

STRATEGIC PLANNING FOR ECONOMIC DEVELOPMENT BASED ON HIGH TECHNOLOGY: THE PUERTO RICO EXPERIENCE

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Abstract ^¾ Since early 2001 a group of industry, government and academia representatives have been working together to develop a strategy to enhance Puerto Rico's economy based on high technology. This paper describes the process of developing and the elements of the Puerto Rico TechnoEconomic Corridor, or prtec, the vision, goals and major strategies.

Index Terms ^¾ economic development, role of government, academia and industry, high technology

and particularly attractive environment that promotes innovation, development and commercialization in the new global economy.

For attaining its goals, the participating public and private organizations have created a non for profit organization: prtec. The Board of Directors of PRTEC is composed by high ranking officials from the Commonwealth of Puerto Rico, the University of Puerto Rico, the major trade associations in the Island and some of largest manufacturing companies operating in the region.

BACKGROUND

The Puerto Rico Policy of Science and Technology of Puerto Rico (PC&T) is based on a commissioned study of the company Arthur D. Little (ADL) in June of 1997. Among other things, this study recommended to the governmental sector to invest in the establishment of technological parks, as part of a directed strategy to focus the economic activity of the Island on research, development and commercialization of products of high added value and innovative technologies. Taking advantage of the recognized productivity the manufacturing sector and opportunities brought forth by the knowledge economy, a group of government, industry and academia representatives initiated a dialogue to advance Puerto Rico position as a preferred jurisdiction to do business.

The first idea to develop a technology corridor in Puerto Rico occurred during December of 2000, when the Chancellor of the University of Puerto Rico, Mayagüez Campus and a group of industrials met. Since January of 2001, the work group met frequently and elaborated a first draft of a strategic plan to establish the Puerto Rico TechnoEconomic Corridor (prtec). Industrial Development officials were also invited to participate at this stage.

What is PRTEC?

Initially established in the western part of this Caribbean Island, the Puerto Rico Technoeconomic Corridor is a conglomerate of public and private entities with common economic and social interests, aiming towards facilitating Puerto Rico's economic development, with particular emphasis in commercializing new and innovative technologies. This group is focused on providing an ideal

WHAT PRTEC OFFERS?

Puerto Rico's west coast has a unique combination of elements that makes it not only an excellent place for doing business, but a great area to live. In this side of the island you will find two of the most powerful business alliances in the Caribbean: the Computer and Information Technology Cluster and the Medical Devices Cluster. Both part of the Puerto Rico Technology Corridor Initiative, these clusters are associations of entities with common or related objectives, needs, products, processes and services; working together to promote and develop its respective enterprises, and to create new business opportunities in the region.

Members of the Computer & Information Technology Cluster are: Hewlett Packard, Sensormatic, MSL, TNT Logistics, Caribe GE, PCB Horizon Tech, Western Manufacturing, TechnoPlastics, NYPRO, Management



Hewlett Packard, anchor tenant C&IT Cluster

Search and Support Services, Motorola, Puerto Rico Storage

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and Distribution, EMS and Smart Modular Technologies/Solectron. The Medical Devices Cluster is composed by the following companies: Allergan Surgical, Jostra, Edwards Lifesciences, Thermometrics de Puerto Rico, Allegiance, Surgical Specialties Puerto Rico, Baxter Fenwall, Bbraun, Loctite, OMJ, Lifescan and Heyer Schultze.

Actually, the clusters are identifying common needs in different areas of service. As they complete their assessments, they will start to invite existing companies to join them, and/or will promote the creation of new enterprises to meet those needs.

At the same time, there are other clusters in the making. Pharmaceutical industries, mainly located in the north side of Puerto Rico, recently announced their decision to participate in this initiative, and organized their cluster. Other important sectors, such as Tourism and e-business companies had expressed their interest in joining PRTEC, regardless their location.

In terms of physical infrastructure to support business activities, PRTEC is working closely with the Commonwealth of Puerto Rico in promoting two of the most important infrastructure projects in the Caribbean: the development of Rafael Hernandez Airport in Aguadilla and the Port of the Americas at the southwestern side of the Island. These projects, along with major improvements to the regional highway system, will make the area served by PRTEC one of the most efficient in the world for import and export activities.

Other competitive advantage PRTEC offers is the academic and research capabilities of the University of Puerto Rico at Mayagüez. With one of the largest engineering schools in the United States jurisdiction, UPR-Mayagüez has a long tradition of academic excellence and collaboration with the private sector and with federal and state government agencies in research and development programs. As a response to this important initiative, UPR Mayagüez is adding new Ph.D degrees in Science and Technology areas; and has available programs for new business creation, a technology incubator called Vitec, which provides scientists with incentives for developing and commercializing new products and/or technologies. Additionally, there are other prestigious academic, technical and vocational institutions in the area, offering excellent opportunities to companies and individuals for continuous education and skills enhancement.

Another factor that makes PRTEC's initiative attractive is the various amenities and services located in the western part of Puerto Rico. Some of its beaches had earned world-wide recognition, not only for their beauty, but for their excellent conditions for surfing, scuba diving and other water sports. Hotels and guest houses are rated among the best in the

Caribbean. Historic places and cultural activities are also major attractions. Some of the largest health care facilities in Puerto Rico are located in the west region. And shopping malls and traditional commerce zones offer the area residents with a wide array of options for acquiring goods and services.

Benefits of the TechnoEconomic Corridor for the Economy of Puerto Rico

In the last 10 years, high technology products have represented more of 50% of the Gross Internal Product of Puerto Rico. In this line the chemical and pharmaceutical products are distinguished; electrical, electronic and computers; and electronic, scientific and medical instruments of measurement. The contribution of these industries to the Internal Net Product (which includes the remuneration to employees in form of wages, marginal benefits and values to the property) manufacturing of the country is significantly high, compared with the rest of the manufacture. Puerto Rico has demonstrated that it can be competitive in the attraction and retention of these industries. The innovation and the technological advances are factors that provide industries with high technology that represent their main competitive advantage. Other factors that help to fortify the competitiveness of Puerto Rico are:

- A labor and professional force highly enabled, bilingual
- Puerto Rico as bridge of the Americas
- An attractive program of industrial incentives
- A sophisticated system of transport and communication
- The stability of the government

The contribution of prtec to enhance the competitiveness of the country as jurisdiction of manufacture of high technology is obtained through the new level of synergy that will be generated through the alliance between the Industry, the Academia and the Government. On the other hand, prtec opens opportunities to other economic sectors, such as services (financial institutions, real estate, electronic commerce, telecommunications, tourism, etc.).

NEXT STEPS

PRTEC is building upon the strengths of the western part of Puerto Rico to solidify its position as the ultimate business paradise. This will be achieved by implementing six major strategies:

- Creation of clusters or industrial groups
- Social support environment
- Attractive financial environment
- Competitive and reliable infrastructure

- Marketing and Public Relations
- Innovative collaborative agreements between academia, private enterprise and government.

Different teams are working in designing and implementing tactical plans for each of the strategies. At the same time, the clusters are actively identifying new business opportunities.

THE ULTIMATE BUSINESS PARADISE

prtec's goal is to be able to develop the ultimate business paradise, as our vision statement reads. We hope to offer the world a place where they can find:

- a wide array of companies to do business with,
- world class academic institutions,
- competitive infrastructure,
- superior economic incentives,
- a great quality of life.

Website: www.prtec.cc