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#### **Talent in Puerto Rico**

Puerto Rico boasts a highly talented workforce, with especially strong concentrations BioScience technical, engineering, and professions. While recent natural disasters have caused an outmigration to the mainland, the growth of key sectors of the economy, an enthusiastic & engaged diaspora community Puerto Ricans. available workforce of development resources, and strong academic centers have all contributed to the growing pool of skilled workers that are eager to participate in the local economy in the years since.

Companies in Puerto Rico not only benefit from the technical prowess of the local labor force, but also from the bicultural and bilingual reality of the island. With over 90% of the island capable of operating in either English or Spanish, businesses are able to easily reach customers around the world and even use Puerto Rico as the jumping off point to expand operations into the mainland U.S. or the rest of Latin America. The Puerto Rico labor force is highly skilled, bilingual, and wages are on average 48% lower than the U.S. national average. This makes the local workforce among the most competitive in the world.

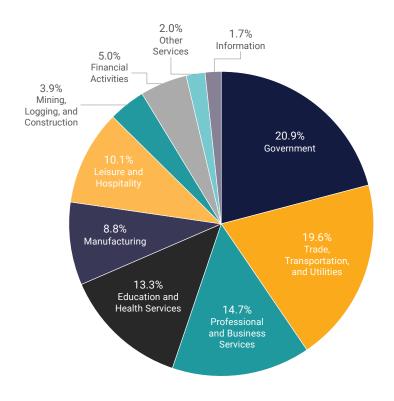
### **Puerto Rico's Economy**

<ul><li>Job Growth (2018 – 2023)</li></ul>	12.6%
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Unemployment Rate (Dec 2023)5.7%

Jobs (Dec 2023) 956,500

Annual Mean Wages (May 2022) \$32,330 (\$61,900 in U.S.)



According to data from the Bureau of Labor Statistics (BLS), there are about 26,000 direct jobs in tech-related fields. Puerto Rico specializes in industrial (LQ=4.4) & electrical engineering (1.37), computer operators (3.74) and programmers (1.46). As an added benefit to the high skilled and concentrated talent in Puerto Rico, the local average wages for these roles are about 40-50% lower than the national average.

Puerto Rico's diaspora over the past decade has created an enthusiastic and supportive community of nearly 5.8 million Puerto Ricans living on the U.S. mainland. Local talent retention, and attraction group ConPRmetidos has identified around 30,000 individuals across the U.S. that are interested in coming back to the Island. To harness the potential of these individuals and link them with local companies, ConPRmetidos has launched El Comeback. an initiative to collect the resumes of skilled workers on the mainland and connected them with companies in Puerto Rico that are eager to grow. Invest Puerto Rico is confident that businesses can find the talent needed in Puerto Rico, as well as have access to more talent if needed.

Puerto Rico's Incentive Code (Act 60) also confers credits to employers who have a hard time filling roles, enabling companies to attract difficult-to-recruit talent to the island. Check out Act 60 here.

The Workforce Development Program at the Department of Economic Development and Commerce (DDEC) administers training and employment funds. Through the federal Workforce Innovation and Opportunity Act (WIOA) program, the Workforce Development

Program provides a wide variety of workforce development activities to support job applicants, displaced workers, and young people gain access to meaningful employment, education, training, and support services. Mostly administered by local municipalities, WIOA operations take place in sixteen career centers around Puerto Rico. For 2023, Puerto Rico is set to receive:

- \$22.4 million to support adult activities
- \$21.6 million for youth activities
- \$83.3 million for displaced worker activities
- \$5.9 million for the Employment Service (Wagner-Peyser Act)

You can access the WIOA State Unified Plan for 2020-2023 through the DDEC's website or by clicking here. Additional detail on WIOA can be found in appendix of this playbook.

Eligible entities can also access up to \$10,000,000 in congressionally administered Community Development Block Grant Disaster Resilience (CDBG-DR) funds to support existing job training programs. For more information about these funds and who can access them, check out the Puerto Rico Department of Housing's page.

