THE INNOVATION AND KNOWLEDGE HUB: THE DEVELOPMENT OF THE GUANAJUATO SCIENCE AND TECHNOLOGY PARK

DR. EMETERIO GUEVARA RAMOS, MA. DOMINGO HERRERA GONZALEZ GUANAJUATO SCIENCE AND TECHNOLOGY PARK - Mexico

A. THE KNOWLEDGE ECONOMY

For the last two hundred years, neo-classical economics has recognized only two factors of production: labor and capital. This is started to change in the earlier nineties. In our days, information and knowledge are replacing capital and energy as the primary wealth-creating assets, just as the latter two replaced land and labor 200 years ago. Additionally, technological developments in the 20th century have transformed in the 21st century the majority of wealth-creating work from physically-based to "knowledge-based". Technology and knowledge are now the key factors of production. We are now an information society in a knowledge economy where knowledge management is essential. For countries in the vanguard of the world economy, the balance between knowledge and resources has shifted so far towards the former that knowledge has become perhaps the most important factor determining the standard of living - more than land, than tools, than labour. Today's most technologically advanced economies are truly knowledge-based.

1. Enhancing human capital is critical for GDP growth

But sustained GDP growth doesn't just happen. In order to make investments in technology, a country must have sufficient human capital. Human capital is the formal education, training and on-the-job learning embodied in the workforce.

The knowledge economy is a knowledge-driven economy one in which the generation and exploitation of knowledge play the predominant part in the creation of wealth. In the industrial era, wealth was created by using machines to replace human labour.

Knowledge workers are defined as "symbolic analysts", workers who manipulate symbols rather than machines. They include architects and bank workers, fashion designers and pharmaceutical researchers, teachers and policy analysts. In advanced economies such as the US, more than 60 per cent of workers are knowledge workers.

2. The Importance of Intellectual Capital

Intellectual capital is a firm's source of competitive advantage. To become knowledge driven, companies must learn how to recognise changes in intellectual capital in the worth of their business and ultimately in their balance sheets. A firm's intellectual capital - employees' knowledge, brainpower, know-how, and processes, as well as their ability to continuously improve those processes - is a source of competitive advantage. But there is now considerable evidence that the intangible component of the value of high technology and service firms far outweighs the tangible values of its physical assets, such as buildings or equipment. The physical assets of a firm such as Microsoft, for example, are a tiny proportion of its market capitalisation. The difference is its intellectual capital.

3. Lessons for Mexico and Guanajuato

a. Our people are a source of competitive advantage

Mexican companies need to better understand and use the concept of intellectual capital. They need to look at their products, processes and people, and assess and augment the amount of knowledge they

possess. They must unlock the value of their hidden assets, such as the talents of their employees, the loyalty of their customers, and the collective knowledge embodied in their systems, processes, and culture. They must learn how to turn their unmapped, untapped knowledge into a source of competitive advantage.

b. Mexico at the centres of the global economy

In this new view, Mexico is at the centre of the world. Our white-collar workers can compete on price and quality with those in London or California. Mexico will be able to retain graduates who until now have emigrated in search of higher salaries. ICT will enable Mexico not only to overthrow the tyranny of distance but also to mitigate the disadvantages of our low population density in the north and south zone.

Many countries around the globe are racing to prepare themselves for electronic commerce and the emerging knowledge economy. Nations respond to this new environment in different ways, as a consequence of their different cultures, national priorities, economic status, size, geography and population. No one model is perfectly transferable to Mexico yet themes and patterns emerge.

c. All developed nations are our competitors

One of the defining characteristics of the knowledge economy is that it is truly global. Markets are no longer defined by, or limited to, national boundaries. In the past we have tended to construe our competition in straightforward terms: China competes with us in terms of electronic equipment, shoes and textiles or Brazil in car industry. The global nature of the knowledge economy changes the dynamics of competition. In the education market, for instance, Mexico's competitors are found around the world. In consequence, here the term "competitor" is used broadly, to include all developed nations with knowledge economy strategies.

