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Research Article

PROPOSAL FOR THE DESIGN AND IMPLEMENTATION OF A BUSINESS DEVELOPMENT, INNOVATION, AND COMPETITIVENESS CENTER FOR SMES, USING SBDC METHODOLOGY, FOR THE INSTITUTOTECNOLÓGICO DE SONORA (CEDICE-ITSON)

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ABSTRACT

This article aims to contribute to the regional development by linking with the social, business and government sectors through the design and validation of a model that involves the university, SMEs and / or entrepreneurs and government, as key actors for the creation of productive development centers for the region of Guaymas, Sonora, Mexico. To this end, a rigorous investigation of the characteristics and importance of the PYME for economic development was carried out, in the global and national context.

On the other hand, the university - company linkage models, dynamic mechanisms of the regions economy were reviewed. Based on the above, a model was designed for a Sustainable Economic Development Model based on SMEs, which was validated and determined the potential both of the universities, Technological Institute of Sonora (ITSON), and that gave rise to the creation of a Center for Development, Innovation and Business Competitiveness (CEDICE-ITSON)

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INTRODUCTION

Owing to a dynamic, changing, and ever more competitive environment, the rules of the market game in which small and medium-sized enterprises (SMEs) thrive are constantly evolving and being modified. These kinds of businesses must therefore maintain parallel progress, adopting innovations and new structures in accord with changes in their context. This requires a reformulation of how they do things, which leads in turn to the development of new technologies, new production processes, new alliances, and new marketing, distribution, and expansion strategies. In other words, organizations require a continual remodeling with respect to their environment whereby the enterprises can navigate the internal and external obstacles of the market.

In the face of economic globalization and the rapid growth of competition and technological development, where market preferences are constantly changing, there is the need to develop new kinds of enterprises that are capable of operating regionally, nationally, and internationally, and which can make the most of their competitive edge to meet ever more stringent

demands in the best possible way. Thus, SMEs need new forms of management –including business associations– suited to the resources available to them and to the turbulent environments they may have to confront.

The process of economic development also allows for constitutional pacts established to stimulate and drive innovation and investment, in the aim of creating efficient systems for the manufacturing and distribution of goods and services.

The term *development* is to be understood as a social condition within a given country or region, whereby the genuine needs of the population are satisfied through the rational and sustainable use of natural resources. The use of resources is to be based on technologies that respect cultural aspects and human rights. This definition of development includes the notion that social groups are to have access to organizations and basic services such as education, housing, health care, adequate nutrition and, above all, that their cultures and traditions are to be respected within the social framework of a particular nation or state.

This highlights the importance of sustainable SMEs as a means of sustainable development. SMEs constitute one of the

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solidest and most important pillars in the framework of the emergent markets of developing countries, owing to their vital contribution to the motorization of the productive apparatus of these economies.

Nevertheless, in our view, the impact of SMEs in emerging economies such as that of Mexico could be much more thorough and developed, to the point of their becoming the veritable foundation of the economy. Sustainable development means wellbeing and quality of life for people, both in the present and in the future, so the aim of this project is to contribute to development through the sustainability of SMEs in the Guaymas region of the Mexican state of Sonora.

From this perspective, a model was developed to allow ITSON to analyze the university and its links with the productive sector and with sustainable economic development through SMES in the region. The specific objectives of the model are:

1. Development of motivation and entrepreneurial spirit in ITSON students and in the general public.
2. Economic analysis of the Guaymas region.
3. Analysis of the decisive factors in the cooperation between the university and SMEs.
4. Diagnosis of the kinds of SMEs that should be established and/or developed and the strategies to be adopted, in accordance with its economic vocation, for the development of the region.
5. Diagnosis of the type of innovation to be pursued among the SMEs, according to sector.
6. Determination of the training areas for SMEs to be developed.

7. Determination of the factors necessary for the development of value chains.
8. Definition of the key role of the university as a business incubator.
9. Determination of the strategic alliances to be developed.
10. Formal definition of the leading role of the university in regional development.

Entrepreneurship or the development of enterprises is complex by nature and even difficult to define, but at the same time decisive to the economic growth and progress of a region, state, or country. Entrepreneurs and small businesses are constantly seeking daring and innovative possibilities for growth through services, products, or service models. Humankind benefits from their activities due to the mere existence of these enterprises that demonstrate the possibility of going beyond the usual limits, and not simply by the fact that they generate wealth or create jobs. They are considered a major source of growth for any country, transforming ideas into businesses in which a country's border alone is no longer a limit for productivity and economic growth. Likewise, they reconfigure business models and develop new services and products which meet unsatisfied or latent demands.

Background

The methodology used for the Business Development Center Program is basically an adaptation of the Small Business Development Center (SBDC) model that has been implemented over the past thirty years and more in the United States, where there are currently around 1,100 centers.

