

Recommendations to the Congressional Task Force on Economic Growth in Puerto Rico



Puerto Rico
Science, Technology
& Research Trust



September 2, 2016
Senator Orrin Hatch
Chairperson
Congressional Task Force on Economic Growth in Puerto Rico
U.S. Congress
Washington, D.C.

Dear Chairman Hatch and Task Force Members:

Thank you for the opportunity for the Puerto Rico Science, Technology and Research Trust to respond to the request of the Task Force for ideas and recommendations to restore economic growth and prosperity to Puerto Rico.

The Puerto Rico Science, Technology, and Research Trust is a nonprofit organization created to encourage and promote innovation, transfer and commercialization of technology, and creation of jobs in the technology sector. We are also responsible for Puerto Rico's public policy for science, technology, research and development. Our mission is to invest, facilitate and build capacity to continually advance Puerto Rico's economy and its citizens' well-being through innovation-driven enterprises, science and technology and its industrial base.

During the last two years the Puerto Rico Science, Technology and Research Trust implemented the following key initiatives to move forward Puerto Rico's agenda in Science, Technology and Research, and to accelerate the transformation of Puerto Rico into a knowledge-based economy.

1. Established Puerto Rico Consortium for Clinical Investigation
2. Established Parallel18 Global Accelerator for Innovation-Driven Enterprises
3. Established Puerto Rico Center for Tropical Biodiversity and Bioprospecting
4. Established Puerto Rico Brain Trust for Tropical Disease Research and Prevention that is in the process of deploying the Puerto Rico Vector Control Unit sponsored by Centers for Disease Control.



5. Executed two major Research Grants Programs with over \$5M investment, and over 30 awardees.
6. Established the Puerto Rico Technology Transfer and Commercialization Office
7. Started the development of Science City with the construction of the Puerto Rico Environmental Research Laboratory and Laboratory Road, both scheduled for substantial completion on October 2016.

The observations and recommendations in the following report focus on fostering innovation as the key for short, medium, and long-term growth of Puerto Rico's economy.

Sincerely,

/S/ Lucy Crespo

Lucy Crespo
Chief Executive Officer

/S/ Iván Ríos Mena

Iván Ríos Mena
Chief Operating Officer

Introduction

Puerto Rico's prosperity for the coming years will depend on the successful development of its science and innovation ecosystem. That will determine, more than many other factors, Puerto Rico's standing in the global economy.

For Puerto Rico to thrive, and to come out of the present financial crisis, it needs to drive productivity and growth. It is clear that the development of science, innovation, and entrepreneurship as tools to generate wealth is an essential condition for productivity and growth. Investment in the innovation sector creates more jobs, higher salaries, and better quality of life than any other. It has a positive effect on education systems and fosters a culture of curiosity and discovery. In addition, high-quality research and development attracts talent and global and local businesses, creating a virtuous circle of productivity, growth, and knowledge.

To be successful in the long term it is important for the public and private sectors to commit to Puerto Rico's Science, Technology, & Innovation Policy and to the full implementation of the Puerto Rico Science, Technology, and Research Trust's (the Trust) Strategic Plan. All Puerto Ricans, including all political parties and future government administration should be unified by this common vision: *By 2022, Puerto Rico is a globally recognized innovation hub that develops, attracts, and retains scientists, technology entrepreneurs, and enterprises to unlock world class creativity and competitiveness.* Federal efforts that strengthen the Trust's existing initiatives, all based on its Policy and Strategic Plan, should be pursued.

Following please find the Trust's proposal's, geared to helping the Task Force achieve its mission of identifying impediments to growth and recommending changes to promote long-term economic growth and stability; spur new job creation; reduce child poverty; and attract investment.