4. Education

a. Learning impacts on earnings

Thirty years ago, Spain, Singapore, Hong Kong, Taiwan and South Korea were all lowincome economies like Mexico. How have they managed to bridge the income gap that once separated them from Mexico and the rest of the OECD? What has made the difference? Economists now believe it wasn't that these countries were working harder, they were working smarter. All five invested heavily in education and training. These were the countries where parents encouraged their children into science and technology.

b. Champion the Development of a Knowledge Economy in Mexico

The vision of the knowledge economy, and the imperative for Mexico to become one, must be stated and restated by all our leaders, so that everyone understands the challenge we face. In addition, the government must:

- ensure that it has a specific strategy for advancing Mexico's progress towards becoming a knowledge economy, and determine the most effective public sector structure to ensure progress is well co-ordinated
- educate citizens on the nature of the knowledge economy
- establish and maintain the legal and regulatory frameworks for an information-based economy
- encourage private investment in knowledge industries, and encourage an innovation market to provide local sources of venture capital
- promote participation in international information society initiatives
- review immigration policy to attract both permanent and temporary migrants with the right qualifications and experience for the knowledge economy
- support the creation of high-tech incubators for small and medium enterprises
- review our tax regime to ensure that there are no barriers to private investment in R&D.

5. A Culture of Innovation

Innovation needs a receptive culture, what makes some places of the world more conducive to innovation and job-creation than others? No amount of R&D and education will suffice unless there is a receptive culture. Culture does matter. Change-oriented, risk-loving cultures such as Mexico would seem to have an advantage over conservative, risk-averse cultures such as Germany. The uptake of new technologies in Mexico is more rapid and extensive than in conservative cultures.

6. Importance and definition of Infrastructure

If education is on the roots of the new knowledge economy, it is also true the importance of infrastructure to nurture it. The definition adopted here focuses on the *services* provided by the physical networks or "infrastructure systems" associated with energy (gas, thermal, and water-based), water supply, transport, telecommunications, sanitation and waste facilities, and flood protection and drainage.

This could be summarised in the following statement: "sound macroeconomic policy setting is a key ingredient for sustainable, long-term growth". Investment in human, physical and knowledge capital is identified as the key driver of economic growth and macroeconomic policies (including price stability / inflation control, structure of tax system, facilitation of international trade and growth, procompetitive regulations, facilitating the entry of innovative firms, facilitating the skills and education of the existing and potential workforce, encouraging R&D investment, removing barriers to network access) are found to facilitate this investment.

B. THE INNOVATION AND KNOWLEDGE HUB

Guanajuato is facing a new, exceptional challenge that is the implementation of the most ambitious project in the American Continent: the Guanajuato innovation and knowledge hub. It has a goal of utilize the potential, manifested in the entrepreneurial spirit of inhabitants and the strength of Guanajuato economy and science, to improve competitiveness of the region in relation to other regions of Mexico and the world.

Work on the Innovation and Knowledge Strategy gave us an understanding that functioning on competitive markets depends on the potential of an economy to create and implement innovations.

This project does not guarantee Guanajuato automatically entering the path of innovation-based development. However, we are strongly convinced that highlighting the main direction of development will help devise and implement measures to strengthen the potential of small and medium sized companies to introduce new techniques, technologies and organizational solutions, as well as allow utilizing the intellectual and economic potential of Guanajuato.

A innovation project of such size required cooperation of various social and economic partners, mobilizing social capital, contribution of most important actors of innovation in the region, including Guanajuato institutions of higher education, research and development institutions, regional development agencies, chambers of commerce and industry, companies, NGO's and government.

We are looking for solutions pertaining to: innovation needs of the companies in the region, the education and research system supply, strengthening links between science and industry, availability and quality of financial services, technology transfer and enhancing development in the industrial corridor, which could intensify economic exchange.

Implementation of the Strategy should facilitate economic development in the state and suitable utilization of the existing potential. Additionally, it helps to understand that the wealthiest regions of Mexico, those which give their inhabitants a high living standard, base their development on innovation.

1. Guanajuato highlights

Background

Guanajuato is a region with strong traditions of sound economy and entrepreneurship, with large human and economic potential, which guarantee sustained, competitive development and a high position between other Mexican regions.

