

# e-Networks for Incubation and Innovation

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**Abstract** - In 2006 the project e-Network for Incubation and Innovation started, with the support of the World Bank InfoDev Program, SUN Microsystems, Virtual University and the Technology Based Business Incubator of the University of Guadalajara, México. Its main purpose is the use of the Information and Communication Technologies (ICTs) to promote the work in Networks to form Entrepreneurs and to create and develop enterprises in the model of Business Incubation. The project in one hand incorporates national and international experts, and in the other are the facilities to train in the use and develop of solutions based on free software; using ICTs to form new entrepreneurs and to create and develop enterprises and business incubators in local and regional sites, by training and/or technical assistance actions. During the project it will be given at least 20 web-conferences, and at least 12 on-line courses; three workshops and other activities, including surveys, contests and publications which lead to the formation of at least 50 new enterprises and the support for the creation and development of 20 new business incubators. Due to the nature of the technologies that will be used in the project, it is expected to impact the Latin-American region through the RedLac (Network of Business Incubators of Latin-American Countries), following the philosophy of InfoDev program, and with similar actions to make it possible to contribute to the development of the less favor sectors and regions, and to strengthen the urban and rural areas that require more and better employments.

*Index Terms* - Business Incubation, e-Learning, Entrepreneur, Innovation, Virtual Education

## INTRODUCTION

The Information Program for Development (InfoDev) is an association of public agencies for the development, both bilateral and multilateral, that works in close cooperation with partners of the private sectors and the society, supported by experts from the World Bank.

With the support of the Japanese Government, InfoDev has created: "The Initiative for Incubation", designed to support innovation and enterprise creation through the use of the ICT's In developing countries, to promote economic growth, as to enable and strengthen the development of products and services for the poor. [3]

The goal of this initiative, as it is described, is not only the support to a group of incubators in the developing countries, but also, with this support, to promote the growth of a global enterprise incubator networks and of innovators that could learn, support and work among themselves, as a team in a creative way to take advantage of the ICT's as a tool to reduce poverty, the growth and the achievement of economic and social opportunities for everyone.

This work is a description of the proposal presented to InfoDev for the introduction of ICTs in the training of entrepreneurs and the creation and development of enterprises through business incubation practices [2] and also to investigate the most accurate network model according to Tapscott's work on knowledge networks [3], as we are going to work in the creation of Mexican networks and to incorporate the Latin American ones, looking for the best impacts of this project.

## BUSINESS INCUBATION

For InfoDev "*Business Incubation is a unique and flexible combination of processes for the development of business, infrastructure and people, designed to nourish and achieve the growth of small and new enterprises through support in the starting development stages*"

The main purpose of the initiative is to promote the economic growth through the strengthening the development of the private sector throughout the following objectives:

- To enhance efficiency of business incubators that are in operation and to develop feasible programs in developing countries.
- To promote knowledge generation and dissemination through good practices, tools sets and other means.
- To strengthen national and international associations and networks.
- To strengthen and enable ICT's for innovation and the development of new small enterprises for the social-economical development in developing countries..

This work comes from the proposal presented to InfoDev in the third call in 2005 and was one of 72 projects to be supported since 2003.

In the National context, business incubation in Mexico since it has started it has been a topic linked to international cooperation, and it is at the beginning of the

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90's when, through the Columbus program, supported by the European Union, that the first work group for managers formation starts. Participating in this group were not only Mexico, but also other Latin American countries: Argentina, Brazil, Chile, Peru, Colombia and Venezuela. For the European part the trainers were basically from: Holland, Germany and UK. The project developing activities are based on workshops that are given in different places in both America and Europe. In Mexico there were events in Cuernavaca, Guadalajara and Monterrey; and in Florianópolis, Rio de Janeiro, and other cities in South America, as well as in Holland, Ireland, and Germany.

Two years later there were many projects in operation in the different participant countries and several national programs. In Mexico: the UNAM (National University of México), in Mexico city, the CeMIT in Cuernavaca, the tech-based incubator in the University of Guadalajara (IEBT) and in Ensenada. At the beginning the Mexican National Science and Technology Council (CONACYT) was the institution that promoted the creation of incubation programs. Later, and in the Latin American regional context, the OAS (Organization of American States) and UNIDO (United Nations for Industrial Development Organizations) were the organizations that in a limited way continued giving support to this program. Meanwhile Mexico, during 1994-2002, had policy of closing business incubators; however, Brazil continued supporting and developing business incubation programs, now being the Latin American leader.