Thanks to decades of growth and development in highly technical fields, like medical device and pharmaceutical manufacturing, as well as supportive service industries like architecture, design, and construction, local human resources and recruiting agencies can help companies find specialized talent. Check out some of the talent-related service providers in Puerto Rico.

## **Talent Highlights**





Local universities graduated 20,500 STEM Degrees

including health sciences professionals

50% of university graduates hold a STEM degree



**6X** more than the next state

### Puerto Rico



### 6<sup>th</sup> Highest

availability of scientists and engineers in the world, according to the World Economic Forum's Global Competitiveness Report

In Latin America & the Caribbean, the island is



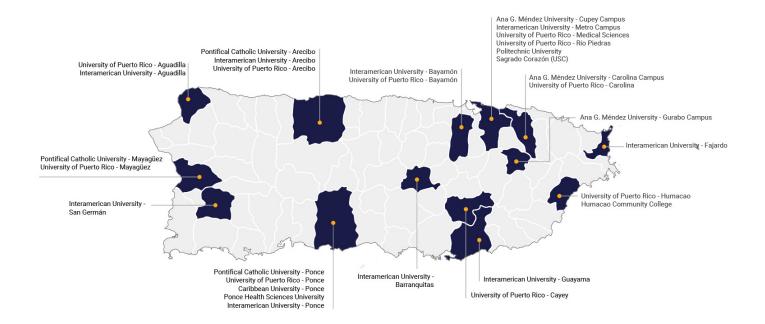
1st in rates of higher education

2<sup>nd</sup> in rates of digital skills amongst the population

### **Academic Assets**

Puerto Rico is home to over one hundred accredited universities and colleges around the island, with courses and study programs available in a wide range of different fields.

Many of these institutions are nationally renowned for their high concentrations of technical degree programs and for awarding STEM majors.



### **Public University**

The public University of Puerto Rico (UPR) is the oldest and largest university system on the island. It spans 11 campuses and nearly 60,000 students. University of Puerto Rico's 11 campuses include a Medical Science Campus in San Juan and the nationally recognized research institutes at Río Piedras and Mayagüez.

The University of Puerto Rico system is accredited by the Middle States Commission on Higher Education, though branch campuses tend to have additional areas of specialty for which they are accredited.

### **UPR Campuses**

University	Students	Graduates in 2022	Focus Areas
UPR-Río Piedras	12,037	2,324 (1,691 Bachelors, 401 Masters, 232 Doctorates)	Biomedical and Biological Sciences Communications, Journalism, and Public Relations Psychology Accounting Physical Sciences (Chemistry, Biology) Architecture and Urban Planning Liberal Arts (Law and Social Work)
UPR-Mayagüez	11,062 (10,201 undergraduates)	1,993 (1,842 Bachelors, 137 Masters, 14 Doctorates)	Engineering (Mechanical, Chemical, Electrical, Computer, Civil, and Industrial) Biological and Biomedical Sciences (Industrial Biotechnology and Microbiology) Nursing and Pre-Veterinary Sciences
University of Puerto Rico Medical Sciences Campus	2,034 (264 undergraduates, 1,770 graduate students)	770 (39 Associates, 140 Bachelors , 265 Doctor- ates, 231 Masters, and 95 Postgraduate certificates)	Biomedical Sciences, Medicine, Pharmacy, Physical and Occupational Therapy, Dentistry, and Nursing

