Puerto Rico Information Technology Cluster – Economic Development Recommendations for the Puerto Rico Congressional Task Force

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The Puerto Rico Information Technology Cluster (PRIT-C) brings together Information Technology companies in the Island with the vision of making Puerto Rico a leader in information technology services and innovation. We are proud to represent one of the most dynamic sectors of our economy; one that continues to have great demand for well-paid jobs. In addition, our industry represents one of the sectors with the most potential to further develop economic activity on the island.

Our mission is to create growth and sustainability in the information technology sector in Puerto Rico and ensure the local industry is highly competitive in national and international markets.

The PRIT-C firmly believes that the growth of the IT industry in the Island and our ability to export IT services will be key catalysts to accelerate Puerto Rico's economic growth.

As requested by the Task Force, we have developed recommendations to grow the Puerto Rican economy and promote prosperity on the island.

Build out IT Talent

The IT sector in Puerto Rico is a bright spot for the current economic situation. Good jobs are being created, companies are growing, and the entrepreneurial eco-system is gathering momentum. However, the sector is young and small compared to other jurisdictions in the Mainland US and its growth has been impaired by the lack of available IT talent in the Island, the number one ingredient for the growth of the sector. The IT Talent issue in Puerto Rico is not any different than the issue affecting the nation, where the number of IT jobs is growing at twice the national average. By 2020, there will be 1.4 million new IT jobs nationally, and only 400,000 IT students, a shortfall of 1 million candidates.

This Mainland shortfall puts special pressure on the talent pool in the Island, because Puerto Rico IT companies are having a very difficult time competing to retain talent locally, where wages are 30% to 40% less than in the States. A significant percentage of the IT talent developed in the Island is migrating. This shortage of talent affects the growth of the local

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sector by not allowing the local providers on the island to grow faster, and it dissuades multinational companies from establishing operations on the Island.

To address this issue, we are proposing to increase the pipeline of available talent by aggressively deploying a strategy to develop talent at the K through 12 level, and at the same time boosting the current talent pool to make Puerto Rico an attractive destination for IT Multinational companies in the US Mainland.

Our recommendations are focused on 3 key areas:

1. **Aggressive Implementation of the *Computer Science for All* Initiative**
   The PRIT-C, along with Professors from the University of Puerto Rico and other Universities in the Island have already begun the definition of the *Computer Science for All* initiative for Puerto Rico to empower students from kindergarten through high school to learn computer science and be equipped with the computational thinking skills they need to be creators in the digital economy, not just consumers.

   This the largest effort to expand CS education in Puerto Rico, providing every student with multiple opportunities to encounter CS in the curriculum. This will 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.

   Our petition is for Congress to earmark funding for Puerto Rico to accelerate the implementation of this initiative. The majority of this will be destined to train public school teachers to bring CS to Puerto Rico's students, reaching more than a thousand students annually in the next ten years.

2. **Take Full Advantage of the Work Force Innovation and Opportunity Act (WIOA) to Retrain Workers in STEM (IT included) Jobs.**
   For 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 or STEM jobs in

general. A study from the Brookings Institute[1] suggest 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 has several recommendations, the 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.

Our recommendation is that the WIOA Puerto Rico implementation plan sets aside a significant amount of funding to retrain workers with STEM skills. As we have mentioned before, in the past the Puerto Rico agencies managing the retraining funds have put little focus on developing these skills. The PRIT-C is ready to work with local agencies in building the WIOA Implementation Plan to assist in the creation of a plan that focuses on helping participants of the program fill high-demand STEM jobs.

3. **Designate 25,000 EB2s Visas for Puerto Rico (to be distributed over 5 years)**
   The idea is a replica of the idea proposed by the Governor of Michigan for the city of Detroit. It calls for the federal government to designate 25,000 employment-based visas (EB visas) for skilled immigrants and entrepreneurs during the next five years. The visas would seek 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.

   We will request the allocation of EB visas from all five preference categories for Puerto Rico, based on the "National Interest Waiver" found within EB-2 visa. 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.

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

Build our IT Export through Federal Contracting

For the IT sector to be a significant driver of the Puerto Rico economy, we need to significantly increase the exporting of products and services. The Federal Government is a key market that for many years the Puerto Rico IT sector has been unable to penetrate. Several joint efforts have been made by the local sector and the Government, however the impact has been close to none. We are confident in the capacity of local IT firms to serve the Federal Government, but there has been little to show in terms of contracts awarded, despite numerous efforts. The are several issues that affect the efforts: 1) Our physical distance from the potential clients; 2) The resistance of Federal Government Agencies to source services outside of the continental US (OCONUS); 3) The high cost for the local IT sector of penetrating the Federal market.