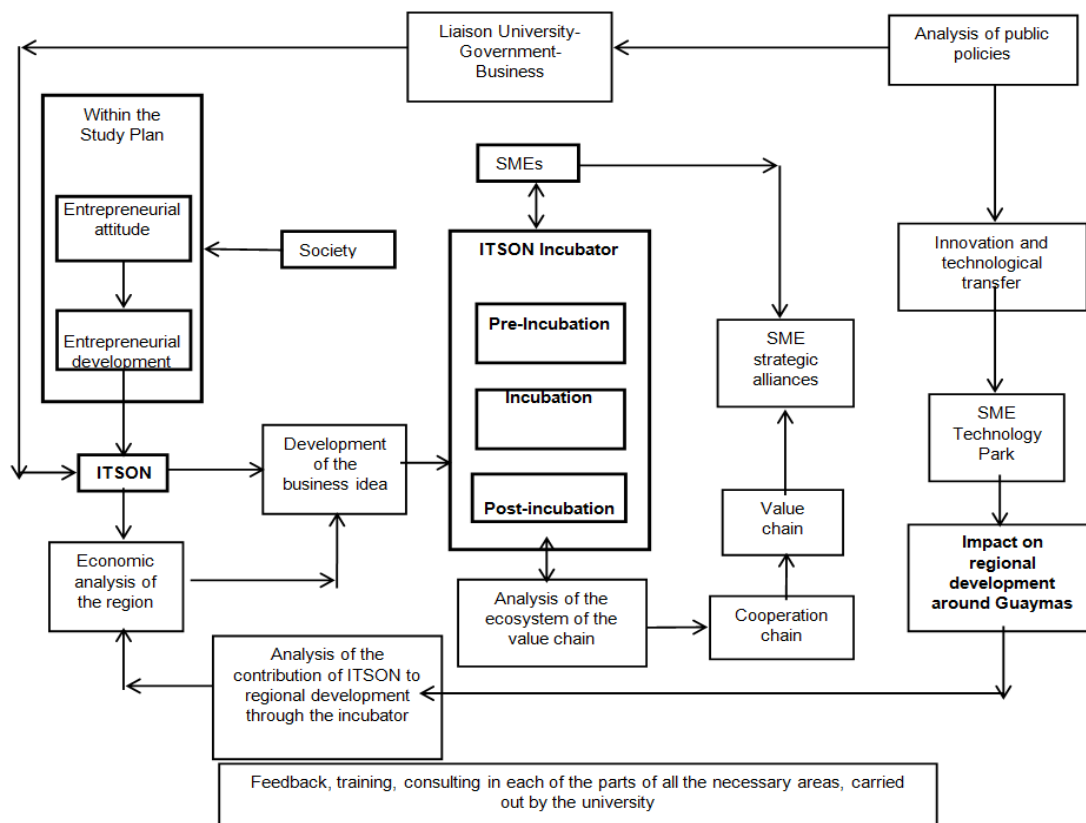


Figure 1 Model of Sustainable Economic Development Based on SMEs in the Guaymas Region in Sonora, Mexico

Source: Olachea, Lerma de León, 2014.

The centers functioning with SBDC methodology are the main source of technical and administrative consulting services for small businesses in the United States. Their mission is to promote growth, innovation, productivity, and profitability in the SME sector through improvements in business management.

According to the University of Texas (2014), SBDCs are sustainable territorial (regional) development alliances between the private sector, governments, and university, which are aimed at facilitating regional, national, and international commerce through existing free trade agreements that create measurable economic impact.

The adaptation of this model originated in a personal initiative to support SMEs in the Guaymas region, given that the university in this case (ITSON) plays an important role in regional development, as established in its mission.

The SBDC model has already been adapted in other Latin American countries. As of the end of 2014, operating with this methodology were 118 centers in Mexico, 10 centers in El Salvador, 6 centers in Honduras, 5 centers in Guatemala, and one center in Belize. This network, which comprises almost 1,200 centers in all, is foreseen to continue its expansion into other Latin American and Caribbean countries.

Problem Statement

There is a great deal of uncertainty regarding the accurate definition of entrepreneurial development. Nevertheless, Academia and various other organizations have set themselves the task of identifying the phenomenon and studying success cases in order to replicate them or simply use them as a starting point or comparative standard for future entrepreneurs and businesspeople. There is a need, therefore, for highly motivating methods, in which risk-taking is possible and ambition is an established element in garnering recognition.

What kind of organization can be designed, implemented, and developed that will allow for this model of support for regional development through ITSON?

This question led us to undertake the research on Small Business Development Centers outlined below, in order to explore the possibility of adopting the methodology and implementing it on behalf of micro, small, and medium-sized enterprises in the region of southern Sonora.

Objective

To design a business development center that can stimulate regional development from and through the university.

METHOD

Given the complex set of circumstances facing small business, with a variety of programs and agencies offering training and consulting services in Mexico, there is a clear need for a comprehensive development model capable of attending to SMEs at all stages of their existence.

The methodology used for the formulation and development of the Model of a Business Development, Innovation, and Competitiveness Center-ITSON (hereafter designated by its Spanish-language acronym of CEDICE-ITSON) is basically a hybrid adaptation of the Small Business Development Center (SBDC), which has been implemented for more than thirty

years now in the United States, where there almost 1,100 centers. Through interviews conducted in 2015, we have profited from the experience of Mónica Doger Ramírez, general director of the Business Innovation and Competitiveness Center (CICE-BUAP, by its Spanish-language acronym). The CICE-BUAP has more than twenty years of experience in cluster development and cooperation chains for the automotive, textile, and food industries in the state of Puebla, through the support and experience of faculty members of the Economics department (in the area of Urban and Regional Economics) of the Benemérita Universidad Autónoma de Puebla (BUAP).

The Centers that operate with the SBDC methodology are the main source of technical and administrative consulting services for small businesses in the United States. Their mission is to promote growth, innovation, productivity, and profitability in the SME sector through improvements in business management. The SBDC model has also been adapted to other Latin American countries.

The CICE offers entrepreneurial and business training and fosters competitiveness and innovation through programs, strategies, and actions that generate high-impact projects with human, economic, and social approach.

The Urban and Regional Economics faculty members have experience in research on the economic, social, and territorial development of the state of Puebla. Their belonging to the university faculty is a guarantee of their experience and research capabilities on the subject.

We must therefore take into account the sustainable regional and/or territorial development alliances among the private sector, governments, and universities, which are aimed at facilitating regional, national, and international commerce through existing free trade agreements that generate measurable economic impact.

Also, to be considered is the support and/or consulting services provided by the Asociación Mexicana para los Centros de Desarrollo de la Pequeña Empresa (AMCDPE), by the SBDC in México, and by the CICE-BUAP, given the leading role they all play in this area on the domestic scene.

