

## PROLOGUE

The book in your hands is about the relation between training and local development. It is based on the understanding that training contributes to strengthening, differentiating and improving the competitiveness of the productive network in different geographical spaces, and thus to generating greater possibilities for work and for welfare in local communities. Therefore, special emphasis will be placed on problems and opportunities in regions and places with lower levels of development.

In recent decades, strategic focuses and local development policies have come to the fore. This is not a passing trend, but the result of the undeniable fact that there are enormous differences in development and welfare between one region and another, and between different places in the same country, differences that 'poverty maps' for example can show with great precision. In fact, in Latin America and the Caribbean, there is a gap in economic growth and social welfare between many isolated places and the capitals of the countries they are in, and this gap is very often greater than the gap between those capitals and cities like New York, Los Angeles or London. We talk of an underdeveloped world (despite the term is becoming disused) but we could just as easily talk of wide geographical and population sectors which constitute underdevelopment within underdevelopment.

The indicators that show this economic and social deprivation and depression are more than well known. The outstanding ones are (a) the segmentation of markets (of work and of capital and technology), which means that it is in these least developed areas and places that we find the greatest concentration of bad jobs and the lowest levels of financial and technological assets, (b) the majority of the population in these areas are in the two lowest deciles of the income distribution structure and of homes in extreme poverty, and (c) there is an evident lack of all kinds of infrastructure. All in all, perhaps 'deficit' in training would best describe the deprivation and depression in these areas and their populations, since their lack of training is closely connected to their limited potential to improve their situation.

Why should there be this unequal development not only in social terms (development without equity) but also geographically (unequal development)? Ob-

viously, this prologue is not the place to analyse the genesis of unequal development but it is possible here to sketch the broad outlines of why this inequality exists.

Massive migration from the countryside into cities has been going on since the middle of the 20<sup>th</sup> century and it is being driven by a progressive worsening in the terms of exchange between rural areas and cities. Accelerated urbanisation in underdeveloped countries has created not only medium sized cities but also great mega- cities. This urbanisation has so much accentuated political and administrative centralisation that the point of view from which political decisions are made always gives priority to the interests of the populations of these huge urban conglomerates. This has led to an unequal distribution of knowledge and of the institutional structures responsible for promoting the development and socialisation of knowledge (public and private schools, technical and vocational training centres, research institutes, universities, etc.). In addition, investment is unequally concentrated, and urban centres receive a disproportionate share of physical, economic and technological infrastructure and public services. Private investment has gone mostly to urban areas, where most internal demand and most of the infrastructure necessary for business initiatives are concentrated. The net result is what we have today, a very unequal distribution of physical, economic and social assets (in terms of knowledge), and also areas and places that are totally excluded and made redundant by the development process.

Some academics and politicians attribute this unequal development to different factors different from those outlined in the paragraph above. They consider that the main cause of social and economic deprivation and depression in certain regions is that markets are not functioning properly and those places are not being allocated the resources needed for development. Besides, this defective functioning is mainly due to rigidity caused by State regulations (laws, decrees, etc.) in the different areas of national life.

Other people think that the main reason for this situation is that the State is too centralised and that, because of political cronyism, it concentrates its investments -specially those in infrastructure for communications and services- in the most densely populated urban areas.

These differences in focus have given rise to an interesting theoretical discussion that has been going on for some time about the best policies and strategies for dealing with this problem and for fostering local development. There are three main positions in the debate. One, which we can call the neo-classical, holds that markets are the best way to allocate resources and that therefore the responsibility for promoting local development, should be left to the market. State intervention should be limited to removing obstacles which hinder the efficient functioning of markets in backward geographical areas and places. The second posi-

tion can be called the 'developmentalist' view, which champions strong external intervention from the start to build up infrastructure for communications, economic activity, education, health, etc. The assumption here is that if the underdeveloped areas had these packages of outside aid they would be able to develop more economic activities and would have better links to the economy as a whole. In brief, they would be able to 'get on the development train'. The third position is that of endogenous development, and this is analysed in chapter 2 and subsequent chapters in this book. Its basic assumption is that State intervention is necessary to equip these districts and places with the outside aid they need for development, and that the utilisation of endogenous resources and potential ought to be fostered. In other words, the local economic network itself, the human resources of the area and the local institutional structure, should be activated. It must be obvious to the reader that this book is undoubtedly, and I believe rightly, in favour of this third alternative.

As mentioned above, one of the factors or endogenous resources which should be incorporated into the local development focus is human resources. This has led the author of this book to the subject of the development and distribution of knowledge. In the areas and places that are most marginalized, the educational and training system is usually limited to just primary and secondary public education (which in many countries is of low quality) and to a very few technical and vocational training programmes. However, until just a few years ago, even these training experiences or programmes were oriented to getting human resources in the area to 'do better what they were already doing' as regards economic and productive activity. The problem was, and in many countries still is, that the productive activities of people in these areas are scarcely viable economically even if the people involved acquired higher levels of training and skills. I think this applies especially to smallholding subsistence agriculture (which is important in many countries like Peru, Bolivia, Ecuador, Paraguay, and in Central America), to small scale mining and to traditional small scale fishing. Therefore, according to the new focus, knowledge should be developed from the perspective of the acquisition of competencies which would allow people to take new initiatives, undertake new ventures, and which would increase their capacity to successfully take new risks in economic and productive activities. This is not just to 'do better what they have always done' but rather to 'do well things that they have never done before', things that have potential for economic success, for higher income, improved welfare, and, consequently, for development.

Technical and vocational training for young people is especially important in this context. For instance, this is the population sector that is most predisposed, and perhaps most disposed, to undertake new initiatives and to take risks in the search for new avenues of productive activity. Moreover, because this is the population sector most inclined to emigrate if economic openings cannot be

found in the home area, and if they do emigrate the main productive resource of that area will be lost.

The gender perspective is important in the context of local development, above all when it comes to technical and vocational training for young people who live in underdeveloped areas. If the situation of young people is difficult and their possibilities for personal realisation are limited, then the situation of young women, especially those from rural areas, is even more serious. For many of them, the best that they can hope for in life is to emigrate to cities and work in domestic service very often under conditions of extreme exploitation.

In the context of local development, the author stresses how important it is to adjust focuses and strategies to the individual cultural, social and productive characteristics of each region, and also to bring the population there into the process of designing and implementing these strategies. In other words, the author makes a point of warning the reader against succumbing to the temptation of one-dimensional and general focuses. Therefore, he recommends that local development should become a dynamic and participative process adapted to the conditions of the soil in which the seed of development will germinate.

To sum up, in this Cinterfor/ILO book, the reader will not find a definitive and complete solution to the problems of development which the most backward regions and places are faced with, but he will find a rigorous analysis of the criteria, focuses and strategies for tackling those problems. In this context, the author believes that technical and vocational training, especially training that is not just for young men but for young women as well, ought to be given priority. This book, then, is in many ways innovative, it is recommended reading, and, most important of all, it should be read and used by anyone who is responsible for making practical decisions in this ambit.

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## 1. THE INTERCONNECTION BETWEEN GLOBALISATION AND LOCAL DEVELOPMENT

In recent years the idea of globalisation has been a major theme for politicians, academics and social actors. Globalisation involves the internationalisation of the economy, of politics and of culture, and it is such a complex process that it makes the mind reel. The only thing it can be compared to is the industrial revolution. All indicators of interaction between individuals in different countries, between firms, social groups, trade unions and civil organisations show that this process of international interconnectedness is a powerful and ongoing phenomenon.<sup>1</sup>

Some authors maintain that in a historical context this phenomenon is not so new. They say that throughout the 20<sup>th</sup> century there was considerable globalisation of markets (Arocena, 1997; Williamson, 1997). They point out that before the First World War direct foreign investment stood at around 9% of world production, while in 1991 it was only 8.5%. In 1913, the percentage of foreign trade over national product in countries like France, Germany or the United Kingdom was similar to the level in 1994. We cannot deduce from this that the world was more or less globalised a hundred years ago, just that the levels of globalisation are comparable. What is more interesting is that after the globalisation phase at the beginning of the 20<sup>th</sup> century there was a period of strong protectionism which lasted through the two world wars.<sup>2</sup> There was even a hypothesis that protectionist policies, selfish nationalism and racist extremism could have been a defensive reaction against the threat of globalisation.

On the other hand, other authors maintain that the increase in interaction between the different economies of the world in the last two decades of the 20<sup>th</sup> century is without precedent (Rodríguez-Pose, 2001). Although it is acknowl-

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1 Francisco Gatto, 'Globalización y Regiones. La construcción de ventajas competitivas localmente específicas', in *Local Development in Globalisation*, Latin American Centre of Human Economics (CLAEH), Montevideo, 1999.

2 Carlos Zaldívar Alonso, 'Para participar en el debate, pulsar sobre el icono globalización de la economía', in *El País*, cited by Arocena, Madrid, 1997.

edged that most world trade and foreign direct investment takes place between developed countries, it is also a fact that in recent years the biggest relative increase in trade and in foreign direct investment has been with developing countries. At the same time, many of these countries have opened their borders and changed from an import substitution model of industry or from a centrally planned economy to systems that are relatively open to the free market.

In spite of these observations, our understanding is that although economic aspects that have to do with finance and the flows and mobility of capital are generally alluded to as the consequence of globalisation, the process is considerably more complex and it is not limited only to the worldwide interconnection of markets. As Camdessus<sup>3</sup> says, it is not possible to measure globalisation only according to indexes of foreign investment or percentages of foreign trade since there is no single globalised dimension, and in fact the outstanding characteristic of this phenomenon is that it is multi-dimensional.

Bervejillo<sup>4</sup> is of the opinion that there are at least five dimensions which must be borne in mind when talking about globalisation:

- *Technological*: the creation of a new global space by computers, telecommunications, and the development of new technologies in transport and in the control and management of processes.
- *Economic*: a new transnational financial system, the internationalisation of consumer markets and productive processes, and the internationalisation of firms.
- *Cultural*: the development of the electronic mass media which allows simultaneous access to information.
- *Political / institutional and ideological*: a new multi-polarity in a space of hierarchies and domains, and also the construction of new global regulations.
- *Physical / environmental*: a degree of uncertainty about the future evolution of human activity.

Although it is often maintained that one of the trends in globalisation is homogeneity (the same products, the same preferences, the same culture all over the world), the reality is that there is great heterogeneity between different places when it comes to opportunities and risks. The effect that was initially expected

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3 Michel Camdessus, 'Reglas, instituciones y estrategias para el bien común de una economía global', inaugural report at the international conference 'Economic growth – For what future?', Jaques Maritain International Institute, Rome, 30 November to 2 December 1995, published in *Estudios Sociales*, No. 88, Santiago, 1996, p. 11.

4 Bervejillo, Federico, 'Territorios de la Globalización. Nuevos procesos y estrategias de desarrollo', in *Revista Prisma* No. 4, Universidad Católica de Uruguay, Montevideo, 1995.

was that there would be homogenisation in consumption and in cultural, economic and political patterns, but the process that has subsequently emerged is far more complex. Certainly, many enterprises and regions have managed to adapt and have benefited greatly, but at the same time the opening of national economies has left many local economic structures vulnerable because they have little or no capacity to compete in the globalised ambit. This has caused local productive structures to disappear and has led to unemployment. In other cases, when employment has subsisted or has been generated to serve the global economy, it has contributed to working conditions deterioration. Workers with lower level skills are finding it more difficult to obtain employment and this is causing the informal sector to expand and precarious work to increase. Another factor is that our perception of the globalisation process from the national or local point of view has a direct connection with the consequences of that process.

Bervejillo also says that while globalisation opens up opportunities for different regions it also poses new threats.

This author<sup>5</sup> has identified four ways in which these new threats become manifested. First, there is the threat of *marginalization or exclusion* for places or districts which are not, or which have ceased to be, attractive and important for the world economy. Now that State protection has been removed, many places have to face the real possibility that they will stagnate, slip backwards, or be abandoned. Second, some regions may play a role of *subordinate integration* in that they will depend on external global actors who do not have roots in the region and who have no responsibility for local society there. Their links with local society are extremely fragile, so they can withdraw their investments when they see more advantageous conditions elsewhere. Third, there is the possibility of *economic and social fragmentation, dismemberment and disintegration* in certain territorial units, regions or cities. This depends on how those units are inserted into the global system. In some cities this fragmentation can result in a split between the 'globalised' population sectors and those sectors that are not globalised. Lastly, there is an *environmental threat* caused by the imposition of a development model that is not sustainable.

Globalisation can also be seen as an opportunity for regions to develop, and this can follow two main lines. First, for some regions it can lead to better access to global resources in terms of technology, capital and markets, which can mean a rise in the value of endogenous resources. When this happens, globalisation would be a window of opportunity for places which have strategic capacities that are in demand.<sup>6</sup>

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5 Bervejillo, Federico, *op. cit.*

6 Bervejillo, Federico, *op. cit.*

To see the process of globalisation as an opportunity means approaching the global-local dilemma from a minority point of view. Arocena<sup>7</sup> distinguishes three ways in which the global-local question can be approached.

- The first is to see globalisation as a threat which tends to eliminate autonomy in local affairs and with it the local or regional actors who could offer resistance to the globalisation process. From this perspective, local development becomes impossible as long as international conditions remain unchanged.
- The second way is to see local conditions as an alternative for confronting the threat of globalisation, and this involves a kind of 'anti-global revolution' which would allow local actors to regain their power. This way of thinking is a rallying point for those forms of political and cultural resistance to the globalisation process which can lead to nationalist demonstrations or the formulation of political projects that strongly emphasise the recuperation and conservation of those elements which characterise a particular local society. Unlike the first perspective, in this one the local actors play an important role since they are 'in charge' of breaking global hegemony. However, both of the views see globalisation as a threat.
- The third way of approaching the global-local relation, according to Arocena, is somewhat more complex. It attempts to set up a way of connecting the local to the global with the idea that globalisation is an opportunity and a challenge to be met and exploited so as to promote local development. Good examples here are regions that have more or less successfully inserted into the new global logic, sometimes in a way that is passive or functional to the global situation, and sometimes exploiting characteristic and individual aspects of societies and districts and their productive network with a distinctive strategy for competitiveness. The possibility of complementarities between globalisation and local development is well expressed by Girardo,<sup>8</sup> when she notes that *'(...) the world market has a growing need to diversify and differentiate products and consumption; and in this way what is produced at the local level is coming to be more valued since it adds individuality, quality and value to products that will compete in the global market.'*

Apart from the historical importance of the process, it has been clear that there is renewed interest, both academic and political, in trying to understand how regions and places construct their strategies for economic insertion into the

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7 Arocena, José, 'Globalización, integración y desarrollo local. Apuntes para la elaboración de un marco conceptual', in *Persona y Sociedad*, ILADES, Santiago de Chile, 1987.

8 Girardo, Cristina, commentaries included in Hualde, A., *ibidem*.

global market. From the academic point of view, the process begins with questioning neo-classical perspectives and with the new flowering of theories of economic growth that are mainly focused on endogenous growth. This has continued with ideas grouped in theories of endogenous development, and more recently in the focuses on local economic development.

With reference to political issues, the possibility of evaluating the effects of economic liberalisation policies has led to an increasing interest in knowing how different places have been using strategies that are original and individual in their productive and social characteristics to successfully, or relatively successfully, counteract the most regressive effects of globalisation.

In an attempt to identify the historical factors that have contributed to the renewal of theoretical speculation, empirical interest and regional policy, Hualde<sup>9</sup> emphasises the following as variables:

- The crisis in the Keynesian model of the nation state and the emergence of other actors such as transnational corporations.
- The delegation of responsibility to regions, which is characterised by a vindication of their competencies and their greater decision-making power. These phenomena have led to the trend towards decentralisation and regional autonomy.
- Criticism of the classical 'up-down' regional and industrial policy.
- A new conception of space in the light of the development of communications and computer technologies.
- Novel forms of organisation in companies, making them more flexible and decentralised.
- The important role of learning and knowledge.

When we look at Latin America it is clear that not all the different regions have regarded globalisation as an opportunity for development. During the 1990s there was in fact less growth in Latin America and the Caribbean than in the 'lost decade' of the 1980s. Rodríguez-Pose<sup>10</sup> points out that only a limited number of spaces seem to be taking advantage of the new opportunities thrown up by the globalisation process. In general, the most prosperous regions tend to be those that have something to offer markets which are expanding beyond the traditional local and regional spheres.

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9 Hualde, Alfredo, 'El territorio como configuración compleja en las relaciones entre educación y trabajo', in *Desarrollo local y formación*, in the *Tools for Transformation* series, Cinterfor/ILO, Montevideo, 2002.

10 Rodríguez-Pose, Andrés, *The role of de ILO implementing Local Economic Development Strategies in a globalised world*, Local Economic Development Programme (LED), policy document, London, 2001.

The same author warns that the empirical evidence tends to show that there are relatively few examples of areas in the globalised world that are dynamic. This is something that can be seen in comparisons between countries and in comparisons between districts inside countries, and in the different capacities to adapt which various regions and places have.

These observations indicate, first, that like at other times in history the globalisation process is tending to provoke a reaction to the new contexts that are taking shape, and this reaction may be to resist or it may be to adapt. Second, this globalisation process does not necessarily work against the upsurge of endogenous development in certain places, in fact it may even be encouraging them. What is very clear, however, is that globalisation does tend to challenge the importance of national states in their role as the main protagonists *per se* in development processes.

We can ask, then, what kinds of options are open to people, enterprises and regions if they are to successfully insert into the globalised economy through development processes which are sustainable and which generate quality jobs. The first fact we have to face is that there is no single model to meet this challenge. Diversity in the nature of people, enterprises and places means that the possible strategies that can be adopted are also diverse.

This is one of the clear differences between traditional development policies and new development policies at the local level. While the former were oriented according to common guidelines that could supposedly be replicated, the latter are always as original and as individual as the spaces they spring from.

### **Asturias: Valle del Nalón Technological City –VALNALÓN S.A.**

Valnalón is the first Enterprise Centre to be set up in Asturias. It came into being in 1987 as part of a wider local development project which included a new technology training centre, a hotel management school and an industrial estate. It is located in La Felguera (Langreo) in what used to be the old Duro Felguera steelworks, which was taken over by ENSIDESA at the end of the 1960s and finally closed down and demolished in 1984.

Nowadays, the Enterprise Centre consists of three buildings. Two of them are house firms engaged in a variety of activities, and they contain 15 industrial premises and 28 offices. The third, which is called Incuv@tic, is for enterprises in the information and communications technology sector, and it has eleven offices of between 12 and 45 square metres.

The total floor space available for companies (including Incuv@tic) is 3,753 square metres. Of this 1,337 is office space and 2,416 is for factories, with units ranging from 70 to 450 square metres.

Since Valnalón was inaugurated it has been home to 64 enterprises of which 54 were newly created at the time they moved in. Twelve of the latter have since closed, which is a 22.22% reduction.

At present, there are 30 enterprises in Valnalón, and they occupy 86.78% of the floor space and 72.22% of the available premises. The residents of Valnalón include the Valle de Nalón Association of Entrepreneurs, SOGEPSA and ENERNALÓN.

The Enterprise Centre is legally constituted as a public limited company and mostly made up of the Regional Promotion Board (SRP). The administrative board is headed by the General Director of Industry and Mining, and SODECO, Langreo City Council and SRP are also represented.

The enterprise centre offers the following communal services:

- **Basic** communal services - reception of calls and messages, reception and distribution of mail and faxes, digitalised telephone exchange, internal and external telephones, personalised answering service, re-direction of individual calls, basic internet access (ADSL, TELECABLE), voice and data networking, conference rooms, library, cleaning and maintenance of communal areas, alarm system, access and control system, and heating and air conditioning.

- **Additional** communal services - fax, photocopier, typing services, computers, plasticization, book and document binding, furniture hire, office cleaning, company registration, advanced internet access (ADSL, TELECABLE), scanner, automatic CD copier, projector, overhead projector, video conferencing, laser colour printing etc. through network access, and the rental of training classrooms.

Besides the above, the main **added value elements** are as follows:

- Since its inauguration in June 2000, Technical Support Service (**SAT**) Centre has offered, free of charge to all resident enterprises, counselling and information about all aspects of new technology (computers, networks, the internet, data lines, video conferencing, etc.). Up until now, 251 enterprises have used SAT services and there have been 1,441 activities. The outstanding ones are as follows:
  - **Demonstrations:** promoting and supporting small and medium sized enterprises through the analysis of practical and real cases with different technologies.
  - **Computer and information technology counselling:** attempts to provide concrete answers to problems that occur over and over again in companies.
  - **Assistance in self-training:** self-training in companies is supported in a way that is practical and applied to real situations, and this can be set up by reserving a few hours each day.

In addition, there have been presentations, chats, lectures and visits to trade fairs and business events. These have involved presenting SAT objectives and activities to countless enterprises.

SAT at Valnalón is managed by the Training Fund, and it is part of the network of SAT centres of Asturias.

- **Seedbed for projects.** This went into operation in 1992. It was the first in Asturias to offer male and female entrepreneurs the possibility to study business projects in the business centre itself.

It has seven work points which the entrepreneurs can use from 9.00 to 19.00 hrs. Those who work are offered on-line or telephone counselling, they are provided with materials so they can prepare their project at home, and interviews are organised for follow-up and a review by the tutor.

In 2001, eleven projects went through the seedbed, by June 21 of the following year it had been involved in 20 projects, and at the time of

writing there are 17 projects in operation, which is the busiest it has been since it was inaugurated.

In addition to this, a management manual for the seedbed for projects is currently being prepared.

- Training plans for **entrepreneurs**. These are centred in the **Chain of Training for Entrepreneurs** which offers different types of activities ranging from primary education to company consolidation.

**Primary education:** A method for developing business culture in primary education through the creation and management of a schoolchildren's cooperative. The project is aimed at the whole teaching community (schoolchildren, teachers, mothers and fathers), and 265 schoolchildren in 19 primary schools have taken part. The training involves the preparation of didactic materials.

**Compulsory secondary education.** A method for developing business culture in compulsory secondary education through creating, managing and commercialising international trade companies (Young European Enterprise). In this project there are 236 students in 9 institutes in the region. There are workshops, courses and visits, and the training is completed with the preparation of didactic materials. The whole of the educational community takes part.

**Pre-university and training programmes.** Methods for developing the entrepreneurial culture at the pre-university and training programme level through business orientation activities, courses on how to set up companies, workshops and seminars. As of the time of writing, 7,529 students had taken part in this. Training is completed with the preparation of didactic materials. The whole educational community takes part.

**University.** Business orientation activities involving chats, courses and counselling. Didactic materials are prepared. It is a project for students as well as teachers.

**Business Ideas Competitions.** Each year there is a competition for business ideas, and this is in two parts:

First, for pre-university and training programme students who have an idea and wish to develop it into a business project.

Second, for entrepreneurs who are developing their project in the framework of Valnalón business seedbed.

**Sensitisation training:** Centred on pre-university and training programme students.

This is structured in two phases:

**Motivation:** There is a chat in school time. The first part covers the socio-economic environment and ways of entering the world of work, and the second part tackles the vocational alternative and how to set up enterprises.

**Course:** After the motivation phase, courses on setting up enterprises are offered. These consist of 20 hours divided into 5 sessions of four hours, and they are run outside of school time.

**Specific projects:** These are for pre-university, training course, and university students.

**The va'l Mercau School:** This is a project for primary schoolchildren to run cooperatives, and 19 schools in Laviana, Sobrescobio, San Martín del Rey Aurelio, Tineo and Siero have taken part.

During the course, the students carry out various company activities that range from deciding on the legal status of their enterprise to designing the sales point. On the 2001-2002 course there were 265 students.

**Young European Enterprise.** This is an initiative which blends education with business. The general objective is to spread entrepreneurial culture among young people of different nationalities. The course is built around creating, organizing and managing a students' import-export cooperative.

This set-up means that the students reach three objectives that are more specific: acquiring knowledge about enterprises, developing entrepreneurial capacities, and working in a team, and all the while they are handling new technologies and using a foreign language as an instrument of communication.

Nine institutes from Laviana, San Martín del Rey Aurelio, Siero, Oviedo and Grado have participated in the project, and a total of 236 students have exported their products.

**The enterprise skill:** This is a vocational orientation project that involves the use of videos, magazines and one-day events. The magazines are about vocational sectors in which a considerable proportion of the people involved are self employed. Each issue deals with a main subject which

has to do with an area of interest like cinema, adventure sports, new technologies, etc.

The one-day activities are designed to coincide with events like Gijón International Film Festival or with one-day events and seminars at the educational centres themselves. A total of 2,686 students from 37 institutes of secondary education have done this course.

**Entrepreneurs Workshop:** This is a sensitisation and motivation programme whose main objective is to imbue young Asturians with the spirit of business enterprise.

A total of 7,529 male and female students from 76 institutes of secondary education in the region have done the course.

The candidates are students who have finished the training stage either in institutes of secondary education (pre-university or training programmes) or in training/employment systems (workshop schools, employment workshops and occupational courses).

**Teacher Training:** This is a programme for training and counselling teachers from educational centres. There are courses in business training run in cooperation with the teacher and resource centres of the Board of Education and Culture. In 2002, three courses were run and a total of 50 teachers took part. Besides this, work groups are coordinated to prepare didactic materials oriented to education for business initiative. At the moment, 28 teachers from primary and secondary schools are involved.

**Young Entrepreneurs Library:** Publications are an important element in the diffusion of business projects. The young entrepreneurs' library has materials in a variety of formats (books, magazines, videos, CDs) for students, teachers and entrepreneurs who are putting their own enterprise into operation. Fourteen items have been published.

**Visits from schools:** Observation of a business environment can motivate people to set up new enterprises. Young people can become familiar with observation and exploitation as capacities connected to business undertakings. In line with this idea, 750 students from 25 educational centres have visited Valnalón.

*Source:* Study of the evolution of Public Enterprise Centres in the Principality of Asturias

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## 2. THE DIMENSIONS OF LOCAL ECONOMIC DEVELOPMENT

Although it might seem paradoxical, the phase of globalisation, world integration and the removal of economic borders which we are witnessing today has become a suitable context for local development projects to be promoted and strengthened. According to Enríquez,<sup>11</sup> the recuperation of local identity is acting as a social defence mechanism which is coming into play in different regions. According to this author, it is therefore no coincidence that certain local development initiatives are trying to revive interest in development strategies that were practically abandoned in the 1980s.

It should be clear that the concept of development is being re-structured. After the Second World War and the fragmentation of the political map, there was a recognized need to reconstruct or repair the 'world order' that had been broken. Two models of reconstruction emerged, the Western or capitalist, and the Eastern or socialist. However, these two systems did not cover all the countries in the world; many nations remained outside this classification and they made up a marginal sector in the world system which was called the Third World.<sup>12</sup>

Unlike the other two systems, in the Third World there was never a will to reconstruct or repair a particular 'order'. Instead, the word 'development' was used, as in '(...) *one part of the world should be reconstructed and the other should be developed*'<sup>13</sup>, and at that time it meant taking a route that would lead to an industrialised society.

This situation led to a degree of confrontation between concepts that were purely economic on one side and concepts that were strictly social on the other, and there was debate about which of the two represented genuine development.

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11 Enríquez, Alberto, 'El Desarrollo Regional/Local', in *Hacia una delimitación conceptual del desarrollo regional / local*, FUNDE, El Salvador.

12 Arocena, José, *El desarrollo local: un desafío contemporáneo*, CLAEH, UCUDAL, Nueva Sociedad, 1st edition, Venezuela, 1995.

13 Arocena, José, *op. cit.*

According to the definitions on the economists' side, a country could be considered developed to the extent that it achieved economic growth, and no thought was given to the social costs of that growth. The second vision was intrinsically social, it came about in opposition to the first, and the main idea was that all economic growth represents a threat to social conditions.

In recent years, the attempt to harmonise these two ideas has in recent years come to the understanding that it would be unrealistic and utopian to consider development based only on social aspects, and the same applies to development considered exclusively from the economic point of view. Although efficacy and efficiency in the economic ambit increase the social product, they do not necessarily raise the level of satisfaction of collective basic needs.<sup>14</sup> Gago's understanding is that '*Development is a process of global structural change (economic, political, social, cultural and environmental) which tends to improve the quality of life of all members of society in that they attain more complete satisfaction of their collective basic necessities.*'<sup>15</sup> Furthermore, he says that all policies for promoting development have to take into account the socio-regional realities where they are applied. These realities condition the decisions to be taken and also the strategies and tactics to be used.

When we talk about local development we understand it to be a process in which a local society, maintaining its own identity and its land, generates and strengthens its cultural, social and economic dynamics, and facilitates the inter-connection of each of these sub-systems thus achieving greater intervention and control between them.<sup>16</sup> To carry this process forward, it is vital that the agents, sectors and forces which interact within the limits of a certain region should participate. Those agents should have a common project which combines generating economic growth, equity, social and cultural change, ecological sustainability, the gender focus, quality, and spatial and territorial equilibrium, so as to raise the quality of life and welfare of the population.<sup>17</sup>

The term 'local economic development (LED) strategies' is applied to a variety of instruments which, unlike the tradition of centralist development policies, are aimed at strengthening the comparative advantages that there are in certain places. To do this, the strategies are built around what are known as 'endog-

14 Pérez, Fernando, *Los efectos del proceso de integración en la frontera Uruguay-Brasil. Oportunidades y limitantes para los departamentos fronterizos*, Regional Development Programme (RDP), Red de Organizaciones Comunitarias y Sociales del Mercosur, unpublished.