Recommendations

Technology Commercialization and Research

1. **Assign Grants for Commercialization Accelerator Initiatives.** Federal agencies with extramural budgets for R&D that are in excess of \$10 million obligated to Puerto Rico higher education institutions could award annual grants to support institutions of higher education in Puerto Rico pursuing specific innovative initiatives to improve the institutions' capacity to identify, protect, and transfer discoveries and innovations to industry or to further develop technology such that it has a better chance of being commercialized.
2. **Accelerate Commercialization of University-based Research through a Regional Proof of Concept Center for the Life Sciences.** A regional proof of concept (POC) center would serve all Puerto Rico academic institutions with life science research activities. A separate line item would be established in the Department of Human and Health Services (HHS)/National Institutes of Health for FY 2017 and be set aside as a maximum 5-year competitive grant, renewable per year, for the amount of \$1.5 million/year to support the operational costs of establishing and implementing the regional POC center.
3. **DARPA and NIH set-aside.** Designate a percentage of DARPA and National Institutes projects (budget) to Puerto Rico. The assignment would consider among other factors, availability of resources and capabilities in Puerto Rico. For example: (1) research and development topics that are tied to specific conditions like diseases that are endemic to Puerto Rico (e.g. Dengue, Chikungunya, Zika); (2) Department of Defense projects that require software (Cybersecurity) or hardware development (wearables or bio devices) or services delivery performed by USA citizens and in USA soil. Minimum period of time: 10 years.



4. **Designate Puerto Rico as the location for the Medical Devices Manufacturing Institute under its National Network of Manufacturing Institutes program.** This would help Puerto Rico leverage its talent and resources into the creation of research and innovation in the area of Medical Devices. Puerto Rico has traditionally been a powerhouse in this area and has the potential to use its knowledge to participate in the future of medical devices. As stated in the Value of Bioscience Innovation in Growing Jobs and Improving Quality of Life presented in Bio San Francisco Conference 2016 New Jersey and Puerto Rico stand out as the only jurisdictions that are specialized in 4 of the 5 bioscience industry (Major subsector area: Agricultural Feedstock & Chemical, Drugs & Pharmaceutical, Medical Devices & Equipment, Research, Testing & Medical laboratories and Biosciences-relates Distribution).
5. **Right to use and commercialize technology from Federal Laboratory Consortium.** Approve agreement or law (executive order or Congressional mandate) to allow companies based (operating) in Puerto Rico to have access, right to use and commercialize technology licenses at no cost from the Federal Laboratory Consortium for Technology Transfer (FLC). Minimum period of time: 10 years or during the PROMESA years.
6. **SBA Programs set-aside.** Negotiate a set-aside percentage of dollars for SBA Programs: (a) SBIR & STTR, SBA/SBIC Impact Investment Initiative, SBA Early Stage SBIC Initiative, and Department of Defense (DOD) Rapid Innovation Fund. Minimum period of time: 10 years or during the PROMESA years.
7. **Designation of SBA 8 (a) Program to all Puerto Rican Companies and/or small business companies based in Puerto Rico.** This idea is based on the Alaska SBA 8 (a) program Designation. In general terms the



designation should help Puerto Rico small business companies to pursue government contracts while building sustainability capacities and contribute to Puerto Rico's economic development without additional costs for the Federal Government. Also, assign a dedicated sole-source federal contracting liaison for qualifying Puerto Rico companies.

8. **Eliminate CONUS requirement.** The US Government has the goal of acquiring 25% of their purchases from small business. If they eliminate the CONUS (Continental USA Only) requirement, small businesses established in Puerto Rico will be able to bid for those opportunities, significantly increasing economic activities both for products and services.

Infrastructure

9. **Expand the New Market Tax Credit to all Puerto Rico.** Designate all of Puerto Rico as a low-income community, which would enable investors to qualify for tax credits as a result of investing in Community Development Entities.
10. **Assign Federal Investments in Research Facilities.** Assign 5% of the Federal Investments in Research Facilities Construction and Major Research Instrumentation Budget to Puerto Rico. In the report of March 2015 the projected budget for 2016 was \$2.8M for R&D facilities and major equipment. Request simultaneous alignment and assignment of the operating budget for these facilities. We propose that the Puerto Rico Science District is designated as the location for those facilities. Minimum period of time: 10 years.
11. **Designate Puerto Rico as HUBZONE and Promise Zone.** Name all the Municipalities of Puerto Rico as HUBZONE and a Promise Zone to increase access to federal contracting opportunities for small businesses.



This is of critical importance for the development of the Puerto Rico Science District.

12. **Expand access to internet through infrastructure development.** Grant fast-track status for fiber deployment projects. Also, design a federal tax credit for companies deploying fiber in Puerto Rico.