RESULTS

What is the Business Development, Innovation, and Competitiveness Center of the Instituto Tecnológico de Sonora (CEDICE-ITSON)?

It is a center that provides consulting, training, and technical and professional cooperation on behalf of entrepreneurship and business training, promoting productivity and competitiveness and stimulating innovation among the SMEs of the region, through the implementation of strategies that generate innovative projects undertaken on behalf of economic development, the improvement of quality of life in the region, and other growth-generated opportunities.

Why support SMEs?

- The aggregate growth of SMEs is a public good in terms of economic and social development.
- SMEs strengthen and diversify the economy, making it more productive, innovative, and dynamic.

- They generate new enterprises and jobs.
- They widen and consolidate the tax base.
- They foster the growth and stability of local and regional economies.

The central axis of training for the various target markets should have a theoretical and practical orientation that allows the personnel of the center to operate under the standards in assisting businesses and providing training and both basic and specialized consulting, as well as in measuring the results of internal and external services. The program has identified the following target markets for the development of the plan: directors of centers, first-tier personnel of the internal and external services, consultants, and the administrative personnel of the centers.

The main activities the center is to develop are:

An important factor is the link between AMCDPE, SBDC México, and CICE-BUAP.

Basic CEDICE Services

- Analysis of the economic vocation and development of the region.
- Diagnosis of areas with potential for economic development.
- Services to SMEs.
- Consulting services for SMEs.
- University-enterprise liaison.
- Center specializing in foreign trade.
- Commercial platform (either with a SBDC focus or developed by the ITSON).
- Individual technical consulting provided on a free, confidential, and long-term basis.
- Group training focused on the subject of competitiveness for the small enterprise.
- Applied business and market research adapted to client needs.
- Support for public policies favorable to the economic development of the SME sector.
- Liaison with the educational program of the ITSON for SME research and development.

Basic Assistance to Entrepreneurs and Business Owners

- Studies of entrepreneurial attitude.
- Business training courses.
- Feasibility study.
- How to start your own business (including official paperwork).
- Business plan.
- Transactions.
- Financial forecasts.

Basic areas of assistance to established companies

- Marketing and sales.
- Accounting.
- Access to capital.
- Reducing costs and increasing efficiency.
- Human resources.
- State-of-the-art technology.

- Growth strategies.
- Strategic planning.
- Main economic indicators for SMEs.
- Analysis and interpretation of balance sheets.
- Online marketing and social networks.
- Onlinesales.
- Growth indicators.
- Innovation and development.
- Commercialization logistics.
- Business Case.
- Company-company and company-university agreements, through the educational programs.
- Cooperation chains.
- Production chains (value chains).

Specialized areas for the development and growth of SMEs

- ITSON-company liaisons.
- Cooperation chains.
- Production chains (value chains).
- Commercialization of technology.
- Innovation and development.
- Disaster prevention and recovery.
- Sustainable businesses.
- Transportation logistics.
- Commercialization logistics.
- International trade.
- Government contracts.
- Formation and development of SME technology parks.
- Online sales.
- Online marketing and social networks.
- Company-company and company-university agreements.

The essential characteristics of the CEDICE-ITSON

- Honesty.
- Professionalism.
- Teamwork.
- Innovation.
- Results-based attitude.
- All CEDICE-ITSON professionals are evaluated on the basis of the results generated by their SME clients.
- Every success or failure of an SME client assisted by the CEDICE is a success or failure of the Center.
- The measuring of the performance of the centers and consultants may be through the Neoserra customer relationship management system or by some other means.
- Consulting, training, and impact of SME clients.
- Measuring results in terms of goals set.

Long-term consulting

- High-value, individual, long-term consulting.
- The work of daily consulting for SMEs is the only way to generate economic impact.
- The objective of expanding the managerial capacities of the entrepreneur is an EDUCATIONAL process.

- The CEDICE must start with the consulting team of the SME, since entrepreneurs, micro, small, and medium-sized enterprises do not have teams of accountants and/or consultants (in all areas) or the available time.

Generation of economic impact and added value of the SME as a societal good (a public good).

Positive yield on investment.

- The CEDICE program may be able to generate (probably, depending on how it is established) federal and state taxes in excess of operating costs.
- Justification for public spending support and continuance of the CEDICE program.

Scaling services with multiple clients and increasing coverage.

- The CEDICE will have to work simultaneously, once it is well established, with hundreds of clients a year.
- Massification of services provided.
- Greater coverage and presence in the community.
- Efficiency in the generation of results.

The CEDICE-ITSON will have to work with triple-propeller co-investment.

Co-investment of work and financing.

- Government.
- Private sector.
- Higher education.
- To guarantee the sustainability of the program and the economic development of the region.
- To optimize actions and resources.
- Simplicity, flexibility, and adaptability to the needs of the region (local needs).
- The ITSON and regional development.
- Key allies working with the CEDICE: business development is an extended educational process.
- Training young people so that they can join the work force.
- Stimulating demand for jobs and the entrepreneurial culture of new graduates.
- Student apprenticeship services.
- The dissemination of state-of-the-art technologies fosters competitiveness.
- Market research and development strategies.
- Innovation and commercialization.

The ITSON, Educational Programs, and the CEDICE

- Involving students in the support of projects on behalf of SMEs.
- By working part-time and studying part-time, they can receive academic credit and/or a minimum wage.
- Professional internships.
- Supervision by the CEDICE-ITSON and professors.
- In all of the educational programs, students (individually or in groups) may be assigned practical tasks, applied research, and consulting projects, such as:

- Drawing up business plans.
- Market research.
- Patent research.
- Dissemination of state-of-the-art technologies.
- Helping SMEs to implement accounting and human resource systems, websites, productive processes, energy savings plans, tourism-related operations, etc.
- Evaluations of plants to streamline production, lower costs, and improve quality and competitiveness.
- Review of installations and energy use, with recommendations for improvement aimed at lowering costs and consumption.
- Evaluation of markets and export opportunities.
- Image design.
- Among others.
- The Role of the University.