University	Students	Graduates in 2022	Focus Areas
UPR-Aguadilla	1,985	339 (33 Associates and 306 Bachelors)	Biology (Bioinformatics, Biomedicine, Genetics, Quality Systems Evaluation)  Marketing, Accounting, and Human Resources  Education  Electrical, Environmental, and Communications Technology
UPR-Arecibo	2,897	604 (78 Associates and 526 Bachelors)	Business, Management, and Marketing  Microbiology  Radio and Television Broadcasting Technology  Health Professions
UPR-Bayamón	3,022	374 (17 Associates and 357 Bachelors)	- Accounting - Biological and Biomedical Sciences
UPR-Carolina	2,270	433 (35 Associates and 398 Bachelors)	Forensic Psychology Criminal Justice Advertising Hotel Management (and other business degrees)
UPR-Cayey	2,216	429 (all Bachelors)	Biology and Biological Sciences Psychology Accounting Education
UPR-Humacao	2,634	437 (45 Associates and 392 Bachelors)	<ul><li>Social Work</li><li>Nursing</li><li>Biology, Microbiology, Marine Biology</li><li>Digital Communications</li><li>Business Degrees</li></ul>
UPR-Ponce	2,221	379 (33 Associates and 346 Bachelors)	Biological and Biomedical Sciences Elementary Education and Teaching Psychology (including Forensic) Business Degrees
UPR-Utuado	346	87 (48 Associates and 39 Bachelors)	Agricultural Operations and Sciences Accounting Natural and Social Sciences

# University of Puerto Rico Highlights

UPR -Río Piedras Only Puerto Rican institution certified as a Doctoral Research-Intensive University and is the largest public research university in Puerto Rico. Recognized as a "very high research activity" by Carnegie Educational Foundation. Rated #1 university in Puerto Rico.

UPR -Medical Sciences Campus

The Pharmacy School at the University of Puerto Rico Medical Sciences Campus is ranked 2nd out of 145 U.S. schools based on how many graduates passed NAPLEX on their first attempt. UPR had a 98% pass rate compared to a 79.1% national rate.

UPR-Mayagüez

Rated #2 university in Puerto Rico and #2 in the Caribbean.

Accreditation Board for Engineering and Technology, National League for Nursing, and American Chemical society accreditations, amongst others.

#1 in graduating Hispanic engineers

#1 in graduating chemical engineers

#2 in graduating women engineers

11th in granting chemical engineering master's degrees

14th in awarding computer engineering degrees

15th of top 20 chemical engineering schools in the U.S.

**UPR-Cayey** 

Research centers include the Environmental Education Center, Institute for Interdisciplinary Research, and the Howard Hughes Project.

**UPR-Humacao** 

Space observatory and microbial observatory funded by National Science Foundation.

### **Private Universities**

While the University of Puerto Rico is the most prominent university system on island, there are also several accredited private university systems in Puerto Rico that offer a wide range of specialties, from business administration to technical and engineering fields.

University	Students	Graduates in 2022
Universidad del Sagrado Corazón	4,954 (4,330 undergraduates and 624 graduates)	1,033 (58 Associates, 734 Bachelors and 241 Masters)
Pontifical Catholic University of Puerto Rico	6,694 (4,823 undergraduates, 1,871 graduates)	1,178 (17 Associates, 811 Bachelors, 171 Masters, 161 Doctorates, 18 Post-Bachelor certificates)
Ponce Health Sciences University	800	207 (109 Masters and 98 Doctorates)
Polytechnic University of Puerto Rico	4,367 (3,718 undergraduates, 649 graduates)	517 (5 Associates, 348 Bachelors, 163 Masters, and 1 doctorate)
Inter American University of Puerto Rico	31,550 (26,020 undergraduate, 5,530 graduate)	5,628 (610 certificates, 606 Associates, 3,326 Bachelors, 801 Masters, 295 Doctorates)
Universidad Ana G. Méndez (Cupey, Gurabo, Carolina)	30,338 (24,473 undergraduates, 5,865 graduates)	6,820 (414 certificates, 1,067 Associates, 3,350 Bachelors, 1,812 Masters, 22 Post-Bachelors, 96 Post- Masters, 59 Doctorates)