To increase the upward spiral in the Guanajuato region, the federal and the state government have formulated a broad strategy, aiming on the one hand to increase the region's value added for the national economy, and on the other to widen the economic base. In that light, GSTP -project was an eminent opportunity to point out unexploited chances and find new leads for the region's innovation policy.

The industrial corridor in the state comprises five cities (Leon, Guanajuato, Silao, Irapuato, Salamanca and Celaya, See map) with a total of approximately four million residents, and the total state's population goes to five millions. In the Industrial Corridor have been established seventeen universities, eleven institutes of technology, twenty one institutes of higher education and thirty two research centers. Like in other states, in Guanajuato state there are diverse regional and national agencies and organizations involved in science, technological and innovative activities. The longest distance between cities is 115 kilometers. This area is what we call "The Innovation and Knowledge Hub".

Since the beginning of this transformation, Guanajuato is characterized by relatively high dynamics of entrepreneurship, in particular in the SME sector.

The innovation sources such as higher education institutions and research institutes are not widely used by the companies of Guanajuato. The above indicates that on the one hand the offer of these institutions has not been tailored to the needs of enterprises and, on the other hand, there are no contacts between companies and the R&D sector.

The enterprises in the industrial corridor are capable of diagnosing and adjusting to such factors of the business environment as price changes on the market, customer preferences or the actions of the closest competition.

The state government has for some time been giving substance and form to the necessary economic renewal. Some promising clusters in the region have been selected, clusters that have the potential to extend the region's economic base and innovative capacity. Efforts are made to stimulate and strengthen these clusters as much as possible, priority being given to renewal and innovation. The government's task is to be predominantly that of director and broker of innovation processes.

The innovative and knowledge hub has as aim to utilize the state of the art knowledge to relate the different projects that already are taken place. There is a unique alliance of research centers, universities, local government and private sector to be one of the most competitive regions in the world. The idea that roots all the actions is to encourage active collaboration between the actors who play a major role and promote the exchange of ideas and expertise to further scientific development and application in the real world. This exceptional environment fuels the dynamic required by innovations.

The significance of innovations is growing continuously. They are important to the success of countries, regions, and products. Innovations are the golden fiber that runs through a knowledge-driven economy.

The location and close proximity with the major market in the world; United States, is another attractive feature of the polygon. As one of the 15 largest science parks areas in the world, the strength is our motivation to be one of the three largest hubs and development locations in the American continent.

The research centers located in the polygon spans life sciences, including genomics. Bioinformatics, animal heath, microelectronics, nanotechnology, bioinformatics, new materials, etc.

Guanajuato innovation strategy covers areas such as attracting international research and expertise, reinforcing clusters, innovation in public services, and support to innovative activities.

Guanajuato state is one of the seven Mexican states who attract more foreign investment (Mexico City, Mexico state, Nuevo Leon, Baja California and Coahuila). The industrial corridor has been chosen for more than ten industries from the "Fortune 100" to establish operational plants. Names such as Motorola, General Motors, Mabe, Flextronics, General Electrics, Green Giant, Del Monte, Danone, Movistar, Microsoft and others can be founding the corridor.

While the Industrial Corridor has made substantial basic investment in its innovation system, infrastructure, training and development of its workers, still require fine-tuning. This call for new collaboration and social innovation, individual research teams to be a complement to the efforts made by the government to success in this complex world.

This highly developed area known as the Industrial Corridor crosses the state from East to West. In this central region investments are sought which can consolidate and modernize infrastructure and the industrial base already in existence.



OUTSTANDING ASPECTS

- Guanajuato is Mexico's seventh largest state economy.
- More than 50% of Mexico's population is to be found within a 250-mile radius of Guanajuato.
- Recently Guanajuato has attracted \$4.9 billion dollars in inward investment.
- 12 Fortune 500 companies have plants in Guanajuato.
- Guanajuato is first place countrywide in terms of technology R&D centers.
- Guanajuato is the country's largest producer of Footwear, Leather Goods, Broccoli, Garlic, Onions and Strawberries; it is also a major producer of pigs, fertilizers and petrochemicals, and becoming one of the most important manufacturers of automobiles and auto-parts and machinery.