15 Gago, Alberto, *Planificación y Desarrollo Regional. Curso Latinoamericano de Desertificación*, Mza., November, 1993.

16 Podestá, Enrique, *Estudio de la gestión ambiental en la microregión del Rosario*, Local Development Programme of the Latin American Centre of Human Economics (CLAEH), *Local Development in Latin America* series, No. 4, Montevideo, 1999.

17 Enríquez, Alberto, *op. cit.*

enous' factors, that is to say the local economic network, the human resources of the place and the local institutional framework. The basic philosophy of these strategies is that economic activity depends on the socio-economic condition of a place rather than the other way around.

We can note that the word 'policies' has been replaced by 'strategies', and this is not just a whim. It is connected to revising those conceptions which historically identified public policies and in which the prerogative and even the monopoly of action resided in the State apparatus, which was usually the centre. On the other hand, in the new focus, public State action is linked to the initiative, resources and capacities of social and private actors, and thus the space of what used to be considered 'public' is being reconfigured. Hence the idea of 'public' comes to be understood in its most essential and original meaning, which has to do with matters of common interest, and implies that control in the 'public' sphere should involve all actors, each one making his or her own individual contribution.

In a review of the theoretical background of the local economic development focus, Vázquez Barquero<sup>18</sup> refers to development carried out from the economy by the school of endogenous growth. This has emerged in opposition to neo-classical theories of economic growth, whose hypothesis of diminishing returns led to a recognition that, in the last analysis, the motor of economic growth was technological progress because the accumulation of capital would in the long run tend to weaken.<sup>19</sup>

In contrast to this, the theories of endogenous growth have gone a long way towards reconciling economic theory with the empirical evidence. In these theories, technological progress is taken as an endogenous variable in the model while at the same time the market power of enterprises is incorporated into processes of innovation and economic growth.

Some of the conclusions that this perspective entails have been incorporated into relatively more recent theories of endogenous development. The growth perspective and the perspective of endogenous development share the vision that productive systems consist of a group of material and non-material factors which allow local and regional economies to adopt differentiated paths towards growth in function of clear potential for development, and that therefore there is a space for regional and industrial policies. The rates of economic growth in dif-

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18 Vázquez Barquero, Antonio, '¿Crecimiento endógeno o desarrollo endógeno?', *Cuadernos del CLAEH* Nos. 78-79, 2nd series, year 22, Montevideo, 1997, 1-2.

19 'The supposition of diminishing returns on capital means that in the long run the rate of growth of productivity tends to zero because investment is directed to activities that are less and less productive, and therefore the investor becomes discouraged. The neo-classical model will lead, therefore, to a stationary situation in which the variables move to a rate that is near to zero.' Vázquez Barquero, Antonio, *ibidem*.

ferent areas and therefore differences in the levels of income and production, are due to differences not only in the stocks of capital-work but also in educational levels, in the capacity to generate R&D, and definitively in the economic progress generated by public enterprises and administrations.

Consequently, economic development would be a process of growth and structural change in which the forms of organisation, the system of relations and the dynamic of learning play strategically important roles. Economic development is also characterised by its territorial dimension, not only because of the spatial effect of the organisational and technological processes involved, but also because each place or region is the result of a history in which the institutional, economic and organisational system was set up.

What is more, from the endogenous development perspective, social development is integrated into the economic dimension. The distribution of income and wealth on the one hand and economic growth on the other are not two processes which come about and are shaped in a parallel way. They acquire a common dynamic due to the fact that public and private actors take investment decisions oriented to resolving the problems that local society and companies are faced with. Therefore, the local area is a space in which the initiatives of the different sectors of organised society become real.

However, this evolution cannot hide the fact that LED focuses lack a clearly defined theoretical model. They are usually inspired in experience itself and this makes it difficult for a precise and generally-accepted definition to emerge. However, a series of efforts have been made to identify the distinctive aspects or components of this focus.

For example, White and Gasser<sup>20</sup> establish four features that characterize LED strategies: (a) they require participation and social dialogue; (b) they are based on territory; (c) they entail the mobilization of local resources and competitive advantages; (d) and they are locally owned and managed.

The Local Economic Development Programme of the ILO uses a definition which includes these four characteristics. LED is seen as “*a participatory development process that encourages partnership arrangements between the main private and public stakeholders of a defined territory, enabling the joint design and implementation of a common development strategy, by making use of the local resources and competitive advantage in a global context, with the final objective of creating decent jobs and stimulating economic activity*”.

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<sup>20</sup> White, S.; Gasser, M., *Local economic development: a tool for supporting locally owned and managed development processes that foster the global promotion of decent work*, Job Creation and Enterprise Development Programme of the ILO, Geneva, 2001.

Another author who is frequently taken as an authority in the LED focus is Michael Porter, whose key work in this field is *The Competitive Advantage of Nations*.<sup>21</sup> In this book, he tackles the question of why there are concentrations of successful economic activity in some districts that are relatively small and not in others. He observes that firms do not come into being independently but that their development is conditional upon a national environment which supports and cultivates competitiveness.

Porter identifies four interrelated factors which are of crucial importance for a nation, district or local area to attain a competitive advantage. The first of these is the basic resources or conditions that the comparative advantage is based on, in other words, land, workforce and capital. To this group of factors, which are very difficult to replicate, Porter adds a second point, which is that there should be a healthy demand from local or national consumers which tends to create conditions and cultures connected to the product or service which is generated locally or nationally. The third factor is territorial proximity and, more specifically, the creation of clusters or groups of units of production and suppliers around a particular industry or service. Finally, the fourth factor has to do with the institutional framework and trade practices which contribute to creating clear and stable rules of the game that are important both for investment and for the development of competitive advantages.

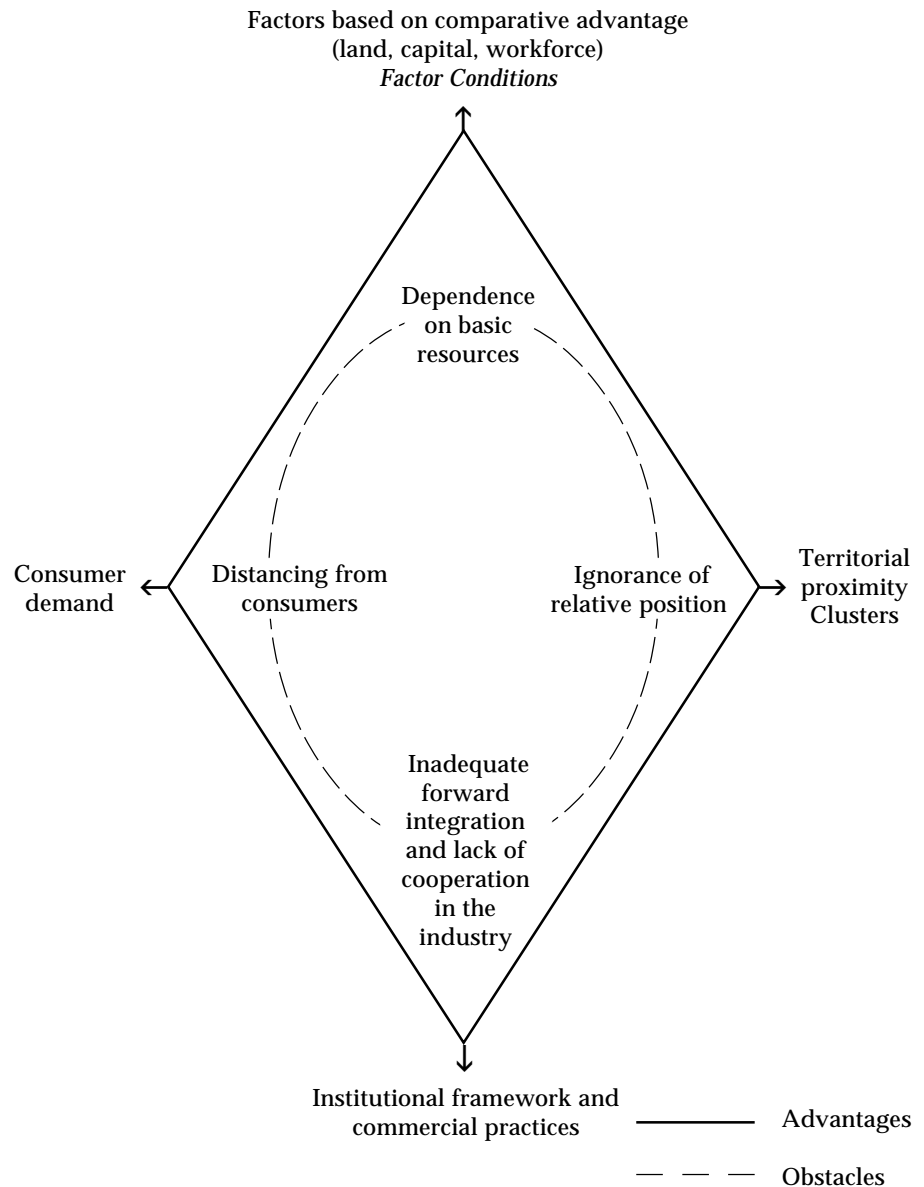
These four factors constitute what has come to be called the 'diamond' of competitive advantage in local economic development. Based on consideration of these factors, authors like Ickis<sup>22</sup> have identified the obstacles that can occur separately and impede full realization. These obstacles would be (a) excessive dependence on the factors that generate comparative advantages, (b) the distancing of consumers (in a spatial sense, but also and more importantly in terms of communication and information), (c) ignorance of relative position in terms of the market and (d) inadequate forward integration and a lack of cooperation in the industry. The factors in competitiveness and the potential obstacles are shown in the figure on the following page.

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21 Porter, Michael E., *La ventaja competitiva de las naciones*, Vergara, 1991.

22 Ickis, John C., *Cómo ganar ventaja competitiva en el desarrollo económico local*, Guatemala, 1998, published at [www.ilo.org.led](http://www.ilo.org.led)

### The diamond of competitive advantages and their potential obstacles (Porter/Ickis)



Rodríguez-Pose<sup>23</sup> has made a comparison between the features which characterise LED strategies and those of the traditional (top-down) development policies, and he has identified at least five points which involve important differences between them: “**First**, whereas in traditional top-down approaches the decision on where to implement development strategies is taken by central government planners and developers, with little or no involvement of local actors, LED practices favour the promotion of development in all territories by using the economic potential and the competitive advantage of every space. The initiative to launch the development strategy is taken locally or with strong local support. **Second**, as a result of where and how the decisions are taken, traditional policies have been generally designed, managed, and implemented by ministries or central government agencies. The involvement of local actors in LED strategies implies, in contrast, a much greater degree of vertical and horizontal coordination of all the actors involved. (...) The **third** basic difference relates to the approach to development. Traditional policies have tended to adopt a sectoral approach. The promotion of specific industrial sectors that contribute to generate economic dynamism has been one of the main objectives of these policies. LED uses a territorial approach as a means of achieving economic development. The diagnosis of the economic, social, and institutional conditions of every territory and the identification of the local economic potential are the foundations upon which any development strategy is built. (...) **Fourth** and last, both approaches are also set apart by their way of attracting economic activity. While traditional approaches have relied on financial support, incentive packages and subsidies in order to attract and maintain economic activity, LED tends to shun such activities and concentrates on the improvement of the basic conditions for the development and attraction of further economic activity.”

Lastly, according to Vázquez Barquero,<sup>25</sup> LED strategies are based on a combination of development in three distinct dimensions which he calls economic hardware, software, and orgware.

*Hardware* has to do with basic infrastructure, communications and transport networks for example, and also industrial space and educational, health and cultural infrastructure.

*Software* implies the design and implementation of comprehensive local development strategies. This includes a diagnosis of the comparative advantages and dysfunctional aspects of each space, and also the interconnection between

<sup>23</sup> Rodríguez-Pose, Andrés, *op. cit.*, pp. 9-10.

<sup>24</sup> Vertical coordination supposes the synchronization of local, regional, national and supra-national or international organizations. Horizontal coordination involves public and private actors concerned with matters of development, Rodríguez-Pose, Andrés, *ibidem*.

<sup>25</sup> Vázquez Barquero, Andrés, *Desarrollo, redes y innovación: lecciones sobre desarrollo endógeno*, Pirámide, Madrid, 1999.

**Main differences between traditional top-down development policies and bottom-up LED approaches**

Traditional development policies	Local economic development
1. Top-down approach in which decisions about the areas where intervention is needed are taken in the centre	1. Promotion of development in all territories with the initiative often coming from below
2. Managed by the central administration	2. Decentralized, vertical cooperation between different tiers of government and horizontal cooperation between public and private bodies
3. Sectoral approach to development	3. Territorial approach to development (locality, <i>milieu</i> )
4. Development of large industrial projects to stimulate other economic activity	4. Maximizing the development potential of each area to stimulate a progressive adjustment of the local economic system to the changing economic environment
5. Financial support, incentives and subsidies as the main factor for attracting economic activity	5. Provision of key conditions for the development of economic activity

Source: Rodríguez-Pose, Andrés. *The role of the ILO in the implementing of Local Economic Development Strategies in a Globalised World*, op. cit.

four axes: the improvement of the competitiveness of local firms, the attraction of inward investment, the upgrading of human capital or labour skills, and the building of infrastructure. The basic objective here is to construct a balanced local development strategy which will help to generate sustainable development and create jobs. According to Rodríguez-Pose, by making any economic activity taking place in the territory dependent on local conditions and by managing the strategy locally, it can be inferred that the jobs created are likely to be of a better quality, than the resulting from other alternative development policies.

*Orgware* refers to the organizational and institutional capacity to design, implement, and monitor the whole development strategy. Rodríguez-Pose says that the development of *orgware* goes beyond a mere vertical and horizontal coordination of different levels of government and of local public and private actors and involves the empowerment of the local society, by allowing and encouraging it to have a greater say in its own future. However, although empowering local societies is a crucial element in any LED strategy, it cannot be considered as its main or only goal. It is basically a means to attain sustainable development and generate greater economic dynamism and employment.

### **SEBRAE in Brazil: some complementary definitions**

Brazilian Micro and Small Business Support Service (SEBRAE) has a local development programme that is specially designed to support city councils in promoting holistic and sustainable local development as a vector of economic sustainability.

The programme's operation is based on municipal and/or regional diagnoses which seek to identify potential for local development in sectoral, social, economic and environmental dimensions. It tries to activate and encourage the entrepreneurial spirit, and helps individual and collective micro and small enterprises that are already in operation.

It also seeks to identify new opportunities for business and create favourable environments so that new enterprises can emerge, and this would generate employment or productive occupations. To do this it undertakes to provide coordinated support for agriculture, industry, commerce and services which include training, consultancy, orientation for credit, promoting cooperation, and developing the spirit of enterprise.

In this framework SEBRAE has developed a number of concepts which are useful to complement those dealt with in this study.

#### ***Local productive arrangements***

Local productive arrangements are agglomerations of companies located in the same district that have a common productive specialisation and maintain some link, interaction, cooperation and learning from each other that operates inside the group and with other local actors such as the government, employers' associations, and credit, teaching and research institutions.

A local productive arrangement is an agglomeration of a significant number of enterprises which are all involved in the same main productive activity. For this, it is necessary to consider the dynamic of the district in which the companies are located, and to bear in mind aspects such as the number of job places, company turnover, market, growth potential and diversification.

It follows that the notion of a district is crucial for activity in function of local productive arrangements. However, the idea of a district is not confined just to its material or concrete dimensions. A district is a field of forces, a mesh or network of social relations which is projected in a particular space. In this sense the local productive arrangement is also a district in which the main dimension that holds it together is economic, although there are other dimensions as well.

Therefore local productive arrangements make up a definition or delimitation of the district (part of a municipality, a group of municipalities, river basins, valleys, mountains etc.) that has some collective identifying marks (social, cultural, economic, political, environmental or historical).

Besides, the district must maintain, or have the capacity to promote, agreements about development expectations, must be able to establish alliances and commitments to retain and put to specialised use the investment of each of the actors in the region, and must promote or be amenable to economic or social integration in the local ambit.

When stimulating local development it is essential to bear in mind that any action must allow connection to markets, sustainability by means of a pattern of organisation which is maintained over time, the promotion of an ambit that includes micro and small businesses in a market with distribution of wealth, and the raising of social capital through promotion and cooperation among the actors in the area.

It is also essential to make access to public goods such as education and health democratic, to preserve the environment, to value the local historical and cultural heritage, to get local people involved, to form alliances with other actors, to mobilise public and private resources contributed by agents of the arrangement, and to attract public or private resources complementary to those contributed by the local actors.

### ***Productive chains***

Productive chains are a collection of stages through which different inputs pass and are transformed in cycles of production, distribution and commercialisation of goods and services. They involve the division of labour in that each agent or group of agents carries out a different stage of the productive process.

### ***Sectoral nuclei***

Sectoral nuclei are firms in the same branch of activity which compete with each other in the market but still act jointly in solving common problems, and this means that micro and small firms are not isolated. Firms in this situation are in a better position to negotiate for equipment and raw materials, and they also have access to technological and market innovations in a globalised world. Normally sectoral nuclei are created within trade and industrial associations, and they function by following certain steps. They identify their problems and needs, and they share information and decision-making when it comes to training and consultancy. This is the base on which solutions are sought.

### ***Networks of companies***

The companies in different kinds of productive and innovative agglomerations can be organised in networks. These networks are born out of a systematic consolidation among firms, and they can take different forms, the main ones being the acquisition of shares, strategic alliances, and the outsourcing of some company functions.

In the last analysis, networks of firms grow out of the formal or informal grouping of autonomous firms. The aim is to carry out some activities jointly so each company can concentrate on its core business.

The advantages that these firms obtain, besides being able to specialise in their core activity, include improved productivity, reduced costs, savings in resources, access to new markets, new technologies, workforce and suppliers, increased power in negotiations in purchasing and trade situations, sharing experience and better access to information, an improvement in the reputation of the sector in that district, and better access to government institutions and programmes.

Source: Brazilian Micro and Small Business Support Service (SEBRAE).  
[www.sebrae.com.br](http://www.sebrae.com.br)

### **Rural Tourism in the Department of Quindío, Colombia**

The department of Quindío is one of the biggest coffee producers in the Colombian economy. When international prices for this product were good, income from this source made possible a local economy based on small and medium sized rural production, and this generated considerable employment and income and made for a relatively good level of life. Besides this, thanks to producers' organisations – the Quindío Committee of Coffee Producers in association with the Colombian National Federation of Coffee Producers – surpluses were generated. These were used to finance big development programmes that not only benefited the coffee producers but also the population as a whole. Then came a big fall in international coffee prices, and this resulted in a serious socio-economic crisis that began at the end of the 1980s and was made worse by the effects of an earthquake in 1991.

However, through a complex but successful process, the department of Quindío is carrying forward an interesting transformation to agro eco-tourism. This is based on converting traditional houses on coffee-producing estates into hostels, and also building a number of theme parks. This transformation has been based on (a) an excellent climate and wonderful scenery, (b) a good location in the heart of Colombia and at the crossroads of the main transport routes, (c) excellent physical infrastructure and social services, and (d) a population that is by tradition very hospitable and that has a strong cultural identity.

After something like 5 years in operation there are now 7,000 beds available for tourists on more than 400 different estates, of which 100 are rated 4 or 5 stars. At the present time, Quindío is the second most popular domestic tourist destination in Colombia after Cartagena de Indias. In short, this is an interesting case of productive reconstruction, the transformation from a traditional one-crop rural economy which was inserted in the international market to a new model of services, also rural, which are clustered together, are competitive nationally at the present time, and have good international potential.

### 3. DIFFERENT REGIONS, SPECIFIC PRODUCTIVE NETWORKS

There have been hundreds of examples of interest in the individual characteristics of regional economies,<sup>26</sup> but the current interest in this focus began in the early 1970s in the United States. There was a more systematic analysis of the de-industrialisation taking place in the North and the consequent migration of industrial plant to the South and abroad. This migration was due to factors such as imports of steel, automobiles and machine tools, and to the maturing of services and incentives to re-locate industries in other regions.

A phenomenon which has attracted a lot of attention among managers and students of economic development policies is the trend for business to become concentrated in specific regions, making up clusters or industrial districts.<sup>27</sup> The clearest stimulus behind this trend is the advantage of having specialised suppliers, services, clients and consumers all concentrated in one place.

It could be argued, however, that the concept of a cluster or industrial district - like the industrial districts in Italy - cannot always be applied to districts and places even when there is a grouping together of companies that are all in the same branch of activity.

Meyer-Stamer<sup>28</sup> identifies three kinds of clusters in developing countries (with specific conceptions of promotion): **survival**, **Fordist** and **transnational**. The **survival cluster** belongs to the informal sector of the economy and is made up of subsistence micro businesses with characteristics which include modest social

26 Already in the 19th century various studies by the Department of Agriculture in the United States and by the research services of some universities were working to identify the comparative advantages for agriculture in the economies of different regions and states. The motivation was to increase the productivity of establishments and to stabilise rural families (Makusen and Schrock, 2001).

27 Strictly speaking, an industrial district does not consist of a group of pieces of land with enterprises from various branches, as can be found in some Latin American countries, but an industrial agglomeration with a restricted specialisation profile like, for example, hundreds of companies that all produce shoes.

28 Meyer-Stamer, Jörg, "Estratégias de Desenvolvimento Local e Regional: Clusters, Política de Localização e Competitividade Sistêmica", ILDES, *Policy Paper* No. 28, September, 2001. Available at <http://www.fes.org.br>

capital, a high degree of distrust between firms, ruinous competition, and minimal capacity for innovation. The second type are **clusters with greater development potential** that were created to substitute imports during the industrialisation phase involving large enterprises and the Fordist production model. Finally, the **transnational cluster** results from changes in the strategies of transnational enterprises which spring from a combination of two factors: the demand in the host country which leads the enterprises to invest in developing local suppliers, and the strategy of conferring on these firms the status of 'globally preferred suppliers' so they would be supplying to company branches located all over the world.

In addition, Markusen also refers to the hub and spoke model (with big enterprises in the centre as hubs), the cluster satellite (dominated from outside) and the state-anchored induced model.<sup>29</sup>

### Hypothesized Features of New Industrial District Types

#### Marshallian industrial districts

- Business structure dominated by small, locally owned firms
- Scale economies relatively low
- Substantial intradistrict trade among buyers and suppliers
- Key investment decisions made locally
- Long-term contracts and commitments between local buyers and suppliers
- Low degrees of cooperation or linkage with firms external to the district
- Labor market internal to the district, highly flexible
- Workers committed to district, rather than to firms
- High rates of labor in-migration, lower levels of out-migration
- Evolution of unique local cultural identity, bonds
- Specialized sources of finance, technical expertise, business services available in district outside of firms
- Existence of "patient capital" within district
- Turmoil, but good long-term prospects for growth and employment

#### Italianate variant (in addition to the above)

- High incidence of exchanges of personnel between customers and suppliers
- High degree of cooperation among competitor firms to share risk, stabilize market, share innovation
- Disproportionate shares of workers engaged in design, innovation

<sup>29</sup> Markusen, Ann, *Sticky Places in Slippery Space: A typology of industrial districts*, Economic Geography, 1996. Available at <http://www.hhh.umn.edu/people/amarkusen/districts.pdf>

- Strong trade associations that provide shared infrastructure-management, training, marketing, technical or financial help, i.e., mechanisms for risk sharing and stabilization
- Strong local government role in regulating and promoting core industries

#### **Hub-and-spoke districts**

- Business structure dominated by one or several large, vertically integrated firms surrounded by suppliers
- Core firms embedded nonlocally, with substantial links to suppliers and competitors outside of the district
- Scale economies relatively high
- Low rates of turnover of local business except in third tier
- Substantial intradistrict trade among dominant firms and suppliers
- Key investment decisions made locally, but spread out globally
- Long-term contracts and commitments between dominant firms and suppliers
- High degrees of cooperation, linkages with external firms both locally and externally
- Moderate incidence of exchanges of personnel between customers and suppliers
- Low degree of cooperation among large competitor firms to share risk, stabilize market, share innovation Labor market internal to the district, less flexible
- Disproportionate shares of blue-collar workers
- Workers committed to large firms first, then to district, then to small firms
- High rates of labor in-migration, but less out-migration
- Evolution of unique local cultural identity, bonds
- Specialized sources of finance, technical expertise, business services dominated by large firms
- Little “patient capital” within district outside of large firms
- Absence of trade associations that provide shared infrastructure-management, training, marketing, technical or financial help, i.e., mechanisms for risk sharing and stabilization
- Strong local government role in regulating and promoting core industries in local and provincial and national government
- High degree of public involvement in providing infrastructure
- Long-term prospects for growth dependent upon prospects for the industry and strategies of dominant firms

### **Satellite industrial platforms**

- Business structure dominated by large, externally owned and headquartered firms
- Scale economies moderate to high
- Low to moderate rates of turnover of platform tenants
- Minimal intradistrict trade among buyers and suppliers
- Key investment decisions made externally
- Absence of long-term commitments to suppliers locally
- High degrees of cooperation, linkages with external firms, especially with parent company
- High incidence of exchanges of personnel between customers and suppliers externally but not locally
- Low degree of cooperation among competitor firms to share risk, stabilize market, share innovation
- Labor market external to the district, internal to vertically integrated firm
- Workers committed to firm rather than district
- High rates of labor in-migration and out-migration at managerial, professional, technical levels; little at blue and pink-collar levels
- Little evolution of unique local cultural identity, bonds
- Main sources of finance, technical expertise, business services provided externally, through firm or external purchase
- No “patient capital” within district
- No trade associations that provide shared infrastructure-management, training, marketing, technical, or financial help, i.e., mechanisms for risk sharing and stabilization
- Strong local government role in providing infrastructure, tax breaks, and other generic business inducements
- Growth jeopardized by intermediate-term portability of plants and activities elsewhere to similarly constructed platforms

### **State-anchored industrial districts**

- Business structure dominated by one or several large, government institutions such as military bases, state or national capitals, large public universities, surrounded by suppliers and customers (including those regulated)
- Scale economies relatively high in public-sector activities
- Low rates of turnover of local business
- Substantial intradistrict trade among dominant institutions and suppliers, but not among others

- Key investment decisions made at various levels of government, some internal, some external
- Short-term contracts and commitments between dominant institutions and suppliers, customers
- High degrees of cooperation, linkages with external firms for externally headquartered supplier organizations
- Moderate incidence of exchanges of personnel between customers and suppliers
- Low degree of cooperation among local private-sector firms to share risk, stabilize market, share innovation
- Labor market internal if state capital, national if university or military facility or other federal offices for professional/technical and managerial workers
- Disproportionate shares of clerical and professional workers
- Workers committed to large institutions first, then to district, then to small firms
- High rates of labor in-migration, but less out-migration unless government is withdrawing or closing down
- Evolution of unique local cultural identity, bonds
- No specialized sources of finance, technical expertise, business services
- No “patient capital” within district
- Weak trade associations to share information about public-sector client
- Weak local government role in regulating and promoting core activities
- High degree of public involvement in providing infrastructure
- Long-term prospects for growth dependent on prospects for government facilities at core

*Source:* Markusen, Ann: ‘Hypothesized Features of New Industrial District Types’, in *Sticky Places in Slippery Space: A typology of industrial districts*, Economic Geography, 1996.

Nowadays, the concept of an industrial district as a geographical and social space where a high degree of economic specialization is brought about (with different configurations) only covers part of the current diversity in regional economic experiences. Rodríguez-Pose refers to three categories<sup>30</sup> that can be called ‘winning regions’ in the current context of globalisation:

| 30 Rodríguez-Pose, *op. cit.*

- a. *Large metropolitan regions:* Large urban agglomerations in both the developed and the developing worlds are becoming concentrations of high value added service activities. Business, financial, real estate, and insurance services are clustering more than ever in large urban regions, as are the headquarters of corporations. The economies of agglomeration derived from such concentration of production factors are attracting research and development and design activities to global metropolises. Foreign direct investment is also flowing to large metropolitan areas. However, this author also points out, a majority of the large urban agglomerations around the globe suffer from the emergence of a dual economy, in which wealth and high productivity jobs coexist with economic and social deprivation, a growing informal sector, and low paid, precarious jobs in the service sector.
- b. *Intermediate industrial regions:* The second group of territories that seem to be profiting from the greater mobility of production factors are the intermediate industrial regions. Such areas often offer labour cost advantages with respect to core areas, with human capital and accessibility advantages with respect to peripheral areas, making them attractive locations for new industrial investment. The combination of low wages with a relatively skilled labour force and accessibility to markets has made them primary targets for industrial investment. Much of today's mass production is concentrated in these areas.
- c. *Tourist regions:* These are regions in the developing world that have managed to find their market niche in a globalized economy and have achieved great success base in their capacity to attract large number of tourists from all over the world, or at least to built up a healthy and relatively successful tourist industry.