Provides stability

- Provides existing infrastructure: buildings, offices, computers, research tools, students, and the capacity to manage state and federal funds.
- Serves as support center for the SMEs.
- Capacity to generate new knowledge and skills.
- Training.
- Innovation.

Benefits to the University

- Receives state and federal funds.
- The image of the university as a valued element of the community is reinforced.
- Commercialization of technology and skills.
- Important link with the private sector.
- Successful SMEs = more students.
- Successful SMEs = jobs for students
- The local economy is dominated by SMEs.
- Graduates find jobs with SMEs.
- Most students and/or their families can be owners or employees of SMEs.
- The vision and mission of the ITSON are fully aligned with those of the CEDICE.
- Recognition by businesses and the general public.
- Increase in number of students.
- Opportunities for national and international academic alliances.
- Formation of academic research networks in association with AMCDPE, SBDC México, and the CICE-BUAP, among others.
- Creation of links with the private sector.

The Role of the Federal Government and the State Government

- Provides financing.
- Assists in the development of national service standards.
- Assists in the development of support goals for SMEs.
- Promotes loan programs with CEDICE services.
- Benefits of the governments.
- Federal government/State government – Benefits.

- The micro and small business sector gains formal status through CEDICE services and the widening of the tax base.
- Increase in tax revenues from the SME sector through the economic impact generated.
- Creation of new exporters in the SME sector with network connections.

The CEDICE and Sustainability

- A simple, flexible model, which will generate economic impact on the region where the ITSON can make its presence felt.
- More new SMEs and job creation.
- Strengthening of the formal economy and greater tax revenues.
- A positive short- and medium-term benefit/cost ratio.
- Co-investment in an integrated network and avoidance of duplicated efforts.

Structure of the Business Development, Innovation, and Competitiveness Center of the Instituto Tecnológico De Sonora (Cedice-Itson)

Obviously, in order to make a sustainable development model based on SMEs function through the university, an administrative structure is required, which can only exist within the organization that implements and applies the model. For this reason, the Business Development, Innovation, and Competitiveness Center of the Instituto Tecnológico de Sonora (CEDICE-ITSON) was created to provide an organizational structure.

Vision

To be an ITSON Business Development, Innovation, and Competitiveness Center recognized for its leadership in the comprehensive development of the region, through the development of strategic business models, with an economic impact on the social and productive sectors, through innovation, training, and entrepreneurial specialization.

Mission

The ITSON Business Development, Innovation, and Competitiveness Center is a center committed to regional development through dynamic generation of business opportunities, using its research and the transfer of skills and technology to contribute to the sustainable development of society.

Functional Roles of the Agents

Managing Board of the CEDICE-ITSON

The principal governing body of the Center, it will be comprised of the rector of the ITSON, who will act as chairperson, and the assistant rectors, if so determined, acting as directors of each area, as well as representatives from each one of the social entities of the Center. The Managing Board will be responsible for taking the decisions required for the proper operation of the Center.

Obligations of the Managing Board

- To supervise compliance with the Center’s operating manual, certification manual, strategic plan, and annual programming.

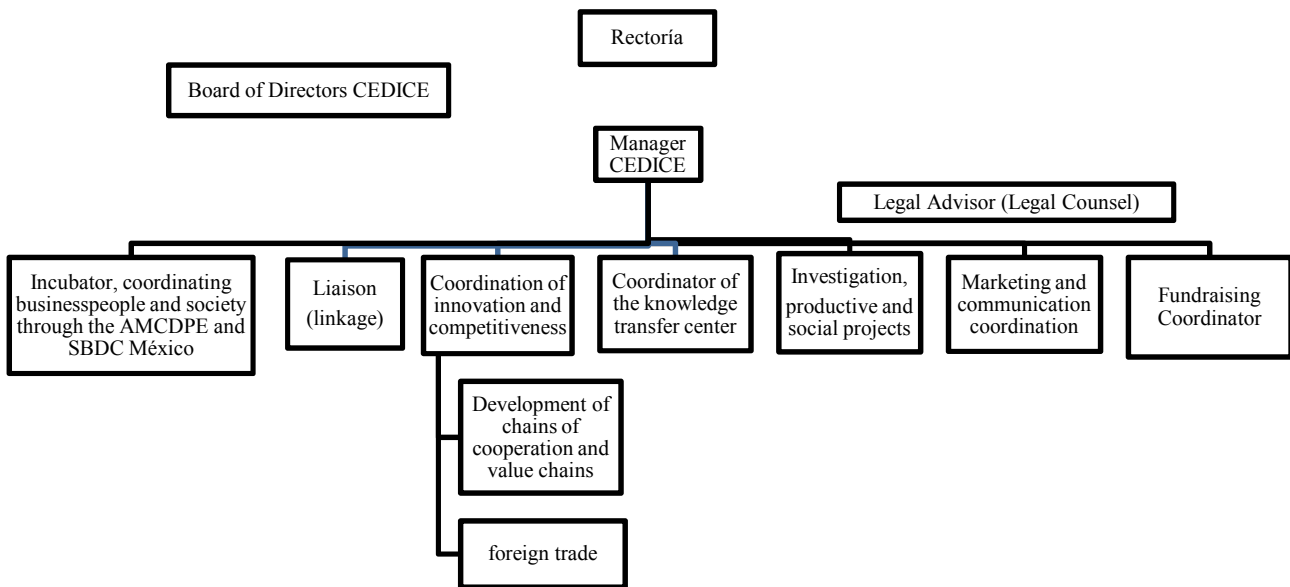


Figure 2 Organizational Structure of the ITSON Business Development, Innovation, and Competitiveness

Source: Author’s own research, 2017.