C. THE INNOVATION AND KNOWLEDGE HUB

Worldwide, science and technology parks are seen as the second generation of industrial parks. The fundamental reason behind the establishment of the Guanajuato Science & Technology Park (GSTP) is the need to generate new ideas via cross-fertilization between scientific disciplines, utilizing the rich existing scientific infrastructure already in Guanajuato. There are 44 Research Institutes in Guanajuato, a number of them acclaimed internationally.

The Innovation and Knowledge Hub is a strategic Mega project that includes several projects located in the Industrial Corridor of Bajio characterized by buoyant industrial activities: automobile, agro-industry, Oil chemistry, leather, and textiles. Also there is a high inter-attractively between the cities. One of this project is The Guanajuato Science and Technology Park, others are:

1. The Rapid Mass Inter City Transit Train. (TRIG in Spanish) Investment-1110 Millions

(All figures in US dollar). Status: construction begins in January of 2007.

The objective is the Integration of a rapid mass transit system to link the major cities of the industrial corridor Guanajuato, Mexico; Minority participation of the government in the concessionaire corporation.

The objectives of the

system capable to transport people from Celaya to Leon and the cities in between with 17

stations located in

investment of 1100 millions US dollars.

corridor

To build and to operate a Rapid Mass Transit

strategic points along the industrial corridor with an

To offer to the users the same price of a bus and to detonate the others

projects in the industrial

project are:



The TRIG will facilitate the accessibility of man power from all the corridor cities to the industrial and scientific parks located there. Also it will generate new jobs and it will aloud to save time to users.

TRIG System Components Light rail system

170 km, overlapping lines;

22 stations;

72 cars (Experienced technology, 4th generation on Sintra Line, Lisboa Portugal);

2. Highway Master plan Project Location: Across the State. Investment-210 millions

Project Background

The Highway Master plan encompasses the construction and subsequent licensing of highways of major strategic importance. These highways would allow quick and reliable access to the state's principal cities, and likewise communication with strategic locations throughout the state.

The highways conceived in this plan are closely connected to the state's and country's business activities, as they cross and connect zones of mayor vehicular and freight traffic, as for instance the Moroleón-San Luis de la Paz Highway. In December 2006, will be the opening of a six lanes road linking the industrial corridor.

3. THE INLAND PORT: Investment, 740 millions

Physical infrastructure is undoubtedly one of the most important factors in economic and social development. In addition to marking possible and sustaining the range of activities in witch the population are engaged, physical infrastructure is today one of the defining variables in a region's ability to attract productive investment and hence generate new sources of employment.

In this respect, the last 20 years of the century have provided two major lessons for Mexico and other countries in Latin America. The first of these is that in a period of serious economic crisis, such as that experienced in Latin America in this the end of the 20th century, it has been these countries that are best endowed in terms of highways, airports, maritime ports, transport systems, industrial parks, gas pipelines, and so on, that have proved best able to overcome that crisis and in a shorter time period.

The second lesson of the last few years, also learned as a result of the economic crisis, is that it is now impossible to look upon national state and municipal governments as the sole providers of the infrastructure goods and services required by peoples and companies.

Today, it is essential that projects be developed that favor join venture between the public and private sectors in the funding, construction, running and maintenance of infrastructure. This would, on the one hand, require far-reaching conceptual, institutional and legal changes, while on the other, the establishment of a framework of mutual trust, common objectives and a guarantee of continuity between the two sectors.

During the administrations of Governors Vicente Fox (1994-1999) and Juan Carlos Romero Hicks (2000-2006), the Government of the State of Guanajuato has made a diligent attempt to conceive, plan, design and undertake a range of major infrastructure projects aimed at placing Guanajuato on the threshold of a new era of development.

Of particular interest amongst these projects is Guanajuato Inland Port, the planning, design and technical analysis of which have already taken place and now give way to a period of promotion before the public potential invertors.

Considered one of the Latin American and country's most innovative projects, Guanajuato Inland Port seeks to endow the state and the central region of the Bajio lowlands with a concentration of infrastructure for the production, storage and transportation by a range of means, of domestic and international merchandise. To this end, it proposes the creation of air cargo rail freight and customs facilities, warehouses and the location of high technology industrial plants in the area surrounding Guanajuato International Airport.

