



Strategic Plan 2022 - 2025

Puerto Rico Science Technology & Research Trust

June 17, 2022

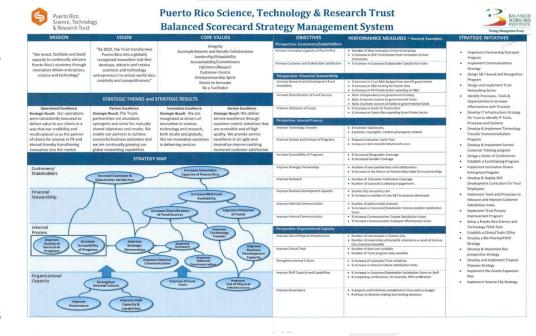




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Executive Summary

In 2015 the Puerto Rico Science, Technology & Research Trust completed its first Strategic Plan 2015-2022. The key strategic objective of the plan was to increase the innovation capacity of Puerto. This plan that was developed with ample participation from the different communities we serve: researchers, entrepreneurs, and partner organizations. We also used the plan as the foundation to set the Trust's human and system infrastructure as well as to guide the development and deployment of the Trust's existing programs.







New strategic plan

In 2022, as part of the strategic plan review process, we evaluated how each program was contributing to advancing the organization's mission to build capacity to continually advance Puerto Rico's economy and its citizen's well-being. We also explored and identified potential synergies between programs. As part of this review, we enhanced the mission to reflect the integration of public health activities, we simplified the vision, and we are transitioning from a program-centric approach into a strategic pillar-centric approach. Each pillar is building programs and initiatives that in most cases are complementing each other to grow with enormous collaboration potential, creating a crosspollination of new solutions and initiatives empowered by the Trust infrastructure. The pillars are shown in the slide to the right.







Key Performance Indicators

As part of the review process, we also defined a set of Key Performance Indicators (KPIs) from the aggregate KPSs of each program to reflect the overall Trust performance. In addition to working towards meeting the discussed KPIs, the PRSTRT will make efforts to participate in global indexes and studies regarding innovation, research, development, and entrepreneurship, among others.

This strategic business plan is a living document created by the Trust team. A team characterized by thinking out of the box, taking risks, building innovation in everything we do, and always moving forward to advance Puerto Rico's economy and its citizen wellbeing.

KPIs Logic









Timeline

2004 2015 2016 2017 2018 2019 2020 2021 2022 Program launch Program launch Program launch Proaram launch Established under Eng. Luz A. Crespo Technology Transfer Office Amendment of Second signature start as Chief the deed where it on the deed Public Law 214 as Executive Officer Re-Grow PR Recuperación Resiliency an autonomous is designated as Xpand entity and **Brain Trust for** the Institute of Agrícola Business Caribbean Center constitution deed Research Grants **Tropical Disease** Public Health and Innovation Telemedicina for Rising Seas is signed. Program Research & Educational STEM Program Prevention Research Institute Organization as a Response Innovation Lab Science City Program bona-fide fiscal New Initiatives agent of the SBIR/STTR Fase 1 Federal Grants Research & Government of PR Puerto Rico Agile - Research Parallel 18 Public Health Telemedicina para Grants Program Innovation Adultos Mavores **Meetups Program** Cultural Heritage Pre18 Trust Innovation EnTrust - TTO Colmena66 Center for Tropical Program Puerto Rico ProdTec Laboratorio Biodiversity Hurricane Hub Genómico de Agroecología para el futuro COVID-19 PR Consortium for Clinical **ASHTO** Investigation Community Health Promoters Capacity building program Unidad de Control de Vectores de PR Red de Pacientes de Puerto Rico Academia del Cacao PR Ready Luz A. Crespo





Strategic Plan Summary

Roadmap of the Science Trust evolution and strategies:

The PRSTRT early days

- Science and research mandate
- Research Grants as the first Trust Program
- Innovation and entrepreneurship Ecosystem mapping
- Initial Science City Development



Life after the hurricane

- Professionalization of organization departments (HR, IT, Legal, Finance etc)
- Growth in entrepreneurship (parallel18, Colmena66 and RBI) make it own pillar
- The Trust begun to execute its Public Health capabilities through PRPHT
- Increasing the amount of external capital to more than 50% and beginning the endowment.

