengthen the relationships of technological innovation and new business methods in the field of training that is necessary to carry out an SI project.
- Adequately define and clarify the objectives of the SI project including the demands and social challenges in the environment where it is applied.
- Become aware of the development engines and the possible social barriers that can affect the achievement of an SI project.
- Become aware of the governmental and/or institutional mechanisms of control and development that can support an SI project in a defined environment.
- Value and develop a life cycle of the SI project that is consistent with the needs of the initial proposal and objectives.
- Evaluate and control the resources and the real capacities of the environment for the start-up of the project including the empowerment of the human personnel involved.

- Establish resources, capacities, and restrictions in the field of finance and regulations that must be taken into account during the development.

Figure 3: Dimensions of a social innovation project in Latin America (Domanski et al, 2016:53)

With all this and based on the knowledge that was developed by the research group on sustainable entrepreneurship of Universidad EAN and the UPV, the need to adapt the Double Hexagon model in projects with a high component of social and sustainable innovation was raised, as there was no updated model that took into account the real problems of enterprises in Colombia. The adaptation focused on the collaborative empowerment of the people involved in the project in the field of SI and on the adaptation of design tools such as the Design Thinking in decision-making, valuing the social component as a key factor in decisions.
The Double Hexagon Design management model has proven its effectiveness thanks to the correct selection of instruments and design strategies that are adapted to the necessities of enterprises that have lasted over time and have served to improve real empowerment in their immediate surroundings.

3. APPLICATION OF A SOCIAL INNOVATION MANAGEMENT MODEL IN THE CONTEXT OF COLOMBIAN SMEs.

The adaptation of a design management model for innovation called Double Hexagon arose from the necessity to establish the relationships between the method that was established by the process model and the tactical inclusion of a facilitator or consultant in innovation projects, capable of directing and empower Colombian enterprises (Patiño Castro et al., 2016; Mejia, Jiménez, & Chavarria, 2014). On the other hand, the need for control and monitoring includes the training and empowerment of the people of the company who are involved in the project through the knowledge of the objectives of the SI projects from a multidisciplinary perspective so that they feel part of the solution to the stated necessity and/or problem (Jiménez-Ibáñez et al., 2017a). During the last 10 years, Universidad EAN has developed projects on social innovation in Colombian SMEs that have allowed validating the model that has been proposed, especially in the methodological aspects of the design management implementation, including tutoring that is adapted to the needs of the Colombian business (Antúnez de Mayolo, 2012).

In order to establish an initial state in an SI project, one must recognize three fundamental elements that define it, and those are:

- THE PROBLEM, arising when the situation that is analyzed affects the company in a negative way.
- THE DILEMMA, resulting when it is considered whether it is necessary or not to establish a significant change in a process or service in the company where previous failures or irregularities have been detected. Therefore, the needs to update, verify, or change in some way or form emerges.
- THE OPPORTUNITY, appearing when the initial situation has been analyzed, and it reveals the possibility of creating or establishing a positive improvement at one or various levels of the process of achieving an innovation project in general.

The knowledge of these three elements is considered the starting point to establish strategies for approaching any SI project, since the company is collectively aware of the necessities of its immediate surroundings. For the company, this new approach implies the need for changes in production processes adapted to their immediate surroundings, including the need to know and adapt to the new social and technological changes that take place in today's world and that affect it as a company.

With that in mind, any approach to the problem or resolution of an SI project needs a model that facilitates effective mechanisms and methods focused on making the design management process known in a company, guided by a facilitator from a didactic and practical point of view. The facilitator will contribute his expert knowledge in the aspects of integrated tutoring in order to follow-up the conceptualization and development of new products and innovative services in the company, and will allow that in the future, the enterprises continue to use them in an autonomous way (McElroy, 2002; Colomer & Martínez-Torán, 2010).

The Double Hexagon is therefore a model that allows a Colombian SME to implement the SI as a strategic factor by applying design management methodologies (Jiménez-Ibáñez et al., 2017b), through the figure of a facilitating agent that marks the route and the times to be followed in the development of a product or service. The facilitator, defined by the Royal Spanish Academy (RSA) as *"a Person who acts as an instructor or counselor in an activity"*, is considered in the Double Hexagon model as an integrating agent in the phases of accompaniment and collaborative empowerment that are proposed in the model. The facilitator is a professional or group of professionals who help, guide, and collaborate actively with the company in the use of tools and/or methodologies in the process of implementing the SI, improving the personal and professional empowerment of the human team of the enterprises that are involved in the process.