Particularly noteworthy in the series of infrastructure projects that make up the Inland Port, is "Guanajuato Customhouse", a fundamental element of the project which, in addition to providing an important service to the region's importing and exporting firms, represents a great step forward in the State's goal of making Guanajuato a primary center in Mexico's International trade.

In the Guanajuato Inland Port project the State Government sees itself playing an instigating or promoting role, through the acquisition of the necessary land and the provision of the roads and urban services required for its realization. In each case, it will create the relevant legal structure in the form of a trust, to allow private investment to be incorporated into each development stage.

The general plan consists of attracting private investment throughout the stages of the project, such that the State Government's initial investment, made in instigating the project, will be recovered. Its role of partner will continue only so long as is required to ensure the consolidation of the project and the social and economic goals outlined therein.

One motivating force behind the projects here mentioned has been the solid support given by Governor Vicente Fox and Juan Carlos Romero Hicks, who since the beginning saw in these projects the possibility to help ensure a promising future for Guanajuato.

Guanajuato Inland Port is the result of long hours of work and discussion undertaken by a multidisciplinary technical team made up of government employees and external consultants (from UK, Canada, Australia, Japan, United States, Spain, France and Germany) alike, under my team coordination. It is essentially the ideas of this group that have come together to form the substance of this project, both in the urban planning and architectural aspects and in the legal, financial, social and political aspects that necessarily coincide in projects of this nature and scale.

Guanajuato Inland Port is an ambitious mega project promoted by the Government of the State of Guanajuato that involves both public and privates investment, as part of its efforts to consolidate the state as a prime center of importance in the production, transportation and international commercialization of industrial and agro-industrial products.

In general terms, Guanajuato Inland Port will capitalize on the state's geographically strategic position, as well as its existing infrastructure of roads, airports and railways, so as to provide similar facilities to those of a maritime port at the very center of the country and the industrial region of the Bajio lowlands.

Guanajuato Inland Port seeks to generate within the state, a technologically advanced complex whose infrastructure provides for the industrial production, multimodal transportation and commercialization of domestic as well as international goods.

By developing and taking advantages of the existing air, rail and highway infrastructure in the state, Guanajuato Inland Port makes up for the state's lack of coastline, combining the existing infrastructure and that yet to be build in a unique and collaborative system, hitherto unseen in this country.

GENERAL ECONOMIC BACKGROUND TO THE PROJECT

Similarly, Mexico's joining the North American trading block, formalized with the signing of the North American Free Trade Agreement (NAFTA), and its consolidation as the US's third most important trade partner, have reinforced the strategic importance of Guanajuato and the Bajio as ideal sites from which multinational firms can take advantages of the thriving markets to which NAFTA has given.

During the last decade, the region has developed a strong automobile production sector with a number of important companies, such as General Motors in Guanajuato and Nissan in Aguascalientes, choosing to set up assembly pants. Furthermore, there has been a significant increase in the number of electronics companies establishing (maquila) assembly plants in the region and the arrival of leading agro-industrial firms.

The State Government.

Guanajuato Inland Port is by no means an isolated project. Indeed it is a direct result of the main courses of action of the strategic planning for the socioeconomic development of the state, as defined in the Government plan 2000-2025, the document that sets out the aims of the state administration headed by Governor Juan Carlos Romero Hicks.

Furthermore, Guanajuato Inland Port is intrinsically linked to the strengthening of international trade and the effort to secure a growing rate of productive investment in the state, clearly outlined as two of the principal work areas of the State Government within the so-called "Economic Policy for Guanajuato".

Given its effect on the urban and rural layout of the state of Guanajuato, Guanajuato Inland Port, also falls within the state's Government Urban and Regional Development Plan, representing an express part of the general strategy of creating self-sufficient centers of economic development and population concentration that allow the growth of the state's principal cities to be controlled and reduced.

For all these reasons, Guanajuato Inland Port is a project which is fully backed by the various bodies that make up the State Government, and has been take up by the Governor of the State as one of the principal strategic projects, as well as by the Department of Urban Development and Public Works, the Department of Economic Development, the Department of Planning and Finance and the Department of Government amongst others.

Guanajuato Inland Port will, on completion, cover an area of approximately 3500 hectares/ 8649 acres.