The application of some or all of the typologies explained above to the Latin American and Caribbean region involves various problems. This is partly because in some cases the bases upon which these typologies were constructed were studies of regional economies in the more industrialised countries. Another reason is that any attempt to apply universal categories runs into difficulties when it comes to a more concrete application in a continent which is very heterogeneous in many aspects.

Nevertheless, the following is a list of different kinds of regional and local economies in Latin America and the Caribbean, but it is not intended to be exhaustive:

- a. *Traditional rural areas.* In many of the Latin American and Caribbean countries a considerable proportion of the population still live in rural areas. In these regions it is common to find an economic activity that is centred on small scale agriculture or livestock rearing, with low levels of productivity

and which is largely oriented to auto-consumption. This is the kind of region which usually has the highest rates of poverty, illiteracy, unsatisfied basic needs and inadequate health services. Although in some cases the productive network in these regions may be linked to larger production and commercialisation chains, these co-exist with archaic distribution, tenancy and exploitation land structures that hinder the prospects of modernising the production system and the population living standards. In addition, many social and political conflicts, specially armed conflicts, are taking place or have taken place in these areas.

- b. *Rural tourist areas.* In Latin America, a relatively small proportion of rural areas have found niches in the market to exploit their potential for tourism. In some cases new opportunities are displacing traditional economic activities either because they are more profitable or because of a previous crisis in the productive activity. In other areas, the tourist undertakings do not only co-exist with economic activities that are characteristic of the region but are actually reinforced by them. In general, the tourist boom in those areas is partly based on access to natural attractions, although there can be other kinds of attractions such as local culture aspects, archaeological remains, or the productive activities that characterise the region.
- c. *Agro-industrial areas.* In some regions in Latin America and the Caribbean, the production of crops like rice, barley, soya beans, wheat, sunflower seeds, sugar cane, grapes and citric fruit, or dairy farming and raising livestock for meat and quality leather, is at the level of modern agro-industrial chains. There are high levels of investment and technological development which yield high added value, which turn out to be higher than that of agricultural areas that still rely on traditional methods of production. Where these production chains are in operation the difference between rural and urban areas and between rural and urban populations is less marked because agro-industry does not only involve basic production but also transport, storage, classification, packaging and commercialisation in the internal market and for export, and these different phases of the process are carried on in different places.
- d. *Industrial port areas.* In Latin America there are a number of port areas that constitute a category in themselves. They may be built around the fishing industry or they may handle cargo or do both, and in some cases these kinds of economic activities determine the economic configuration of adjacent areas. In other areas, port activity may be interconnected with other sectors that play an important role, specially when the port is located in or near a large urban conglomerate.
- e. *Tourist-oriented traditional fishing areas.* An economic activity that can be found on the coast and in river basins all over Latin America and the Caribbean is

fishing by traditional methods, usually based around the family or the small community. To a certain extent these places share many of the characteristics and problems of traditional rural areas, and they are closely linked to them. Production is oriented to auto-consumption and to supplying local markets on a limited scale. Although from a technological point of view these could be considered activities with low productivity, traditional fishing techniques have increased their value since they involve the sustainable management of the natural resources they depend on, which often stands in contrast to large scale fishing industries. Sometimes, these fishing villages are able to develop their tourist potential (an activity in harmony with their traditional economic activity).

- f. *Industrial areas in the process of rationalisation.* Liberalisation in general and trade opening in particular have made a big impact in Latin America and a number of industries are making efforts to adapt to the new conditions. Even when old industries have managed to survive or improve their position in national or international markets, there have usually been profound changes in the social environment and local job markets. New focuses for organising and managing production and the technological reconstruction involved, have brought about job losses and changes in the structure of the qualifications needed for work. On the other hand, organisational changes have led to the outsourcing of many of the tasks which were previously carried out internally, leading to the creation of new kinds of jobs in smaller enterprises which operate as suppliers of products and services to the large firms.
- g. *Old industrial areas.* The old industries that grew up before or during the import substitution period have not managed to survive. Some of these are very old indeed, such as the saltpetre or rubber industries, and more recent examples are the textile sector, footwear, meat processing plants and tanneries. Many of these industries were large scale and dominated the economic and labour life of the regions and cities where they were located. Their disappearance has led to endemic unemployment, migration, and lack of economic dynamism. In some cases, the land that was previously destined for industrial purposes has been put to other uses which may involve tourist facilities, the development of service areas or the incubation of small enterprises.
- h. *Border areas.* These are limited geographical spaces that are near international borders where two adjacent societies and economies interact and are interconnected. In Latin America these border areas have certain common characteristics: their economies are relatively isolated and depressed compared to the main urban centres, they have a low level of development, they are less densely populated and, in a political sense, they are heavily dependent

on the main decision-making centres. This combination of characteristics lead these areas to develop a *modus vivendi*, adapting to the reality of being distant and underdeveloped, and they are no strangers to smuggling, illegal migration, and in recent years to drug trafficking.<sup>31</sup>

Another situation which can be found in some border areas has its roots in differences in the offer, the prices, the production costs and the legal requirements in each country. Large industrial undertakings usually decide to set up their plants in the border area of a neighbouring country to take advantage of favourable exchange rates or labour costs that are considerably lower than in their own country. In no way does this mean 'growth and development' for the locations chosen since the profits that these enterprises make are not re-invested in the area and the salaries they pay are too low to activate the local economy. Despite these enterprises may create new jobs, they are of low quality and imply no social protection or social security.

- i. *Traditional specialised industrial areas.* In a number of countries there are places or regions which have a concentration of many micro and small industries that are specialised in a particular kind of production such as furniture-making, handicraft stone work or shoemaking. They have frequently come about for historical reasons, and sometimes because of specific resources availability (such as wood, stone, leather, etc.). Strong collective traditions grow up over time, and make the main economic activity of the area a distinctive characteristic in regional identity. These concentrations, and the knowledge capital that they involve, may attract larger firms that are in the same field but have better technology and greater commercial reach to establish themselves in the area.
- j. *Extraction industry areas.* This group consists of different kinds of industries with very different characteristics which necessarily lead to the creation of economic structures and labour markets that are completely different. Examples are oil fields, natural gas fields, and the mining of precious and semi-precious minerals. In some cases, these industries import a high level of technology and heavy investment (for example, petrol and natural gas) and in others production depends on the intensive use of labour. Some of these industries require their personnel to be highly specialised and trained while others do not require their workers to have any kind of previous training. Conditions of work and the degree of market regulation in each case are also very varied.
- k. *Large metropolitan areas.* Some examples of large urban conglomerates are the Federal District in Mexico, Sao Paulo, Buenos Aires, Bogotá and Santiago de

| 31 Valenciano, Eugenio, *La Frontera: Un nuevo rol frente a la integración. La experiencia en el Mercosur*.

Chile. As Rodríguez-Pose has pointed out, these tend to bring together many activities with high added value, which range from modern industries to different kinds of services, and which may be of national or transnational origin. Due to their weight in terms of demography and employment these regions tend to guide the service sector growth. Although the informal sector is clearly important, economic benefits also tend to become concentrated in these regions, which constitute the best economic and occupational mix.

The categories set out above are only an aid to analysis, and when applied on the empirical level they cannot be mutually exclusive. All regions constitute an economic and occupational mix in their own ways and to different degrees. Consequently, the advantages of regional economic analysis are easier to see by making a synthesis that goes beyond sectoral analysis and the study of regional planning based on criteria of administrative policy.

Moreover, we can also ask to what extent exclusive consideration of the kinds of economic activity that are concentrated and combined in certain regions constitutes a factor in explaining their development processes. Some authors think that a focus on occupations has greater explanatory power than a focus which is exclusively on industry.<sup>32</sup> This is based on the idea that the education, location and migration of people with specific competencies connected to occupations or families of occupations are more important than the location and migration of installations, firms or industries. While these two aspects are clearly related, and it is obvious that people do seek and pursue job opportunities, the argument here is that people are increasingly choosing locations because of specific kinds of facilities, advantages and personal preferences, and that now the enterprises are following the workers. Research carried out by these authors indicates, first, that the distribution of occupations among different industries is diffuse while the occupational structure of these industries changes over time. Second, that the regions are characterised by significant occupational considerations which in certain cases create a concentration of specialised occupations that is greater for example than the national average. Third, over time a significant number of occupations become disconnected, that is to say they become mobile and their continuing presence in the regional economy cannot be predicted with complete accuracy based on their presence there in the past.<sup>33</sup>

Therefore, the conclusion is that insofar as it is a base for stimulating local economic development strategies, regional economic analysis has to take into consideration not only the presence and structure of economic activities but also

<sup>32</sup> Markusen, Ann; Schrock, Greg, 'Occupational Advantage: Detecting and Enhancing Occupational Mix in Regional Development', *Working Paper* No. 256, Project on Regional and Industrial Economics. University of Minnesota, USA, 2001.

<sup>33</sup> *Ibidem*.

the specific occupational configuration of the region. The latter does not only include the current sectoral orientation of the labour market but also its composition by occupational levels (managers, middle managers, technicians, professionals, manual workers, service workers, entrepreneurs) and the levels of qualification in that market (from the highest levels of specialisation and qualification to unskilled labour).

Finally, we should also bear in mind that just as investment, industries and firms move to different areas in search of greater advantages, the labour market is also dynamic insofar as people develop options for work, study and life which, while they may be connected to the decisions of industries or enterprises, they are also based on the people's own motivations and criteria. Although this makes the task of constructing development strategies considerably more complex, it does allow us to visualise a wider scope for intervention and for modifying current conditions.

### **DELNET - Local Development Support Programme of the ILO International Training Centre in Turin**

With decentralization happening across the world, local principals are taking on increasing responsibility for the development of their territory and for improving the quality of life of its inhabitants.

Local development initiatives and strategies initially concentrated on a territory's **economic development**. Their main thrust was to implement job creation measures.

These measures then began to broaden their scope. They began to take an **integrated development perspective** that goes beyond the purely economic context to build "**human**" and **social development**. In this perspective, **participation** by all the players in civil society and the local socio-economic fabric is an indispensable condition for the sustainability of development.

Local development thus becomes a tool of consultation and social dialogue. It places responsibility for designing and implementing sustainable development strategies in the hands of its beneficiaries, the local players.

One of the pillars of local development is the mobilization of a territory's inherent potential, the strong points of each local environment, to enhance the quality of life of its inhabitants.

This inherent potential is taken better advantage of when there is contact and relationship with other places, regions and countries: acting locally and thinking globally.

The local level is often geographically isolated and outside the main channels of information. This impedes access to skilled human resources and to specialist knowledge and information, which are essential to giving development momentum.

**Delnet** is a local development support programme run by the **International Training Centre** of the International Labour Organization, one of the United Nations' specialized agencies.

The International Training Centre of the ILO is based in **Turin, Italy**. It offers training in areas such as job creation, improving working conditions, workers' rights, equal opportunities and social dialogue.

In recent decades, local socio-economic players have increasingly had to deal with these issues, and have often found it hard to do so.

Delnet supports local development and decentralization by **enhancing the capabilities** of local players through **training, information, technical consultancy and networking**.

### ***Training***

Delnet's innovatory use of information and communications technology (ICT) takes it beyond the bounds of traditional training.

The Delnet programme offers a model of **distance training** based on Internet use, in which participants can step into a **practical, dynamic learning experience** at any time anywhere in the world.

Every participant in a Delnet course receives constant support from a specialist teaching team that uses the most innovatory training resources and services. Each participant thus becomes the protagonist of his or her own training process.

All Delnet courses support the participants in their daily local development work by providing not only theoretical models but also practical tools that are applied throughout the training process. The participant's access to Delnet's information and technical advisory services complements this process.

### ***Information***

**InfoDelnet is Delnet's information service.** It seeks to provide participants and their institutions with global, up-to-date information on cases, ideas and initiatives that affect the local world.

To this end, it uses the following tools:

- A direct **e-mail line**
- Specialist **publications**
- Delnet's **Intranet**

### ***Technical advice***

**AsistecDelnet** is a personal **technical advice service** on local development issues and the use of information and communication technology

that Delnet offers its participants.

A multidisciplinary team of international experts answers participants' enquiries through a direct e-mail line.

This service enables the participants to take advantage of:

- consultancy on **managing local development** in a concrete context;
- consultancy on the feasibility, design, implementation, monitoring and evaluation of local development **projects and programmes**;
- guidance and information on **sources of funding**;
- consultancy on **strategic planning**;
- **local development models and experiences**;
- consultancy on strategies for **citizens' participation**.

To ensure that Delnet's services are used well, AsistecDelnet also offers:

- immediate **personal help** to sort out computer problems;
- the latest **warnings and information on computer viruses** and computer security;
- **practical advice** on computer use.

### **Networking**

In a world that is ever more closely inter-connected, it is essential to know how development policies are designed and implemented elsewhere, to learn from their successes and failures, and to share ideas and opinions about the factors that influence the development of a territory.

Delnet actively promotes **networking** among participants by:

- **stimulating dialogue** among local players;
- **making it easier to share**;
- **connecting** people and institution.

The Delnet Network encompasses every individual and institution that has taken part in the programme since it began. It has participants from 55 countries in Africa, Asia, the Americas and Europe. The Network's strength lies in the diversity of its component institutions: big ones and small ones, from industrialized countries and developing countries, pub-

lic and private, local, regional, national and international, speaking various languages and working in very different subject areas and contexts.

The networking tools are:

- **DelnetForum:** An electronic forum that provides up-to-date information on experiences, meetings and news about the world of local development. It stores all the experiences shared by the members of the Delnet Network in a single, virtual, interactive location
- **Delnetlist:** an electronic mailing list that keeps all the institutions in the programme and the Delnet Network in daily contact. It is a vehicle for debate among the participants and the sharing of their information and experience.
- **Face-to-face meetings:** courses, seminars and workshops organized by Delnet, in which experts from all over the world take part.

e-mail: [delnet@itcilo.org](mailto:delnet@itcilo.org)

Web site: [www.itcilo.it/delnet](http://www.itcilo.it/delnet)



## 4. LOCAL ECONOMIC DEVELOPMENT STRATEGIES AS A NEW SPACE TO CONNECT TRAINING WITH WORK

While some geographical regions have managed to undertake sustainable economic development, others have not been able to adapt to the new conditions even when they often have greater comparative advantages to compete in the globalised market. The search for an answer to those differences should be a persistent spur to debate, and this shows that there are no clear or single answers as to what is needed to bring about development in a particular geographical area.

In previous sections in this book we have seen how different authors approach the most important dimensions of local economic development, and, beyond the particular characteristics of each region or local society, how they have highlighted some possible common characteristics. One of such characteristic is that all LED strategies involve high level of social dialogue although the actors who take part in this, and the institutional arrangements which allow it take place, may be different in each case. We have also seen how, even when efforts are made to construct theories to classify and to a certain extent to impose conceptual uniformity on cases that are empirically different, the range of examples of what makes up productive and occupational networks in different regions is very wide.

One characteristic which is not always explicitly brought out but which is always present in theoretical approaches to the question of local economic development is the key role played by knowledge. Just as the better qualified an individual is the better his chances in the labour market, so companies are able to attain higher levels of productivity when they can use knowledge effectively. The more knowledge that regions and local societies have, the better their chances are.

Vázquez Barquero<sup>34</sup> maintains that the availability and quality of human resources are key factors in the development of a place or a region since these

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<sup>34</sup> Vázquez Barquero, Antonio, 'Desarrollo en los recursos humanos', in *Política económica local*, Editorial Pirámide.

exert a great influence on the productivity of the business system, on regional competitiveness and on the cultural model that the process of change and economic growth are built upon. Hence trained human resources become strategic assets in raising regional competitiveness.

The average level of training in the population of a region can be considered a comparative advantage just as much as the availability of certain natural resources in the area would be. However, this important condition it is not a sufficient to sustain local economic development. In Latin America and the Caribbean, when there is more knowledge available in one particular region than in others, this is more the result of investment by the central government in education and training than the result of endogenous processes to generate knowledge.

The fact that one region has a population that is better trained than another inside or outside the country can make it potentially more attractive, for example to investors. However, this advantage may be eroded due to deficiencies which might be present in other dimensions of the local economic development process.

One aspect that apparently does consistently make a difference, and therefore does constitute a competitive advantage, is the capacity of a region to learn. This is borne out by all that has been written about productive organizations stressing this capacity to learn. What is relevant is not that a fixed asset is available but that it should be maintained, increased and developed in an original way. Hence a number of authors refer to successful examples of local economic development as 'learning regions' or 'smart regions'. This can be seen as a causal factor in endogenous development and at the same time as a characteristic resulting from a combination of factors which make possible the development of both the economy and knowledge.

Thus, in the same way that explanations for successful local economic development processes are sought, authors like Hualde<sup>35</sup> look for the factors which allow information and knowledge to grow in some regions and not in others, and to what degree these assets have to accumulate before a geographical space can be called a smart region or a learning region.

On this point Vázquez Barquero says that training strategies can be formulated from a defensive or from an offensive point of view. The former implies that the objective is to recycle the workforce so as to limit job losses while the latter are aimed at training to create employment in such a way that regional competitiveness will be improved. Thus the training of human resources is connected to the region's own development strategy.

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35 Hualde, Alfredo, 'El territorio como configuración compleja en las relaciones entre educación y trabajo', in *Desarrollo local y formación*, the *Herramientas para la transformación* series, Cinterfor / ILO, Montevideo, 2002, p. 47.

One of the lessons learned from examining specific concentrations of economic activity is that most successful examples are influenced by powerful, primary contributory factors. These are correlative concentrations of experience and skilled work, the availability of specialised education and training, and the high degree to which capacities and knowledge are produced and developed in the region. The key element in almost all the successful industrial districts seems to be that there are workers who have skills and knowledge that are suitable for the industries located within the variable frontiers of these concentrations. Although industries need general skills that are easily transferable, they also need specific competencies which are often more scarce. Therefore, enterprises tend to value workers who are familiar with the operations involved in their businesses and who are capable of applying their knowledge in the specific environment which a concentration of this type generates.

It is evident, then, that training is part of the 'software' of local development, and must necessarily be conceived of as a strategic element. Local development projects tend to increase dependency on intangible assets – the information and knowledge that their workers, entrepreneurs and organizations have - and less on natural resources. What is more, resources like technology and financial capital can be transferred instantaneously, but this is not the case with skilled human capital.

Although it is true that many educational and training institutions have not recognised or adequately catered to the specific needs of the regions where they are located, there are also many examples that are positive in this respect. Some institutions have made it part of their mission to obtain adequate knowledge of the needs of a wide spectrum of individuals and enterprises, and they have focused on effectively meeting the demands of regional economies. This applies specially to meeting the needs of small and middle-sized enterprises through providing a wide range of services to make them into genuine centres of excellence in their regions because they demonstrate their capacity to develop specialised training for specific kinds of enterprises.

However, there are various factors which make it difficult to replicate experiences or to develop cooperation schemes in function of joint objectives, and these include institutional isolation, a lack of communication with peer bodies, and lack of information about the best practices currently in use.

Moreover, institutions and training centres usually have to confront complex and difficult decisions if they wish to orient their ways of working to meet the demands and productive and social needs of the regions they are in. Some of these dilemmas are listed and discussed in the following section.

### **State of Paraná, Brazil – The Agency for the Development of Vocational Technical Training – Paranatec**

The State of Paraná in southern Brazil is a region with approximately 9 million inhabitants and has 2 million students in the State basic education network. An interesting experience of coordination to improve vocational technical training has been taking place there.

The Agency for the Development of Vocational Technical Training –Paranatec– was set up through a community initiative, supported by the government of Paraná, as a non-profit civil society which acts in the field of vocational education.

The organisations taking part in Paranatec are the Secretary of State for Education, the National Rural Training Service (SENAR), the National Industrial Training Service (SENAI), the National Commercial Training Service (SENAC), the National Transport Training Service (SENAT), the Micro and Small Business Support Service (SEBRAE), the Federal Centre for Technological Education in Paraná (CEFET-PR), the Euvaldo Lodi Institute (IEL) of the State of Paraná Federation of Industries, the National Association of Technical Schools (ANET) and the Paraná Centre for Technological Integration (CITPAR).

Paranatec aims at excellence in its activities. It seeks to bring together efforts from the government, from enterprises and from teaching institutions to cooperate in solving problems in the field of vocational education.

In addition, it makes a contribution to running quality vocational education, integrating schools, enterprises and the community, and it is oriented to meeting the demand in the field of technology so as to foster the well being of society.

Paranatec opens up alternatives in terms of raising the level of training and promoting work for young people. These are:

- Promoting studies aimed at reformulating technical teaching so as to orient it to the real needs of the users.
- Promoting the consolidation of educational institutions for work that is compatible with vocations in the region in the primary (agricultural), secondary (industrial) and tertiary (commerce and services) sectors of the economy.

- Encouraging and attracting investment to develop education and work, and searching for sources of finance.
- Stimulating, counselling, and promoting the transfer and development of information in technologies that are strategically important for technical and vocational teaching.
- Promoting studies about the real condition of the infrastructure of the physical network, and the rational utilisation of it.

The institution manages the vocational education maintained by the public power of the State, it controls all the vocational training courses that the State offers, it manages the finances of the Secretary of State for Education programmes oriented to education for work, and it does consultancy work in the field of vocational education.

Besides the above mentioned, it also runs the following activities:

- ✓ Developing and training human resources for education for work.
- ✓ Integration and interaction among schools, enterprises and the government to jointly develop education for work and the development of enterprises.
- ✓ Running management projects for vocational education.
- ✓ Developing curricula for vocational education courses.
- ✓ Promoting discussion and formulating policies and guidelines for vocational education.



## 5. THE RELATION BETWEEN TRAINING BODIES AND LOCAL ECONOMIC DEVELOPMENT PROCESSES<sup>36</sup>

The training of the human resources in a region is in no way a subject of minor importance. Specialised labour markets provide enterprises with more options, and they make certain places more attractive even when there is tough competition for human resources in those areas. When the time comes for enterprises to make decisions about expansion and where to locate production, they generally put the presence of a specialised labour pool in first place on the list, ahead of other factors.

Consequently, it is interesting to ask what work training centres should do to optimise and train local human resources. The first question here is what competencies and objectives the training centres have, and must have, and whether these should serve in a universal way for all students and for all industries, or, on the other hand, whether training should be focalised. Training centres can provide general competencies and basic courses that are applicable to a wide range of occupations but they cannot do this with the same intensity of learning for each of those occupations. The centres must always make choices about what to teach, and these choices are generally based on the needs of enterprises, the demands of students, and the interests of authorities and teachers. Centres which give priority to meeting the demands of enterprises necessarily choose to focus on those sectors which are most developed in the region. There are only a few centres which usually meet the needs of a region. What is more, despite providing general or basic courses, the training centres have to take strategic decisions about which specialised programmes to offer.

In addition, from the State point of view, if there is large scale manifest or potential demand in a specific region, making above-average investment to strengthen private training centres is an adequate task.

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<sup>36</sup> The base that was taken for analysing these questions was the *White Paper* 'Cluster-Based Workforce Development: A Community College Approach', by Regional Technology Strategies, INC (RTS), April 2003, available at [www.rtsinc.org](http://www.rtsinc.org)

The mission of the centres is defined by the community which they serve. It is true, especially in times of budget cuts, that centres have to thoroughly justify the way the resources allocated to them are used. However, this obligation does not stop the centres and the enterprises they serve negotiating agreements which specify the roles and responsibilities of both parties, resulting in relations that benefit students, enterprises and the community. But in these agreements what always has to be borne in mind is the specific regional context and the individual characteristics of the area. In any case, training centres always have a role to play in regional economic development and many of them can assume responsibility for filling gaps in the labour market in the regions where they operate.

### **Community-based training in national training systems**

Between 5 and 9 May 2003, a workshop called “Integrating Community-based Approaches to Employment Promotion into National Training Systems” was held in Kingston, Jamaica. It was jointly organized by HEART Trust/NTA of Jamaica and the International Labour Organisation (ILO).

In the background and reasons for holding the workshop, emphasis is put on the well known and documented fact that local and national economies can be enhanced by promoting the self-employment potential of people. Implementing this recognition through specialized activities associated with occupational and entrepreneurial skills has been the thrust of community-based approaches to employment promotion and, in particular, Community-Based Training (CBT).

The general aim of the workshop was the development of participants as facilitators with the necessary skills to develop the capacity to replicate and integrate community-based training strategies into their national vocational training system or training organization.

Other workshop objectives supporting the immediate objective were to assess the relevance and suitability of the CBT approach in terms of content and presentation of individual steps in the planning, delivery and follow-up process; adaptability of the CBT manuals and training delivery procedures; organizational aspects and implementation strategy; institutionalization of the methodology in local training institutions; and mainstreaming the gender perspective in promoting employment activities.

The workshop was structured in three phases. In the first, CBT experiences from Jamaica, Belize and Guyana were presented, and different aspects of how CBT has been managed in the national training systems in those countries were outlined. The second phase dealt with how CBT has been conceptualised in the framework of the ILO and included a presentation of didactic materials prepared by that organisation, and a description of a series of ILO projects in different parts of the world in which CBT was implemented. The third phase of the workshop opened with a presentation by a Cinterfor/ILO representative about successful CBT experiences in Latin America. This focused on an analysis first of the possibility and then of the mechanisms by which the national training systems in the countries represented would be able to incorporate and adapt the methodological guidelines and the didactic materials of CBT strategy that had been developed by ILO.

At the end of the workshop the participants made their evaluations of how far the objectives that were set at the start had been achieved, and these evaluations were very positive. Plans were made for future action to increase the capacity of the institutions represented to develop CBT strategies in their respective countries.

More information about the event and documents about CBT experiences in Latin America can be found at:

<http://www.cinterfor.org.uy/public/english/region/ampro/cinterfor/conf/2003/cbt/index.htm>

When there are specialised centres in an area as well as other training centres it is important that the latter should be able to accede to the information and innovative capacity concentrated in the specialised centres through networks of cooperation and exchange. If the cost of developing specialised centres turns out to be very high, the State may consider resorting to cross subsidies. The key element here is that the training bodies should not be competing against each other for the same markets. The best solution is to determine which markets make sense for which institutions. In some regions there might be concentrations of enterprises oriented to the same kind of production or services but located in different places. In situations like this the centres in different places could cooperate. Consequently, all the centres would be able to use the curricula, standards of competency, and methods for evaluating the needs and connections with industry that

have been developed by any other centre. Any innovation would not belong to any particular centre, it would belong to the regional training system as a whole.

In many regions there may be groups of industries that are not on a large enough scale, or do not have the necessary degree of concentration, to satisfy the criteria established for recognising enough productive specialisation to be called a cluster or other kind of specialised regional economic configuration. What is more, there may be activities that do not satisfy the income expectations of the community. But productive networks are not 'things', they are systems that are inter-dependent and have collective interests in the framework of an economy which offers a logical form of organising and providing services. In rural areas, for example, training centres may wish to expand the coverage they provide to include nearby places, to seek connections (umbilical cords) with productive networks in adjacent areas, or perhaps to consider support for micro and small enterprises and micro clusters which may have a unique configuration of competencies. Likewise, in places that have weak relational systems, treating the economy as a single system may be more beneficial than dealing with people or entrepreneurs on an individual basis.

One final important question is whether specialisation might undermine the ability of the people who do the courses to adapt themselves to different labour conditions, and thus become a disadvantage. If specialisation is seen as the simplest and most effective way of teaching competencies that can be generalised, it is not a threat. Much of the teaching that follows curricula geared to one particular family of occupations consists of competencies that are general and can be transferred and be of value in other occupations. But the specific applications which are used in the training process are connected to the initial choice of career that the people make, in the context of the geographical area and the local network of production. In a certain time frame the students can gain experience, complement their competencies, and, with additional courses, be able to transfer them to other applications. Specialisation improves their possibilities of a career in that it facilitates entry and gives the young people experience and confidence to face the subsequent changes. The recent trend is to approach education and training as long processes in which people are continually re-trained for new tasks and develop new groups of competencies. The vision of a one-dimensional process moving from basic knowledge to more technical competencies is rapidly being replaced by the perspective of much more interactive and lateral processes.

### **Industry clusters and occupational clusters**

Industry clusters stem from common economic interests and needs while occupational clusters arise through common skill sets. These common skill sets are shared by many industry clusters; at the same time the workforce of any given industry includes many such occupational clusters. But learning around industry clusters is based on a business environment context that is common to all occupations within the cluster. The uniqueness of industry clusters is context; the uniqueness of occupational clusters is content. The question the college will address for a variety of occupations that exist within a cluster is “what are the features of this workplace that are unique or particular to the cluster?” For example, the furniture industry, the aerospace industry, and the automobile industry all have employees who are called Computer-Aided-Design operators. But the specific nature of their jobs is quite different between these diverse industries.

