



Puerto Rico Information Technology Cluster
Strategic Positions and Recommendations to the Financial Oversight and Management Board
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INTRODUCTION

The Puerto Rico Information Technology Cluster (**PRITC**) brings together Information Technology (IT) companies residing on the island under the vision of making Puerto Rico a leader in IT services and technological innovation. Its Board of Directors includes the local entrepreneurs that currently are at the forefront of the IT industry in Puerto Rico. **PRITC** proudly represents one of the most dynamic sectors of the Puerto Rican economy, one that continues to experience significant growth and is in high demand for well-paid jobs. In addition, it is **PRITC**'s position that the IT industry is one of the sectors with the greatest potential to further the development of economic activity on the island.

The **PRITC** mission is to promote the growth and sustainability of the Puerto Rico IT sector and ensure that local industry is highly competitive at the national and international levels. The organization firmly believes that such growth, coupled with the ability to export IT services shall be vital catalysts to accelerate Puerto Rico's economic growth and development.

In light of current realities, and as part of its strategic planning process, **PRITC** has developed a number of **strategic positions** that it wishes to communicate to the Financial Oversight and Management Board, which aim to stimulate growth of the local IT industry and, in turn, help restore the Puerto Rican economy and promote prosperity on the island. The positions are stated and summarized herein:

1. Focus on the development of IT talent
2. Build IT exports through federal contracting
3. Target increases in federal R&D funding allocations to Puerto Rico
4. Enhance the Puerto Rico venture capital and private equity industry
5. Enforce Data Parity

PRITC herein presents a succinct yet explicit explanation of such strategic recommendations, and states its availability to discuss them in detail.

STRATEGIC POSITION #1: FOCUS ON THE DEVELOPMENT OF IT TALENT

The IT sector in Puerto Rico is a bright spot within an otherwise distressed economic landscape. Good, well-paying jobs are being created, companies are growing, and the entrepreneurial ecosystem is gaining momentum. However, the sector is young and small when compared to other jurisdictions in the US, and its growth is primarily stymied by the lack of IT talent on the island. This IT talent issue is not any different from that of the entire nation, where the number of IT jobs is growing at twice the average for all other industries. By 2020, it is estimated that there will be 1.4 million new IT jobs nationally, and only 400,000 IT students will be graduating (a shortfall of 1 million candidates).

This shortfall puts particular pressure on the local IT industry. IT companies based in Puerto Rico are having a much harder time acquiring and retaining local talent, as local wages are 30-40% lower than those in the mainland. Hence, a significant portion of the IT talent that is developed in Puerto Rico ends up migrating to the US mainland. This shortage impairs the growth of the local IT sector and dissuades multinational IT companies from establishing operations on the island.

To address this talent shortage issue, **PRITC** is proposing to increase the local talent pipeline by aggressively deploying a strategy to develop talent at the K-12 levels, while at the same time boosting the current talent pool and making Puerto Rico an attractive hub for national and multinational IT companies. The strategy is comprised of three main initiatives:



1. Aggressive Implementation of the *Computer Science for All (CS4ALL)* Initiative

In a joint initiative with professors from the University of Puerto Rico and other educational institutions, **PRITC** is actively defining the *Computer Science for All* initiative, aimed at empowering all Puerto Rico students, from kindergarten through twelfth grade, to learn about computer science and acquire the computational thinking skills that they will need in order to be active participants of the digital economy. This the largest effort ever to expand computer science education in Puerto Rico, as it aims to provide every student with multiple opportunities to encounter computer science in the curriculum. *CS4ALL* aims to create equitable access to technology education and careers, significantly increasing the number and diversity of tech talent entering the workforce. The goal is to achieve this transformation over the next 10 years.

PRITC petitions that Congress earmark funding for Puerto Rico to accelerate the implementation of this initiative. The majority of the funds would be destined to train public school teachers to bring computer science to Puerto Rico's students.

2. Refocus the WIOA Puerto Rico Agenda on STEM and IT Training

For too many years, Puerto Rico has neglected to use available federal youth and adult training funds to retrain workers with the skills necessary for high demand IT and STEM jobs. A study by the Brookings Institute¹ suggests that: *"while many researchers have studied why there is a shortage of highly educated STEM workers, less attention has been paid to why sub-bachelor's level STEM jobs are hard to fill. Further, public policies have focused almost entirely on four-year degree pathways, ignoring the many high-paying jobs in STEM fields that do not require as much formal education."* While the study includes several recommendations, **PRITC** believes that there is a significant opportunity to focus the WIOA implementation plan on training workers to occupy these high demand STEM jobs, including IT.

PRITC recommends that WIOA Puerto Rico implementation plans set aside a significant amount of funding to retrain workers with STEM skills. In the past, Puerto Rico agencies managing the retraining funds have put little focus on developing these skills. **PRITC** aims to work with local agencies in building a WIOA implementation plan that shall focus on helping program participants fill high-demand STEM jobs.

3. Designate 25,000 EB2 Visas for Puerto Rico over 5 Years

In 2014, Michigan Governor Rick Snyder proposed an initiative to designate 50,000 EB2 visas in order to attract *"legal immigrants who have advanced degrees or show exceptional ability in certain fields"* to the troubled city of Detroit. Similarly, **PRITC** calls for the Federal Government to designate 25,000 employment-based visas (EB visas) for skilled immigrants and entrepreneurs during the next five years. By way of these visas, **PRITC** aims to attract highly skilled, entrepreneurial, legal immigrants who commit to living and working in any city in Puerto Rico, thereby contributing to its economic and population growth.