# Private Universities Highlights

Polytechnic University of Puerto Rico The institute offers Mechanical Engineering, Software Development, Engineering in Supply Chain and Logistics, Biomedical Engineering, Chemical, Civil, Computer, Electrical, Environmental, and Industrial Engineering, Computer Science, and Construction Management

Plasma Engineering Laboratory

Inter American University of Puerto Rico

The institute offers dozens of academic programs in Natural, Environmental, and Health Sciences, Engineering, Math, Information Technology, and Business Administration

Universidad de Ana G. Méndez Includes School of Health Sciences, School of Science and Technology, and School of Technical Studies

## **Next Generation of Puerto Rican Tech Professionals**

As an emerging tech hub, Puerto Rico is home to various alternative education programs to encourage the development of STEM skills, including coding and software development, machine learning, IoT, robotics, and more. As an example, New Horizons is a computer learning center in San Juan that offers trainings and certifications on a diverse set of software and technical skills.

Polytechnic University of Puerto Rico houses the Center for Information Assurance for Research and Education (CIARE) In San Juan, which specializes in advancing and promoting information assurance and cyber defense. Atlantic University College has courses in UX/UI and specialized programs in digital technology, including animation, graphic design, and interactive programming.

The Holberton School is another option for students looking to learn world class computer science and software development, while offering career placement support for its graduates.

The Escuela Elemental at the UPR-Río Piedras is the first school in Puerto Rico to be admitted into Microsoft's Innovative Schools program as an Associate Showcase School. This title recognizes the successful implementation of technology in the classroom and promotion of STEM education.

Engine-4 is a regional hub for tech skills training and development. Based in the northern city of Bayamón, Engine-4's coworking space houses robotics labs, Al & code training for high schoolers, and the IOTeen Eco Technology and Business Education Project; a collaborative effort to bring tech workshops to teenagers. Engine-4 also works with IBM, Intel, Microsoft, AT&T, and Hewlett-Packard to fund additional data projects, trainings, and hackathons. The facility in Bayamón also houses Puerto Rico's Internet of Things Lab.

#### **Research Centers**

In addition to Puerto Rico's extensive list of university assets, there are several applied research centers that provide academic space to address real world challenges. Across 2022 and 2023, research institutes in Puerto Rico received a total of \$73 million in federal funding through the National Science Foundation (NSF) and the National Institutes of Health (NIH). While this is considerably smaller than most U.S. jurisdictions, the funding supported dozens of research partnerships and about 120 specific research projects

#### **NSF Funding**

- In 2022, Puerto Rican institutions received \$18.9 million in NSF funding
- Projects included \$5M to create a new STEM education and research center at Arecibo Observatory, \$2M to increase student engagement and retention in STEM, and a \$1M award under the NSF's Regional Innovation Engines program under the CHIPS and Science Act

#### NIH Funding

- In 2023, 13 Puerto Rico institutions received \$54.4 million for 73 projects. This is up from 74 awards worth \$44.1 million in 2022
- 39 awards went to Medical Sciences (\$28.3 million); 8 to Ponce School of Medicine (\$8.1 million); 5 to UPR-Río Piedras (\$2.9 million); 4 to Comprehensive Cancer Center (\$2.3 million)
- Projects included \$8 million for the UPR
  Center for Incubator and Technology
  Transfer; \$4.3 million for the PHSU
  Specialized Center in Health Disparities;
  \$3.3 million for Center for Collaborative
  Research in Minority Health and Health
  Disparities

With support from federal funds, research centers across Puerto Rico contribute to groundbreaking work in technology, science, and medicine.