The situation outlines above raises the question of whether specialized centres can create local economic development or generate the conditions that allow it to exist. Most of the evidence says clusters cannot be created out of whole cloth. They require a solid foundation either embedded in existing companies, local expertise, or some special resources. However, the intervention of an organization such as a new center can influence the development of clusters. The formation of the world’s largest clusters occurred over long periods of time—usually many decades. They were unplanned and often unnoticed until they reached a level activity that attracted attention. Most have been historical accidents, though some stem from natural resources. However, despite the vagaries of historical industrial development, if some core strengths exist, it may be possible to leverage that strength into something larger and eventually reach a scale that will draw the various factors associated with clusters. Institutions can catalyze and promote existing specialization, but rarely can create it.

*Source:* Cluster-based Workforce development..., op. cit.



## 6. TRAINING AND EMPLOYMENT STRATEGIES FOR YOUNG PEOPLE: APPROACHES FROM LOCAL DEVELOPMENT

All local development initiatives are aimed at increasing the power of endogenous capacities in a region and improving the quality of life of the people who live there. The resources that the region has to offer include its human capital, its institutions and the characteristics of the area. It is no surprise, therefore, that strategies for training and employment for the youngest sectors of society should be one of the first questions to be tackled in any local development project.

Although actors in different regions agree that training and employment for young people are a core element in development, there is no consensus about the best strategies to adopt with regard to this question.

The first hurdle is how to define and delimit the notion of 'youth'. In general terms, we can understand that youth is the stage before adult life begins, the stage in which individuals have not yet reached certain milestones in life and do not yet play roles that are normal for adults in society.<sup>37</sup> However, there is abundant literature about the different variations which this notion can have depending on social, cultural or economic contexts in each case, and there can even be differences between regions in the same country about which people are considered to be 'young'.

These considerations show how fragile the delimitations that are laid down for statistical and comparative purposes when it comes to analysing specific contexts are. They also show that there is a need for all perspectives on local development to consider characteristics like the average age at which people are incorporated into active life, the average age at which they are inserted into systems of education and initial training, and the age at which young people are expected to begin playing adult roles in the community.

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37 José Weinstein, *La juventud urbano popular vista desde la sociología*, Cide, Santiago de Chile, 1984.

The second important aspect here is of quantitative nature and concerns the demographic weight of young people who are not distributed evenly across all regions or places. This distribution is subject to two main factors, first, that patterns of birth and death differ from one region or country to another, and there can be places where the birth and death rates are very low, which would mean a small number of young people. Second, it is important to consider the rate of migration since there are regions that, due to their demographic, economic, educational and climatic characteristics (or some other factor) are more attractive for young people to settle in. Quantitative studies show that young people tend to be concentrated in urban areas in general and in big cities in particular.

In third place, there are big differences in the levels of training that young people receive in different regions as well as in the structures of competencies and occupational options in each region. Therefore, while in some medium sized and big cities the range of training available is relatively wide and there is a good chance of being able to delay entry into the labour market, in rural areas, villages and small towns, the chances of delaying entry into employment are much less.

Fourth, we also find big differences between one region and another when we look at these questions from a gender perspective. While in the big cities more and more women are joining the job market with higher levels of training, indicators show that in smaller places these rates are lower and there is greater occupational segregation.

In the light of these considerations, the instruments for analysing public policies on youth have to be revised, adapted and complemented with inputs derived from the local and regional development perspective.

#### **The 'Learn Working' Programme in Buenos Aires**

Who made these glasses that have been given to the kids in first grade who can't see very well? And who built this sewer that was so badly needed and is now right there in the street? The answer is that the work was done by students from secondary technical schools in the city of Buenos Aires. The students are **taking advantage of the knowledge** they are acquiring in different technical specialisations **to provide inputs** which various areas of local government in Buenos Aires need.

This is part of the Secretary of Education's '**Learn Working**' programme. 'It is not a case of utilising a cheap labour force', says Roxana Perazza, the Secretary of Education, 'The schools do it to the extent that the tasks in question come up in the annual teaching plan.'

The concept is that there are educational and labour practices, and schools that present productive and community-oriented projects can subscribe to them. Perazza says, 'Historically, the city has always had a large number of schools with a lot of capacity for production, with infrastructure and teachers that can take a productive process up to a certain point. Then what happens is that they have to stop because they do not have a market. They need to do things on a larger scale. In response to this, we thought of generating a circuit in which the school would produce certain inputs and we would buy them because they are needed for running the project.'

Up until now, four of the thirty-four technical schools in the city have joined the programme. Students on the optics course at the **Manuel Belgrano Technical School** supplied glasses for a health programme called 'See what you see'. Specialists and students visit the children in first grade in State schools to identify those who have eyesight problems. Once the diagnosis has been made, the students from Manuel Belgrano make the glasses and give them to the kids. Last year they tested 9,000 children and gave out 1,800 pairs of glasses, and so far this year they have tested 10,000 and given out 1,374 pairs of glasses.

There are other examples. Students from **El Plumerillo** (Technical School No. 33) are **laying sewers and making wheelchairs**, while students from **Otto Krause** (No. 1) and **Hipólito Yrigoyen** (No. 27) are making cleaning utensils.

For the time being the programme is only aimed at meeting needs from the city council, it is not doing commercial business beyond this ambit. 'To do so there would have to be a legal regulation to authorize schools to sell their products, but at the present time we do not have one,' says Perazza.

Nor is it thought of as a job. The kids on the 'Learn Working' programme **are not paid, but they do have accident insurance**. The authorities maintain that even though taking part in the programme is not actually a job, the young people involved in these productive processes acquire competencies and skills that will be useful in their working lives.

'What we are doing is supporting this idea with an intensive programme of apprenticeship in enterprises', says Perazza. At the moment, **there are 62 students getting work experience doing 20 hours per week and being paid 120 pesos per month**.

There are young people at the pre-university level who are studying statistics, social communication, accountancy and taxation, health care and administration, and they are working at the Argerich, Piñero, Pirovano, Penna, and Santojanni hospitals and at the Pasteur Institute.

In the future the 'Learn Working' programme is expected to have new productive projects, but they will have to be pedagogical.

*Source:* Gabriel Giubellino, the *Clarín* newspaper, Buenos Aires, Argentina. Wednesday 24 September, 2003, year VII, No. 2732.

<http://www.clarin.com/diario/hoy/s-03001.htm>

### **Policies of training and employment for young people: a historical balance**

In Latin America and the Caribbean, as in other parts of the world, there have been all kinds of policies aimed at young people since this sector was first identified and valued as a category or group that was different from the rest of the population. However, youth policies are a relatively recent phenomenon. The concept of youth as a transitional stage towards adulthood, and the erroneous conception of a young person as someone who has not yet 'fully arrived', meant that for many years there were no policies for young people specifically.

According to Álvarez, Ibáñez and Sepúlveda,<sup>38</sup> the rise of the youth phenomenon in Latin America is connected to the growth of cities and urban life, the expansion of the media, the development of employment which is specifically for young people, and the emergence of new forms of social participation. Although the demographic weight of young people is also a factor in this process, in no way is it the determinant factor. On the contrary, an important factor has been the increase in life expectancy, which has extended the average active life of people and led to the problem of how to reconcile this longer stay in the job market with the pressure of young people who are struggling to enter that market. The combination of these two processes occurred (and is still going on) in different time frames in most of the countries during the so-called 'demographic transition'. This transition is an increase in life expectancy and a delayed increase in birth rates, and the result has been a rise in the rates of population growth. These factors have led to the youth period being assigned its own characteristics and not being considered just as a transitional stage, and this in turn has given

| 38 Carlos Álvarez, Sergio Ibáñez, Leandro Sepúlveda, *Working document* No. 4, Cide, Santiago de Chile, 2000.

rise to the formulation of policies aimed at young people, mainly in the fields of education and vocational training. Among their other objectives, these policies attempt to delay the incorporation of young people into active life.

Another factor which has favoured the formulation of training and education policies for young people is that new development focuses were adopted – at different times in different countries – that were aimed at promoting the industrialisation of the economy within an import substitution strategy. This new system of production required skilled and semi-skilled workers, usually young people, and it called for some previous training.

Thus most of the countries in the region not only sought to expand the cover given by their regular educational systems (specially basic or first grade education), but also set up vocational training systems or institutions which were mostly oriented to the industrial sector and offered learning courses for young people who would then be inserted into paid employment.

These learning programmes<sup>39</sup> could thus be considered as the first public training and employment policy aimed specifically at young people. The content and the methodology of the training were both dictated by the forms of work in the productive sector in general and in specific occupations and trades in particular. Up to a point they could be considered as specialised training offers, but their frame of reference was universal, the young people were trained as mechanics, carpenters or shoemakers depending on the characteristics of these trades and occupations. The specific social and productive context in which they were going to apply the knowledge they acquired was not very important, and this was reflected in the nation-wide uniformity of training programmes.

This model of public vocational training policy oriented to young people functioned adequately in the relatively protected economic ambits which predominated until the 1970s, but then the presupposition that there would be sustained growth in the long term (albeit with cyclical crises), and a correlative increase in employment, ceased to be borne out by events. The subsequent two decades showed that there were structural barriers to growth and that even when there was growth, unemployment could be more difficult to tackle than had been expected.

In fact, the problem of unemployment gradually turned out to be a top priority. Despite being considered linked to economic growth, it is understood that

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39 In Latin America and the Caribbean, the idea of learning has traditionally been understood as a series of types of training usually aimed at young people so as to train them as workers capable of discharging skilled occupations. The typical learning period was two years, and its most common characteristic was that it involved a period of practical work experience in enterprises. This work experience could take place at the end of basic theoretical training or could run parallel to the programme throughout its duration, as in the case of 'dual learning'.

high unemployment rates among young people are due to causes or factors which could be dealt with by adopting specific policies.

These second generation policies for youth training and employment differ in various ways from the previous ones, and the fact that they are not aimed in a generic way at any young person makes them even more interesting. They seek to deal with the problems in those sectors of the young population that find it hardest to obtain work, that is to say young people in low income homes, with low levels of schooling, without technical training and with little or no work experience. Consequently, the programmes sought to give specialised intensive training on courses which lasted three or four months and to help with labour insertion through work practice in enterprises.

These programmes tried to focus on specific groups of young people, but what most stands out about them is that to a large extent they continued to offer a standardised product in spite of the diversification that there was among training providers. The specifications that the programmes could have had in function of the individual characteristics of particular regions and their productive network were not incorporated into its training design or implementation.

#### **Don Bosco Industrial Polygon, El Salvador**

**Don Bosco Industrial Polygon** (PIDB) is in the city of San Salvador, the capital of El Salvador. It has become an international landmark experience because of the way it developed, and because of its current situation and good prospects for the future. To a large extent this success is due to its innovative and holistic focus on tackling the problem of marginalized young people.

PIDB is a private educational institution geared to enterprises. It is located in the San Salvador municipal area surrounded by nine communities with a total population of some 45,000 people. The initial spark of the project was an intense meeting with people from those communities at the chapel of what was formerly the Don Bosco school, and it involved dealing with the extreme poverty of families in the area in an alternative way.

The seed of what was to become an industrial complex was planted in 1986 when young people from those communities set up cooperative enterprises on land adjoining what was at that time a rubbish dump and

the main city sewer. These cooperative enterprises were engaged in industrial activities, mainly mechanical work, shoe-making, tool making, printing on cloth, printing, aluminium, plastics, garment making and carpentry. In 1992, they were formally legalised, later on a bakery business was added. In the same year, **EDYTRA Foundation** (Salvadorian Foundation of Education and Work) was set up as a project unit.

There was a demand for education in the community and more space was needed to provide academic training for the members of these cooperative enterprises. In response to this, **Enterprise Worker Technical Institute (ITOE)** was set up in 1993, and since that time it has been an integral part of the PIDB development scheme.

This is one of the most innovative aspects of the PIDB experience. There is a formal or regular educational space which currently covers primary (first to sixth grade), secondary (seventh to ninth grade), pre-university (three grades) and levelling, and this is integrated into a scheme of education for non-formal work. Practical experience is gained through work in the PIDB cooperative enterprises, where the focus is on training-production and 'learning by doing' methodology. From the age of six, boys and girls from the community can go through their formal education at ITOE. At the age of thirteen they have the option of complementing their education with practice in the enterprises. This can open up possibilities to move into the world of employment as paid workers, to join the established enterprises in PIDB (or other enterprises that have grown from it but are located outside), or to start their own new enterprises. At the present time, there are more than 600 schoolboys and schoolgirls in ITOE. The children have their classes in the morning, adolescents attend in the afternoon and 350 young people are gaining work experience in the cooperative enterprises or are working there as partners.

Beyond these general lines of action, the joint PIDB-ITOE initiative has led to the creation of two programmes which deserve particular attention, the '**Miguel Magone**' Programme (for men), which started in 1991, and the '**Laura Vicuña**' Programme (for women), which began in 1995. There are more than 80 young people of both sexes on these two programmes. These young people's normal environment is the street, many of them belonged to *maras* (gangs of juvenile delinquents) and the violence of that kind of life has often led them to prison. The idea is to provide them with an alternative way of life by giving them healthy, harmonious and integral education. After their priority needs for food,

housing, clothing and spiritual guidance are met, they have access to the educational opportunities above mentioned. Thanks to an agreement between the PIDB and the courts in El Salvador, young people who are serving prison sentences can join the regime as internees. They are interned at PIDB from Monday to Friday but they can spend the weekends with their families or guardians. In daily life at PIDB no distinction is made between the internees and the external students; when it comes to treatment or possibilities they are all regarded as equals.

PIDB utilises the concept of the '**enterprise**' as an educational model. This stands in contrast to the predominant model whereby young people are usually trained with a view to turning them into workers in enterprises that buy their labour. In the PIDB context, on the other hand, the enterprise is understood '...not simply as a means to make a profit, but rather that the very existence of the enterprise is seen as a community of people who, in different ways, seek to satisfy their own fundamental needs and constitute a distinctive group serving society as a whole.' This does not mean that all the young people will become entrepreneurs, but they will become enterprising people who have creativity, initiative and solidarity with each other, and who are used to working in a team. In fact, they will become protagonists of their own development and the development of their community.

At the same time, an **inductive methodology** is used which is based on the young person's own social context and personal history. The aim of the '**learning by doing**' method is that the young person should come to recognize his or her own potential, so self-esteem should increase and also confidence not only in his or her own abilities but also in the immediate environment. This is not an individualistic approach, it is a community focus which allows the young person to set his or her own targets and take advantage of his or her experience in the school and in enterprises.

The concept of inductive methodology can also be applied to the creation and development of PIDB itself. The main mentor of the project is a Spanish priest, **José María Moratalla**. In 1985, he took on responsibility for the chapel at Don Bosco and for the next two years he did nothing but listen to the local community members. In other words, before attempting to apply any kind of pre-established model or design to the lives of these people, he tried to find out as much as he could about the

reality of the community and of the young people in it so as to become involved in their problems and understand their frustrations and aspirations. All the subsequent steps that were taken, setting up the enterprise complex, creating ITOE, the interneers regime, the projects that are currently under way, have been based on the same open attitude of dialogue and commitment to the community.

PIDB is not an outside organisation as it holds a close connection with the community. This is schematically planned and it works in two ways. First, through the cooperative enterprises themselves, which are made up of young people from the community. The scheme means that before they move on they themselves become agents in the process of change. Second, PIDB takes institutional action in different ways such as helping families to acquire ownership rights to the land their houses are built on, running environmental programmes, getting proper asphalt access roads built, providing preventive and curative health care for the neighbourhood, and promoting alternative mechanisms for resolving conflicts. Despite being a space in which cooperative enterprises and ITOE can work, PIDB is a space where the associations of neighbourhood organisations from the nine communities nearby regularly meet.

The results of this interaction between PIDB and the community are clear to see when we compare the present situation with that of the mid 1980s. Today ITOE building and the interneers building stand on what was previously a rubbish dump, and there are football fields. The stream where the waste from the city flowed has been progressively replaced by pipes and the ditch has been filled in. Green areas have been gaining ground in what was previously a wasteland. A number of asphalt roads have been built and the housing is now of better quality. The neighbourhood is making progress.

In the light of the above, PIDB experience can help us to understand the role that educational and training institutions could play in local development. The main virtue of the style and the philosophy of work that have been applied in this case is that -with reference to the young people and to the community- what is sought is for the people themselves to be the protagonists in the change that is brought about. PIDB offers resources, opportunities and experience to make the individual and collective potential of the community yield concrete results. The objectives of this individual and collective change, and of the steps necessary to bring it about, are appropriate for the young people and for the commu-

nity. These changes are not the result of paternalistic policies or of the intervention of technocrats, whose action does not lead to really sustainable solutions.

What is more, PIDB actions are not limited just to this area of San Salvador. A similar project which consists of a technical institute and an industrial estate is currently under way in San Miguel in the department of **Morazán**. In that project PIDB is working with the association of city councils in that department, an organization that brings together the 27 mayors from the area.

There is another project under way in the same department, complementary to the one mentioned above, which involves **cultivating, processing and exporting annatto**. The annatto is the red seed which comes from a tree of the same name, and it is used in cooking as a condiment and colouring agent. Cultivation of this plant is compatible with the livestock rearing in the region, and it has the potential to become a complement to the livestock business. Studies undertaken at request of PIDB indicate that this product could find a potentially lucrative niche in the market, mainly in the United States. In this project the producers will receive the seeds and two enterprises that are connected to PIDB will provide technical support for cultivating and processing the annatto crop and for commercialising and exporting the final product.

In **Chalatelango**, land has already been acquired for building an industrial centre which will be used for different clusters of cooperative enterprises. Again, the work here is closely coordinated with local organisations and institutions, adding resources that are already present in the area to others from the State or from international donors.

In both Morazán and Chalatelango, PIDB is contributing to training in technical fields and in administration, organisation and municipal projects. At the same time, the city councils and other institutions have begun to build and install facilities on the industrial estates.

The project that has been running for the longest time is the **Salvadorian Development Centre for Small Enterprises (CESPED)**. This centre is conceived of as a structure to provide services of various kinds (administration, design, marketing, management of production, technological development, etc.) and it is an initiative from the enterprises themselves. It is organised in the framework of the PIDB in San Salvador and in other areas in the country, and is based on a collective effort to re-

spond to needs that are also collective. The objectives are to become a representative of small enterprises, a space to promote and emphasise their role in generating a middle class and promoting democratic practices. It also aims at creating an opportunity to revive and update European models of development, and to integrate all the forces of production (livestock farmers, peasants, industrial workers and artisans).

All these initiatives have a logical relation which PIDB calls a **regionalised development** model. It is based on education and training which include elements of formal education (there is dialogue and agreement with the Ministry of Education), of non-formal education for work and of developing a business culture. This element of association is promoted not only at the level of each cooperative enterprise but also between enterprises on at least two levels. These are the local industrial estates, and the setting up of the CESPED as a national body sustained by local development processes. As a complement to this, organisational and management capacities are also being promoted not only in the ambit of the enterprises and their groupings on industrial estates, but also for local communities and their institutions and organisations. Therefore, education, initiative in enterprises, solidarity and the creation of associations, local management and horizontal and vertical coordination are becoming the fundamental pillars of regionalised development.

### Should youth training and employment policies be local?

The question is whether it is adequate in different regions to implement policies that up to now have been designed and implemented from the centre, or, on the other hand, whether vocational training for young people and improvements in their job opportunities should be tackled with a focus that is different both conceptually and in practical terms, and is based on the local development perspective.

Many analysts have observed that the trend in employment policy is moving from the Welfare State which implements uniform action throughout the country to the State which recognizes differences and individual characteristics.<sup>40</sup> It is clear that if the State is to cater to specific local needs, it cannot respond to them

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40 José Arocena, report presented at the seminar 'Los jóvenes, el desempleo y el desarrollo local', *Memorias*, 1st edition, Montevideo, 2002.

with centralised organisations. Any national training and youth employment policy will have much to gain if, right through from design to everyday management, it can be adapted to the specific characteristics of the regions where it will be implemented and where its impact will be felt. If there is also a transfer of resources and technical capacity, and a progressive decentralisation of the management of programmes, the training offer will have a better chance of becoming more pertinent to local demands and needs. Although this is a process which is complex by nature, many countries are opting for it. This does not mean that there should not be central organisations, but that those central organisations should not act in a centralist way.

However, beyond the success that might come from this kind of grounding of national policies in the local space, it is also possible to develop another kind of local alternative. This is to construct a 'down-up' focus which integrates attention to groups of young people into more global regional and local development strategies. What is interesting about this alternative is that it allows the question of employment in general, and of youth in particular, to be re-connected to economic growth and development. Therefore, the design and management of economic development strategies should be local, and should -functionally and with gender mainstreaming- incorporate training objectives and work for young people.

As Arocena notes,<sup>41</sup> different research studies have identified places where employment policies have been formulated and have yielded excellent results based on conceiving of the question of employment in a different way. The classic approach, which can be called bureaucratic or techno-bureaucratic centralist, has the logic of agent/resource/solution: we create an agent, we give him resources, and we let him find the solution. The most successful local initiatives, on the other hand, have an approach which is based on the actors who are directly affected, and it generally proceeds in the following way: there is a problem, unemployment, which affects many local actors, and it is therefore necessary to have a local ambit where these actors can interact about the question of employment. Coordination between these actors creates new networks and new spaces to meet where they can construct strategies that are most suitable for solving the problem in the local context.

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| 41 José Arocena, *op. cit.*

## **The territory as a fertile space for constructing new institutional arrangements**

As previously mentioned, the local development approach opens doors to a new configuration of the relation between the public sector and the private sector, new forms of inter-connection between the public services themselves, and opportunities for social participation and dialogue.

For example, training centres are less and less being thought of exclusively as a local expression of the national institution for vocational training, and more as a resource that belongs to the community and the local network of production. They can be gradually transformed from places where courses are centrally designed to centres for training and other services which respond in a pertinent and efficacious way to the needs for training and for technological development in production in the region where they are located.

The interaction between national vocational training services or institutions and productive and labour sectors is always complicated to put into operation beyond the central level. But in the local space there are new alternatives that are potentially easier to identify and to implement because they are more mutually familiar and they deal with common interest subjects. Moreover, they involve the possibility of mobilising people and organisations which would hardly be able to participate in agreements or dialogue on the national or centralised level.

New and original alternative responses to crucial questions can emerge from a local development management focus. For instance, with reference to the transition from education and training to work, information systems about education and vocational training, and about job markets and social needs, can be improved so that stronger bases are established for taking decisions. In addition, the interaction between schools and enterprises could be improved by making agreements and activities which would be difficult to identify or to put into operation in a more centralised system.

Furthermore, the activity of training centres would tend to broaden out and become progressively more integrated with the objectives and strategies of development that is managed locally. Besides, there could be more integration inside the public apparatus itself. Many of the public programmes and policies which at the national level are seen as independent, would find opportunities at the local level to connect with each other regarding local development strategies. This can lead to different but always synergic combinations between policies in such areas as training, technological development, technical support and access to credit.

From the perspective of the interaction between the public and private spheres, vocational training finds opportunities for expansion through identify-

ing and valuing other training spaces apart from the school or the centre. Enterprises and their organisations, local unions, other educational bodies, productive sites, industrial estates and community organisations are some examples of spaces where the offer of training could potentially expand into, thus becoming more pertinent to the regional and local situation.<sup>42</sup>

From this point of view, training and youth employment become one of the aspects to be taken into account in local economic development strategies not as independent programmes but as an objective to be taken into consideration in the action that flows from those strategies which is analysed in the following section.

### **Training and employment for young people: a mainstreaming component of local development.**

We should clarify that it is not just policies and programmes aimed at young people which are transformed when they are analysed and thought of from the local and regional development perspective, but also policies aimed at any group or sector. Social and economic development is the means, or groups of means, which mobilises countries, regions and communities with the ultimate objective of obtaining decent conditions of life for all. Essential aspects of these conditions of life include social, cultural and political integration, opportunities for education and training, and access to decent work. Different sectors or social groups start in different situations, and therefore opportunities for integration, education and work require specific help aimed at making opportunities more equal and overcoming obstacles that might appear. Hence, many of the points considered here could be extrapolated to the situation of other groups such as older workers, women, people running micro-enterprises, and workers who are employed or unemployed.

However, young people do form a group with certain characteristics that have to be taken into account and which are necessarily different from those of

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42 In a recent report, de Ibarrola mentions this kind of interaction in the city of León, Guanajuato, in Mexico. He notes that in this place the relation '*...is expressed in the origin of the fiscal and private funds for education and training, in the distribution of these funds among public and private actors, and in the ongoing participation of both in decisions about education (sitting on the boards of learning institutions, official scholarship programmes which support students going to private educational institutions, government financing for education which takes place in private offices, public and private funds for organisations in civil society, the design of specific joint programmes).* This can be seen simply by looking at the physical space that employees from various departments share: the office of Municipal Economic Promotion is located in the Chamber of Footwear building, the facilities of the State Tourist Council are in the Chamber of the Hotel Business, and all the new State departments oriented to training are in the CIPEC, which is a civil association.' de Ibarrola, María, in *Desarrollo local y formación*, 'Hacia una mirada integral de la formación de los jóvenes para el trabajo', (Tools for change series), Cinterfor/ILO, Cinvestav, Red Latinoamericana de Educación y Trabajo, Universidad Iberoamericana de León, Montevideo, 2002.

other sectors or groups. In this section we deal with the generic aspect and also specific instances.

We should consider that policies with the local and regional development focus that are aimed at training and work for young people, as well as policies oriented to other groups in the community, are implemented within general strategic frameworks involving social participation and dialogue. Although very often national resources are utilised, these strategies always mean mobilising local resources and capacities. In addition, training is coordinated with other policy dispositions and with resources and capacities that are mobilised not only by the public sector but also by the private sector and by social organisations.

An example of this kind of policy would be a regional plan to develop honey production. Groups of young people would receive technical training to set up and manage economic undertakings which have mechanisms for access to credit or starting capital and technical counselling once production is under way. Support mechanisms could be set up to establish organisations of honey producers, to help in certifying processes, identifying markets and setting up the business. Through training and through making the means available, access to communication and information technologies would be facilitated so that the producers and their associations could share their experience with other producers, researchers and institutions in other regions and countries. In the same way, programmes to develop complementary enterprises for functions such as the production of containers, design, and support for commercialisation could be implemented. The vocational training, research and technological development bodies in the region or in nearby regions could cooperate in the development of new products in the area of beekeeping, with commissions or teams which would help to orient these activities.

The above strategy is not aimed specifically at young people. A similar kind of plan could be implemented for unemployed workers or for agricultural producers who needed to reconstruct or to complement other types of production. However, it is clear that this is a strategy which would allow young participants to acquire technical training, to learn about starting and managing a business and also to organising themselves. What is more, it would give them opportunities to work and to generate income and also perspectives for personal development. In other words, it would deal with all the aspects that a training and employment programme for young people is designed for.

This is not meant to imply that training and employment strategies with this focus do not differ considerably from each other in function of the group which they wish to reach. On the contrary, and still with the example above in mind, the characteristics, needs and aspirations of young people have to be taken into account if the aim is that they should take part in such a plan. On this point, we can

draw up a list of aspects which generally have to be borne in mind when training and employment plans or strategies for young people are designed.

- We have already mentioned that young people do not constitute a homogenous group and this is true not only on a national level but also at the local or regional level. Programmes which would interest and be useful to some young people would not be so attractive or useful to others. Therefore, it is not enough to identify a specific demand in the market or the local capacities that there are, it is also essential to take into account the needs and motivation of the participants in accordance with their basic characteristics.
- We should take into account that it is usually necessary to complement training with other kinds of activities such as recreation, vocational orientation, personal and social training, professional orientation and educational leveling. From an integral perspective, young people do not only have technical or occupational needs. It has been found that very often a lack of attention to matters like basic education, spaces for sociability and help with orientation can lessen the impact the programme was expected to have or even block the effects altogether.
- Unlike adults, young people usually have little or no previous work or professional experience. It is not only the technical content of the job (whether or not it is a paid job) that is essential for good labour and professional performance. Other qualities to be cultivated in the framework of training processes that are as similar as possible to concrete work situations are attitudes, self-confidence and professional pride.
- One advantage young people have over adults is that they are potentially more flexible and adaptable to changing production and labour conditions. They are usually more familiar with modern codes and with the use of new information and communication technologies.
- There is a whole debate about whether policies aimed at young people should be oriented to labour insertion or if, on the other hand, they should be aimed at maintaining young people in the educational system. Each different social context will yield a different answer to this question and it will certainly not end there. In any case, sooner or later any education or vocational training process should be oriented to increasing the possibilities of successful labour insertion.
- However, education and training cannot be thought of as a defined stage that starts and ends before active life begins. Education and training are not only necessary for work but also to make it possible to be educated and trained throughout one's whole life.

## 7. VOCATIONAL TRAINING INSTITUTIONS AT THE SERVICE OF THE PRODUCTIVE NETWORKS

### Three examples of good practices

Considering the above conceptual framework we propose to examine three vocational training institutions in the Latin American and Caribbean region which illustrate the contributions that institutional centres and services make to regional and local development strategies.