2003 is the year in which Mexico started once more supporting business incubator programs, and also supporting innovation in small and medium sized enterprises through a Fund for SMEs, handled by the Minister of the Economy at a federal level. Three years from this second start in business incubation there are still no solid data that allow the evaluation of the results achieved until now, even though the new federal government (2006-2012) has just announced a support program for the small and medium sized enterprises, having once more the support for business incubation and related activities. This gives us a certainty that what has been achieved in the last three years will be strengthened. [4]

In the Internet site for the National Business Incubators System (SNIE), December 31st, 2006 [5], we can see that there are a total of 192 business incubators operating in Mexico, according to the following characteristics:

Traditional Incubators:	62
Intermediate Technology Incubators:	120
High Technology Incubators:	10
<b>Total:</b>	<b>192</b>

SNIE recognizes three business incubation models, as it can be seen in the figure above:

- Traditional Business Incubators: For the creation of traditional business, with a recommended stay up to 3 months in the incubator.
- Intermediate Technology Incubator: For the creation of semi-specialized business, with important innovative issues and with a stay of approximately 12 months in the incubator.

- High Technology Incubator: To support the creation of specialized business in ICT's, MEMs (Micro Electro-mechanical devices), Biotechnology, New Materials, and others; with a stay in the incubator of up to two years.

Recently, the model for Rural Incubators to develop business in rural areas has also been approved.

In addition the Minister of the Economy, through a Fund for the Small and Medium Enterprise (FPYME) has started, a model of a business accelerator abroad, located in many well known cities because of their contributions to innovation and international entrepreneurship, as, TechBA program in: Austin, Texas and San José California in the United States of America, another one in Canada, and the last one opened in Madrid, Spain.

In the State of Jalisco there are at least a dozen business incubation programs, often located in education and/or research centers. There are up to three different programs, according to the category of the program (Rural Incubator, Intermediate Technology, Tech-base and high Technology). The policies for the creation of new business incubators has been based in model implementation, most of which have not done any feasibility, location or vocational study; the intention to start a business incubation program was enough get authorization from the FPYME Fund.

Paper Body Format This was a model where, those who asked for funding, were given funding. The following tables show the headquarters of the business incubators, according to the model, operating in the Metropolitan Area of Guadalajara.

**TABLE I**  
**Business Incubation Programs in Guadalajara**

INSTITUTION	Incubation Programs that are in Operation			
	Rural	Traditional	Intermediate Technology	High Technology
Universidad de Guadalajara	1		1	
UNITEC			1	
ITESO		1	1	1
UAG			1	
CECATI 7		1		
Ayto. de Guadalajara			1	
ITESM		1	1	1
Private		1		

The University of Guadalajara (U. de G.) started the first business incubation program in October, 1992, with the name of Tech-base Incubation (IEBT-U. de G.) with the support of the CONACYT, and has been operating up to now with no interruptions, and since 1994 it has been self financed. It has hosted two foreign enterprises, one from Hong Kong (VTEch, telecommunications) and the other from Ireland (Q-tech, electronics).

Table 2 and Table 3 show the working model in the IEBT-U. de G. and the results of ten years of operation. (4)

### THE PROJECT

InfoDev's initiative for Business INCUBATION has the following mission: *"Help the countries to take advantage of ICTs as a powerful tool to fight poverty, to promote the economic development and to train the persons and the community in total creative participation with the society and economy"*

**TABLE II**  
**IEBT-U. de G. Model**

Integrated in a University department	Legal figure Simple	Technological Linking Agent	Teaching faced to projects	Technical Production Area
Teachers and Students support	In site Services	Promotion of external supports	Technological graduate	Workshops And dedicated Laboratories
Operating 24 Hours per Day				
Open to Projects from the University and the Community in general				

**TABLE III**  
**Impacts of the IEBT-U. de G**

Enterprises creation projects	175
Approved Projects	90
Incubated Enterprises	60
Graduated Enterprises	45
Enterprises in Incubation	12
Generated accumulate Employment	6,000
Accumulate general sales	>150 USD millions
Vocational Technological Centres.	3
Technological areas	Environment, Informatics, Electronics and New Materials.

It specific objectives are:

- To improve the efficiency in the business incubator through the development of feasible programs.
- To generate and disseminate knowledge through a successful practice and tools packets
- To enhance national and international relationships of networks and between incubators.

From these postulates in the *e-Network Project for the Innovation and Incubation* (e-Network I & I) it has been set as its main goal: (5)

*"To make effective use of the ICT's for the creation and development of new and competitive enterprises that can participate in a global economy and to strengthen the linkages between the institutions of higher educational to increase their teaching and research capacities as to impact the industrial and the potential entrepreneurs sectors, as well as the unemployment in the region"*

The project's main objective: "To create and develop a virtual network for business incubation and innovation through a platform based on the Internet, and which will help to strengthen knowledge management, strategic alliances and the promotion of services and products among the entrepreneurs incubated or non-incubated, the financial entities and institutions dedicated to innovation processes".