- To certify the reports submitted to the Ministry by the Director of the CEDICE (if requested).
- To review and approve the personnel providing services at the CEDICE.
- To make the necessary recommendation aimed at improving the performance of the CEDICE and ensuring that it achieves established goals.
- Any other obligations that may be established.

Director of CEDICE-ITSON

Liaison between the Managing Board, partners, and companies and the representative of the Center, responsible for its executive management and the results it produces. His or her obligations include:

- To follow up on the instructions of Managing Board as regards the implementation of administrative, financial, and technical controls.
- To submit the Center's annual strategic plan to the Managing Board for its approval and to organize the human and financial resources available for the execution of the plan.
- To program and organize the meetings required for the coordination, execution, and follow-up of the Center's annual programming.
- To define, in collaboration with consultants, the timetable for the training of the Center's businesspeople users and to schedule the events organized by the Center.
- To define criteria for assigning consultants in accordance with their own skills and the characteristics of the particular user.
- To define criteria for providing technical assistance and collective training in accordance with the stipulations of the methodology.
- To plan and administer the Center's various programs in accordance with the needs of stakeholders.
- To design the promotional strategy of the services provided by the Center in its region/city.
- To establish strategic alliances for fund raising, technical support, and sponsorship on behalf of the Center.
- To design training programs for the consultants belonging to the Center.
- To submit the reports requested by the Managing Board and/or rector, contributing partners, and control mechanisms.
- To follow up on the indicators established and to take corrective measures if necessary.
- To supervise the proper handling of information and software.
- To periodically review and analyze the information entered into the system.
- To determine the scope of the specialized consulting and to authorize it, upon review of the justification submitted by the consultant requesting it.
- To provide consulting to users when the dynamic of the Center so requires.
- To comply with the Center's operating manual (once it has been designed) and to apply the guidelines of the methodology.

- To share strategies and goals with members of the Center's work team.
- Any other obligations that may be assigned.

Coordination of Businesspeople and the General Public with the AMCDPE and SBDC México

- To design, implement, and coordinate strategies to promote entrepreneurship and the creation of sustainable businesses within the university community.
- To provide consulting for, accompany, and guide the entrepreneurs in their business ventures.
- To lay down positioning strategies within the university community, around the institution, and in the local and national entrepreneurial ecosystem.
- To formulate and implement sustainable financial strategies.
- To organize competitions of initiatives aimed at generating sustainable businesses.
- To ensure the continuance of the business and entrepreneurial process cycle.

Linkage

- Seek out partners for the development and setup of the Center (whether from the ITSON, the business community, the government, etc.).
- Design and create new business sectors, ITSON/business/government.
- Organize exchanges for interns, professors, and researchers in the industrial sector.
- Make a detailed description of the activities and responsibilities of each one of the participants in the alliances (linkage), which can be embodied in a collaboration agreement or memorandum of understanding.
- Formulate a proposal in conjunction with SMEs to obtain funding (whether from the CONACYT, the Mexican Ministry of the Economy, or from any other government body) for research aimed at business development and innovation (in the areas of products, products, materials, etc.).
- Seek out economic aid, donations of equipment, or other kinds of support from the industrial sector, so that the ITSON can develop innovations or help make SMEs more competitive.
- Interchange of personnel.
- Joint copyright and intellectual property registrations.
- Structuring of a strategic liaison plan for the development of SMEs (cooperation chains, value chains, training, and technology park).
- Analyze the higher education levels of the educational programs to determine their strengths and weaknesses with respect to links with the SMEs.
- Draw up periodical plans to facilitate the distribution of strategies to connect the ITSON with SMEs.
- Select the modalities to group together linking actions.
- Make contact with business groups in order to coordinate joint actions.
- Organize groups to foster and promote linking activities.
- Promote interchanges of linking experience with other universities.

- Promote research projects carried out jointly with companies in the region.
- Offer services to companies through partnered research.
- Promote the organization of seminars, workshops, and group meetings aimed at improving the functioning of businesses.
- Offer training and updating courses for employees of the companies.
- Promote linkage through the programs offered by the ITSON (specialized diplomas, master's degrees, and PhDs).
- Carry out periodical evaluations.
- Propose actions aimed a feedback on the process.
- Contribute to the establishment of research and development activities and agreements between companies or other institutions and an ITSON research team, which could lead to a research and development contract between the two parties.
- Promote joint research and development projects between the ITSON and the local business community, previously designed by the business community to meet their specific scientific and technologic needs.
- Seek financing for research and development projects and activities carried out jointly by companies and universities, through a technology and skills transfer center that would submit proposals to public entities for the financing of projects that generate benefits to society.

Coordination of Innovation and Competitiveness

- Develop training and reinforcement programs aimed at innovation for already established companies.
- Form innovation workshops for SMEs and students.
- Develop training and reinforcement programs for already established companies aimed at importing and exporting, whether interstate or international.
- Train SMEs that are incubating in order to prepare them to export.
- Develop both interstate or international export plans for SMEs.
- Provide training to interns in this area.
- Join the Consejo Mexicano de Exportación, Ciencia y Tecnología (Mexican Council of Exportation, Science, and Technology, or COMEXTYT).
- Train SMEs and students in entrepreneurial culture.
- Train SMEs and students to make their businesses sustainable.
- Strike alliances with Nacional Financiera (NAFINSA) to organize free or inexpensive workshops in:

Loans and credits

- Business Case.
- Challenges to SMEs.
- Networking.