#### 7.1 SENAI: the example of Santa Catarina

Brazilian National Industrial Training Service (SENAI) was set up in 1942, and nowadays it is one of the most important national poles in Brazil for generating and diffusing knowledge applied to industrial development. As a member of the system of the National Confederation of Industry (CNI), SENAI gives support to 28 sectors in the economy through training their human resources and rendering services like support for production processes, laboratory services, applied research and technological information.

SENAI mission is defined as follows: *'To contribute to strengthening industry and sustainable development of the country, promoting education for work and for citizenship, providing technical and technological support, the production and design of information as well as the adaptation, generation and dissemination of technology.'* One of the main factors that allow this organisation to fulfil its mission is that it has a very flexible structure. Consequently, SENAI is the biggest vocational training complex in Latin America and the Caribbean and its services are adapted to a variety of local needs. It contributes to increase industrial production and to promote the sustainable development of the country.

The priorities in SENAI are lifelong education, technological development, information, and the dissemination of knowledge. The professionals that SENAI trains work with suitable pedagogic practices, innovative vocational training methodologies, distance learning courses, state of the art technology, courses based

on the premise of lifelong education, and modern laboratories and workshops. Graduates from SENAI are the most sought-after personnel in the market because of their ability to generate immediate results in enterprises and industries is widely recognised. In addition, SENAI also invests in projects and programmes which give priority to information and the dissemination of knowledge, and this is based on the conviction that the enterprises' success is closely connected to its capacity to transform knowledge into decisions. From SENAI's point of view, it is essential that knowledge, mainly in the area of technology, should always be kept up to date and should reach the client rapidly and in a language that is suitable to his needs.

SENAI is involved in different chains of production such as telecommunications, petrochemicals, the automobile industry, foodstuffs, civil construction, graphic arts, garment making, the electric-electronic sector, design, computers, the metal-mechanical field, furniture, textiles, etc. SENAI works all over Brazil through 293 training agencies and vocational education centres, 312 mobile units, 46 national technology centres, and 58 model centres of vocational education. All of these units are interconnected via the Infovía-CNI, a multi-media digital network that is aimed at conquering geographical distances and extending SENAI's range of action.

By 2010, SENAI aims to be the national leader among internationally recognised training bodies with innovative technology and implementing management by results.

#### **Summary of the SENAI Strategic Plan 2000-2010**

Considering the opportunities and threats in the external environment, to fulfil its mission and bring its vision to fruition SENAI's activity up to 2010 will be regulated in line with the following basic strategic guidelines:

1. *Systematic action:* Give priority to developing integrated action among SENAI units and departments and other organisations in CNI system, to attend to clients.
2. *Action in productive chains:* Widen attention to the productive sector by offering solutions for links in chains of production, in alliance with other institutions.

3. *Improve management*: Disseminate a model of business management based on valuing competencies and obtaining results.
4. *Market Oriented*: Intensify action to strengthen and widen SENAI's connections with the national and international market.
5. *Social responsibility*: Intensify action which has social impact, and focus on public responsibility and on the exercise of citizenship.
6. *Sustainability*: Intensify efforts to widen the offer of competitive and innovative products by establishing strategic alliances.

**Objective 1**

Increase SENAI's participation in the market of education for work, attending to the needs of traditional segments as well as those areas that are more advanced technologically.

**Objective 2**

Increase SENAI's participation in the information and technology market in terms of adaptation, generation and diffusion, with products that are competitive and innovative.

**Objective 3**

Be proactive with clients in Brazil, offering personalised services in a coordinated and homogenous way.

**Objective 4**

Give systematic and holistic attention to the demands of chains of production.

**Objective 5**

Widen SENAI's links with the international market, by co-ordinating with the National Department.

**Objective 6**

Expanding SENAI's action with micro and small enterprises.

**Objective 7**

Strengthen SENAI's position in the market.

**Objective 8**

Extend SENAI's contribution to the exercise of citizenship, to social responsibility and to improving the quality of life.

**Objective 9**

Progressively raise SENAI's sustainability rate.

**Objective 10**

Achieve excellence in the institution's performance in accordance with criteria and practices that are recognised by quality management.

**Objective 11**

Promote the valuing and recognition of internal competencies.

SENAI's strategic plan for 2000-2010 was revised and updated using methodology that was rather simpler than that one used for the 1995 plan. This simplification is the result of the institution learning in strategic management.

The main characteristic of the revision of the plan was that directors and planning technicians in all Regional Departments and the National Department contributed strategic ideas. Besides, SENAI's communications networks were used intensively and extensively to gather opinions, stimulate debate and make the conclusions viable in the different planning process stages.

**The municipality of Joinville in Santa Catarina**

One of SENAI's regional departments is in the State of Santa Catarina in the south of Brazil and its office is in Florianópolis, the capital of that state. SENAI-SC implements action at the basic, technical and technological levels of vocational training, and it runs courses in 33 areas. It has 37 units of which 30 are education and technology centres, 6 are technology centres (SENAITEC)<sup>43</sup> and one in the regional departmental office.

In Brazil, the State of Santa Catarina stands out for its high levels of organisation, production and quality of life. The region was originally colonised in such an efficient way that led to the creation of prosperous urban centres, and this has resulted in a diversified industrial base. The predominant industry in the north west of the state is an electro-metalworking complex that accounts for 18%

43 The SENAITEC centres in the state are the Chapecó Foodstuffs Technology Centre, the Criciúma Materials Technology Centre, the Florianópolis Automation and Computer Technology Centre, the Jaguará do Sul Electronics Technology Centre, the Joinville Electro-Metalworking Technology Centre, the São Bento do Sul Furniture Technology Centre, and the Florianópolis Enterprise Development Centre.

of the industrial production in Santa Catarina, whose 5000 enterprises employ 52,000 people. In addition, one of Santa Catarina's main exports is hermetic motor compressors for domestic refrigeration; this accounts for 10% of exports from the state. Other important industries are transport and plastics, which account for 7% of industrial work, and involve 18,000 employees in 800 factories.

Joinville is situated in a strategic point of access to the southern cone countries. The city is among the top 15 Brazilian municipalities when it comes to tax income, and it is the third industrial pole in the south of the country. Of the economic activity in this city 82% is concentrated in industry. There are 1,521 factories in the municipality employing around 85,000 people. The main ones are in metalworking, textiles, plastics, the metallurgical sector and the chemical and pharmaceutical sectors.

Joinville accounts for approximately 16% of exports from Santa Catarina. Its industry is in fifth place in the national export ranking and each year it conquers new foreign markets. Regarding the domestic market, the city is known for its manufactured products such as refrigerators, omnibuses, motor compressors, textiles, air compressors, auto parts, PVC pipes and connections, and bathroom fittings.

In addition, there has been new investment in the automobile industry in the south of Brazil. Audi, Renault, Volkswagen and Chrysler factories have been set up in the neighbouring state of Paraná, and Ford and General Motors are just to the south in Rio Grande do Sul. Since the area became competitive with important international suppliers like Italy, France, Germany and Portugal, big new opportunities for industrial production have opened up.

This is favourable for the municipality of Joinville and the cities in the north of the state because they are strategically located in the centre of the area that is receiving this new investments. At the moment, there are around 55 factories producing auto parts for BMW, Mercedes-Benz, Audi, Volvo, Peugeot, Renault, Citroen and Honda Motorbikes abroad, and, in Brazil, for GM, Volkswagen, Fiat and Ford. Parts are also supplied for trucks and agricultural machinery made in Brazil, meaning that Joinville is a supply centre of excellence. Apart from that, there are plastics, electro-electronics and textile factories in the region that also make components for vehicles.

The development of this whole industrial base is largely due to the contribution which vocational training and technological institutions have been making throughout the region. While it is true that education and training alone have a very limited impact on transforming a local productive system, they are part of the software of development and they play a strategically important role in the growth of business, and this means improvements in the area.

In local development the training of human resources becomes very important when it is seen from the perspective of business competitiveness. If the aim is to maintain or improve the competitive position of enterprises in the market, it is necessary to improve products and services, and this very often depends on the quality of human resources.

As Vázquez Barquero says, '*...the availability and quality of human resources are a key factor in the development of a place or a region since they affect the productivity of the business system and the productivity of the region, as well as the cultural model which sustains the growth process and structural change in the economy.*'<sup>44</sup>

In Joinville careful attention is paid to training. Since 1944 the SENAI has been running a vocational training unit, administered by the State of Paraná, with industrial learning programmes in the electrical and mechanical fields. Its first headquarters was the Martins Veras Practical Commerce School and it later moved to the Joinville Workers Circle until 1946 when it acquired its own building.

In 1953, the Santa Catarina branch of SENAI severed its links with the State of Paraná and established its own administration and its own regional department in the capital of Santa Catarina, where it started coordinating the activities of the units located on its area.

The Joinville unit evolved into a vocational training centre and became a landmark in human resources training for the metalworking industry in the region.

In 1977, growing demand in the region led to a considerable increase in the number of SENAI units all over the state. The following year, another centre was inaugurated, this time in the industrial district in the north of Joinville. A vocational training centre called Joinville Norte was set up on a 20,000 square metre site with 5,400 square metres of buildings and with equipment and laboratory facilities for electro-metalworking.

These two units in Joinville came to play a crucial role in vocational training in the region, and they diversified into training and updating activities oriented to the general mechanical area, the manufacture of machines and tools, industrial maintenance, automobile mechanics and electro-electronics.

In 1984, the Joinville industrial textiles union signed an agreement with SENAI to pool the competencies of the two institutions in order to develop the textiles and garment-making sector in the region. At that time, SENAI was made a free loan of the facilities at the Joinville Textiles Training Centre (CETEJE), which

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| 44 Vázquez Barquero, Antonio, '*Desarrollo de los recursos humanos*', in *Política economía local*, Pirámide, p. 276.

had been created in 1975, and which was used for training and for updating skilled workers in textile enterprises.

Since 1994 there have been post-second grade technical courses and post-graduate programmes run in cooperation with universities.

In 1996, SENAI extended its activities into new technologies by setting up the Advanced Automation and Computer Pole of CTAI (Automation and Computer Technology Centre) with modern laboratories for hydraulics, pneumatics, electronics, automation and computers in the CNC centre, to meet increasing demand from industries in the north and north west of the State.

As a result of the evolution of its activities and methods, SENAI merged its SENAI-Joinville work with that of the advanced pole of the CTAI and this union was recognised as an electro-mechanical technology centre (CTEMM). Nowadays, it serves industries not only in the municipality but throughout the region. This means responding to challenges in technological education, technical and technological support, and technological information and applied research. It has an infrastructure of facilities and specialised services for the automobile, electro-metalworking, textile, garment-making, foodstuffs, civil construction, quality management and business management branches.

The electro-metalworking technology centre (CTEMM) and the technology-based micro-industrial district (MIDIVILLE) were inaugurated in March 1999. The CTEMM, like the other SENAI technology centres, offers vocational education, technical and technological counselling, applied research, and technological information diffusion services. The building where the old Joinville Norte unit of SENAI used to work has been totally remodelled for the new centre.<sup>45</sup>

### **CTEMM (Electro-Metalworking Technology Centre) and its contribution to industrial development in the region**

CTEMM is a useful example of how a vocational training institution can contribute to regional development, and a concrete illustration of one of SENAI's main strategies at the national level, the National Technology Centres, better known as SENAITEC.

In general, SENAITEC are units which have been converted to attend to specific sectors or chains of production, usually on a regional basis, through integrating vocational education services with support for productive processes, labo-

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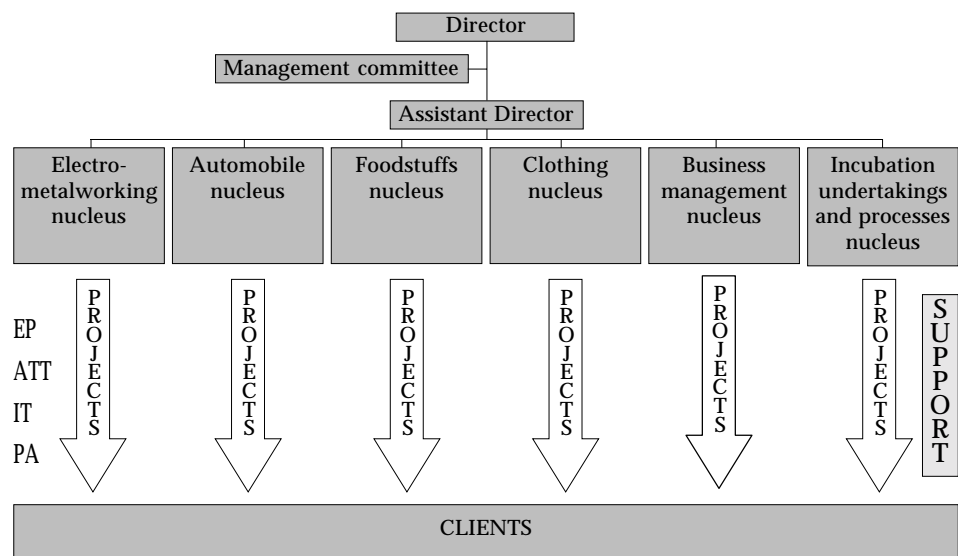
<sup>45</sup> Of the total area constructed (5,400 square metres), 2,250 square metres are reserved for laboratories for electrical work, computers, electronics, hydraulic and pneumatic work, computerised numerical command / flexible manufacturing system, robotics, automation, mechanical work and tool making.

ratory services, applied research and technological information. These centres have state of the art technological knowledge and infrastructure that are geared specifically to the industrial sectors that they deal with.

In practice, the aim of SENAITEC is to make available -on a national level- the knowledge derived from the most modern industrial sectors in different States.

The organigram of CTEMM is structured as a matrix in which the business nuclei manage material and human resources in their specialised fields. Each nucleus acts in four areas: vocational education, technological information, technical support and applied technology and research. The matrix organisation model involves a multiple-command system which is aimed at making interaction between different areas and different business nuclei which are flexible and agile, so that people can work on different projects that are coordinated separately. There is also a support nucleus which provides administrative technical support

### Organisational structure of the CTEMM (Electro-Metalworking Technology Centre)



EP – Vocational Education  
 ATT – Technical and Technological Counselling  
 IT – Technological Information  
 PA – Applied Research

in all the areas of activity and there is a management committee made up of the management team, the facilitators of the business nuclei and the facilitator of quality. All of them define CTEMM actions.

CTEMM infrastructure consists of three facilities in different places. In the north of Joinville, CTEMM-Norte<sup>46</sup> and the MIDIVILLE project –which deals with incubating technology-based enterprises–, are located in the same building. CTEMM-CETEJE<sup>47</sup> is in another building whereas the CTEMM-Sur<sup>48</sup> is in the southern part of the city.

The main innovation lines in CTEMM, as well as in the other SENAITAC centres, imply, first, focusing the centre's action on sectors and chains of production in the region or connected to it. Second, it involves diversifying and integrating these services.

The former can be clearly seen in the fields and specialised needs that CTEMM focuses on, which are closely linked to the main economic activities in the city and the surrounding area. The second aspect is reflected in the fact that while CTEMM's facilities and resources are still used intensively for training purposes, they are also being used to render new services in technological information, technical and technological support, and applied research.

This last item has at least three significant effects:

First, it **widens and diversifies the range of subjects** that are tackled in the institution. These are no longer just people – young people or adults – who want to be trained for work, but also enterprises, industrial sectors and chains of production which combine different sectors and services including industrial estates and enterprises in incubation. In short, the centres are oriented to serving the whole community and its economic and productive network. Thus, CTEMM policies are an important tool for consolidating local development since beyond training and educating human resources, they raise the quality of life in local society.

The second significant effect is that there is a **change of focus in the management of services in the centres and their relation to the world of produc-**

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46 CTEMM-Norte has facilities for technical mechanical counselling, welding, general mechanics, CNC-CAD-CAM, robotics, hydraulic and pneumatic systems, industrial computers, automation, computers, electronics and electrical work, plus a metrology laboratory and a design laboratory.

47 CTEMM-CETEJE has facilities for scientific glass making, clothes making, modelling, and general maintenance of sewing machines, plus a chemistry laboratory, a CAD garment-making laboratory and a natural gas laboratory.

48 CTEMM-Sur has an automobile centre, a Ford module, a Mercedes Benz module, an MWM module, an electronics hall, a laboratory for converting vehicles to natural gas, a computer room, a hydraulics/ pneumatics room, a laboratory for electrical work, an auto machine shop, a general machine shop, and facilities for alignment and balancing, bakery and confectionery.

**tion.** Originally, the vocational training centres tended to be connected to the demand for training in the regions and sectors they were assigned to, but at the present time they go far beyond that. Training services are coordinated and integrated with new and diverse services, and the result is holistic. The enterprises, sectors or industrial estates do not go to the centre just to present their requirements for training or to recruit people who have completed courses there, they also go to find out about the latest technological progress in their field, to use the facilities to test equipment, tools or materials, and to make agreements with the centre – and eventually with other actors such as universities – to run applied research projects.

Last, **in virtue of the centre's specialisation and field of action, it also integrates with and complements other services, actors and resources in the region.** This happens when there is an agreement to combine the centre's infrastructure, resources and services with those of chambers of commerce, universities, and technological and other institutes. The centre's contribution, thus widened and diversified, is also oriented by an integral focus on the provision of services, and is inserted into a network which serves the whole productive network of the region.

Now let us look at one of the lines of action that was developed recently by SENAI-SC: the incubators of technology-based enterprises.

### **Incubators of technology-based enterprises**

SENAI-SC is putting into operation three incubators of technology-based enterprises that are strategically distributed around the state. This means that new jobs will be created, and the competitiveness of undertakings in those regions will be increased. These establishments are structured in a flexible way so that they can be easily adapted to meet new needs that may appear. The incubators foster a close business connection through transferring knowledge and the results of research carried out by bodies that promote information and by producers of technology, and through training leading segments that make it possible to increase the value of business activities that are based on knowledge and technology. All this is grounded in the view that in the immediate future changes in mentality will become increasingly important, and research, development and innovation will guarantee that productive systems are modernised through local and regional strategies.

Three incubators are being set up in this scenario:

*Joinville technology-based incubator – MIDIVILLE.* This works in industrial automation, electro-metalworking and tool making, and as a logistical support

and operational unit of CTEMM in Joinville. This incubator was inaugurated in March 1999, and so far, even with only one of the modules initially planned, 103 new jobs have been created, 13 new products and services have been generated, and one of the latter is currently being exported to Argentina and the United States.

*Criciúma technology-based incubator – MIDISUL.* The areas of knowledge in this incubator are ceramics and materials. It receives logistical support from Ceramics Technology Centre (CTC), which is located in the same place, the pole of the southern part of the State. This incubator was inaugurated in May 2001 and it already has four resident enterprises.

*Chapecó technology-based incubator – MIDIOESTE.* The area of knowledge here is agro-industry, and there is support from the foodstuffs technology centre (CTAL) and from the city of Chapecó. This incubator has physical space for sixteen enterprises, and it will become a mechanism to generate new products and technology, seeking to add value to current production. Chapecó is the pole city in the west of the state, and there is an agro-industrial complex that works mainly in producing and processing pork and poultry.

The services that SENAI-SC incubators offer to enterprises are:

- Physical infrastructure
- Operative support services
- Strategic support services
- Enterprise development services
- Technological support services

SENAI uses the mechanism of fostering industry in the form of a physical space specially designed to house technology-based enterprises, disposed to transform ideas into products, processes and services. Besides, the project constitutes a link between the market and the technological development generated in the training and research institutions or derived from other enterprises, delivering research products to potential consumers.

The main objectives of the programme are as follows:

- To train micro, small and medium-sized enterprises to generate new technologies, specially in the electro-metalworking, foodstuffs and ceramics sectors.
- To train personnel in industrial sectors with a view to incorporating new technologies into productive processes.
- To foster the creation of new technology-based enterprises through mechanisms which enhance and stimulate entrepreneurial capacity, aimed at supporting the development of new technologies.

- To promote the development of management skills for entrepreneurs in micro and small enterprises, for researchers at universities and other research centres, and for university students who wish to create and develop new undertakings.
- To insert the environmental variable into the economic development of the state, to sensitise businessmen and mobilise them to adopt techniques to safeguard the environment, and to introduce technologies which minimise the negative effects of industrial waste.

Entrepreneurs who are interested in taking part in the incubation process have to present a business plan that demonstrates:

- that they propose to develop technology-intensive products;
- that the projects are technically viable;
- that they have commercial potential;
- that the necessary capital is available;
- that they are compatible with the objectives of MIDIVILLE-MIDISUL-MIDIOESTE.

For effective access to the incubator the enterprises must go through the following stages:

- pre-qualification of undertakings
- qualification of the candidates
- final classification

What is offered is the physical space for installing the incubated enterprises (modules) and to share the infrastructure which consists of a meeting room, an auditorium, a show-room, the SEBRAE office, copying and binding services, a classroom, training programmes, the intranet network and access to internet, access to the Infovía-CNI system, reception, security, and access to the laboratories of SENAI technological centres.

This strategy is expected to produce the following results:

- a failure reduction rate among enterprises;
- the creation of jobs;
- the transfer of technology among universities, technological research centres and enterprises;
- to accelerate the growth of the incubated enterprises;
- to influence the technological culture of the region.

SENAI-SC thus seeks to respond to the industrial society demands, making it possible for new entrepreneurs to apply research and ideas in a practical way so as to benefit society as a whole. The aim is to generate and strengthen eco-

nomic and business dynamics in the region but taking care of maintaining the local identity of the area.

Lastly, so as to present a clear panorama of the kind of activity that the incubation strategy is aimed at promoting, we will give a brief description of the enterprises incubated in MIDIVILLE. These are:

*Pollux:* The mission of this enterprise is to develop and install industrial surveillance systems that consist of cameras, optical elements and image-processing hardware and software used for inspecting production and assembly lines. The technology involved makes it possible to inspect 100% of the production and to detect defective products and discard them.

The main advantages of the surveillance systems are that they ensure quality, improve productivity, eliminate waste in production processes, and maintain the company's image in the market by preventing products with visible defects from reaching the final consumer.

By applying world technologies, Pollux caters to the visual inspection needs of big enterprises in industries such as pharmaceuticals, cosmetics, drinks, automobiles, the electro-electronic field, and graphics. The company's headquarters is in Joinville and there are branches in Florianópolis, Sao Paulo and Mexico. Apart from the partners who founded and manage the company, Pollux has two large funds for technology-based enterprises that are managed by Banco Fator and by GP Tecnología. In 2001, Pollux won the FINEP prize for technological innovation, which was awarded by the Ministry of Science and Technology.

*South – Quality industrial solutions:* This company is a leader in the dimensional metrology, reverse engineering and instrument calibration areas and applies advanced technologies in the services it provides in these fields. Dimensional metrology is used for evaluating pieces, tools, moulds and devices, using apparatus for measuring by coordinates and comparing surfaces in three dimensions. In reverse engineering the process consists of using equipment and software which captures the form of surfaces and reproduces them with fidelity and precision in a three dimensional mathematical model. In the instruments calibration area, South is a specialist in calibrating conventional and complex control devices, and it also handles the implantation of metrology and calibration. The enterprise has won important clients in the automobile, electro-electronic, metal-working, metallurgical and plastics sectors.

*Fastparts – prototypes:* The design of prototypes is an essential step in the development of a product since it allows enterprises to test their products safely before making investments in definitive tools. Fastparts produces prototypes, models and mock-ups using a tri-dimensional modelling process machined in CNC, thermoforming and silicon moulds. CAD and CAM software are used to generate

models of pieces of varying degrees of geometrical complexity. A vacuum-forming machine is used to make pieces with constant thickness. In vacuum casting, silicon moulds are made to help the reproduction of geometrically complex pieces. With an injection of resin it is possible to simulate the final material and make a pre-series of the product. Fastparts maintains absolute confidentiality with its clients and it has a team of qualified professionals who have an average of 15 years experience. It works with enterprises in the automobile, electro-electronic, household appliances, packaging, and design workshop sectors. Its main clients are Volvo, Multibrás, Busscar, O Boticário, Docol, Motorola, Tigre and Weg.

*ISA of Brazil:* This is an industrial automation company that was founded in 1997 whose headquarters is in Joinville. It works in harness with a partner, ISO Automatisierungs Technik, which was founded in 1991 and is based in Herrenberg, Germany. The two units, the Brazilian and the German, are efficaciously interconnected and they support each other. They make up a highly specialised team that uses state of the art technology to meet specific needs in the electro-mechanical sector. The company plans, constructs and implants systems adapted to the client's requirements.

Its main services are to develop electrical projects (using Eplan *software*), to develop software applicable to PLC (Programmable Logic Controller) and to the AGV (Automatically Guided Vehicle) supervision system, to set up electrical panels and infrastructure, to start up the system, and to provide training in automation and maintenance. ISA of Brazil's clients include Embraco, Renault, Tupy and Multibrás.

*Hbtec:* This company provides services in information technology. Since 1989, it has been working in Blumenau, and for the past three years in Joinville as well. It is a specialist in CRM (Customer Relationship Management) systems. It deals with the whole cycle of sales and relationships with clients, and provides support for enterprises in areas like scenario/market analysis (Hbtec-DEX, data extractor, the OLAP tool), automating the sales force (Hbtec-AFV, multi-platform solution – Palmtop, Notebook and Web), telemarketing and telesales processes (Hbtec-TMK), and service of the SAC/technical support kind (Hbtec-SAC). The services of Hbtec-CRM can be used in isolation or as a package, depending on the needs of each client. Technical support from this company allows a manager to focus on his sales operation, relate to his clients and give excellent service. Hbtec stands out in the market for its agility in rendering services, for the reliability of its products and services, and for the way it works, focusing on adapting the client company's products and processes to the final customer.

*Kronos-Engineering:* This company applies the concept of simultaneous engineering in developing injection moulds. It uses CAE/CAD/CAM/CAV technologies as a support instrument in the making of tools, and in modelling, design and

modification. It has a very experienced and specialised team and it is important in the household appliances, packaging, toy and automobile markets. With the CAD system a 3D ambient is developed: products, reverse engineering, mould projection and movement simulation in mechanisms in moulds and complex products.

Computer simulation (CAE) allows evaluation of the variables involved in thermo-plastic injection and generates alternative possibilities for the product, the mould and the regulation parameters for the injection machine, and this makes the process more efficient. The manufacturing system (CAM) allows exact reproduction of the design of the product, generating the trajectory of the tool for the CNC machine. All the programmes are verified (CAV) so as to optimise the process and avoid collisions. Kronos Engenharia is a specialist in machining graphite and copper electrodes, cavities and replacements, for which it has high speed milling machines.

*Sysfocus –Software Solution:* This company works to support manufacturing in the areas of engineering, stock, planning (MPS, programming, MRP and CRP), and the control of production and industrial costs. The software allows each stage of the production process to be visualised, and monitors the processing, cost and storage of intermediate products. It makes it possible to control products, co-products and sub-products at the same stage of production which involves defining control items for the productive process and associating them with the technical index of the process. It also makes it possible to make fine adjustments in production and subsequently to compile productivity rates.

It also makes it possible to control materials and products, and operate with different measurement scales. The costs system allows the enterprise to define the variables which contribute to the composition of the cost of each product (raw materials, packaging, labour, depreciation, etc.) and draw up detailed accounts. Sysfocus has specialists who have experience in developing and implanting business management systems in various Brazilian and international enterprises.

*DesignInverso:* This enterprise develops design projects in a planned and strategic way to connect the areas of product design and graphic design, so as to continuously produce alternatives from the conception of the product until it goes on the market. It has trained professionals and it employs a methodology that is geared to functional, aesthetic, ergonomic and innovative solutions for products and brands, so as to increase sales, market position, overall quality and innovation. It runs production projects in areas such as household appliances, furniture, and medical and orthodontic equipment.

Developing graphic design projects involves planning the packaging, trademarks, institutional profiles, catalogues, publications, merchandising and sign posting. The quality of the project is guaranteed by alliances with enterprises

that work with prototypes, engineering, and photographic and graphic producers. Some of Design Inverso's clients are Wetzel S.A., Kavo do Brasil S.A., FGM Productos Odontológicos, Grupo Meta and Cargolink Almacenes de Cargas.

*NitreAço.* This company works in the area of nitrogenation with plasma. This process creates a very hard and resistant layer on pieces, moulds and tools made of steel. Nitrogen is incorporated into the surface of the material, which results in a combination with the iron and the alloy elements. Besides plasma, this also comes in liquid and in gaseous form, but these take longer and are noxious for the surrounding area. The utilisation of plasma for the process means there is less chance of geometrical distortion since the temperature is lower and the treatment is quicker. The equipment was developed in Brazil, and this is the only service of its kind in the south of the country. The process is used in the metalworking and automobile industrial sectors. Results as regards resistance to wear are optimal: a 2mm diameter high speed conical steel drill that perforates stainless steel has a 1000% increase in its useful life, with a increase from 20 to 200 holes before it needs to be discarded. NitreAço offers solutions to the problems of wear.

## **7.2. SENA in Colombia: a knowledge organisation**

The National Training Service (SENA) was created in 1957 through a joint initiative involving the Colombian government, workers' organisations, employers, the Catholic Church and the International Labour Organisation. It is a national public institution, with legal status and its own independent assets and has administrative autonomy under the auspices of the Ministry of Social Protection of the Republic of Colombia.