Figure 4: Meeting during the process of accompaniment and collaborative empowerment, (Jimenez et Al, 2017)

The Double Hexagon Model takes into account the needs of users as one of the strategic factors to be taken into account from the beginning. There are two double-track connections, one between the SME and the Facilitator Team because communication is the key to the correct flow of model implementation, and the other

between the Facilitator Team and the context because the team must be aligned with the context, know it , and keep it in mind all the time in order to ensure that all the work that is done in favor of the innovation of the SME is relevant to the scenario that has been defined. The last line of relationship is the action and intervention that the Facilitating Team has in the relationship between the SMEs and their users, since the fieldwork that is required in order to know the users thoroughly must be firsthand action for the company (see figure 5). It is very important to understand that the model seeks the implementation of innovation through a structured process that also aims to develop innovation competencies through the transfer of knowledge within the company in order to ensure the continuity of innovation (Jiménez- Ibáñez, 2017).
The following are the general phases that define it:

- Initial Context Phase.
- Collaborative Approach Phase.
- Diagnostic phase.
- Alternatives Phase.
- Collaborative Empowerment Phase.
- Sustainable Implementation Phase.

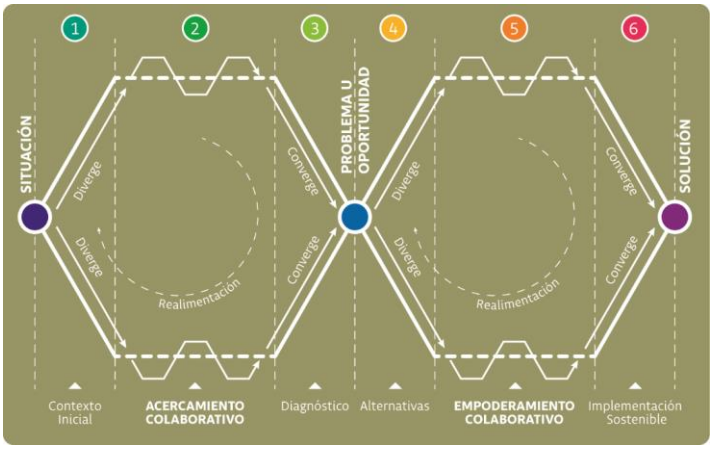

Figura 5: Double Hexagon model adapted for the resolution of social innovation projects. (Jimenez et Al, 2017)

3.1 INITIAL CONTEXT PHASE

In this phase, the facilitator makes a preliminary investigation about the immediate surroundings where the implementation of the Design or service is going to take place. This research may include the study of the demographic data of the area, the distribution of the direct socio-economic strata, the level of training of the active population, the access that the population or community has to ICT and Internet, the infrastructures that are available at the state and/or private level existing in the area, the plans related to the environment, and good practices in ecological design, the institutions that can collaborate in the implementation and dissemination of the project in the area, etc.

All this will allow us to know if there are favorable conditions for the implementation of the management model since without them, the infrastructure and human resources that are necessary for its implementation will not be available. For this reason, once this phase is analyzed, the commitment of the parties, whether public or private, will be sought in the fulfillment of the monitoring, advisory, and final implementation phases that have been planned.

The development of the future scenario allows analyzing the quantitative and qualitative data that have been previously analyzed in the initial context search phase that allows to delimit and define the objective. In situations where a scenario is being made for several enterprises of the local economic fabric, a single exercise can be done and then the findings are specified for each economic sector.

3.2 THE COLLABORATIVE APPROACH

This phase is one of the great bets of the Double Hexagon model. In this phase, basic knowledge and technological skills will be transferred to the personnel who are involved in the project in order to apply and develop the tools and methodologies foreseen by the facilitator. The staff will be introduced to the importance of prior market research, participating actively in the field work of surveying or evaluating the responses of users or end customers. For a Colombian SME that wants to implement innovation processes, it is essential to detect the needs of its users, to know them in detail so that they can accurately characterize their target audience. It is the fastest way to achieve successful innovations in short periods of time that generate a direct and effective impact.

The information that is provided by potential users will help to characterize the groups of interest or groups of users with specific needs that allow establishing the guidelines in those products and/or services that are useful for the Community.