The Inland Port development is to be situated in the area surrounding Guanajuato International Airport, on a site close to the General Motors assembly plant and the city of Silao, in the municipality of the same name.

This places Guanajuato Inland Port within a short distance, an average of 60km/37 miles of the city of Leon the state's principal urban industrial center, and the city of Irapuato, a major textile and agroindustrial center. It lies situated near the city of Guanajuato, capital of the state and a university town that is a center of scientific and technological research.

Furthermore, the position of the Port places it at exact point where the Carretera Federal 45 highway, the Pacifico Norte railway and the International Airport facilities converge.

It is also worth pointing out that the Port's location means it will take in within a 250 km/155 miles radius, all the major cities of Guanajuato's industrial corridor and the Bajio, including the neighboring states of San Luis Potosi, Queretaro and Aguascalientes.

Finally, it should be mentioned that the Inland Port will lie just 401 km/342 miles from the maritime port of Manzanillo and will be connected to the centers via its modern network of highways and railways.

BACKGROUND AND SIMILAR PROJECT

Until now, there have been no such projects as Guanajuato Inland Port in any part of Mexico. The development of genuine inland port is unheard of in this country, though there have been partial developments, consisting of multimodal rail terminals linked to a certain extent to main highways or local airports. The rail terminal being developed in San Luis Potosi and the rail freight multimodal near the city of Queretaro are example of these.

On a international level, two previous projects have played an important role in the design of Guanajuato Inland Port: the Alliance Inland Port, on the outskirts of Dallas, Texas and San Antonio Inland Port, which grew out of Kelly Air Base in San Antonio Texas. In fact, as a major factor in its development and commercialization strategy, Guanajuato Inland Port plans to establish agreements with these Texan ports, in an effort to form trade links.

With regard to the high-technology industrial park, one the principal elements of Guanajuato Inland Port, this too is considered completely innovative in Mexico. The park is based on the "Technopolis", built in Europe in the sixties, notably in France with its Sophia Antipolis industrial park, and which subsequently spread to the US and Asia, where they became the most advanced model for future industrial parks.

CONCEPTUAL FRAMEWORK OF THE PROJECT

In conceptual terms, Guanajuato Inland Port is made up of five main elements, independent in terms of their specific administration, though at the same time closely inter-related in their operations. These five main elements are:

- a) Guanajuato International Airport.
- b) A Multimodal Cargo Terminal.
- c) A High-Technology and Science Park.
- d) A General Services Zone.
- e) The Guanajuato Customhouse Facilities.
- a) Guanajuato International Airport, equipped with additional infrastructure for the handling of airfreight.
- b) A Multimodal Cargo Terminal for rail and road freight.
- c) A High-Technology Industrial Park (Technopolis): this will function independently within the Interior Port and is to be equipped with the necessary services to allow the installation of medium and high-technology industries. Based on the concept of modular construction, which will allow it to grow in stages; the project's design will meet International Standards Organization specifications ISO 9000 and ISO 14000.

- d) A General Services. Commercial Activities and Corporate Buildings Zone. Commercial, recreational, administrative and financial support services and services in general. For use by the neighboring populations of Silao and Leon, as well as by the Port community itself.
- e) The Guanajuato Customhouse Facilities and the adjacent Fiscal Warehouse.

MASTER PLAN OF THE PORT

The Master Plan for Guanajuato Inland Port sets out geographically five main elements that correspond to the five conceptual elements; these are inter-related in their operations, but located in independent well-defined locations.

At the heart of the master plan is Guanajuato International Airport, and includes a new area to eh northeast where the air-cargo terminal will be situated.

To the northeast of the airport lies the second of the principal elements, that is, the multimodal cargo terminal for rail and road freight, with a center specializing in the distribution of automotive products.

The industrial park will be developed around the two central elements and will include specific areas for large, medium and small companies, as well as, the commercial and corporate area, the latter bordering the Carretera 45 highway.

ZONIFICACION REGIONS

- Air transport service.
- Industrial complex.
- Road transport terminal.
- Rail Intermodal transport terminal.
- "Principal services of the port.
- Area reserved for industrial.
- Natural reserve area.