SENA discharges the State function of investing in the social and technical development of Colombian workers. It offers and implements integral vocational training so as to insert people in productive activities which will contribute to the social, economic and technological growth of the country.

Apart from vocational training, SENA provides continuing training for personnel connected to companies, information, orientation and training for work, support for business development, technological services for the productive sector, and support for innovative products, technological development and competitiveness.

SENA recently formulated its 2002-2006 strategic plan,<sup>49</sup> which is aimed at converting the institution into a 'knowledge organisation' that has a global man-

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<sup>49</sup> National Training Service – SENA / General Management, Strategic Plan 2002-2006: 'SENA: una Organización de Conocimiento', Bogotá, 6 March 2003. Available at: [www.sena.edu.co](http://www.sena.edu.co)

date and serves the country. It plans to act in three main areas: integral vocational training for workers, promoting and facilitating technological and innovative development, and the development of an entrepreneurship culture.

In these four years, SENA plans to double the number of people it will train, and to take steps to improve the quality and pertinence of its courses. This widening and improvement in the training offer is based on incorporating new technologies into the system and putting the emphasis on the intensive use of information and communication technologies. It also involves incorporating a teaching component which will prepare its trainees to be able to generate their own jobs, and in this way it will become a leader in training for work for the unemployed population. It bases its activities on the labour competency focus but it also plans to encourage other training bodies to join so as to construct a national system of training for work. In this framework, SENA is the responsible body for the standardisation and certification of labour competencies.

Due to several outstanding qualities, SENA is regarded as an important actor not only on national basis but also at regional and local ones. Some of these strengths are shown in the diagram below.

Over and above each of the strengths considered individually, SENA also has a kind of 'meta-advantage' as an institution. This is a consequence of the nature of the organisation as a space for participation, concerted action and social dialogue among different departments in the State apparatus and with the public sector, the private sector and civil society. This scheme, which can be clearly seen in the composition of its Managing Boards at a national level, has also a regional and local expression involving individuality and originality.

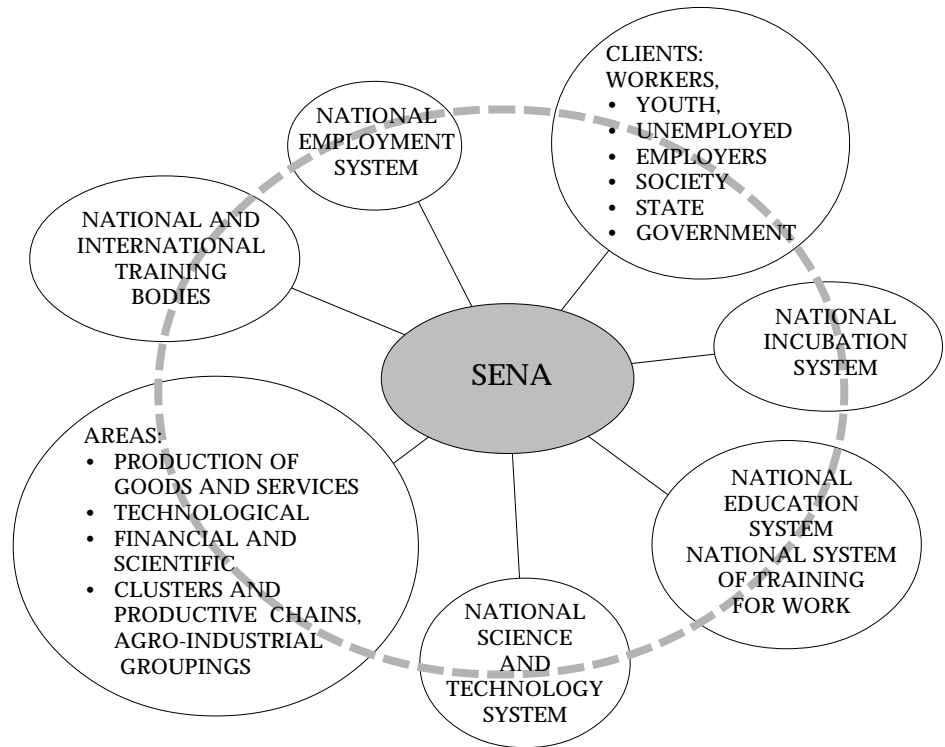
One of the consequences of having the above institutional nature is that there is a high degree of coordination between SENA and different State policies. An example of this is its participation, along with *Colciencias* and other State bodies, in the National System of Science and Technology (SNCT) where it mainly offers its know-how in development and the capacity to generate and transmit knowledge.

The fact that SENA has widened its coverage and improved the quality of technical education shows that, as an institution, it has made a great effort. One of SENA's objectives is that all its training centres should run programmes coordinated with the structure of secondary technical education in their respective regions.<sup>50</sup>

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50 Other examples of this are the National Strategic Plan for Green Markets, its contribution to constructing the National Labour Registration System, the 'Youth in Action' programme, the National Productivity and Competitiveness Programme, and the Competitiveness and Productive Technological Development Programme. More detailed information about these and other programmes is available at the SENA web site: [www.sena.edu.co](http://www.sena.edu.co)

The diagram below gives a simplified picture of the connections that SENA has at the national and regional levels.



### **SENA strengths**

- Well structured and responsible financial administration
- Solid assets
- Insignificant indebtedness
- Assured financing for pensions
- Accumulated know-how from the 45 years that SENA has been in existence
- National cover geographically, of the population and by economic sectors
- Redistributive allocation of resources among sectors and regions
- Diversification of action to give integral attention to the needs of the productive and social sectors: training of human resources, counselling for business development, technological services, information and orientation about the labour market, and support for innovative projects and technological development
- Installed capacity for providing services, such as classrooms, laboratories, workshops, practice areas, technical and administrative support areas with the necessary equipment
- SENA trainees adapt well in the labour market, according to impact evaluation studies
- Combination of training modalities in centre, out of centre, and non-formal training, plus diversification in the offer of vocational training for a first job, continual vocational training for connected personnel, and occupational vocational training for the unemployed
- The sectoral round tables have become a strategy to actively connect with the productive sector in identifying workers' vocational training needs
- Experience in strategic alliances with national, regional, local and foreign organisations for running projects jointly, transferring technology or special training for specific population sectors
- Capacity to call together entrepreneurs, workers, the educational sector, research and development bodies, and other public and private organisations to orient vocational training and technological development
- Employers and SENA participation in formulating technological innovation and development projects
- Infrastructure and an open mindness when it comes to enterprise initiating programmes to promote undertakings and set up enterprises.

*Source: SENA, 2002-2006 Strategic Plan "SENA: Una Organización de Conocimiento", Bogotá, 6 March 2003.*

## **The National System for the Incubation and Creation of Knowledge Enterprises**

We have selected one of all the examples of SENA's most recent initiatives, the Strategic Plan, to describe in detail. This plan is aimed at facilitating the development of business initiatives through the national system for incubating and creating knowledge enterprises.

According to law No. 344, which was promulgated in 1996, SENA was given a mandate to spend 20% of the income from the contributions on gross salaries on programmes to develop competitiveness and productive technology. Apart from other action and programmes geared to complying with this law, since 1999 SENA has participated as a founding partner in 13 enterprise incubators. These incubators are non-profit organisations, and through them 96 new businesses have been set up. They have a high content of innovation and technological development which guarantees that new knowledge and technologies will be transferred to the integral vocational training which SENA gives in its training centres.

Over five years SENA has invested more than 9,829 million pesos in these business projects. Through the thirteen incubators, 464 enterprises have been set up, generating 4,802 jobs and sales of more than 43,500 million pesos. The areas of production include software, electronic systems and equipment, health, the agro-industry, services, telecommunications, tourism, the graphics industry, leisure and sport, bio-technology, oils and oleaginous products, transport, education, precious minerals, and chemistry and pharmaceuticals.

In 2003, SENA set itself the target of creating 22 enterprise incubators and promoting 116 enterprises, with an investment of approximately 6,200 million pesos.

The thirteen incubators which SENA helped to found and is now represented on the board of directors are Corporación Innovar e Incubar Colombia (Bogotá), Incubadora de Empresas de Base Tecnológica de Antioquia (Medellín), Génesis (Rionegro), Incubar Urabá (Apartadó), Corporación Bucaramanga Emprendedora (Bucaramanga), Incubar Caribe (Barranquilla), Incubar Futuro and Software Technological Estate (Cali); Incubadora del Eje Cafetero (Pereira), Incubar Manizales (Manizales), Incubar Bolívar (Cartagena), and Incubar Huila (Neiva).

The **National System for the Creation and Incubation of Enterprises** is defined as a concerted national effort which will lead to a new chain of value to create new state of the art enterprises. This chain of value consists of five broad components or stages:

- **Sensitisation:** The transformation of a life project into an undertaking.
- **Identification:** Identifying the degree of maturity of the initiative and its position in the ambit.
- **Pre-incubation:** Raising the degree of maturity of the initiative through preparing the business model.
- **Incubation:** Constructing the company's business projection (work team, products/services and clients) and going into operation in the natural market.
- **Acceleration:** Maximising the added value of the company through internationalisation and continual innovation to constantly re-think the business.

The System is a combination of different efforts and the SENA has a role to play in each of them although its main emphasis will be on training. The six main national efforts are training, support industries, finance, the legal framework, incubation and internationalisation.

### **Enterprise incubators**

Enterprise incubators are institutions which accelerate the creation, growth and consolidation of innovative enterprises through the enterprise capacity of citizens. These institutions are like state of the art enterprise laboratories whose inputs are ideas and knowledge teams, and whose products are profitable enterprises. The main task is to get the entrepreneurs into a way of thinking: entrepreneurial thinking.

The incubators are non-profit organisations with a **tripartite structure** which comes from an alliance between the **public, private and educational sectors**. The partners or promoters of these institutions are training bodies (technical, technological and university), public and private enterprises, local governments, councils, unions, chambers of commerce, and in some cases union federations. Moreover, the participation of different actors leads to acknowledge the social, economic and cultural reality that they work in.

SENA's part in this incubation system is not new, it has been sponsoring enterprise initiatives from citizens and promoting incubation in the country since 1999. However, it is clear that in the current strategic plan this area has expanded and become an important line of action for the institution. Between 2002 and 2006 SENA expects to promote 40 incubators across the country, of which 22 were expected to be working in 2003, supporting the setting up of enterprises that have a high level of innovation and technological development.

The National Projects Committee is the top evaluation body, it is made up of representatives from SENA, Colciencias, DNP, and the unions and workers, and it is presided over by the Ministry of Social Protection. So far in the current administration, it has approved the formation of 7 incubators for enterprises and has supported 29 enterprise initiatives to the tune of 3,533 million pesos. However, the administration has not authorised the payments. Before the payments are authorised the auditing process has to be strengthened. This auditing process guarantees the hand-over of resources which is contingent on meeting targets, on the correct execution of the resources on a national level, and on the transfer of the technology developed in each SENA enterprise initiative. The National University of Colombia is cooperating in this auditing process.

On the other hand, the fact that fees for education are now payable in cash, and that the correct percentage would go to the Enterprise Fund, is an attempt to support and stimulate associations of students or trainees who have recently completed courses at SENA or other educational institutions that are recognized by the State. Therefore, they may undertake their own business initiatives by making the knowledge acquired in the generation of new sources of income and employment available to them. The Enterprise Fund will cede non-repayable resources directly to those young people's projects that have a direct relation with their training area and are supported by training institutions.

Since 1999 the work of the enterprise incubators that SENA is connected to has resulted in 464 new enterprises being set up, and these have generated 4,802 jobs and more than 43,500 million pesos in sales. For example, in the first quarter of 2003 the Bucaramanga Enterprise Corporation helped to found 55 new enterprises with 350 new jobs, and the incubated enterprises achieved sales amounting to 1,200 million pesos. Similarly, on the Cali software technological estate 12 new enterprises, 36 new jobs, and the incubated enterprises are generating sales of 500 million pesos. At the same time, the Antioquia technology-based incubator helped to set up 33 new enterprises with 597 new jobs, and the enterprises incubated there have made sales amounting to 1,750 million pesos. These are just three examples of the important work that the thirteen SENA-connected incubators have been doing. It amounts to a real and considerable contribution to re-activating the country's productive apparatus and generating new opportunities for young Colombians.

In order to develop the National System for the Creation and Incubation of Enterprises, the SENA has made the following national strategic alliances:

- Colciencias
- United Nations Development Programme
- DNP. National Planning Department

- FONADE. Development Project Financial Fund
- SECAB. Executive Secretary of the Andrés Bello Convention
- National University of Colombia. Auditing Office
- EmpreAndes: A student group that fosters the spirit of enterprise and the creation of enterprises at the University of the Andes
- ANEIAP. National Association of Industrial Engineering, Administration and Production Students
- MINCI. Interactive Knowledge Worlds

Besides, thanks to the management schemes of the different associated incubators, SENA has a wide range of other alliances at local and regional levels. For example, INCUBAR Quindío in Armenia, an incubator which has already been set up and is in process of establishing an association with the SENA. Its partners include the local government of Quindío, the mayor of La Tebaida, the Armenia Chamber of Commerce, the University of Great Colombia in Armenia, the University of Quindío, the Administration and Marketing School, Actuar QUINDÍO, Café Quindío, the National Coffee Estate, and the Quindío Departmental Committee of Coffee Producers.

### **SENA's role in the construction of the National System for the Incubation and Creation of Knowledge Enterprises**

To take the lead in this task, which has nation-wide scope and regional, local and sectoral impact, SENA has implemented the National Programme of Technology-Based Enterprise Incubators (IEBT). This Programme comes under the Employment Board of the institution and works as a support group for programmes that are aimed at developing the strategy to enhance innovation, competitiveness and technological development.

A consultative committee has been set up as an advisory body made up of representatives from the different institutions connected to the program. The function of this committee is to accompany the structuring, promotion, diffusion, operation and consolidation of the programme to ensure it includes the operative models which contribute to widening the cover of the services offered. In addition, it gives the encouragement the different users might need to create and consolidate their new production units in the framework of innovation and the introduction of technology to their processes.

The broad objective of the programme is to create enterprises through promoting and supporting pre-incubation and incubation projects classified as having high levels of technology, innovation or competitiveness. This support is un-

derstood as assistance, accompaniment, and financing the applied research that is required for formulating, putting into operation and consolidating each project, disaggregated according to characteristics in each case.

The specific objectives of the programme include:

- To establish orientation policies to promote the creation of high technology enterprises which will facilitate the diversification of national production, incorporating advanced processes and products in the international ambit.
- To define and formulate strategies which will help to facilitate interconnections between private and institutional entrepreneurs and the incubators and the support bodies of the programme, so as to maximise the results that it generates.
- To have a work model with highly trained and specialised personnel to develop and accompany the processes to be implemented, so as to bring to fruition the ideas and initiatives that are successful in the creation of enterprises.
- To promote productive sectors that are vital for GDP growth and the socio-economic development of the country.
- To promote the creation of employment in the different phases of the project; in the pre-incubation phase with research groups and the making of plans, and in the productive stage through setting up the new productive unit and starting it off.
- To bring support institutions into the process of creating enterprises, and to bring in private domestic and foreign investors as external support for the programme.
- To establish a chain of support and service for the entrepreneurs in the international ambit so as to facilitate production and commercialisation.

The aim is to promote and spread the spirit of enterprise, to help to identify and consolidate ideas with the potential to foster the growth of new enterprises, to support research, to help in preparing business plans, and to accompany the new productive units as they go into operation. The agents of this are SENA's different enterprise training centres and their partners in the programme, which in this case are the technology-based enterprise incubators.

### **The process whereby technology-based enterprise incubators become associated to SENA**

In the framework of Science and Technology Law 29 in Decree 393, enterprise incubators can apply for association to SENA. This means they receive accompaniment for implementation, orientation from regional science and technology policies, participation on their boards of directors and therefore support in the form of money or payment in kind, and also the co-financing of projects that have a considerable information and technology component, are oriented to strategic sectors, and are in the technological development phase.

The incubators will have to take account of the following orientation criteria:

- To foster an enterprise culture to generate new knowledge enterprises
- To create knowledge enterprises oriented to open markets
- To promote the inter-relation of regional work between enterprise/university/ government
- To coordinate action with financial service providers for possible accompaniment in the process of obtaining starting capital and other resources for the new enterprises
- To establish agreements with national and international incubators, technological development centres, productivity centres and universities
- To belong to national and international networks which would make support for enterprise initiatives possible
- To link up regional efforts which would have an impact in the centres of greatest competitiveness in the region, defining target clusters or productive chains to implement enterprise initiatives
- To accompany the development of each initiative as set out in the work time plan
- To give priority to coordinating the work of the incubator with the business prospects of the region or with the vision of the region's future
- To maintain the standard defined by the national system to incubate and create knowledge enterprises
- To receive projects pre-incubated by SENA training centres, which could be incubated within the standards defined by the incubator

### Mechanisms for financing initiatives

In Colombia, debt has become the mechanism which entrepreneurs traditionally have recourse to when it comes to financing their business initiatives. However, this mechanism is usually out of the reach of new entrepreneurs mainly because they are not eligible for credit.

Therefore, it has become necessary to formally develop new creative mechanisms for financing which will give the new entrepreneurs access to the financial resources necessary to put their enterprises into operation.

These mechanisms should be understood as actors who make it possible to start up chains of value in the financing of new enterprises, guaranteeing that the resources reach the company at the right time. Some of these mechanisms are as follows:

- **Investment Angels:** The so-called investment angels are people who finance business initiatives on their own account. The investment angel usually appears when the entrepreneur decides to move out of his original ambit to seek the resources he needs to implement his business plan. From here on, the investment angel will accompany him and provide him with money, contacts, work, experience and all the resources needed to gradually go through the stages required to be able to gain access to new and greater resources.
- **Venture Capital Funds:** Venture capital funds are enterprises that serve as financial intermediaries between potential investors who are seeking a satisfactory return from investment that is long term as well as for fixed periods. It also benefits new, innovative, state of the art enterprises that are looking for backing. The venture capital comes into the process of financing enterprises in a transaction against assets.
- **Corporative Funds:** Corporative venture capital funds are enterprises that invest in a new enterprise whose product or service is connected with their main activity. This source of finance has big advantages for new entrepreneurs because of the strategic importance of receiving investment from a enterprise in a cluster or sector in their field. For the investor it is perhaps the best option for developing and maintaining its innovation and competitiveness strategies.
- **Private Equity or Mutual Funds:** Private equity bodies build up a portfolio of shares in companies that are not quoted on the official markets, and bring added value to their management. Their aim is to have a fixed but long term presence in the enterprises. Mutual funds are an intermediate step between financing with venture capital and launching the stock of the enterprise on

public markets. In general terms, the way private equity operates is similar to a venture capital fund, the difference is in the tolerance of risk. The mutual funds do not assume high risks and only intervene in enterprises that have a high level of consolidation.

- **The Stock Market:** This is the best option for corporate venture capital funds and mutual or private equity funds to disinvest. Their role ends and the investors obtain a return on their investment from the resources they have put in the enterprise, in other words, they sell all or part of their participation in the company.
- **Debt:** We are not talking here about a creative source of financing in Colombia but rather about a formidable and rare opportunity that consolidated enterprises have to move forward with resources that are nearly always costly. However, it is increasingly evident that the two spheres - debt and venture capital- have become mixed together and even that the former may change into the latter and vice versa.

The two value chains, that relative to the creation of enterprises and that of financing them are connected through the phases set out below.

- **Seed Phase:** The capital requirements are relatively small, and the investment is given directly to the inventor or entrepreneur so that he or she may develop the initial concepts of the company. These resources are used to develop prototypes and to carry out market research. It is very important to start building up the work team that will guarantee that the steps set out in the business plan are followed successfully.
- **Start up Phase:** The capital is given to companies that have completed the market research and prototype development phase. Enterprises in this situation have usually been in operation for a year at most but they may have reached this point without commercial sales. The work teams should already be formed and be solid, market studies should have been completed, and the business plan should be in operation.
- **First Round of Financing:** The capital is handed over to companies that already have validated their prototypes on the market (real sales) and now need to expand the installed capacity of the enterprise and move on to the industrial production phase. An advanced level of management and organisational structure is required, and the business plan must be adjusted according to the company progress.
- **Second Round of Financing:** The capital is given to companies which are already producing and distributing. The resources are for providing working capital in the company to strengthen its inventories and response times.

Although the company may be generating a good level of sales, it is usually not showing high profit levels.

- **Third Round of Financing, or Mezzanine Financing:** The capital is given to companies which have passed the point of equilibrium and are growing strongly. The resources are used to strengthen the expansion of plant, marketing, working capital, and the innovation and development of new products.
- **Financial Bridge:** These are the resources needed to take the company to the point where it can put its shares on sale to the public. These are usually financial loans that are payable with the income from the public transaction. Often these resources are used to re-structure the assets of the company before the sale of shares.
- **Public Sale of Shares:** This is the mechanism whereby the property of the company is made public, usually on the stock exchange. This is the normal strategy that investors in the previous phases use to recover their investments with high levels of profitability.

#### **A concrete example:**

##### **The Antioquia Incubator of Technology-Based Enterprises**

The Antioquia incubator of technology-based enterprises (IEBTA), which was set up in November 1996, is a non-profit corporation in private law. The incubator forms part of the national science and technology system created by Colciencias.

The main objective of IEBTA is defined as an indicator, to maximise the business value of the initiatives it supports in the shortest possible time.

Its main function is to set up state of the art enterprises, and its scheme of work involves continuing training, unlimited cover using a flexible virtual incubation model, to develop a portfolio of services based on applied knowledge accumulated by the incubator and its business laboratory, and to make strategic alliances.

The virtual incubation model is different to SENAI-SC incubation, which was based on the assumption that physical facilities would be available and that different services would be concentrated in that space. In IEBTA, on the other hand, the strategy is based on information services, knowledge management, technical assistance and consultancy services.

Besides the incubation process, which will be described below, IEBTA offers new entrepreneurs, incubated enterprises and external enterprises, the following services:

- Intermediation or seeking new business
- The presentation of projects for co-financing and financing
- The management of projects for tax exemptions
- The valuation of enterprises
- Presentation of enterprises to venture capital funds and strategic investors
- Consultancy and management of enterprises for venture capital funds
- University social groups
- Talks and presentations about projects and undertakings
- Lectures and seminars

The virtual incubator is an information and knowledge management system for identifying, creating and developing innovative enterprises. Its management strategies are based on information technology, the internet and interaction with resources in the support industry, or on consultancy, counselling and other facilitators.

The Virtual Incubator model adopted by IEBTA allows entrepreneurs to be in contact, in an organised way and in real time, with the different actors who have to be involved if the enterprise is to be successful. Access is controlled in accordance with the level of the enterprise, and each person or body responsible for contributing to the process of managing the enterprise registers his action and receives tasks which the system co-ordinates with all the others or which necessarily have to be carried out. As an intelligent system, advisers, consultants, financiers, entrepreneurs, managers and agents who are external (from the investor's market or from clients) participate in developing the enterprise initiative to which they have been invited or accepted. The administrator of the system, which in this version is IEBTA, guarantees follow up, control, and the quality of the processes.

The Virtual Incubator allows entrepreneurs to apply their idea, project or enterprise on a maximised internet platform. In the first phase, the essential resources, the human talent team, the business model and the proposed target market are identified. In the second phase, the resources that have been identified and the business model are systematically matched against possible allies, supporters and competitors in different scenarios in the global market. In the next stage, if there are clear indicators of viability, all the actors draw up an enterprise plan and a business plan, and work is done on research and formalisation.

In the subsequent phases control is taken in a sequential way of all the day to day concepts of management training. This covers different subjects such as the estimated value of the enterprise as well as the training and learning of employees and clients.

The Virtual Incubator is an IEBTA project added to a concept of operations and logistics based on new technologies and interaction with the best there is in the support industry.

<b>Organisations which support the Antioquia Incubator of Technology-Based Enterprises</b>	
<b>Universities</b>	
National University of Colombia	Catholic University de Oriente
University of Antioquia	JIC Colombian Polytechnic
Bolivariana Pontifical University	Metropolitan Institute of Technology
University of Medellín	Antioquia School of Engineering
EAFIT University	María Cano University
Lasallista University	
<b>Bodies</b>	
Medellín Public Enterprises	FESTO
Medellín Chamber of Commerce	OIM – German Government
ANDI	SENA
PROANTIOQUIA	METRO of Medellín
Corfinsura	Noel
Leonisa	Suramericana Foundation
Cemento Argos	Oracle
Corona Foundation	World Group - ANDERCOL
National Federation of Coffee Producers	(supports its financing strategy)
<b>The following make significant contributions:</b>	
Government of the Department of Antioquia	
Municipality of Medellín	
Colciencias	
German Government	
Quebec Engineering School	
Government of Toscana and Iris and Cesvit	
Metz National Engineering School	

At the present time, IEBTA has seven enterprises in pre-incubation, thirteen in their incubation phase and fifteen in post-incubation.

Enterprises in **pre-incubation** benefit from services of selection and generation of value of the idea, project or enterprise; analysis and conenterpriseation of the workability or viability of the idea, project or enterprise; accompaniment in formulating the business plan; and assistance in evaluating experimental prototypes (if this is necessary).

Enterprises in **incubation** are assisted through services of counselling about the legal constitution of the enterprise; accompaniment in managing technological and financial resources; help in accessing starting capital, venture capital funds or other models of financing; and counselling services in any area such as finance, accountancy, production and/or marketing.

Enterprises in the **post-incubation** phase, and also institutions and enterprises in general, enjoy services of technical support and counselling in different fields such as outsourcing, spin-off products, sensitisation talks, lectures and technical visits, identifying new ideas based on the structuring of strategic clusters, advice and accompaniment in presenting projects for co-financing and financing, guidelines, seminars and training about organisation in enterprises, strategic thinking and the management of human talent, the management of innovation and technological development, business models and the valuation of enterprises.

Some examples of **pre-incubated** enterprises are CREA (bio-technology), CONEXIÓN (connections), COLOMBIA T.V. (television), MADERA PLÁSTICA (furniture and materials for industry), TÚ Y TU BEBE (orientation and sale of products for the care and education of children), VISIÓN VERDE (treatment of solid waste and its transformation into raw materials or new products).

**IEBTA: enterprises in the incubation, post-incubation  
and pre-incubation phases**

**Enterprises currently in incubation:**

**AFUERA LINK:** This enterprise deals with commercialising information on a world scale, specially information to help set up commercial links between purchasers and sellers. It takes advantage of commercial opportunities that appear in the market and acts as an agent between the person who wishes to buy and the supplier that has the capacity to meet that need, between the person who wishes to sell and clients that are disposed to buy, and between economic sectors which share the need to buy or sell similar products.

**CONSULNET:** This enterprise works in tele-information and information systems for the hotel sector, such as cabling to connect computers, internet communications, creating and running web sites on the internet, remote administration, the analysis, support and auditing of projects and the hotel information system.

**CRP:** This enterprise works in the area of client service and helps in the management of service. Through the internet or a private virtual network it becomes the communication and operational channel between the enterprise and its clients. This gives both sides real-time permanent monitoring of their relationship. It allows companies to collect, store, analyse and manage information from clients, and it allows clients to monitor the requests they make to the company.

**FROG:** This enterprise researches and adapts new technologies in public and private communications based on information networks.

**GESCOMER:** This enterprise provides integral solutions for the commercial management of in-home public service enterprises (E.S.P.), making these organisations more efficient through the suitable, correct and opportune management of information. For this, new computer tools are developed whereby the product support and maintenance service becomes the most important component in the commercial relationship.

**HOMINI:** This company specialises in developing and implanting systems to check and authenticate the identity of persons who engage in operational and commercial transactions. This is done by physical or electronic means or using the internet, and the company employs biometric technology. Its portfolio includes unique identification services –

digital signatures – for citizens dealing with the State, and the particulars of all digital operations conducted on the internet including conenterpriseation of people's identity in the integral health information system, the national labour information system and other State information services. On the web, there is a conenterpriseation system for electronic transactions involving the State such as the paying of taxes, pensions and indemnities, and the adjudication of contracts and of virtual and physical government and private elections.

INTERACTUAR: This company provides computer solutions of its own or from third parties, and it is specialised by sectors. It is not sold to the client as a product but as a service that is leased via the internet (Application Service Provider, ASP).

MPC: This company issues and digitally distributes multi-media content to educate, motivate, entertain and inform employees and captive audiences, and promotes services and products with the same benefits as traditional analogue television, at a cost that medium-sized enterprises can afford. The great difference is that the content and frequency are controlled by the client, and there is a mix of information from different media like internet, data bases and real time tele-conferencing, which allows commercial and administrative corporate objectives (marketing, sales, service, management, human resources, etc.) to be efficiently met.

NETMO: This enterprise works in the area of the planning, operation, fault management, performance and configuration in telecommunications networks.