2021 and beyond



- Reinforcement of our strategy map:
 Mission and Values
- Scaling of the organization to new heights, but also a scaling of its impact
- Synergies across the organization's pillars to find groundbreaking solutions
- Programs and Pillars new impact





Effective and results driven

The Puerto Rico Science, Technology, and Research Trust is a reputable and effective organization that has complied with its mandate: keep driving research, innovation, entrepreneurship, public health policies, and more, on the island. After experiencing accelerated growth in the last six years, it is time to start thinking about the next six and setting up the right structure to maximize its impact.

The organization has 20+ programs under its umbrella. To define its purpose and messaging it has begun to group them into four main pillars:

Research Public Health Foundation

Who we are

We are a private non-profit organization created in 2004 to encourage and promote innovation, transfer and commercialization of technology and creation of jobs in the technology sector. We are responsible for Puerto Rico's public policy for science, technology, research and development.



Daniel Colón Ramos



Salvador Moncada



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Dara Schuster



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Edith A. Perez, MD



Frances Santiago-Schwarz, Ph.D.

Trustees

Our Council of Trustees is composed of distinguished professionals who support and oversee our work and provide guidance to ensure that the Trust us managed within its mission and vision.



#WeAreTheTrust

prsciencetrust.org





Strategic Plan 2022 - 2025

Puerto Rico Science Technology & Research Trust

June 17, 2022



Mission

We invest, facilitate, and build capacity to continually advance Puerto Rico's economy and its citizens' well-being through innovation-driven enterprises, science, research, public health and technology.

Vision

Puerto Rico is a globally recognized innovation hub.







Strategy Map

Puerto Rico Science, Technology, and Research Trust

Organizational capacity

- Strengthen internal culture
- Enhance governance
- Enhance staff capacity, capabilities, and work environment
- Leverage on Trust ICT resources to get recognized as a data management powerhouse
- Continue development of physical infrastructure (Science City)

Programs and internal processynergies

- Transform public health paradigm Expand and clinical trial capabilities
- Accelerate technology transfer
- Expand entrepreneurship and business development capability
- Evolve STEM adoption and workforce development
- Expand on outreach and accessibility
- Enhance strategic partnerships

Financial stewardship

- Increase Trust fund availability
- Increase diversification of funding sources, including earned income mechanism
- Increase endowment funds
- Expand Trust's financial capabilities

Plan Objective: Increase Puerto Rico's innovation capacity





The strategic pillars come to life

The strategic pillars have created a more comprehensive structure to incorporate new initiatives and enhance existing ones consolidating in units that have a common pattern. It is important to mention that one of the highlights across the board of the pillars has been an investment in our governance by including a complete compliance infrastructure and a safety department

Research

- Increased reach with new COVID Programs
- TTO with new record patents and Life Science Accelerator
- Beginnings of Climate with Caribbean Center for Rising Sea
- Exposing inventions and research is still a challenge
- Collecting funds for research it is a growing opportunity

Entrepreneurship

- Solid infrastructure with tangible results with Colmena66 and Parallel18
- New Programs to increase pipeline: Fase1, pre18, and Investment
- Deep tech startups through SBIR/STTR space to grow
- Exportation for a startup is still a challenge

Public Health

- Successful Federal funding raise
- Strategic talent attraction
- Community driven approach across the island
- Telemedicine Pilots
- COVID19 SME and communication
- Vector Control performance
- CDC, HHS and Department of Health relationships

Foundation

- STEM program to strengthen critical thinking and scientific skills from the early days of the school journey
- Science City used to find specific real estate projects and host the Science Trust administration and special projects
- Research Meet ups key events and discussions around critical island challenges



RESEARCH











ENTREPRENEURSHIP



parallel¹⁸







PUBLIC HEALTH







FOUNDATION PROGRAMS











Program Strategic Plan Research Grants Program

What do we want to achieve?

Empower local scientists and researchers to take Puerto Rico's knowledge economy to a higher level of excellence.

How are we going to measure it?

funded research projects

of external grants secured after receiving Trust's funds (ROI)

of research assets (publications, patents, students impacted, PhD dissertations, companies funded, participation in local/international conferences to present findings)

How do we want to achieve it?

Provide seed funding and incentives to advance locally developed R&D projects to become more competitive for federal and private funding and/or commercialization.

of female researchers participating in the program

strategic relationships that promote R&D and attract more funds to the island

of active researchers with a complete profile in BEACON

of research administrators trained in the pre & post award grants cycle process.





Program Strategic Plan Scientific Research Institute

What do we want to achieve?