So far there have been no similar projects in Mexico.

Guanajuato Inland Port will be a link between not only the State of Guanajuato and the rest of the country; but also with similar inland port project in the rest of the world, particularly those in the state of Texas, USA, Alliance Inland Port in Dallas Texas.

An important fact in the market evaluating the project is that nearly 70% of the foreign trade between NAFTA countries crosses the Mexican border via Texas.

As a result, the market for the project is divided into three sectors, which are currently under analysis:

a).- The international sector, consisting of multinational companies with an interest in producing and/or distributing their products in Mexico, and capitalizing on the advantages of operating in North American Free Trade Agreement (NAFTA) country.

b). - The national sector, consisting of domestic companies involved in international trade.

c). - The regional/state sector, also made up of companies involved international trade, or the provision of parts to large companies.

It is worth pointing out that, give its characteristic and components, the project takes in a market that includes not just industrial enterprises, but also commercial freight, parcel and tourist services, as well as financial and professional services.

Guanajuato Customhouse, which as already mentioned is considered a fundamental component of the Port, will be incorporated at this stage.

b) The second stage involves the acquisition and development of 1,362 hectares/3,366 acres, on which the Multimodal Rail Terminal is to be built, along with the central section of the High-Technology Industrial Park.

Similarly, the air services area, to the north of the airport runway, and the commercial, tourist and corporate services area, located along the Carretera 45 highway are also incorporated into this stage. This development stage will take between 7 and 10 years.

c) Lastly, the third stage includes the development of 1,972 hectares/4,873 acres of land reserved for the remainder of the Technology and Science Park. This would commence some time after the tenth year of the Port project and would complete the total of 3,500 hectares/8,649 acres that make up the entire Port.



Guanajuato INLAND PORT

THE GUANAJUATO LAND PORT HAS FIVE ELEMENTS:



a. An Inland Port Bajio Airfreight Terminal

The Guanajuato International Airport is located between the city of León and the town of Silao, and is close to Irapuato and Guanajuato.

With the enormous growth in exports, there is now a clear need for a major airfreight center, serving the needs not only of exporters within Guanajuato, but also from the surrounding states, and those further a field. México City lies within a 200-mile radius of the proposed airfreight center.

Project Description

The construction of a modern airfreight center meeting international criteria will let to Guanajuato to take advantage as far as this project is concerned, given that the state's altitude is ideal for aircraft carrying freight.

The Inland Port includes five elements –an interior customs, a freight truck and train terminal, an air freight terminal, a services zone and a industrial zone which includes the Guanajuato Science and Technology Park and its development is taking place in 2672 Ha.



The GSTP Leon site is part of the Inland Port. In the first phase will occupy 221 ha. There is a reserve of 300 for future growth.

b. ACCESS AND CUSTOMHOUSE



CUSTOMHOUSE OPENING MAY 17, 2006

The interior customshouse was built in an area of 31 ha. In this way all the products can go directly to any country who hold FTA with Mexico (47 Countries).

All the products manufactured in the GSTP will take advantage of this free economic area.





This is the building inaugurated last may and now fully operational. Arranged have been made with USA and Canada to build customhouses from these countries and alleviate traffic congestion in their borders.

c. THE SERVICES ZONE



The services zone is located in an area of 50 ha. of public property. Additional 350 ha. are private development where hotels, business centers, gas stations and commercial developments will be located. d. THE IN BOND TERMINAL -OPENING MAY 2007



e. THE RAILWAY FREIGTH TERMINAL-OPENING SEPTEMBER 2006. Investment- 124 millions



The in land port offers the possibility to attract and distribute freight by truck, airplane and railways. There is a terminal to exchange containers

Following with the Hub projects the next is the International Business Center.

MASTER PLAN



The master plan includes the following zones:

- 1. Incubators zone
- 2. Base technology enterprises zone
- 3. Research institutes zone
- 4. Research institutes in alternative energy
- 5. Housing zone
- 6. Recreational zone
- 7. Educational institutions zone

IASP Asian Divisions Conference, ASPA 10th Annual Conference, 3rd Iranian National Conference on Science and Technology Parks, 17 - 19 September 2006, Isfahan, IRAN