PRITC is requesting the allocation of EB visas for Puerto Rico, corresponding to all five preference categories, based on the "National Interest Waiver" found within EB2 visas. The objective is to attract individuals who are *"members of the professions holding advanced degrees or their equivalent"* and *"individuals who, because of their exceptional ability in the sciences, arts, or business will substantially benefit prospectively the national economy, cultural or educational interests, or welfare of the United States"* and Puerto Rico.

¹ <https://www.brookings.edu/wp-content/uploads/2016/06/TheHiddenSTEMEconomy610.pdf>



STRATEGIC POSITION #2: BUILD IT EXPORTS THROUGH FEDERAL CONTRACTING

The IT sector in Puerto Rico, although robust and experiencing growth, has a very discreet presence outside of the island. For the sector to be a significant driver of the Puerto Rico economy, it needs to significantly exports goods and services. The US Federal Government is a market that, for many years, local players have had limited success penetrating. Numerous joint efforts have been made, yet the impact has been close to none. In fact, Puerto Rico IT contracts with Federal Government amount to less than \$1 million per year, out of expenditures in excess of \$1 billion.

PRITC is confident in the capacity of local IT companies to serve the Federal Government, yet there are two main barriers that need to be surpassed: The resistance of Federal Government agencies to source services outside of the continental US (OCONUS), and the high cost of penetrating the federal market (due to distance, language, perceptions, others).

In order to gain experience and traction with the Federal Government, **PRITC** is proposing a set-aside of \$100 million in contracts to be awarded to Puerto Rico IT companies over the next 10 years, for projects to be delivered from Puerto Rico. This should have an immediate effect in the local economy by helping to create additional jobs and, more importantly, facilitating a track record on which the industry can bank in the future.

STRATEGIC POSITION #3: TARGET INCREASES IN FEDERAL R&D FUNDING ALLOCATIONS TO PUERTO RICO

Due to multiple factors, federal research and development (R&D) spending in Puerto Rico has been significantly lower than any other state jurisdiction, on a per capita basis. There are multiple channels available to increase R&D funding allocations to Puerto Rico with the purpose of strengthening the already nascent R&D infrastructure, like the Puerto Rico Science & Technology Trust, public and private universities, and private corporations.

PRITC recommends that Congress allocate \$1 billion over the next 10 years for R&D funding to Puerto Rico, to be channeled through a special commission appointed by Congress that will determine the initiatives and organizations that shall receive the funds over time. This R&D funding allocation can come through special allocations from the National Science Foundation, the National Institutes of Health, and Small Business Innovation Research Grants, but could also include building one or several federally funded laboratory facilities in Puerto Rico, similar to several others currently located in cities across the United States. These federally funded laboratories would support clusters of industries around them, in addition to direct employment. A federally funded laboratory (or several) located in Puerto Rico would also help improve Puerto Rico's reputation as a premier location for research and development, and would improve connectivity with public and private research institutions locally and abroad. Nowadays, nearly all major federally funded research laboratories in health, energy, transportation, and aerospace, among others, are leveraging information technologies for research purposes. It is **PRITC's** view that this laboratory infrastructure shall also help foment the growth of the IT ecosystem in Puerto Rico and have extraordinary positive ripple effects.

STRATEGIC POSITION #4: ENHANCE THE PUERTO RICO VENTURE CAPITAL AND PRIVATE EQUITY INDUSTRY

PRITC observes that one of the key shortcomings of the Puerto Rican economy is that, for many years, the strategy of Puerto Rico and federal tax treatment to attract capital developed a short to medium-term focus on investments. With a robust private capital ecosystem, the development of long-term capital in the island could flourish, and long-term investments in technology companies and other segments of the economy would be more feasible. Hence, Puerto Rico needs to develop its own and robust early stage, growth stage and later stage venture capital and private equity ecosystem, all in alignment with the clear goal of promoting the development of long-term capital in Puerto Rico. Clearly, this would feed Puerto Rico and **PRITC** interests.



Developing a more robust venture capital and private equity ecosystem in Puerto Rico can also lead to the creation of new publicly traded companies based on the island, which in turn would create a long-term capital environment and long-term employment opportunities for island residents. Additionally, a robust venture capital and private equity industry based in Puerto Rico could make the island a leader in this capital segment not only to finance and provide support to local and US companies, but also to facilitate private capital to countries in the region, thus making Puerto Rico a truly relevant capital hub within its geographical area.

To pursue this interest, **PRITC** recommends new funding allocations or guarantees directed exclusively at Puerto Rico. This can also be achieved through specific allocations to Puerto Rico of already existing programs such as the New Markets Tax Credits and Small Business Investment Companies, among other tax and federally backed programs.

STRATEGIC POSITION #5: ENFORCE DATA PARITY

It is **PRITC**'s position that reliable and accessible information is the basis not only of the IT industry, but also of industry as a whole.

As such, **PRITC** observes that Congress should mandate that all federally funded programs capture and report data on Puerto Rico in a similar fashion as they do for all states of the union, so that local entities, federal entities, investors and citizens can have access to information at a similar level. This is particularly relevant to the data related to federal programs on the island (a very relevant example can be found in the healthcare industry, but there are several others).

PRITC calls this "Data Parity." It is **PRITC**'s view that Data Parity shall help promote the IT Industry in Puerto Rico, create additional well-paid jobs (positions in the field of data science), and promote overall transparency and accountability.