Gain “Entrepreneurial Training” Certification

Coordinator of the Knowledge Transfer Center.

The management and knowledge transfer model is created with an aim to:

- Improving employee performance.
- Strengthening organizational culture.
- Creating added value and competitive advantages.

The application of the model will allow the SMEs to optimize the use of their available resources and capacities. The strategic management of the organization thereby becomes a tool to achieve organizational goals. In this sense, the knowledge to be transferred must be taken into account in the strategic management of the company, just like other important activities.

The fundamental activities are

- Design of a knowledge transfer process from ADO to the SME.
- Skills transfers.
- Technology transfers.
- Knowledge transfers.
- Contracts and/or negotiation for the transfer of knowledge, skills, and/or technology.
- Transfer of knowledge for innovation.
- Methodology to understand the challenges inherent in the handling and transfer of knowledge and technology.
- Understanding of knowledge as a strategic resource that can be acquired, integrated, shared, and used.
- Effective knowledge management.
- Development of new skills and capacities that allow companies to achieve an innovative and sustainable competitive advantage.
- Among others.

Research and Productive and Social Projects

Researchers, professors, and students of the various educational programs of the ITSON (which may include those of the institutions with which it is allied) oriented toward market research or specific technical and technological subjects, among others. The Center will also receive both undergraduate and post-graduate students completing internships, theses, or degree assignments in specific subjects who may contribute to the development or improvement of the companies receiving support from the Center.

The support activities provided by the interns would be determined by the needs of the Center

Coordination with the government: Ministry of Social Development (SEDESOL), Instituto Nacional de la Economía Social (National Institute of Social Economics, or INAES), Ministry of Agriculture, Fishing, and Rural Development (SAGARPA), Red de Innovación Universitaria (Network of University Innovation, or REINU), Fondo Nacional para el Fomento de las Artesanías (National Fund for the Promotion of Craft, or FONART), Instituto Nacional para el Desarrollo Social (National Institute for Social Development, or INDESOL), Fondo Pyme (SME Fund), Fondo Nacional de Apoyo para Empresas de Solidaridad ((National Fund for Solidaridad Companies, or Fonaes), Programa Nacional de Financiamiento al Microempresario (National Micro-Enterprise Financing Program, or Pronafim), Programa de Competitividad en Logística y Centrales de Abasto (Program of

Competitiveness in Logistics and Central Supply Markets, or Prologya), and Programa para el Desarrollo de la Industria del Software (Program for the Development of the Software Industry, or Prosoft), as well as all the other bodies that administer and promote economic production.

Activities to be developed by students and interns

- Assist CEDICE consultants with market research, and business competition data. Likewise, the students may produce degree assignments related to the improvement of the companies in accord with the skills they have acquired, provided they have also met the legal and academic requirements set by the ITSON.
- Assist the Director and the consultants in the development of the programs and activities organized by the Center.

Coordination of Marketing and Communication

- Create and disseminate the image of the Center.
- Identify the market for entrepreneurship and innovation, society, companies, ITSON, for all.
- Promote the activities of the Center, incubation, training, events, lectures, open calls, innovation, business support, etc.

Coordinator of Fundraising

Objective: to make the Center self-sustainable.

- All projects must be reviewed by this area, in collaboration with the legal counsel.
- Reduce the funds received from CONACYT, the Ministry of the Economy, NAFINSA, companies, SEDESOL, SAGARPA, FIRA, and the state government.
- Promote the incubator.
- INADEM training projects.
- Impulsa México projects.

Legal Counsel

- Provide basic legal advice on the constitution of companies, official paperwork, intellectual property, industrial property, registration of trademarks and patents, hiring, and all matters connected with the functioning of the Center.
- Propose legal options for the specific situations of the companies.
- Draw up reports on clients and training documentation and enter the information into a client control system.
- Provide collective training on legal issues.
- Assist with training for consultants dealing with the professional development programmed by the director of the Center.
- Comply with the operating manual of the Center and apply its guidelines.
- Any other responsibilities that may be assigned.

Administrative Assistant

- Handle reception and provide client service.
- Answer users' questions and direct them to the various service areas of the Center.
- Conserve and update the Center's archives.

- Perform administrative procedures.
- Assist with procedures for new users and follow up on existing users.
- Assist consultants with the coordination of their activities, including the dispatch of surveys to identify and measure the economic impact generated by the Center.
- Any other tasks that may be assigned.

Infrastructure of the Business Development, Innovation, And Competitiveness Center of The Instituto Tecnológico De Sonora (Cedice-Itson)

For the establishment of the Business Development Center, the following minimum space is required to attend to the entrepreneurs/businesspeople:

An enclosed space suited to the Center's needs, strategically located for easy access by the businesspeople. The size of the Center must be in accord with the number of entrepreneurs to be attended to and the available budget.

- Independent offices/cubicles, equipped with the office furniture required for the performance of their functions.
- A reception area.
- A meeting room with capacity for ten persons, with a table, television, project, and coffeemaker.
- The Center is eventually to have an auditorium space suitable for collective training activities.
- The furnishings for each of the spaces defined in the infrastructure include:
- Office furniture, desks, file cabinets, computer, printer, etc.
- Projector.
- Table, chairs, air conditioning, etc.
- The investment in infrastructure will be made by the ITSON or by one or more of the Center's partners, with their respective commitments to be established and included in the budget.

Costs

Based on market studies, an estimate of the funds required for the implementation of the Center must be made. This estimate will be in line with data gathered at the moment authorization is obtained. The costs indicated will not be covered by independent funds, but the aim is to reduce them over time, allowing financing by third parties and the accumulation of human and technological resources.

Plan for the establishment and functioning of the center

Stage 1

Activity 1: To create a Business Development, Innovation, and Competitiveness Center, including the formation of a managing body and bylaws.