Build an ecosystem that works for the researcher and to bridge opportunities for collaboration and evolution

How are we gointo

of research assets

measure it?

(publications,

funded research

patents, students

projects and \$

impacted, PhD

strategic relationships dissertations, companies

that promote funded)

R&D and attract more

funds to PR

How do we want to achieve it?

- We are going to use all powers of Law 214
- Designate Scientific Advisory Board
- Commission an assessment of the current state of research in PR
- Create the perfect administrative support
- Deploy unique research infrastructure
- Attract merit-based intramural & extramural affiliated researchers
- Establish educational and training programs





Program Strategic Plan Technology Transfer Office

What do we want to achieve?

Advance innovations from the lab to the marketplace in order to benefit the public.

How do we want to achieve it?

Provide best-of-class technology transfer services in partnership with our academic partner institutions.

How are we going to measure it?

Performance is measured by using our profession's standards regarding research funding, technology transfer activities, and impact of innovation.





Program Strategic Plan Caribbean Center for Rising Seas

What do we want to achieve?

- Redefine Professional Knowledge and Understanding of Sea Level Rise + Flooding
- Update Building Codes, Zoning, and Land Use in Puerto Rico
- 3. Change Urban Development Practices

How do we want to achieve it?

- Outreach, Community Engagement, Education, and Professional Training Program
- 2. Rising Seas Policy Reference and Resource Center
- 3. Advisory Service Program

How are we going to measure it?

- # of Stakeholders Contacted and Level of Engagement in Puerto Rico >>> (Workforce Development)
- # of Legislation/Policy/Planning/Educational Standards/Building Standards addressed and modified (Opportunity Development)
- # of Publications, Literacy Tools, Key Reference Documents/Instances >>> (Knowldege Transfer, Outreach)
- # of Coastal Communities Engaged in Puerto Rico and Level of Engagement>>> (Mental Health, Research, Economic Development)
- Tracking public and private building projects and level of built-in resiliency and adaptation measures to flooding and SLR >>>





Program Strategic Plan Center for Tropical Biodiversity

- 1) To establish Puerto Rico as the regional leader in the development of biodiversity products.
- To make biodiversity protection a major component of the regional agenda for economic development.
- To increase the local portfolio of biodiversity-related companies

- 1) Providing key services to companies that develop (or seek to develop) biodiversity products.
- 2) Increasing the scope and value of existing research on biodiversity-related products.
- 3) Building a catalog of biodiversity assets for Puerto Rico and the Caribbean
- 1) Number of biodiversity-related products entering the IP protection or licensing pipelines of the TTO.
- 2) Number of companies developing biodiversity-related products, seeking SBIR support.
- 3) Number of users and depositors for the Natural Product Online Repository (NatPORT).

Puerto Rico Science, Technology & Research Trust

Entrepreneurship



Since 2015, entrepreneurship has been in the DNA of the PRSTRT with programs like parallel18 and Colmena66. They have been paving the way for a stronger entrepreneurial culture in the island, broader access to capital and technical resources, retention and repatriation of talent, and regional an international reputation.

With this background and its current status, the Entrepreneurship pillar has a clear new approach of building a innovation platform

Colmena66 Fase1 pre18 P18 P18 Ventures and Xpand

SBIR/STTR

Parallel18: Pre18 and P18





2016

P18 was 40 launched par

40 \$14M total participants revenue

\$7.8M total revenue in PR

\$7.4M total investment raised by companies

\$1.87 M total investment raised by P18 companies in PR

3 initial investments by P18Ventures

Pre18 born after hurricane Maria in 2017 as a one-time program. Became a fixed program in 2018

2021

9 cohorts 291 \$189M total participants revenue

1 \$62M total revenue in PR \$126 M total investment raised by companies

\$20 M total investment raised by P18 companies in PR

59 investments by P18Ventures

Pre18
3 cohorts
903 applicants
43% female led
47 moved to P18

Colmena66





2016 2017 2018 2019 2020 2021

Launch with 160 collaborators on the Net

- Networking Meetings
- ► Levanta Tu Negocio: Huracán María
- ► Shop&Hire
- ► PRSTRT Co-Working Space

In 2021:

2,212 entrepreneurs served

4,275 interactions

7,632 referrals

274.5 counseling hours

7K searches on the network navigator

2,212 entrepreneurs served

- ► Tu Camino Empresarial (Map)
- ► Tu Camino Empresarial Tour
- ► First Boricua Emprende Fest
- ► SBIR/STTR: SBIR Road Tour
- Meeting Agro Industries
- ► Tu Camino Empresarial: Versión Agro
- ► Personalized Action Plan