### Puerto Rico Science, Technology, and Research Trust (PRSTRT)

- Advanced Research Grants Program
- Catalyzer Research Grant Program
- Science City & the Science District with research and facilities, labs, business initiatives, and academic resources (in development)
- PR Consortium for Clinical Investigation formed by PRSTRT in 2016 to improve clinical research speed (19 research sites around Puerto Rico)

# Bioprocess Development and Training Complex (BDTC) in Mayagüez

 Part of the Technoeconomic Corridor (PRTEC) and the Guanajibo Research and Innovation Park (GRIP)

## Translational Molecular Research Center (MSRC) at the UPR

- Materials Characterization Center offers R&D solutions for on-island manufacturing; three hundred researchers
- Confocal and multiphoton microscopy, mass spectrometry and chromatography, nuclear magnetic resonance, sequencing and genotyping, surface microscopy and spectroscopy, x-ray diffraction

## Center for Collaborative Research in Health Disparities at UPR Medical Sciences Campus

 NIH-funded center that promotes research in minority populations and provides initial funding for basic behavioral and clinical research to close health disparities

### Caribbean Genomic Center at UPR-Mayagüez

 This is a next-generation sequencing research center that works with the biology department at the UPR-Mayagüez campus to study evolution in various species

## Pharmaceutical Engineering Research and Training Center

 Supports the research and development behind optimizing pharmaceutical manufacturing processes, including through the training of students and professionals

### **UPR Comprehensive Cancer Center**

- Designed to be part of UPR's Science District with inpatient and outpatient facilities
- Dedicated to cancer treatment and prevention

#### FDA's San Juan Laboratory

 One of eight in the country, with specialization in pharmaceutical analysis and chromatography

## Ponce Research Institute (PRI) & Ponce Health Science University

- Studies cancer, neuroscience, infectious diseases, women's health, women's health, community-based research, and e-health initiatives
- Leaders in clinical research in southwestern
   Puerto Rico, having participated in over 275
   Phase 1-4 clinical trials

#### Caribbean Primate Research Center at the UPR

Across four facilities in Puerto Rico, this NIH-funded research center improves scientific knowledge of primate biology and behavior, critical to human health and welfare. It has been in operation for over 75 years.

## Science & Technology Research Development Center (CDICTP) in Ponce

 Programs support STEM education, university-level research, and global research collaboration

## Sustainable Energy Research Center and Microgrid Laboratory at UPR - Mayagüez

 One of eight in the country, with specialization in pharmaceutical analysis and chromatography

## Center of the Advancement of Wearable Technology (CWAT) at UPR

- Studies cancer, neuroscience, infectious diseases, women's health, communitybased research, and e-health initiatives
- Leaders in clinical research in southwestern
   Puerto Rico, having participated in over 275
   Phase 1-4 clinical trials

Due to Puerto Rico's favorable geography and weather, the island is home to nationally unique research centers including the only truly tropical agricultural research station in the U.S.

# Center for Teaching and Research in Agricultural Biotechnology (CEIBA)

 In coordination with the Pontifical Catholic University of Puerto Rico in Ponce, the Center conducts research to control plant diseases and protect crop quality

UPR-Mayagüez has several **agricultural research centers** around Puerto Rico:

- Center of Excellence for Quarantine and Invasive Species
- Pesticide Research Center
- Entomology and Tropical Biodiversity Museum
- Tropical Agricultural Research Station
- One of three USDA tropical/subtropical research centers
  - » Conducts research to develop solutions to agricultural problems of high national priority

- Plague and Plant Disease Diagnostic Clinic
- Experimental Dairy Farm Station
- Central Analytic Laboratory
- Animal Molecular Biotechnology Laboratory
- Food Innovation Hub
- Water Quality Laboratory
- Environmental Chemistry Laboratory
- Phytopathology and Tissue Culture Laboratory
- Experimental Agricultural Station Library
- Botanical Gardens in San Juan