Description

1. Through work meetings of the authorities of ITSON, a liaison, and its allies, an agreement will be drawn up to make official the creation of CEDICE-ITSON. This activity will be led by the rector and the project director,

who will be designated by the rector, accompanied by an institutional liaison.

2. An official will be designated by each entity to make up the governing body, and a set of bylaws to regulate the action of the Centro will be drawn up.

Activity 2: Process to select and hire support personnel for the operation of the Business Development Center.

Description: An open call, recruitment, selection, and hiring of an administrative assistant will be carried out under the leadership of the director of the Center and human resources.

Stage 2

Activity 3: Implement plan to promote and communicate the Center's offer of services.

Description

1. The Manual of Identity of the CEDICE-ITSON will be drawn up and the entire promotional strategy carried out through the media with which the university has contracts or agreements, calling on businesses and entrepreneurs to visits the Center's facilities and benefit from its services.
2. Promotion of the Center's services through a communications and advertising strategy (billboards, banners, flyers, social networks, other media with impact in the region), which will seek to motivate businesspeople and entrepreneurs to participate in the program of entrepreneurship and business support.

Stage 3

Activity 4: Draw up a business plan, service portfolio, and sustainability plan.

Description

1. The Director, together with his or her team, will lay out a roadmap to identify and survey the businesses of the sector, city, or region where the Center is located and create a database for the use of the CEDICE-ITSON.
2. An economic profile will be generated of the southern Sonora region, where the ITSON campus is located.
3. Once the data of companies interested in participating in the support program have been obtained, they must enroll in the program, whereupon the services required will be classified and a consultant assigned.
4. A business plan and service portfolio will be drawn up in accordance with the productive potential of the sectors, along with a sustainability plan outlining the strategies defined for the operation of the CEDICE-ITSON. This activity will be carried out by the management of the Center and its work team.

Stage 4

Activity 5: Work days for the transfer of methodology to the work team.

Description

The work team will be trained in the Center's methodology.

Activity 6: Training of the CEDICE work team in better environmental practices for SMEs.

Description

The work team linked to the Center will be trained in better practices for SMEs.

Activity 7: Training in the use of the database.

Description

The director of the Center, the coordinators, and the work team in general will receive training (possibly given by the CMPDE) in the utilization of Neoserra (or any other SME database that may be selected) in order to develop the Center's follow-up, measurement, and evaluation system.

Activity 8: Work sessions to construct and socialize the business plan.

Description

A business plan will be drawn up with the participation of partners and the work team of the CEDICE, led by the director of the Center.

Stage 5

Activity 9: Work sessions to construct and socialize the sustainability plan.

Description

A sustainability plan will be drawn up to allow us to identify the entities and organizations that will contribute resources, in cash or kind, to the development of Center, by means of collaboration agreements.

Activity 10: Consulting and training on keeping clients faithful through quality products, services, and client attention.

Description

Group training in markets on keeping clients faithful through quality products, services, and client attention, by means of theoretical instruction that prepares participants to understand and apply the concepts formulated during training, provided by one of the CDE consultants.

Activity 11: Coordination of networking activities.

Description

Networking activities and the creation of networks with local businesses and experienced tech people (business circle and/or MeetUp), in the aim of fostering the articulation and/or integration of the business and getting to know the new products and services defined through accompaniment of the Center.

Stage 6

Activity 12: Training and consulting on how to go about drawing up a business plan and feasibility study.

Description

Training of businesspeople in basic aspects of business plans and their feasibility, through theoretical instruction that prepares participants to understand and apply the concepts

formulated during training. Follow-up and evaluation through the Neoserra tool.

Activity 13: Evaluation of the businesspeople training events.

Description

This will be carried out by means of an evaluation form filled out and submitted by the participants in the training workshops. Once training is complete, the consultant assigned to lead the workshop will be responsible for systematizing the information resulting from the Neoserra workshop.

Activity 14: Implementation of communications plan.

Description

In accordance with the provisions of the communications plan, it will be implemented under the direction of the director of the Center, with the support of the work team. A monthly evaluation of the effectiveness of the plan will be made, in order to make the required adjustments after feedback is received.

Stage 7

Activity 15: Implementation of the professional development plan.

Description

In concert with the work team and under the coordination of the director of the Center, a professional development will be designed to allow the work team to strengthen its capacity to offer businesspeople consulting services of the highest quality.

Activity 16: Implementation of the Center's sustainability plan in order to establish new contacts in the private, governmental, and academic sectors.

Description

In order to ensure continuity over time, the Business Development Center will implement a sustainability plan.

Activity 17: Processing of requests for specialized consulting services.

Description

In accordance with issues identified by the consultants and taking into the account the needs of the SMEs, points requiring specialized consulting services will be identified. Requests for such specialized consulting will need to be justified and processed by means of the form established for the purpose.

Activity 18: Specialized consulting services, provided in accordance with the priorities determined by the director of the Center and the demand of companies with accelerated growth and development potential.

Description

Once the request for consulting has been processed through human resources, expert professionals will be hired to provide the specialized consulting services to the SMEs.

Stage 8

Activity 19: Implementation of innovation training.

Description

1. A plan for innovation training for SMEs will be drawn up.
2. Organization of innovation workshops in SMEs.

Basic Cedice-Itson Evaluation Indicators

Management Indicators

1. Number of public and/or private alliances established / period of time
2. Total amount of funds raised for the CEDICE / period of time
3. Number of entrepreneurs/businesspeople attended per consultant.
4. Number of companies enrolled in the CEDICE / period of time
5. Number of companies that received individual consulting / period of time
6. Number of companies trained collectively / period of time
7. Number of entrepreneurs enrolled in the CEDICE / period of time
8. Number of entrepreneurs who receive individual consulting / period of time
9. Number of entrepreneurs trained collectively / period of time

Impact Indicators

1. New jobs generated by companies attended by the Center.
2. Jobs maintained by companies attended by the Center.
3. New companies created with the support of the Center.
4. Number of loans granted to companies attended by the Center (including amount and purpose)
5. Increase in sales of companies attended by the Center.
6. Number of businesses registered with the tax authorities in the course of the consultation process.