3.3 THE PREVIOUS DIAGNOSIS

During this phase, the facilitator gathers all the information obtained from the analysis of the company in its current state, the previous analysis of the socioeconomic environment, the characterization of the user or interest groups, and the institutional support both local and national. All the foregoing serves to develop a first strategic assessment of the possibilities of success in the development of an SI project where the control of the human factor and the community infrastructures that are available in the area or region are fundamental for its implementation. The objective of this first work is to evaluate the current situation of the company as experts and prepare conclusions regarding the First Hexagon. It is important to remember that the final milestone of the First Hexagon is to define the problem, dilemma, or opportunity that is going to be resolved in the Second Hexagon, by means of methodologies of design management and creativity applied to the most current business environment and with the available means. The diagnosis that has several dimensions allows us to quantify the current state of the company and the achievements on which we want to influence the development of this new product and/or service. The dimensions that are treated are thus the users, the market, the technology, and the innovation that will allow to know if the company has either conventional or markedly social means for the development of the project itself.

The information that is analyzed by the facilitator is presented to the company for acceptance, and comes in handy to explain graphically, directly, and in strategic terms the current status of the company with respect to the three dimensions, and negotiate the next steps (See Figure 6). The facilitator, together with the company, will analyze possible actions that materialize in a product or service that can be effectively addressed by the company with the resources that are available. In most cases, it is necessary to propose a complementary training for the middle management of the company in the knowledge of tools related to creativity and innovation, so they get motivated and take real awareness of the project to be carried out.

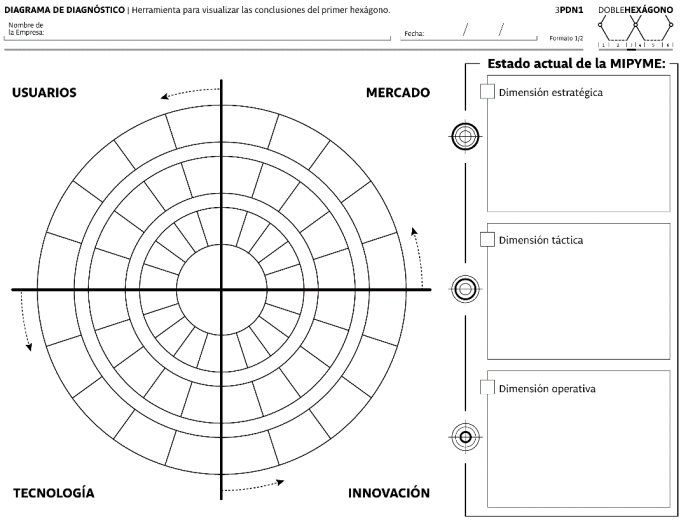

Figure 6: Diagram of previous diagnosis of the current state of the MSME based on the Double Hexagon Model adapted for the resolution of social innovation projects. (Jimenez et Al, 2017)

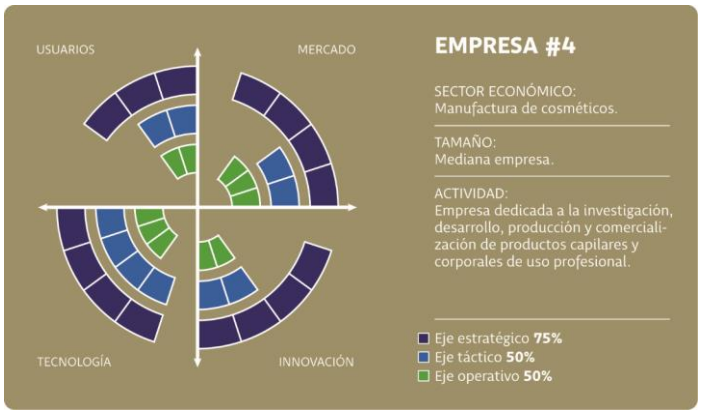

Figura 7: Example of a previous diagnosis diagram of a company, (Jimenez et Al, 2017)

Once the Diagnosis Diagram of the First Hexagon is created, it is time to move on to the phases that are developed in the Second Hexagon (See Figure 7). The main objective is to obtain ideas and novel alternatives within the solution space that is proposed in the Diagnosis Diagram, which has set limits that will allow design methodologies to be more effective and depend on the strategic lines that were defined in the First Hexagon.