In order to gain experience and traction in the Federal Government market, we are proposing a set aside of $100Million of IT Federal contracts to be awarded to Puerto Rico IT companies for projects to be delivered from Puerto Rico. This set aside is proposed for 10 years. This will have an immediate effect in the economy by creating additional jobs, and more importantly creating a track record of experience for Puerto Rico local IT industry.

Increased Federal R&D Funding Allocated to Puerto Rico

There are multiple channels to increase the R&D Funding allocated to Puerto Rico with the purpose of strengthening the already nascent R&D infrastructure through the Puerto Rico Science & Technology Trust, public and private universities and private corporations. Due to multiple factors, federal R&D spending in Puerto Rico has not been sufficient when compared to other states on a per capita basis. Our recommendation is that Congress allocate $1billion in the next 10 years to Puerto Rico to be channeled through a special commission also appointed by Congress which will determine which entities should receive the funds over time. This R&D spending can come through special allocations from the National Science Foundation, National Institute of Health, and Small Business Innovation Research Grants but can also include building one or several federally funded laboratory facilities in Puerto Rico such as those located in other cities across the United States. These federally funded laboratories would support clusters of industries around the laboratories in addition to direct employment. A federally funded laboratory (or several) located in Puerto Rico would also improve Puerto Rico's reputation as a premier location for research and would also improve the connectivity with the public and private research institutions locally and abroad. Nowadays, many of the major

federally funded research laboratories in health, energy, transportation, and aerospace, among others are leveraging information technologies for research purposes. It is our view that this federally funded laboratory infrastructure will also help grow and support the information technology ecosystem in Puerto Rico and have extraordinary positive ripple effects.

Develop a Program to Promote the Puerto Rico Venture Capital and Private Equity Industry

This can be achieved through new funding allocations or guarantees directed exclusively to Puerto Rico. It 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. The task here would be to identify specific and concrete steps that will promote the development of a robust early stage, growth stage and later stage venture capital and private equity ecosystem based out of Puerto Rico. As part of this strategy, a key goal is to promote the development of long-term capital in Puerto Rico. 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 has developed a short to medium-term focus on investments. With a more robust private capital ecosystem, the development of long-term capital can flourish and long-term investments in technology companies and other segments of the economy may be more feasible. Many of these higher risk investments may take fruition in 5-10 years or longer. Developing a more robust venture capital and private equity ecosystem can actually lead to the creation of new publicly traded companies based out of Puerto Rico which would in turn create long-term capital environment and long-term employment opportunities for individuals residing in Puerto Rico. For example, a quick look at Fortune 500 companies based out of Puerto Rico would reveal the lack of such types of headquarters in Island, which would be common in average for most States of the Union. It is our view that a robust venture capital and private equity industry based out of Puerto Rico can also make Puerto Rico a leader in this capital segment not only to finance and provide support to Puerto Rico based companies and in other US regions, but can also provide private capital to countries within our geography such as Cuba, the Dominican Republic and Panama and make Puerto Rico a truly relevant capital hub for the region. Although, clearly this is no easy task and we recognize that Congress may or may not be the appropriate entity to handle this concept, however, due to the dire circumstances of the Puerto Rican economy and finances, and the nature of the moment, we believe it is worth bring up so that we can engage in

a discussion on how to best promote this industry. This may be via Congressional action or Executive Action.

Build Puerto Rico as a Regional Health IT Hub

Puerto Rico is in a very unique place to develop a strong Health IT sub-segment within the IT industry. It is our view that several factors can improve employment and income opportunities in Puerto Rico that would promote a robust Health IT industry that could be regional and global in nature. Our industry's expertise in federal guidelines and our domain of the Spanish language provides a strong basis for our IT companies and entrepreneurs to provide products and services serving not only to the English speaking world in developed countries but also to Spanish speaking countries, albeit most have different healthcare regulatory frameworks. It is our view that an integral part of promoting the Health IT industry is to achieve parity in Medicare and Medicaid and all health programs, ensuring that all federally funded and Congressionally mandated Health IT programs apply to Puerto Rico in a similar fashion to other states such as the Health Care Exchanges, among others. Finally, it is our view that all health services, once parity is achieved, should be required by regulators to provide data and information systems according to federally established guidelines, including the star rating system, which would in turn continue to promote our industry.

Data Parity

Finally, it is our strong view that data is the basis of the information technology industry and as such Congress should mandate to all federally funded programs to capture and report data on Puerto Rico in a similar fashion as it does for all states of the Union. This is especially relevant to healthcare (but not exclusively) so that local entities, federal entities, investors, citizens, among others can have full access to what is happening in Puerto Rico, particularly with all data related to federal programs and captured by the federal government. We call this "Data Parity". It is our view that Data Parity will help promote the IT Industry in Puerto Rico, create well paid jobs such as data scientist positions and increase transparency and accountability.