Goals Set

The goals will be set annually by the director of CEDICE-ITSON in conjunction with his or her work team and approved by the rector. The goals will vary, depending on location (distance from the campus), the potential of the users assisted, the number of consultants, and the Center's budget.

Registry of Reports

The CEDICE must submit reports to the rector and the managing board when so requested. These reports must contain information on progress in assistance provided to users, results as of the cutoff date of the report, observations on the activities undertaken during the period, and other data requested by the rector or the board.

Proposal for the Sustainability of the Center's Operations

The proposal for sustainability will consist mainly of five (5) strategies focused on lowering costs and expenses and raising funds in order to ensure the Center's continuity in time. The common aim of these strategies is the establishment of alliances that meet the triple-propeller requirements of the CEDICE-ITSON on behalf of the sustainability of the Center:

1. To establish close relations with public and/or private financial entities that are able to grant loans to entrepreneurs and businesspeople who are users of the Center. Business circles will be organized to draw up entrepreneurial proposals of considerable potential to be submitted to the various financial entities, in the aim of obtaining financing. The same will be done for companies that require injections of capital. The aim is to strike agreements with these entities whereby the Center earns commissions on loans processed through its agency. Care will be taken that the loan conditions are ideal for both the entrepreneurs and their companies and that the payment to the Center corresponds to the feasibility studies of the proposals submitted, so that the financial entities can be assured of the financial solvency of the companies.
2. Forge alliances with the education programs of the ITSON and with accredited scientific, technical and/or technological research institutions in the region. In selecting these entities, the condition that they do not have a business development center will be taken into account (though they may have an entrepreneurship unit). Through these alliances, specialized knowledge and skills in various field of expertise will be contributed by the educational programs and the research institutions, to the benefit of the companies and entrepreneurs who are the Center's final users. The allied educational institutions will also be asked to supply physical infrastructure for the business circles, fairs, and/or collective training sessions organized by the Center (in addition to their contribution of knowledge, in the last case). An effort will be made to work hand-in-hand with any institution and/or body to make use of free training services, and that these services, as well as specialized consulting, be offered in the aim of benefiting the Center's users.
3. Since the sustainability of the Center over time resides in large part in its capacity for optimal management and efficiency in achieving its goals-in other words, in the success of its final users-, a key element is working in common with businesspeople and entrepreneurs to raise funds to improve their competitive edge in external markets, as in the instruments of the Inter-American Development Bank designed to support small and micro enterprises (FOMIN, OMJ). In this way, the Center depends on the success of its users –and at the same time on its own– in undertaking these efforts to increase the probabilities of contributions from private entities and the government. Along the same lines, the Center will work with entrepreneurs and businesspeople in submitting projects designed to obtain funds from other Mexican agencies and governmental bodies (NAFINSA, FIRA, the Ministry of the Economy, etc.).
4. To channel efforts into the creation of macro-circles aimed at establishing sponsorship programs for productive chains, cooperation chains, and value chains, aimed at larger companies. These companies may be benefited by the growth in productivity of users of the Center that belong to their supply chain. The aim is to attract sponsor companies into the sponsorship program as part of their own social responsibility policy.
5. To strike alliances with international nonprofit organizations such as the Eskoll Foundation, which promotes large-scale changes and invests in, connects with, and celebrates social entrepreneurs and innovators. Alliances can also be struck with international higher education institutions with support programs for entrepreneurship and SMEs in emerging economies, such as the Legatum Center, the development and entrepreneurship center of MIT, which seeks to accelerate social and economic progress through business innovation aimed at social transformation, or the SEED program at Stanford University, which supports the development of business in order to boost developing economies, inspiring students to be globally-committed business leaders with innovative solutions. The aim is to establish fellowship programs that will foster entrepreneurship in developing countries and so address some of the world's most pressing problems.

CONCLUSIONS

Although governmental, educational, and private institutions are all engaged in public policy measures and campaigns on behalf of business development, we have to ask ourselves whether these support mechanisms are sufficient for the needs of businesspeople and entrepreneurs. Although there are a whole range of entities at present, such as ImpulsaMéxico, INADEM, the Ministry of the Economy, CONACYT, chambers of commerce, and universities, among others, it can nevertheless be asked whether they are sufficient, given the small use that is made of them and their negligible impact on the development of the country.

This is why new ideas and methodologies are implemented, in order to leverage global economic development as a social transformer, and to remind us that we possess ever more effective means to help small businesspeople and entrepreneurs make their dreams come true, express their disagreement with market forces, and achieve the economic solvency that so many seek after.

The economic integration with local and regional markets and with markets in other states, in places such as the United States and Latin America, is vital to competing with European and Asian markets. It also generates jobs and better opportunities for all. Many government-established programs come up short, but fortunately there is a hybrid model between that of the SBDC and the experience of CICE-BUAP and the Department of Urban and Regional Economics of the BUAP, which allows public and private sectors to be integrated with the university on behalf of a single end: regional development. This also demonstrates that we have the conditions to be better in whatever field we happen to work.

The Business Development Center will be part of the solution we are looking for, as the current circumstances in Mexico (drug trafficking, corruption, etc.) allow us to offer advice, information, and guidance to benefit the personal and professional development of others. Mentoring of this kind will have a greater impact on the solution, helping to prepare us to work in the areas of development we need.

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