In most cases, a lack of prior knowledge about business concepts on innovation and more specifically on social innovation is detected, which affects not only the company's management but also the middle managers who carry out the final development from the different departments of the company. This implies the application of a learning and empowerment phase on methodologies that are related to the management of design and creativity and that will be necessary for the internal awareness of the company on the need for both general and social innovation (SI).

The results that are expected in this phase must be clear so that they can be elaborated and tested with end users. The development of this phase may require the participation of other professionals or SMEs co-developers both during development and in the final execution. In the field of social innovation, this phase

also incorporates institutions or enterprises that in like manner want to participate directly or indirectly in a local project that can benefit them as well.

3.4 COLLABORATIVE EMPOWERMENT

The collaborative empowerment phase is one of the most important aspects proposed by the Double Hexagon, since it is the facilitator who proposes, in an informed way, the competences that are required by the SME team to continue the development of the project and that in the future will serve the company to know the path of innovation and ensure that the solutions resulting from the previous phase are implemented correctly. This phase will make it possible to train the team of people who are involved in the project and set the training lines and/or updating courses in the field of innovation that will enable them to empower and work autonomously in the future. Among the design and innovation methods that have been mostly used during the development of the research project have been, among others, the techniques of Design Thinking (Stickdorn & Schneider, 2016), the creation of Moodboards, the use of value mapping or Service Blueprint, the application of the DPESTE model (Demographic, Political/legal, Economic, Socio-cultural, Technological, and Ecological), the Strategic Product-Experience-Service model (PES), the Business Model Canvas Model (Osterwalder, Pigneur, & Clark, 2010), and the Strategic PES (Mejia & Parra, 2014), among others.

3.5 SUSTAINABLE IMPLEMENTATION.

This last phase of the project aims at ensuring the continuity of the innovation in the company and that this does not remain just as a simple novel idea, but that it is implemented and that it becomes a process within it. Part of this responsibility is shared in the phase of collaborative empowerment with each and every one of the members involved in the development of the product and service, and must be guaranteed so that there is a monitoring committee that can become a new and strategic department or section within the same company.

With this phase the Second Hexagon is closed. Unlike the First Hexagon, it does not have a specific document such as the Diagnostic Diagram, since in the reality what is generated is a large amount of documents that can be used by the company for monitoring or replicating the process, and that the facilitator must deliver conveniently adjusted to the needs of the company. The documents that are created vary according to the project that is carried out. They can be flow diagrams, technical documents to implement new processes, brand manuals, media strategies, etc. All of them must serve to control the tracking or traceability of the product and service over time, inasmuch as complementing it with the training that is acquired would allow to advance in the need that SMEs currently have to know new processes and methods related to innovation.

At this point, SMEs are at another level and have begun to assimilate the changes that have already begun to be implemented.

4. CONCLUSIONS

In recent years, Colombia has entered a dynamic of general progress perceiving itself as a developing country that needs to consider new challenges related to the design and innovation of new products and services for SMEs in Colombia with a marked social positioning among its objectives. Given this panorama, it is necessary to have models and methodologies of social innovation that help the country in the progress of the population and their communities.

The first step to be able to propose a new model and some methodologies for social innovation in Colombia is to understand other models and related methodologies, in order to analyze them and verify if they have worked

in projects that have been already developed in Colombia or if the possibility of modifying them or building a hybrid model can contribute in the processes of transformation that Colombia is living as a nation.

This methodological analysis developed by the Institute for Sustainable Entrepreneurship of Universidad EAN (Colombia) together with the Ministry of Commerce, Industry, and Tourism of Colombia, and the Colombian Confederation of Chambers of Commerce (CONFECAMARAS) allowed to define some of the determining factors that are established in the Double Hexagon model adapted to the context of social innovation in Colombia and, by extension, to Latin America.

The Double Hexagon model has become a safe methodology that trains the company in the knowledge of innovation, the social context where it exists, and the real needs of the final consumer. Within the model, the facilitator is the key factor that conducts and guides all the strategic development of the process and must ensure that all participants feel empowered both in decision-making and in the strategic decisions made in the company to motivate the personal and professional involvement in the project. The model must also serve to motivate the development of real and future social transformations in the new approaches on products and services made by the company. The model of integral tutoring of the Double Hexagon ensures continuous learning among the parties, a constant feedback based on the training that arises with the implementation of a project of these characteristics. Finally, the model must always adapt to the community, never the community to the model, defining spaces of action and impact on social sustainability, intersectoral collaboration, scalability, and replicability.

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