PLC: This is a service and development enterprise in electrical and electronic engineering which is based on good knowledge of the technology involved and a high degree of creativity. It offers solutions in automation in industrial processes, manufacturing and innovative technological development

S-SQUARE: This is a consultancy and advisory enterprise specialised in simulating business processes, and it provides organisations with decision-making tools.

VISIÓN TECNOLÓGICA: This enterprise is oriented to the design and export of components for developers who use the Delphi and C++ Builder languages, supported by all the infrastructure and technology available on the internet. It is also oriented to creating software tools which cover

a wide range of the commercial applications offered by the media using a massive distribution strategy via the internet, electronic payment and strategic alliances.

The enterprises in **post-incubation** include:

**ACCIM:** The initials stand for massive intelligent access. This company provides integral solutions which are based on the intelligent management of access, and it offers a management system that is intelligent and highly dependable. The system is used for managing valuations, offices, access control and the management of precautions, it is a powerful administrative tool for planning, execution and control, and is the most efficient means for the direct market.

**A-MAQ:** This is a high technology research enterprise in vibration analysis applied to machines, systems and mechanical structures to detect faults, prevent disasters, meet standards, and check and improve quality.

**CAD:** This company creates products for other companies and helps them to create value for their clients through designing, developing and commercialising new concepts and identifying new innovation opportunities, by engineering and producing a prototype rapidly. At the present time it is working on vending machines and three-wheeled vehicles.

**CICENET:** This is an internet business information and knowledge centre. Its main aim is to support electronic commerce for exporters that are seeking to set up electronic channels on internet protocols for commercialising their products or services in international markets. A second aim of the company is to explore the possibilities of commercialising information and/or knowledge in the same scheme.

**COLOMBIANET:** This is a multi-purpose enterprise in communication services. Its aim is to render services based on state of the art technology, and wherever the user is there will always be an agent available at any time or in any space to attend to his needs.

**CONVISIÓN:** This enterprise aims at applying state of the art technology in our environment so as to optimise the use of energy and the natural resources that produce it. It also works to automate productive processes so as to make industry more efficient and competitive in domestic and international markets.

**CYBERIA:** This service enterprise is a corporative network security consultant. It provides improved security in company networks so as to

give them better possibilities for electronic commerce to be able to survive in an increasingly technologised market. Cyberia provides advisory and consultancy services, implements software and hardware security tools, and trains personnel.

**DDI:** An engineering company geared to the need for automation, control, updating and the appropriation of technology. It adds a high knowledge content and applies specialised software. At present it has 36 staff who are engineers, technology experts, technicians, and project and maintenance operators.

**FACTORING MARKET:** This enterprise develops, launches and administers virtual markets which generate high added value. Artificial intelligence technologies are used to handle business to business or business to consumer transactions.

**ENDO VASCULAR DEVICES:** This enterprise develops its own designs for coronary stents (intravascular prostheses) and specialised devices for use in heart operations. It is registered and approved by the Colombian official medicaments office – INVIMA – and it is authorised by the United States Food and Drug Administration, the FDA. The company has applied for a patent in the USA, and is preparing to apply for the CE-Mark in the European Union.

**IDEAS APLICADAS:** A computer service provider for the business area which aims at improving its clients' competitiveness and growth by providing opportune and reliable business answers. Its services and products are backed by competent personnel who stimulate innovation and creativity with technology and methodologies whose quality and efficiency standards are certified at a level that is recognised internationally.

**LIDERAGRO:** A company that develops and applies specific solutions for the agricultural sector through innovations in the management of agro-industrial enterprises. These involve implementing information systems that coordinate the work of teams that are specialised in areas like the production of improved seeds, and using bio-technology processes and the genetic selection of cattle in milk production.

**INTERSAT:** This enterprise develops applications for interactive audio response platforms to provide services that add value in telecommunications. Its portfolio of products and services includes pre-paid communications from fixed telephones to cellular phones inside the country and internationally, external control over the telephone services of compa-

nies so that calls can be managed by restricting times, origin numbers, numbers called, and duration. This optimises telephone services inside large, medium-sized and small enterprises. There is a single service which allows investment in the concept of payment on a cellular telephone (the person who receives the call pays); advertising during a call, whereby advertising information can be presented to both parties during a call; DIAL (automatic call directioning) which is a virtual number that allows connection to any domestic, cellular or international number; and the development of different products in audio-response systems such as competitions, and the capture and delivery of information.

V-FACTORY: This enterprise aims to be the Latin American leader in the creation, development, promotion and management of virtual business for domestic and international markets, making use of the high technology available in the international ambit and the competitive advantages of the country. Its basic tool is the internet, where the high level of diffusion and the exchange of knowledge, products and services take place in real time and without geographical barriers.

WINET: This is a new enterprise in the computer services sector that focuses on providing outsourcing services for optimising business processes. It is based on internet technology and has the optional support of digitalised documents. Its portfolio of services includes constructing, setting up and administering the process of preparing, scanning, indexing, and the storage and consultation of digitalised documents; the intelligent recognition of characters and data-construction of applications in internet/intranet for transnational processes and for process control (workflow); and the construction of e-business systems.

IEBT in Antioquia is also developing a series of special projects. These are:

*Agricultural Groupings Incubator:* This agricultural incubator aims to identify economically viable social and environmental projects so as to provide them with ongoing accompaniment through management, preparing business plans, formulating projects and giving advice in the different business areas.

The groupings or clusters become the structure of the incubator, those being understood as enterprise conglomerates which create synergy through effective relations, seeking to consolidate business and agreements with each of the main actors such as suppliers of raw materials,

enterprise transformers, academic institutions, and financial and commercialising bodies.

The first agro-industrial incubator is based in the city of Apartadó and gives coverage in the sub-region of Urabá in the department of Antioquia. It has support and continuous accompaniment from the Antioquia incubator for technology-based enterprises.

*Regional Innovation Centres (CIR):* This is a joint programme involving IEBTA and the Medellín Chamber of Commerce for Antioquia. The aim is to identify enterprise initiatives in the regions. For that purpose, there is a programme of sensitisation and positioning in which the activities of CIR are publicised among producers, institutions and people from the region. At the same time, ideas, projects and enterprises are received so as to give them accompaniment in getting established or in consolidating.

CIR are directly or indirectly linked to developing scientific, academic, technological or entrepreneurial activities in the region, with the aim of building up a work network.

The first CIR went into operation on 1 August 2001 in Ciudad Bolívar. It covers the south west of the Antioquia region, and it seeks projects of an agro-industrial nature.

*University Innovation Centres (CIU):* This is a joint IEBTA-university programme which has a physical space in the university. Its objective is to generate an environment that is favourable for the development of enterprise initiatives that are born as proposals from undergraduates, postgraduates, ex-students, university teachers, members of research centres or any agent from the university who is directly or indirectly connected to science, technology or business.

From this starting point the incubator works to put the initiative into practice in a business sense, searching for financing, accompaniment and transference of management models, until the enterprise is successful.

The incubator is currently accompanying the setting up and strengthening of innovation centres at the University of Antioquia and the Antioquia Engineering School.

*Technological Maps:* These are a technological service for which the incubator has developed an interesting methodology. The service allows new business and strategic technological plans to be visualised, and the incubator focuses on developing these for enterprises.

### **7.3. The INA's contribution to a local-based sustainable tourist industry in Costa Rica**

The history of development in Costa Rica is unusual when compared to that of the region. In the last fifty years the country has enjoyed a rate of economic growth that is among the highest in Latin America. Meanwhile, there has been a high degree of stability in the political system and considerable progress in the social sphere thanks to sustained investment in developing the capacities of the population. Consequently, there has been a contribution to improving the quality of life of the inhabitants.

However, the domestic and world situation in which this pattern of development evolved has been gradually changing in recent decades. Initially, the consequences of these changes were absorbed by the system and it became consolidated, but towards the end of the 1970s and in the 1980s the rhythm of change accelerated. The crisis at the start of the 1980s laid bare a series of problems, and gave rise to an in-depth and wide-ranging national debate about which development paradigm the country should adopt. This debate has not finished yet.

Apart from these different opinions, it seems clear that any perspective on development will have to preserve the fundamental characteristics of Costa Rican society which give it its identity, and any initiative will only be successful to the extent that these can be conserved. Three main characteristics stand out, first, the emphasis on social equity, which is understood as an egalitarian distribution of income, access to basic services, and opportunities for personal, economic and cultural development. The second is the investment in developing people's capacities, and the third is the perspective of sustainable development which preserves the country's natural resources as a strategic asset.

This is the context in which Costa Rica is meeting all the familiar challenges that the current regional and world situation poses, particularly the challenge of raising its levels of productivity and competitiveness through sustainable economic development strategies. For this, the country has a series of assets or advantages which have the potential to be a solid network on which to base prosperity and satisfactory living standards for Costa Ricans in the future. These assets are as follows:

- Income distribution that is more equitable than most countries in the region.
- Adequate access to basic services like education, health, housing and social security.
- A strong culture of democracy, a stable political system, and institutionalised mechanisms to resolve social conflicts.
- High average levels of training in the population.

- A path towards sustainable development based on preserving natural resources. There is wide social and political consensus about its importance and it can be considered State policy.
- It is a small country as regards size, population and the economy, and this means it has a minimal impact in other markets, especially in those of the more developed countries, which is important in the context of trade agreements. However, while any expansion of Costa Rica's role in the world economy is bound to be relatively small, it would have a big impact inside the country.

In the context of a crisis in the traditional agricultural sectors (coffee, sugar), the best way to take advantage of the country's assets can be found in a deep-rooted trend in the national economy, namely the transition from an agricultural and agro-industrial economy to one in which tertiary activities, particularly commerce, tourism and services, are coming to the fore.

### **The development of the tourist industry**

For the purposes of this study we will focus on the development of the tourist sector in Costa Rica in recent years. An analysis of the number of foreign tourists who visited the country between 1992 and 2000 shows there was an increase of 85% (Table 1). The relative weight of tourism in generating foreign currency

Table 1  
Number of international tourists visiting Costa Rica  
Absolute figures and percentage of growth year by year 1992-2001

Year	Number of Tourists	% growth
<b>1992</b>	610,591	0
<b>1993</b>	684,005	12.02
<b>1994</b>	761,448	11.32
<b>1995</b>	784,610	3.04
<b>1996</b>	781,127	-0.44
<b>1997</b>	811,490	3.89
<b>1998</b>	942,853	16.19
<b>1999</b>	1,031,585	9.41
<b>2000</b>	1,088,075	5.48
<b>2001</b>	1,131,406	3.98

Source: Author's preparation, based on data from Costa Rica Tourist Institute (Statistics Annual 2001)

increased considerably, and in 2001 tourism accounted for 25.5% of all income from exports (Table 2). Lastly, the contribution of tourism to the GDP went up from 4.6% in 1991 to 7.8% in 2000 (Table 3).

**Table 2**  
Share of different sectors in generating foreign currency 1996-2001

Year	Exports thousands USD	Electrical micro- structures %	Tourism (%)	Coffee (%)	Bananas (%)	Meat (%)	Sugar (%)
<b>1996</b>	3758.4	0.0	18.3	10.3	16.8	1.1	1.2
<b>1997</b>	4205.5	0.0	17.1	9.6	13.7	0.7	1.0
<b>1998</b>	5526.6	17.9	16.0	7.4	12.1	0.4	0.8
<b>1999</b>	6640.8	38.5	15.6	4.3	9.5	0.4	0.5
<b>2000</b>	5847.7	28.3	21.0	4.7	9.3	0.5	0.5
<b>2001</b>	5005.9	16.2	25.5	3.2	10.3	0.5	0.7

*Source:* Author's preparation, based on data from Costa Rica Tourist Institute (Statistics Annual 2001).

**Table 3**  
Share of tourism in GDP

Year	TOURISM USD millions	Tourism / GDP
<b>1991</b>	330.6	4.6%
<b>1992</b>	431.1	5.0%
<b>1993</b>	577.4	6.0%
<b>1994</b>	625.7	5.9%
<b>1995</b>	659.6	5.6%
<b>1996</b>	688.6	5.8%
<b>1997</b>	719.3	5.6%
<b>1998</b>	883.5	6.3%
<b>1999</b>	1,036.1	6.6%
<b>2000</b>	1,229.2	7.8%

*Source:* Statistics Annual, ICT and BCCR

According to estimates for the year 2000 the tourist business employed about 140,000 people, which amounts to 10.6% of the working population of the country. The only sectors that employed more people were community social services (25.5%), agriculture, forestry, hunting and fishing (20.4%), and the manufacturing industry (14.4%). Tourism generated more jobs than the wholesale and retail

trade (9.6%), construction (6.8%), transport, warehousing and communications (5.9%) or financial establishments (4.8%).

Costa Rica's good performance in the tourist sector has to do with the assets mentioned above, but there are other factors that work in favour of competitiveness. First, Costa Rica has a lot of diversity (in climate, flora and fauna, culture, and possible activities) that is geographically concentrated in a small area, and this means the tourist offer includes a wide range of products that are all interconnected. Second, the infrastructure of the country is sufficiently dense for tourist attractions to be accessible. Third, a number of companies that are specialised in different consumer niches or sectors have developed the local market. Fourth, 45% of the tourists who visited Costa Rica in 2001 were from North America. Fifth, the strategy of sustainable development that was mentioned above has resulted in a well-structured system of conservation. Lastly, the country has consolidated its image as one of the main destinations in the world for naturalists.

However, future possibilities for the development of tourism are not predetermined. Hence, in the framework of the national tourist development plan,<sup>51</sup> three alternative scenarios have been put forward for the future of tourism in Costa Rica. Each has its own characteristics and restrictions for facing the future as well as different consequences for local development prospects and for the demand for training.

### ***Scenario 1: The Current Trend***

In this scenario the current trend would continue. This trend is for tourism based on traditional tourist activities, and these would continue to develop in a very spontaneous way with very little structural or spatial organisation. Investment and the growth of the offer and of services would come from initiatives by the agents themselves, investors/builders, wholesalers and travel agents. Public investment would continue to be reactive, and the margin for promoting private investment would continue to be small.

Unplanned development would continue, and because of the characteristics of the market it would tend to be concentrated in places that are already highly developed. Therefore, the country would still not have a national strategy for effectively developing infrastructure to support this private investment in tourist facilities.

In this scenario, big changes in the design or innovation of products are unlikely. The tourist locations which already enjoy a considerable degree of devel-

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51 Costa Rican Tourist Institute (ICT): *Plan Nacional de Desarrollo Turístico 2002-2010*.

opment, and the products that are commercialised there, would be strengthened. However, the industry would still be dispersed. The image of Costa Rica as a tourist destination would remain the same, and the marketing strategy would only be to renew the campaigns from time to time.

### ***Scenario 2: Sustainable Tourist Centres***

Development would be based on a much more integral effort. Spatial planning would determine the areas where development was to be concentrated and it would be multi-polar, that is to say tourism would be structured and concentrated in different locations and different kinds of attractions. This would allow sustainability to be implemented as a fundamental principle for development, and thus ensure a balance between the environmental, social and economic variables.

Infrastructure would be built up by the public sector in a pro-active way and in association with the tourist centres to be developed. Private investment, mainly in medium-sized installations, would be encouraged, and a new generation of incentives for tourists would be established to promote this investment.

Tourist products would be developed in other parts of the country where tourism would be fostered, and this would make for greater diversification in the offer.

Costa Rica as a tourist destination would acquire the image of ecological sustainability, and the marketing would be adjusted to this new situation. The idea of the country as a tourist destination would gain strength, which would allow some regions that currently have little tourist development to become more competitive.

### ***Scenario 3: Concentration in Development Poles***

This scenario involves selecting one to three tourist centres that have the potential to develop quickly, and concentrating all public and private effort in those places. The rest of the country would continue to operate in accordance with scenario 1.

Public investment would be concentrated in these few centres, and a new generation of incentives focused on mega-projects would be implemented to attract private investment to big projects. Sustainability would not be a determinant factor in these centres because the cost-profit relation would be focused on

generating an offer that would cause demand to increase rapidly. In addition, the development of these centres over the next ten years would generate sufficient demand to be able to indirectly promote development in other parts of the country.

The image of the country would have to be split. On the one hand there would be direct promotion of domestic destinations regardless of the image of the country, and this would be done with a contribution from the State but mainly through private investment and using private or mixed promotion mechanisms. On the other hand, the focus on nature in this tourist destination would remain for the rest of the country and there would be no big changes in the communication strategy.

The characteristics and restrictions of each of these scenarios are shown in the table below.

Characteristic	Current trend	Sustainable centres	Development poles
<b>Planning instruments</b>	Local development plans and regulatory plans both aimed at orienting but with little impact on development	Planning unit prepares sustainable plans for land use. Regulatory development plans, and strategic plans for centres linked to land use plan and with a determinant effect on the control of development	Master plan for development centres. The rest of the country continues as in scenario one
<b>Infrastructure development</b>	Public investment reactive and dispersed, depending on the possibilities	Moderate public investment oriented to sustainable centres and at the level required for medium-sized enterprises	Very high public investment concentrated in the centres in accordance with the needs of the big development projects
<b>Return on investment</b>	Moderate to fast	Slow to moderate	Very high, but concentrated in the centres
<b>Generation of employment</b>	Moderate over a large part of the country	High and distributed across the country	Very high, but concentrated in the centres
<b>Tourist installations</b>	Variable, without a determinate focus. Lodges, cabins and medium sized hotels	Focus on medium-sized enterprises	Focus on large enterprises, possibly mega-projects
<b>Quality of tourist services</b>	Relatively low	High due to competition between centres	Very high in the centres, and radiating to the rest of the country in the middle term

Characteristic	Current trend	Sustainable centres	Development poles
<b>Type of tourist</b>	Intermediate-low market with general interest in the destination	Intermediate-high market with interest in a combination of nature, adventure, sun and beach	Intermediate market with focus on sun, beach and having fun
<b>Local development</b>	Possibilities of moderate to high	Good possibilities depending on planning in the use of the land	Low
<b>Negative social impact</b>	Moderate	Low in the centres	Moderate to high in the centres and support communities
<b>State effort in marketing</b>	Moderate to high about the destination's image	Moderate to high with image of destination and multi-product	Low Private enterprises assume the main role
<b>Capacity for protecting the environment</b>	Very low because of dispersal and weak capacity for control	Moderate, depending on investment and control in the centre but manageable because of planning	Very high in function of the concentration of impact in very specific areas
<b>Training needs</b>	Moderate and constant.	High in the short term and moderate in the middle term	Low in the centres, with a positive impact in other areas of the country
<b>Multiplier effect in the economy</b>	Moderate and constant	High in the middle term	Low and constant in the centres, but having an indirect effect in other places
<b>Cost of implementation</b>	Low	Moderate	Very high, basically because of public and private investment
<b>Guarantee of expected results</b>	Low	Moderate	High

The strategic planning group which put forward the three scenarios recommended that the most suitable for developing tourism in the country would be scenario 2. Even considering that it would be more costly to implement than the current alternative, it is clear that there are greater possibilities for development. The vision of the future that it embodies is as follows: *The tourist industry will become one of the main driving forces in the economy of the country, generating direct benefits for human development. It will be of high quality and will be distributed all over the country, allowing efficient use to be made of the natural and cultural resources in the different planning units. Enterprises as a whole will be very professional, and while large,*

*middle-sized and small enterprises will co-exist in the different branches of the tourist industry, the main emphasis will be on the small ones. Tourism will be an excellent vehicle for developing the country.*

This kind of scenario would seem to be the most promising choice among the various possibilities for stimulating local development. First, it implies that the different regions would have more balanced access to the opportunities opened up by the tourist industry. Consequently, there would be more chance for them to participate, and the negative social impact would be less. The growth which is largely spontaneous that has taken place in parts of the country's tourist offer tends to perpetuate the differences that already exist, with certain areas already positioned as tourist destinations and other areas not being taken advantage of or missing out on this development. In addition, in some cases this may translate into a negative social impact because the competition to attract visitors could bring about a displacement of traditional activities in the economy and in local culture and societies, and this could cause an effect which is contrary to what was initially sought. Lastly, there is the risk of ruinous duplication between the different initiatives, especially those on a smaller scale.

The problem of disparate development in different regions is also a risk in a strategy which exclusively favours mega-projects. Although these projects could achieve positive results or even be massively successful, the jobs such initiatives generate are usually restricted to a few small areas and even at the local level this option implies the risk of negative social impact. Besides, this kind of development does not generally involve local actors to any significant extent.

On the other hand, the scenario of sustainable development centres is based on social participation and strengthening of local management capacities. It is geared to balanced development in different regions, to planning exercises, and to an increasing power of tourism which not only does not threaten natural resources or the social, economic and cultural characteristics of each area, but in fact takes advantage of them as prime asset.

From the point of view of training strategies there are big differences between this second option and the other two scenarios. Spontaneous development tends to produce a weaker demand for training and segmented in accordance with the scale of the undertakings and the previous level of development in different regions. Demand for training would also tend to be more fragmented, erratic, and of a kind that has to be dealt with urgently because this type of development tends to behave reactively to problems as and when they come up.

The mega-project focus, on the other hand, produces demand from the most concrete investment poles, and this is concentrated in the initial phases of development. The effect on demand for training in other regions that are not involved

is much less. Most of this demand would be oriented to specialised and technical contents and not so much towards developing management and business capacities.

The strategy of sustainable development centres would require continuous training systems that are flexible and diversified so as to be able to cater to different kinds of labour insertion, and demands for a diversity of competencies. While this involves a higher degree of complexity, it would be supported by the intensive use of planning tools, and public and private institutions would necessarily cooperate. Lastly, it would involve a wider and integral vision of the demand for training. Therefore, the whole country and local society would be involved in a kind of tourism which would take advantage of rather than threaten local characteristics and competitive advantages so that the trainees would not only be people directly employed in the tourist industry as such. As well as staff and entrepreneurs in the hotel, catering and tourist agency sectors, there would also be a need to train public employees, the police, transport workers and all those who would have a direct or indirect connection to tourism.

#### **The INA: A strategic asset for a policy of training for the development of tourism in Costa Rica**

The Costa Rican National Training Institute (INA), which was founded in 1965, is a public body with a tripartite management system. It is financed through a specific tax on the gross salary payroll. As a rector institution for vocational training in the country, it gives national coverage and its training offer reaches all sectors of the economy.

INA is organised into five regional and two sub-regional centres.<sup>52</sup> Among other functions, these units identify local needs, programme their training, obtain the packages or courses, contract instructors, discharge the services and issue certificates to the students. The regional units offer the different learning modalities that the institution has.

To carry out their training work the regional units have to coordinate with sectoral bodies which are called nuclei of training and technological services. There are twelve nuclei (see below) which are technically un-concentrated units which facilitate different actors in vocational training working jointly in a specialised area so as to improve quality, productivity and competitiveness in enterprises through training, vocational training and adapting and transferring technology.

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<sup>52</sup> The INA regional centres are Huetar Atlántica, Pacífico Central, Huetar Norte, Chorotega and Brunca. The sub-regional offices are Central Occidental and Central Oriental.

As well as assisting the regional units, the nuclei are authorised to create Specialised Centres which are set up in spaces for research and development, technical assistance and consultancy for enterprises, and interaction between training, work, technology and production.

**The twelve INA Technological Service and Training Nuclei are:**

- **Vehicle Mechanic Nucleus.** Sub-sectors: light vehicle mechanic, heavy vehicle mechanic, agricultural mechanic.
- **Metalworking Nucleus.** Sub-sectors: precision mechanic, industrial maintenance, metallic construction, automobile panel beating and painting, moulding and metal casting and founding.
- **Textile Production Nucleus.** Sub-sectors: textile and industrial garment-making machine mechanic, textile production, industrial garment-making.
- **Hotel and Tourism Nucleus.** Sub-sectors: catering, hotel management, travel agencies.
- **Agricultural Nucleus.** Sub-sectors: zootechny, plant production, irrigation, drainage and soil conservation, agricultural mechanisation, agricultural management.
- **Sea Fishing Nucleus.** Sub-sectors: naval mechanic, fishing, navigation, aquaculture, fishing for sport.
- **Electrical Sector Nucleus.** Sub-sectors: electricity, electro-technical, refrigeration.
- **Foodstuffs Industry Nucleus.** Sub-sectors: baking, conservation of fruit and vegetables, meat processing, processing dairy products, chocolate making.
- **Materials Technology Nucleus.** Sub-sectors: construction industry, design, plastics industry, furniture industry, packing, wrapping and storage of materials.
- **Administration, Commerce and Services Nucleus.** Sub-sectors: marketing and sales, administration, production, advertising, accountancy and finance, computers, image, secretarial management, occupational health, business management, training trainers.
- **Handicrafts Nucleus.** Sub-sectors: shoe-making, cabinet making, leather, made to measure tailoring, handicrafts, hairdressing and beauty.
- **Graphics Industry Nucleus.** Sub-sectors: flexographic printing, pre-printing, offset printing, screen printing.

The need to coordinate the regional bodies and the sectoral nuclei stems from their mutual dependence on training resources. Despite the fact that the centres (except specialised ones) usually depend on the regional offices, the instructors, curricular design and resources for rendering technological services are in the orbit of the nuclei.

This organizational scheme facilitates horizontal coordination in at least two senses. First, it makes possible a national vision in national strategies (nuclei which co-ordinate with different regional offices), and second, regional demands may involve more than one sector (different nuclei co-ordinate among themselves to meet a regional demand).

A far-reaching transformation of institutions was begun in 1994 and the tourism nucleus was set up in 1996 to cater to the expanding tourist sector. Its objective is to seek new vocational training schemes which will provide a suitable response to the growing need for competent staff able to contribute to the productivity and competitiveness of the national tourist sector.

Its objectives involve:

- To establish and to keep constantly up to date a system of standardization, training, and certification of labour competencies for the tourist sector.
- To provide technological services for enterprises in tourist sub-sectors, to improve their productivity and competitiveness.
- To implement a system of guaranteeing quality in the internal and external management of the nucleus.

The tourism nucleus deals with the sub-sectors of hotel management, catering and tourist services. It works in the modalities of initial training (learning and skills), complementary training, dual training and distance training, and it also offers services of certification, the accreditation of training, and technical and technological assistance to enterprises. The main training programmes in the tourism nucleus are given below.

### INA Tourism Nucleus offer of vocational training

#### CATERING SUB-SECTOR

- Hotel assistant chef
- Hotel chef
- Costa Rican Caribbean cooking
- Spanish cooking
- Typical Costa Rican cooking
- Italian cooking
- Grill chef
- Desserts and confectionary
- Cooking for tourist micro-enterprises
- Bar and restaurant service and special events
- Bartender
- Saloon staff
- Tropical fruit-based cocktail service
- Flaming and serving delicacies at the table
- Banquet and buffet organization and set up
- Preparing and serving food and drink on tourist boats
- Serving wines
- Preparation and service of coffee-based beverages
- Table service and client attention
- Bar and restaurant for tourist micro-enterprises
- Bar and restaurant staff

#### HOSTELRY SUB-SECTOR

- Tourist group leader
- Room service
- Management of security department
- Plans and procedures in hotel security
- Laundry services
- Cleaning rooms
- Bellboy
- Hotel receptionist
- Housekeeper
- Table service for tourist micro-enterprises
- Security in tourist enterprises
- Reception for tourist micro-enterprises

#### TOURIST SERVICES SUB-SECTOR

- Tourist guide and driver
- Tourist information
- General tourist guide
- Travel and airline agency
- Regional tourist guide
- Tourist marketing
- Ornithology
- Handling snakes
- Rescuing tourists with ropes
- Tourist guide specialised in plants and mushrooms
- Design and sale of tourist packages
- Dealer techniques
- Jungle survival
- Environment legislation
- Impact of hotels on the environment
- Norms of tourist sustainability
- Ethics for tourist enterprises
- Providing tourist services for the disabled
- Tourist guide for fast water, class I to III

It can be seen that the offer covers a wide range of specialised functions and occupations which, as was mentioned above, in some cases are offered directly by the nucleus and in others as a response to demand from the different regional offices.

However, there is another form of action which is taken when the frame of reference is a specific place or a local initiative. It is here that we can see not only the co-ordination between nuclei and regional offices, but also with other nuclei and other institutions, bodies and organizations that do not belong to the INA.

For example, INA is involved in coordinated action with the Small Donations Programme (PPD) of the United Nations Development Programme. This programme was launched in 1992 and it has financing from the World Environment Fund. It aims at providing financial and technical support for community-based groups and non-governmental organizations to respond to environmental problems. The targets are groups that are taking environmental action that will also improve their conditions of life. Since it was set up, the PPD has financed around 160 projects throughout the country, specially in the conservation field of bio-diversity which includes about forty community eco-tourism initiatives.

The INA has become a great ally of the programme, both through the tourism nucleus and through other nuclei that provide technical support to groups that are undertaking all kinds of initiatives. Thanks to INA, personnel in some of these initiatives are receiving training in areas like Local guides, Client service, Natural History in Costa Rica, tourist geography, conversational English to cater to tourists, tourist information, tourist marketing and catering.