### **Appendix:** May 2022 State Occupational Employment and Wage Estimates

Occupation Title	Employment	Location Quotient	Mean Hourly Wage	Annual Mean Wage
Chief Executives	3,290	2.71	\$62.62	\$130,250
Pharmacists	2,170	1.09	\$46.40	\$96,500
Financial Managers	3,830	0.85	\$44.55	\$92,670
Computer and Information Systems Managers	1,490	0.46	\$42.52	\$88,430
General and Operations Managers	6,760	0.33	\$40.83	\$84,920
Purchasing Managers	420	0.93	\$38.65	\$80,400
Human Resources Managers	1,250	1.13	\$35.62	\$74,080
Computer Systems Analysts	1,140	0.37	\$28.75	\$59,810
Compliance Officers	4,380	2.00	\$25.09	\$52,190
Network and Computer Systems Administrators	920	0.46	\$25.51	\$53,060
Computer Programmers	1,180	1.46	\$25.05	\$52,100
Computer Occupations, All Other	640	0.25	\$26.57	\$55,270
Registered Nurses	21,270	1.14	\$17.96	\$37,360
Computer User Support Specialists	3,840	0.90	\$16.92	\$35,200
Insurance Claims Processor	890	0.64	\$14.11	\$29,340
Call Center Representatives	20,380	1.19	\$11.37	\$23,650

To read or download all May 2022 State Occupational Employment and Wage Estimates Puerto Rico from all industry sectors, visit the Bureau of Labor Statistics here.

In addition to the BioScience research institutes across the island, there is a burgeoning tech scene that will position Puerto Rico at the forefront of industrial technological advancements. In the efforts to restore telecommunications infrastructure, at least three companies have rolled out 5G and two companies have provided Puerto Rico with new LoRaWAN networks to connect IoT devices. There are now two 5G test beds in Puerto Rico that focus on cost-effective, industry-facing tech applications:

### T-Mobile 5G and NB-IoT Lab at Engine-4

Engine-4 and T-Mobile's lab is bringing together a diverse group of public, private, and nonprofit partners to focus on emerging applications of 5G and the Internet of Things. Together in Bayamón, these leaders and students of all ages are developing new tools and services in agriculture, manufacturing, health, and entertainment.

#### Puerto Rico 5G Zone

This initiative with the National Spectrum Consortium will connect the University of Puerto Rico with three other Labs Across America. Puerto Rico's 5G Zone will focus on resiliency, manufacturing & logistics, and other business-facing industrial applications for 5G as well as the broader wave spectrum. This test bed will enable companies to explore cost effectively new technologies that promise to enhance everyday operations.

### Appendix: What employers need to know about WIOA

#### Workforce Innovation Opportunity Act (WIOA) Summary

WIOA is a federally funded program that provides a variety of workforce development activities to help job applicants, dislocated workers, and youth in and out of school access new employment opportunities, education, training, and support services to be successful in the job market. In addition to matching employers with qualified job candidates, it can also provide funding for employers to train incumbent workers as a means of job retention, prevention of layoffs, and skill upgrading.

#### Who does it benefit?



Individuals who are on the job market or seeking additional education/ training



**Employers** looking to recruit new employees or upskill current employees



Training providers seeking more students for their pipeline

Every two weeks, DDEC hosts a WIOA orientation

Email <u>omayra.rodriguez@ddec.pr.gov</u> and <u>desarrollolaboral@ddec.pr.gov</u> to attend a session

More detail can be found at <a href="https://www.conexionlaboral.pr.gov/">https://www.conexionlaboral.pr.gov/</a>

### What types of employer programs are available?

#### **Customized training**

 Classroom-type training designed and developed to meet the specific needs of an employer, with commitment to employ those who successfully complete the training

#### On-the-Job Training (OJT)

 Structured training provided to a salaried worker while performing productive labor on a job that provides new knowledge or new skills essential to a job

#### Registered Apprenticeship Program (RAP)

 A combination of both On-the-Job Learning (equivalent to OJT) and related instruction (equivalent to customized training); longerterm, with nationally recognized credential

A detailed navigation guide to help apply for these programs can be found on <u>investpr.org</u>.

Reach out to our Business Development experts to learn more about the talent and academic assets in Puerto Rico.

info@investpr.org