Human Capital

13. **Designate more applicable entities such as the Puerto Rico Science, Technology and Research Trust as a Local Educational Agency.** STEM education must be improved and scaled for Puerto Rico to be able to participate and grow in the innovation economy. Knowledge and skills in programming and other subjects must be integrated into the educational program of every child and young person. Furthermore, reskilling of existing professionals must take place. In light of the challenges of the existing education system of Puerto Rico, the designation of entities such as the Trust as a Local Educational Agency would permit the use of Federal Department of Education funds for these purposes. The Trust is already a key supporter of several capacity-building initiatives.
14. **Allocate WIOA funds for programming skills development in unemployed.** Allocate a significant amount of funds from the Workforce Innovation and Opportunity Act to fund programs for the development of basic, intermediate, and advanced programming skills in people who are not employed already. This would allow a better support and growth of all science and technology-related fields such as aeronautical, IT, Digital Health, and Bioinformatics.
15. **Establish new H1-B/EB1/EB-2/EB-3 visa programs and/or expand their scope.** There could be special sub-program or modification of these programs that would create a special allotment and/or different



thresholds for additional employment based visas available only to applicants who will be residents of Puerto Rico.

16. **Create special EB-5 program for Puerto Rico.** Modeled after the current EB-5 immigrant investor program, a special program should be created for Puerto Rico with different investment thresholds to attract new immigrant investors to Puerto Rico, with a minimum job creation requirement.

Governance

17. **Facilitate the Puerto Rico Digital Service.** Facilitate the creation of a “Puerto Rico Digital Service”, modeled after the United States Digital Service. This team would be in charge of transforming Puerto Rico to a “native digital” government, so that it can better serve its citizens at a significantly more efficient and at a much lower cost than how it serves citizens today. It would enable a government-wide coordination of Information Technology investment and implementation that ensures proper delivery of information and services, and incorporate best practices in E-Government as an opportunity to reinvent government services.

International Relations

18. **Include Puerto Rico in USA treaties.** Ensure that software developed, and/or licensed from Puerto Rico is free of royalty payments in all the countries USA has this type of agreements or Treaties with. It seems that sometimes Puerto Rico is not specifically included in the USA Treaties. To fully enable software development, manufacturing and distribution from PR we need this provision. The same policy should apply for games, films, media and other forms of entertainment. This should become a permanent practice or policy by the US Department of State.



Benefits

If we can transform these ideas to specific programs under each category, we can achieve the following benefits for Puerto Rico and for the Federal Government.

- **Technology Transfer and Commercialization.** These initiatives will support the creation of wealth by facilitating a source of value that is vastly underestimated and underutilized in Puerto Rico, which is knowledge created by universities and their researchers. Aside from job creation and other factors, technology transfer has untapped potential to make public and private universities more sustainable and less dependent on federal and other external sources.
- **Puerto Rico SBA 8(a)**-assisted businesses will produce profits, jobs and much-needed business know-how to disadvantaged communities, by graduating a number of substantial, well-financed and well-managed companies that will contribute to the economic development of Puerto Rico's disadvantaged population and communities. Also, new and existing companies will have access to new channels for their products and services.

The Federal Government would also add a strategic partner for technology transfer and business development. Puerto Rico produces 22,000 STEM graduates per year, and the highest percentage of Hispanic and female engineering graduates in the nation. This will result in a lower level of migration from Puerto Rico to the USA, and in the growth of Puerto Rico's economy.

- The **Infrastructure** initiatives, such as the designation of Puerto Rico as a Low-Income Community under the New-Market Tax Credit, would



incentivize investment in science and technology businesses in Puerto Rico, and help develop economic development projects such as the Puerto Rico Science District.

- **Human Capital.** The capacity-building, education, and immigration recommendations would allow a better support and growth of all science and technology-related fields such as aeronautical, IT, Digital Health, and Bioinformatics, while also leveraging the international talent that is key for the innovation economy. These initiatives, including the expansion of unemployment benefits to company founders, would foster eventual decrease of the use of the traditional social welfare system, while at the same time increasing contributions from new companies and job creation.
- Especially as a result of the immigration initiatives, U.S. companies, whether based in Puerto Rico or not will be incentivized to create new jobs and business operations/offices in Puerto Rico. These changes can incentivize immigration of talented foreign entrepreneurs and attract globally-oriented high-growth startups to Puerto Rico. At the same time, currently demand for employment based visas often exceeds supply and a PR program could be a win-win for many constituencies.
- The creation of a **Puerto Rico Digital Service** will prevent many of the governance issues that gave way to the present crisis for the local and federal governments. The remedies and solutions that the Fiscal Control Board and the local and federal governments will implement will need solid technology-enabled governance systems to be able to be effective and sustainable.