One of those initiatives involves working with the divers of Paquera. These are local fishermen who are worried about the fall in stocks in their fishing grounds, mainly of species that are being over-exploited like lobster. Therefore, the programme has helped them to build artificial reefs to block off areas within which the marine fauna can reproduce, leading to a great increase in productivity per square metre. In addition, in order to complement fishing, they have been trained by INA's sea fishing nucleus as master divers, they have acquired the necessary diving equipment and they are taking tourists down to see the reefs and other parts of the sea bed in the area.

Another example of support is the co-ordination between the tourism nucleus and the Agricultural Nucleus involving the training offer of the former and assistance and training from the latter so as to work on community tourism or eco-tourism initiatives, for example, to conserve native flora and fauna.

When it comes to training and technical assistance, the responses that are 'made to measure' for particular regions or places are rarely in the exclusive prov-

ince of one single nucleus but are a combination of resources and effort from different units.

INA does not merely respond to requests that are made and there are many examples of the organisation taking the lead in its dealings with the private sector or communities, initiating action and calling attention to the need to innovate. This has happened in the management and certification of the quality of tourist services, and in ensuring adherence to safety norms (for instance, in adventure tourism).

Moreover, INA's leadership has spread the concept of accessible tourism, which is geared to attracting tourists with disabilities. The private sector had always seen incorporating innovations and modifying tourist infrastructure as an extra expense and, in view of new legal dispositions, as an imposition. The tourism nucleus has succeeded in demonstrating the economic potential of catering to this niche in the market, therefore Costa Rica has not only consolidated its image as a nature-oriented holiday destination but also as one where tourism is accessible.

However, in attempting to insert its action and resources into the framework of the local development process, one of the problems that INA (like other public bodies) is up against is that municipal administrations were recently created. Taking into account that mayors and councils are usually important allies when it comes to local development, there is likely to be a progressive strengthening of the role of these actors to make them legitimate public organs of local government. The high degree of institutionalisation in the country at all levels is marred by a weak tradition of participation and local management. However, recent studies by the tourism nucleus and the ICT show that this is now changing, and there are many local-based economic initiatives.



## 8. CONCLUSIONS

1. The process of globalisation which nowadays characterises the world demands different responses for different regions and places. Thus, as well as the uniformity which it eventually leads to, there are reactions based on heterogeneous strategies of resistance and adaptation.

The opportunities and the risks involved in globalisation are not evenly distributed around the world. While many enterprises and regions have managed to adapt with great success, the opening of national economies has also laid bare local structures which have little or no capacity to compete in the new environment.

2. Regions and places that have developed strategies for economic insertion in the new global logic deserve special attention. Sometimes these are passive or functional, and at other times they are based on factors that are typical and individual to regions, societies and the local productive network, which open up opportunities to try out different competitiveness strategies.

3. Apart from a historical review of the globalisation process, for some years now it has been clear that there is renewed academic and political interest in understanding how regions and places construct their strategies for economic insertion in the global market. On the academic level, the process starts by questioning the neo-classical focuses, and with the emergence of a new trend in theories of economic growth followed by theories of endogenous development and more recently in the approaches of local economic development (LED).

At the political level, an evaluation of the effects of economic liberalisation has stimulated a focus on regions that have employed original and individual social and productive strategies and have counteracted the most regressive effects of globalisation with great or relative success.

4. There is no single answer to the question of what kind of options are open to enable people, enterprises and regions to successfully insert in the globalised economy through development processes that are sustainable and that generate quality jobs. People, enterprises and regions are very diverse, and this is reflected

in the wide range of strategies that are possible. This is one of the clear differences between traditional development policies and new development strategies at the local level. While the former were oriented according to fixed guidelines so as to be replicated, the latter are always as original and as distinctive as the regions where they are born.

5. The term 'local development strategies' (LEDs) refers to a variety of instruments which, unlike in the traditional centralised development policies, are aimed at getting specific regions to strengthen the comparative advantages that they have. In so doing, these strategies focus more on what are known as 'endogenous' factors such as the local economic network, the human resources in the area, and the local framework of institutions. In short, rather than imposing a system, the aim is to base economic development on the idea that the socio-economic conditions of the place itself should be the foundation.

6. Thus economic development would be a process of growth and structural change in which the forms of organization, the system of relations and the dynamic of learning play strategically important roles. What is more, it would be characterised by the regional dimension, not only due to the spatial effect of the organisational and technological processes involved, but also because of the fact that each place or region is the result of a process in which its institutional, economic and organisational structure has developed.

7. Therefore, regional economic analysis, regarded as a stimulating basis for local economic development strategies, has to take account not only of the presence and structure of economic activity but also of the individual occupational profile of the region. This profile does not only include the sectoral orientation of the labour market, but also the composition by occupational levels (management, supervisors, technicians, professionals, manual workers, service workers, entrepreneurs) and the levels of training in that market (from the most highly qualified and specialised levels to unskilled labour).

It should also be borne in mind that while investment, industries and enterprises move from place to place seeking greater advantages, the labour market is also dynamic. In addition, people choose work, studies and way of life which, even though they might be related to decisions made by industries and enterprises, are based on their motivation and criteria. Consequently, the task of constructing development strategies becomes more complex but opens up greater possibilities for intervention and for modifying current conditions.

8. One characteristic which is not always brought out explicitly but which is always present in theoretical approaches to local economic development has to do with the important role of knowledge. Just as individuals have better opportunities in the labour market when they are better qualified, and just as enter-

prises achieve higher productivity when they are able to use knowledge effectively, so local regions and societies have greater possibilities the more knowledge they have. The availability and quality of human resources are key factors for development in a place or a region since they are affected by the level of productivity of the business system, on regional competitiveness, and on the cultural model in which change and economic growth take place. Hence qualified human resources become strategic assets for improving the competitiveness of a region.

9. We should consider that training strategies can be either offensive or defensive. When they are defensive the objective is to recycle the workforce so as to counteract the loss of jobs. On the other hand, when the strategies are offensive the aim is to train in order to create jobs in such a way that this will increase the region's competitiveness. Therefore, the training of human resources is connected to the region's development strategy itself. One of the lessons learned from specific concentrations of economic activity is that the most successful examples are powerfully and profoundly influenced by corresponding concentrations of experience and qualified labour, by the availability of specialised education and training, and by the way in which the region produces and develops skills and knowledge.

10. The mission of training centres is always defined by the community which they serve. While training centres cannot by themselves create local economic development, they always have a role to play in such processes. Centres can take responsibility for filling gaps in the work market in the regions where they operate.

11. One of the main preoccupations in local economic development strategies has to do with strategies for young people's training and employment. There is no consensus about what the most suitable tools to meet this challenge are. This is partly because the notion of what youth is varies from one region to another depending on social, cultural and economic conditions. However, any local economic development perspective has to take account of characteristics like the average age at which people are incorporated into active life, the average age at which people are inserted into initial educational and training systems, and the age at which young people are expected to begin playing adult roles in the community.

12. In Latin America and the Caribbean, public training and employment policies for young people have gone along with the changes and debates between the different paradigms of social policy. During the development stage, for example through learning programmes, both the content and the methodology of training were determined by the kind of work there was in productive sectors, and specifically in some particular occupations and trades. Up to a point training

could be thought of as a specialised offer, but its framework of reference was universal, the young people were trained as mechanics, carpenters or shoemakers in accordance with the characteristics of those trades and occupations. The specific social and productive context where these young people would apply their knowledge was secondary, and this was reflected in the fact that training programmes were uniform across the country.

13. Subsequent youth training and employment policies differed in that they were not directed in a generic way at any young person. They were designed to cater to the problems of those sectors of the population that had the greatest difficulty in labour insertion, that is to say young people from low income homes, with low levels of schooling, without technical training and with little or no work experience. They were and are programmes which attempted to give specialised and intensive training on courses that lasted for three or four months and which would facilitate labour insertion through work experience and practice in enterprises. Despite trying to focalise on specific groups of young people they continued offering a standardised product even though the providers of education were diversified. The specifications which the programmes could have had individual characteristics in specific regions and their productive network were not incorporated into the design or put into practice.

14. The current trend in employment policies is to change from a benefactor State which implements undifferentiated action to a State which recognises differences and specific characteristics. It is through this kind of grounding of national policies in the local space that it is possible to develop other kinds of alternatives that are constructed in a 'down-up' focus, and which integrate help for groups of young people into more global regional and local development strategies.

15. The local development focus enhances a new configuration in the relationship between the public sector and the private sector, new systems of coordination between the public services themselves, and opportunities for participation and social dialogue.

Thus, for example, training centres are not being thought of exclusively as the local expression of a national vocational training institution, and more as a resource that belongs to the community and to the local productive network. Moreover, places which gave courses that were all designed from the same central point can be gradually transformed into centres for training and other kinds of activities which can respond pertinently and efficaciously to the training and technological development needs of the productive network in a particular region.

16. The experiences presented in this book do not only reflect the current diversity in strategies (which is also a reflection of the diverse configurations

found in the areas they deal with), but also their high degree of complexity. It is no coincidence that we now speak of a 'focus' instead of a 'model'. Before establishing uniform criteria for designing and implementing young people's training and employment strategies that have a local or regional base, what emerges are elements which regardless of their differences allow the diverse experiences to be grouped in a new focus. These elements include (a) that a specific region with its individual social, cultural and economic characteristics is taken as the framework, (b) that a high level of participation and social dialogue is usually involved, (c) that the orientation is towards mobilising local resources and comparative advantages, specially in the field of knowledge, and (d) that the initiatives are framed in more general strategies aimed at enabling local societies to raise their capacity to manage their own development processes.

### **Local Economic Development (LED) in the world**

#### **The Programme of Strategic Alliances for Local Development in Latin America**

[www.desarrollolocal.org](http://www.desarrollolocal.org)

This is a regional undertaking from the Latin American Association of Promotion Organisations (ALOP), which is financed by the Inter-American Foundation (IAF). Its objective is to improve the capacities of civil society organisations in the area of local development.

The Programme is coordinated by the Latin American Centre for Human Economics (CLAEH), and is run by a coordinating committee made up of representatives from ALOP, CLAEH (Uruguay), SUR (Chile) and FUNDE (El Salvador).

What are the objectives of the Programme?

- To make it possible for local development experiences to be put into a system and distributed through a fund that organisations, local governments and NGOs can apply to.
- To create an electronic information system about the resources available for local development and also for actors in the region to share information electronically. The web site has been set up for this purpose and three electronic conferences about local development will be held.
- To implement training with a wide range of activities such as national, border area and regional courses, work experience and counselling.
- To help regional non-governmental organisations to participate in the regional forum for strengthening NGOs institutionally.

#### **CLAEH**

Latin American Centre for Human Economics

[www.claeh.org.uy](http://www.claeh.org.uy)

(This organisation is a member of ALOP)

This non-governmental organisation is an expert in the measurement and assessment of interests and initiatives in Uruguayan civil society.

It does consultancy work mainly in the social area, in the Uruguayan parliament, and in the evaluation and monitoring of public policies and social projects.

It runs six programmes: the local development programme, the bridge programme of training and technical support from small and middle-sized enterprises, the social policy programme, the State and political system programme, and the Integration Programme of Mercosur and the Northeast Region.

### **DESCO**

Centre for Studies and Promotion of Development

[www.desco.org.pe](http://www.desco.org.pe)

(This organisation is a member of ALOP)

Desco is a non-governmental development institution which has been operating in Peruvian civil society for more than 33 years. It works to foster social development and to strengthen capacities in excluded sectors in Peru.

Desco is defined as a private civil association with public objectives, and it has established connections with people's organisations, the main social and political actors and State bodies so as to help to make civil society more able to create development projects.

### **MERCOCIUDADES**

Mercociudades Network

<http://www.mercociudades.org>

The Mercociudades (Merco-cities) Network operates in the Mercosur and associated countries. Since it was set up eight years ago it has been working to make the Mercosur more just and more accessible to the citizens of those countries.

Mercociudades is a horizontal cooperation network that links up 91 cities and is working to promote their insertion into the regional integration process of the Mercosur. It has been growing in importance, both in number of members and exchanging experiences.

**SUR**

Corporation for Social Studies and Education

[www.sitiosur.cl](http://www.sitiosur.cl)

(This organisation is a member of ALOP)

Sur is a private institution which focuses on public concerns. It has ten years of experience working as a consultant to State bodies, and providing studies, assessment, technical support or implementing programmes and social projects to foster production.

The professionals and technicians who work in Sur are specialists in the following areas: citizenship and social development, communications, urban development, local economic development, employment and labour relations, governability and public policies, gender and equal opportunities, public space and citizenship, the environment and participation, identity and local history, social movements, councils and planning, social participation, poverty and social policies, and sexuality and the family.

**CECADE**

Centre of Training and Promotion for Democracy

[www.cecade.org](http://www.cecade.org)

(This organisation is a member of ALOP)

The Centre of Training and Promotion for Democracy (CECADE) is a civil institution whose function is to strengthen civil society and the democratic process in El Salvador. It is a non-profit, academic, scientific institution.

Its mission is to help in the sustainable and integral development of local unions, leaders and communities in areas of institutional influence and interest, and to strengthen the democratic process through education.

### **CESAP**

[www.cesap.org](http://www.cesap.org)

(This organisation is a member of ALOP)

CESAP is a private organisation with popular support that is made up of 27 organisations at the national level which carry out social programmes and projects in settlements, towns, communities and cities. For 25 years it has been working to foster the participation of sectors of the population in the management of their own development and their struggle for welfare.

This organisation is a social and political actor that is profoundly committed to people's action, and it fosters change towards constructing 'a society of all men and all women'.

### **FUNDE**

National Development Foundation

[www.nicarao.apc.org/funde](http://www.nicarao.apc.org/funde)

(This organisation is a member of ALOP)

FUNDE's objectives include promoting a strategy of alternative economic and social development by fostering the participation of civil society, generating mechanisms to coordinate different social sectors to debate economic and social policies and their impact on local council management, and also to foster programmes and projects in the area of sustainable human development.

Its main aims are to make a contribution to research, reflection and debate about regional and local development in El Salvador, and its core is a focus on proposals, participative methodology, and a multi-disciplinary and integral approach that is modern and has nation-wide impact.

**IAF (Funding organisation)**

Inter-American Foundation – Local Development Programme

[www.iaf.gov/index/index\\_en.asp](http://www.iaf.gov/index/index_en.asp)

The Inter-American Foundation (IAF) is an independent American government body that was set up in 1969 as an experimental alternative for foreign aid from the United States to Latin America and the Caribbean. It works with bodies in the public and private sectors to increase aid and mobilise local, national and international resources for grassroots development. The budget of the Foundation consists of funds that are allocated by Congress and by the Fiduciary Fund for Social Progress.

The Inter-American Foundation acts on the principle that local development is a participative process. It tackles and solves various socio-economic problems in a particular region through forging alliances between civil society, local government and the private sector which will lead to sustainable development, improved quality of life for low income groups, and a strengthening of the movement towards democracy throughout the region.

**AECI (Funding organisation)**

Spanish International Co-operation Agency

[www.aeci.es](http://www.aeci.es)

The Spanish International Co-operation Agency (AECI) was set up in November 1988 as the executive arm of the Spanish policy of cooperation for development. It comes under the auspices of the Ministry of Foreign Affairs through the Secretary of State for International Cooperation for Latin America (SECIPI). It is the technical body responsible for the design, execution and management of cooperative projects and programmes. It either does this directly with its own resources or through collaboration (conventions, agreements) with other national and international bodies and non-governmental organisations.

**ALIDE (Funding organisation)**

Latin American Association of Financial Institutions for Development

[www.alide.org.pe](http://www.alide.org.pe)

This is an international non-governmental organisation which represents institutions that finance development in Latin America and the Caribbean. It works to bring cohesion and strength to the role that financial institutions play in economic and social development in the region.

**IDB** (Funding organisation)  
Inter-American Development Bank  
[www.iadb.org](http://www.iadb.org)

The main functions of this institution are to allocate its own capital, the resources it obtains from financial markets and other available funds to finance development in countries that have joined the system. When private capital is not available it complements private investment on reasonable terms, and it provides technical assistance for preparing, financing and implementing development programmes. The Bank's operations cover the whole spectrum of economic and social development. In the past, the Bank put the emphasis on productive sectors like agriculture and industry, physical infrastructure like energy and transport, and social sectors including public health, the environment, education and urban development. Nowadays its priorities include social equity and reducing poverty, modernisation, integration and the environment.

**FOMIN** (Funding organisation)  
Multilateral Investment Fund – Inter-American Development Bank  
[www.iadb.org/fomin](http://www.iadb.org/fomin)

This special Fund, which is administered by the Inter-American Development Bank (IDB), was set up in 1993 to foster the increasingly important role of the private sector in Latin America and the Caribbean. In association with governments, business organisations and non-governmental organisations, FOMIN provides subsidies and technical assistance to contribute to market reforms, to supply special aptitudes and knowledge for the workforce, and to widen financial participation of micro, small and medium-sized enterprises. FOMIN also acts as a catalyst to attract capital to the small enterprise sector, and micro financing with special capital funds in community development, venture capital, technology and business associations, and the promotion of new focuses in environmentalism.

**IDRC (Funding organisation)**

International Development Research Centre  
[www.idrc.ca](http://www.idrc.ca)

The International Development Research Centre is a public corporation set up by the Canadian government to help developing communities in the world to find solutions – through research – to social, economic and environmental problems.

**IULA/CELCADEL (Funding organisation)**

International Union of Local Authorities – Latin American Chapter  
[www.iula.net](http://www.iula.net)

CELCADEL, which was set up in 1983, is the technical executive instrument of the Latin American chapter of IULA (the International Union of Local Authorities). It offers training and technical support, and it does research in local development areas and produces training material oriented to improving the quality of human resources at the municipal level.

**ALOP**

Latin American Association of Promotion Organisations  
[www.alop.or.cr](http://www.alop.or.cr)

ALOP promotes the sharing of experiences among its associated NGOs focusing on preparing alternative development proposals and working to get them implemented.

**DELNET**

[www.itcilo.it/delnet](http://www.itcilo.it/delnet)

This is a programme from the international training centre of the International Labour Organisation (ILO), a specialised agency in the United Nations system. The aim of Delnet is to support local development and de-centralisation processes which are under way in different parts of the world, and to strengthen capacity at the local level through training, information, technical support and networking.

**FISDL**

Social Investment Fund for Local Development - El Salvador

[www.fisdl.gob.sv](http://www.fisdl.gob.sv)

The objective of FISDL is to finance and foster sustainable local development, to strengthen the capacity of local governments and their communities, to implement processes which will allow (in an equitable, participative, co-responsible and transparent way) the effective and efficient use of limited resources to improve opportunities and the quality of life for Salvadorans, specially in the poorest strata.

**(LED) Local Economic Development**

ILO - International Labour Organisation

[www.ilo.org/public/english/employment/intro/led](http://www.ilo.org/public/english/employment/intro/led)

This is a programme of the ILO employment sector in Geneva. Its strategy is oriented to creating decent employment at the local level through social dialogue. It uses local resources and capacities and takes the social and environmental ambit very much into account. Its focus centres on public-private cooperation between local economic actors, workers' and business associations, economic support institutions and NGOs. These associations are usually local economic development agencies.

**Latin American Forum for Best Practices**

[www.habitat-lac.org/habitat-lac](http://www.habitat-lac.org/habitat-lac)

This organisation, which is sponsored by the Spanish government, was set up in 1997. Its mission is to promote the transfer of knowledge about best practices in Latin America. The general objectives of the Forum for the period 1999-2000 were to improve the quality of best practices on the best practices data base, and facilitate their distribution throughout Latin America. The Forum identifies and analyses innovative experiences, and promotes the distribution of this information throughout the region. The Forum is a network of more than sixty organisations including local government agencies, non-governmental organisations, universities, grassroots groups and the private sector, all of which are working to improve the conditions of life.

**MAGNET**

Governability and Development Management Division. United Nations Development Programme – UNDP  
[www.magnet.undp.org](http://www.magnet.undp.org)

This Division supports UNDP efforts to promote good governability in the three areas that are crucial to achieving sustainable human development: the State, the private sector and civil society.

**Public-Private Partnerships for the Urban Environment**

United Nations Development Programme - UNDP  
[www.undp.org/pppue](http://www.undp.org/pppue)

This facility supports the construction of partnerships between governments, private enterprises and civil society so as to unite resources and capacities to confront challenges in the urban environment in the 21<sup>st</sup> century. It supports cities, councils and communities in developing countries in their efforts to improve the quality of life of their citizens through involving the private sector in key environmental services.

**SISCO**

Information Centre  
[www.sisco.or.cr](http://www.sisco.or.cr)

The training area of the Resource Centre for Sustainable Development in Human Settlements in Central America (CERCA) decided to make available the addresses (URL and e-mail) of web sites of a number of study centres, grassroots organisations, documentation centres, etc., that work in the field of local development. The emphasis is on those institutions which have documentation centres or which periodically put useful information on the net.

**UIM**

Latin American Union of City Councils

[www.eurosur.org/CEMCI](http://www.eurosur.org/CEMCI)

The Latin American Union of City Councils (UIM) is an international non-governmental development organisation that is recognised by UNESCO. It is a non-profit organisation with legal status and full powers to act, constituted through an initiative by responsible politicians and technicians in Spanish and Latin American city councils. Its technical office is in the Centre for Municipal Studies and International Cooperation (Cemci).

**UT – LANIC**

University of Texas - Latin American Network Information Service

[www.lanic.utexas.edu](http://www.lanic.utexas.edu)

The objective of LANIC is to provide Latin American users with access to academic data banks and information services available on the internet, and at the same time to offer information from and about Latin America to people all over the world who are interested in this region.

LANIC is the official site of the virtual library's Latin American studies discipline, and it is one of the most visited academic spaces in this World Wide Web Consortium project. It is also a key part of the International Information Systems project that was initiated by the University of Texas.

**Centro Emprende**

[www.centroemprende.com](http://www.centroemprende.com)

A distance training centre for Spanish-speaking entrepreneurs all over the world.

**CESEM**

Municipal Services Centre

[www.serpiente.dgsca.unam.mx/cesem](http://www.serpiente.dgsca.unam.mx/cesem)

Municipal information network. It has listings and links that can be very useful.

**INFODEL**

Local Development Information System

[www.siscom.or.cr/infodel](http://www.siscom.or.cr/infodel)

INFODEL is taking shape as a strategic and operational alliance that aims to unite technical and human efforts to develop a specialised information system for local development (INFODEL).

This is an agreement between the Resource Centre for Human Settlements in Central America (CERCA), the Central American Urban Environment Network (RAU-CA), the Arias Foundation for Peace and Human Progress, and the Sustainable Development Network (SDN-UNDP). It has made the interconnection of complementary initiatives possible.

**ACCESO**

[www.acceso.or.cr](http://www.acceso.or.cr)

Acceso is a non-governmental development organisation that has its headquarters in Costa Rica, and active programmes in Latin America. It offers technical support, training and help in institutional development to local, national and international organisations which share its commitment to equitable, participative and sustainable development.

**CEBEM**

Bolivian Centre of Multi-Disciplinary Studies

[www.cebem.com](http://www.cebem.com)

CEBEM is a non-profit association which conducts multi-disciplinary research in the social science area. It is a private and autonomous social research centre, and it is concerned with reflection and discussion of questions that are important for Bolivian society. It employs multi-disciplinary perspectives and consistent methodological focuses that are spread through publications, seminars and workshops. It works on local development, and it has a virtual information network.

**HUMBOLDT CENTRE**

[www.ibw.com.ni/%7Ehumboldt](http://www.ibw.com.ni/%7Ehumboldt)

The Alexander Von Humboldt Centre is a Nicaraguan non-profit civil association. Its mission is to promote regional development and environmental management, and its main lines of activity are local development and management of the environment.

**CEPRODEL**

Centre for the Promotion of Local Development

[www.nicarao.apc.ni/ceprodel](http://www.nicarao.apc.ni/ceprodel)

CEPRODEL's aim is to establish itself over the next few years as a leading institution in the promotion of local development based on the population's potential, capacity and initiative, so as to influence structural changes in society.

Its objectives are to foster the development of city councils, to contribute to making family survival strategies into self-run productive economies, to help poor communities and families to improve their conditions of housing, employment, services and income, and to foster a sense of self-respect and dignity in poor families.

**DEMUCA**

Foundation for Local Development and Municipal and Institutional Strengthening in Central America and the Caribbean

[www.demuca.or.cr](http://www.demuca.or.cr)

The objective of DEMUCA is to help strengthen the management capacities of local governments as well as political, democratic public management organisations, so as to promote human development.

### **EQUIPO PUEBLO**

[www.equipopueblo.org.mx](http://www.equipopueblo.org.mx)

DECA Equipo Pueblo is a civil association whose mission is to promote alternative social development programmes, integrate public policies and promote good relations in citizens' interaction initiatives to help to construct civil power and foster the culture of citizenship. Its platform includes a commitment to the most excluded social sectors, to play a part in global policy action, to participate in processes and to promote national and local projects, etc.

### **FIADELSO**

International Foundation to Support Local and Social Development  
[www.xarxaneta.org/fiadelso](http://www.xarxaneta.org/fiadelso)

The International Foundation to Support Local and Social Development (FIADELSO) is a private non-profit body which has been set up as a non-governmental development organisation.

### **Impulsa Local Development Foundation**

[www.desarrollolocal.cl](http://www.desarrollolocal.cl)

This foundation aims at offering a service, which is to create a context for information and debate about what is going on in the world of local development. It also aims to facilitate the sharing of experiences, the creation of networks, the search for information and meetings between people involved in the development field.

It has good links to Chilean organizations which can provide inputs that are useful when it comes to undertaking local development projects.

### **IGLOM**

[www.web.iteso.mx/iglom](http://www.web.iteso.mx/iglom)

IGLOM's main objective is to bring together researchers and specialists who, from their various disciplines and analysis perspectives, work to generate knowledge and practices aimed at modernising local governments and at making their relations with local society more democratic.

### **PREVAL**

Programme for Strengthening Regional Capacity to Evaluate Rural Poverty Reduction Projects in Latin America and the Caribbean  
[www.fidamerica.cl](http://www.fidamerica.cl)

PREVAL was born of the need to remedy the problem of the region's limited capacity to evaluate projects. It was recognised that, despite a growing demand for technical support in evaluation, there are few opportunities for training in this field. The organisation has three components: applied research (case studies of interesting evaluation experiences, and the production of methodological manuals and training materials), training (the design and implementation of regional and sub-regional events for specialists in project evaluation and for personnel responsible for the follow-up and evaluation of projects supported by FIDA and by other bodies), and diffusion (production, reproduction, distribution and diffusion by printed or electronic means of material collected or generated by PREVAL). The organisation is also working to consolidate an electronic network that was set up in June 1997 as a space for sharing information and experiences about evaluation.

### **The REDES Programme**

Regional Programme for Social Undertakings  
[www.redes.gov.ar](http://www.redes.gov.ar)

The REDES programme (Regional Programme for Social Undertakings, of the Ministry of Social Development and the Environment of the Republic of Argentina) provides technical and financial support to foster economic and social development in different local communities. The social interest and technological innovation of the productive undertakings make them a key factor in this process because they are a means to promote regional economic development and help to generate employment and raise family incomes.

**REDADEL**

Central American Network of Economic and Social Development Agencies

[www.oit.or.cr](http://www.oit.or.cr)

Fourteen agencies have united to set up a Central American ADEL network. Its headquarters is in El Salvador. The aim is to support regional integration and bring about economies of scale in the field of information, human resources training and financial management. These fourteen ADELs in Central America promote local economic development in different modalities, and this has laid bare the need for structures like the Central American Network that are able to transcend the individual characteristics of each agency. In fact, the aim of the Network is to bring added value to ADEL system, implementing general initiatives for improvement that would be out of reach for one single agency.

**REDEL**

Local Economic Development Network

[www.redel.cl](http://www.redel.cl)

The Local Economic Development Network belongs to the Friedrich Ebert Foundation in Chile. Its mission is to help bring dynamism to local economies in different parts of the country in a framework of social equity, involving small enterprises in development, working towards gender equity and consideration of an environment that yields a good quality of life. To this end it is cooperating with other institutions in constructing a regional network that is able to make strategic agreements aimed at integral development, to produce and distribute methodological tools to bring local actors into the management of development, and to set up spaces for reflection and dialogue that will enable public and private actors to learn.

**REDES**

Salvadorian Foundation for Reconstruction and Development

[www.redes.org](http://www.redes.org)

This is a private, non-profit organisation that provides technical and financial services, and promotes participation from the citizenry and environmental protection so as to contribute to the integral and equitable development of sectors that are socially and economically marginalized.

**RIADEL**

Network of Research and Action in Local Development

[www.cebem.com](http://www.cebem.com)

The main objective of RIADEL is to foster the sharing of information about local development. It is available to researchers, trainers, politicians, local authorities and those who implement public policies and programmes in the area of local development. RIADEL sprang from an initiative by a group of Latin American study centres, NGOs, universities and government bodies, in response to the need to coordinate and systematize work being done in the sphere of local development. This work includes research on decentralisation and local government, poverty and equity, social movements and participation, and the training of social leaders and public employees in subjects like education, the formulation and evaluation of projects, planning, and also intervention in local development projects that range from community workshops to municipal participative planning.



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