#### Participant Institutions

e-Redes Project for Incubation and Innovation participates in the following institutions:

- InfoDev through the initiative for business Incubation.
- The University of Guadalajara through: The Virtual University.

Coimbra, Portugal

The Center for High Performance Computing. (CENCAR)

- SUN Microsystems enterprise.
- The University of Clausthal, Germany.
- The Minister of Education, through the Entrepreneurship and Incubation program.

#### Project Operation

The project operation is done through linkages between technological tools, knowledge and services providers, connected through the Internet.

#### 1. Portal for Incubation and Innovation (e-Site management)

e-Site Management is a central point for information and training, as well as for consultants advising and the provision of materials for the operation and development of the business incubators in the program.

#### 2. Education and on line coaching (e - Learning and coaching)

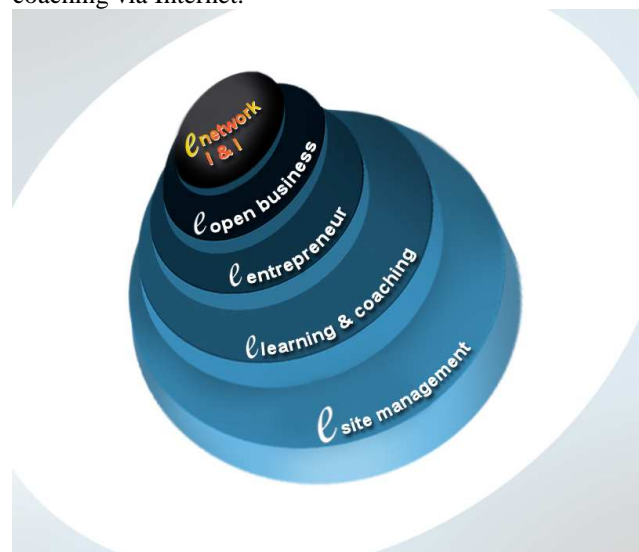
e-Learning, on line coaching and training for incubators and entrepreneurs managers in formation are given in the room for video conferences.

#### 3. Entrepreneurs Forum (e-Entrepreneurs)

e-Entrepreneurs is the place dedicated to the training and development of entrepreneurs, with software tools to develop and assess business plans, learning entrepreneurial skills, as well as technological intelligent applications and marketing, via the Internet.

#### 4. Business Center (e - Open business)

e-Open Business is the place to find products, services both offered and requested, and other information, to meet entrepreneurs, enterprises and business incubators, and support funding organizations, intellectual property and coaching via Internet.



**Figure 3**  
**Main Components to Operate the Project**

**Activities to be developed**

The project is for one year and has different activities for entrepreneurs, enterprises and business incubators, both in formation or in operation. Ninety percent of the activities will be done on line via the Internet, and video conferencing, the other ten percent will be on site.

**Conferences**, with the following themes:

Entrepreneurs, Funding, Business Plans, Best Practices in Business Incubation, Leadership, Industrial Property, Innovation, Seed Capital, all of them 90 minutes conferences with time for questions and comments.

**Workshops**, with the following topics:

Direction and governance of a Business Incubator, Entrepreneurial Process, Business Incubator Operation, Competitiveness, Services to customers, etc. The workshops are 12 hours maximum and can be taken on site or via the Internet.

**Courses**, with the following topics:

Enterprising I y II, Business Plan, Finance Analysis, Marketing, Business Incubator, Entrepreneurial process, Technological innovation, Project management, Strategic Planning, Business Intelligence, Small enterprise management, Fiscal incentives, ICT's introduction. The courses duration is a minimum of 20 hours and all will be on line.

**Contests and Events:**

Business plan contest, entrepreneurial laboratories cases contests, IEBT graduated club, round tables with new entrepreneurs, creation of an association.

## CONCLUSIONS

With projects of this type, it is possible to contribute to the strengthening of business incubators in operation and also in the process of opening, in both Mexico and Latin America, the strengthening of the networks actually in operation and the formation of new networks, in such a way as to stimulate the cooperation between countries and regions through the use of ICTs, both for the impact, and for its lower costs.

Perhaps the most important is that through the international cooperation, and the utilization of ICT tools, it is possible to contribute to the creation of an entrepreneurial culture, and, in the future, this can be self forming through the networks created.

Finally, this project has the challenge of identifying, and working successfully with diverse interests, with different levels of development among the participants, with the search for times and dates that are compatible with the activities of the participants.

This is an experience that looks for sustainability supported with the values of cooperation instead of thinking about profits, and operated carefully such that the resources and efforts invested by all of the participants will be seen as a reflection of all of the achievements and the objectives of the project.

## ACKNOWLEDGMENT

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