- Levanta Tu Negocio: Terremotos
- ► Levanta Tu Negocio: COVID-19
- ► Recovery Guide
- ► COVID-19
- ▶ Webinars SBIR
- ► Boricua Emprende Fest Virtual: eCommerce Edition
- ► Refuerzo PyME
- ► Entrepreneurs up to date

- ► Serie de Incentivos
- ► Acércate al Grant: Fase 0
- ► SBA Lab-to-Market: Super Connector Award
- ► SBIR Growth Accelerator Fund Competition
- ► Boricua Emprende Fest Virtual





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Winning proposals

37 SBIR

6 STT

STTR

35

STTR

8 Phase II \$9M

Total of obtained funds

51% of funds generated are part of the Trust's efforts since 2015.

35% of total awards belong to this period as well.

16 total awards were received during this period.





Program Strategic Plan Colmena66

What do we want to achieve?

Everyone in Puerto Rico can start and grow a business.

How do we want to achieve it?

Colmena66 facilitates entrepreneurship by connecting and building the entrepreneurial community.

We:

Catalyze and facilitate access and resources Build and connect the entrepreneurial community Create and Drive innovation

How are we going to measure it?

We have a series of 17 measurable objectives to measure (1) business development, (2) network navigation, (3) communications and marketing, (4) data, and (5) innovation.





Program Strategic Plan: Fase1

What do we want to achieve?

Facilitate and transform new idea generation into proper innovative businesses (start-ups), and thus creating a **stronger base of successful companies** in Puerto Rico.

How are we going to measure it?

of individuals that participate in FASE1 Lab: 500

of projects selected to pass to FASE1 Intensive: 50

of businesses that get into pre18 selection committee: 30 at least

of training modules developed: 3 permanent, 4+ additional content per vear

of businesses established

Number of people hired

Revenue generated & Capital Raised

How do we want to achieve it?

With a dual approach:

Fase1 Lab – an entrepreneurial virtual academy to: 1) change the mindset of participants into an entrepreneurial mindset 2) provide a framework and validated knowledge for idea generation 3) provide tools and resources to facilitate the transformation of ideas into business ventures; 4) track performance; 5) transform traditional business ideas into scalable ones.

Fase1 Intensive – our 12-weeks curriculum ideas incubator program to 1) develop ideas into services or products (MVP); 2) to provide individual, targeted support to increase successful start-ups generation; and 3) provide structured tracking of milestones achievements.





Program Strategic Plan for parallel18

What do we want to achieve?

To become the leading player involved in the Global Startup Incubation Program by providing mentorship, and investment to underrepresented founders around the globe to turn their ideas into market leading startups.

How do we want to achieve it?

- Raising outside capital from Limited Partners to create a sustainable and profitable program
- Adding corporate partners to fund the cohorts and Studio companies

How are we going to measure it?

of new startups funded and created by parallel18 programs

of private capital raised by parallel18 programs

of Jobs created by starts created and funded by parallel18 programs

of underrepresented founders funded.

of companies created by parallel18 programs





Program Strategic Plan SBIR/STTR Federal Grants

- Increase the number of SBIR/STTR awards in Puerto Rico.
- Create jobs
- Bring funding to support our entrepreneurship community

- Recruiting small businesses and individuals located in Puerto Rico to participate in the program
- Recruiting companies from outside Puerto Rico to establish on the island
- Providing support to companies considering the program
- Providing support to companies working on proposals

- · Number of awards
- Amount of funding brought to Puerto Rico
- Number of jobs created





The Puerto Rico Public Health Trust (PRPHT)

The PRPHT has experienced a major positive growth in the last two years, driven primarily by the pandemic. The organization has been able to successfully leverage its expert positions, building a knowledgeable innovative reputation that has attracted experienced talented staff, secured key grantors and funding opportunities, and generated impact by increasing access to health by empowering communities and formalizing strategic alliances with external an internal partners

After a significant 2020 the PRPHT decided to begin year 2021 designing how they want to move forward the next three years, organizing a week long workshop involving all the leadership team of the organization, where they came up with the most critical goals and strategies.





Puerto Rico Public Health Trust (PRPHT)

Goals and Strategies Programmatic

- Increase presence in our communities for health promotion, increase preparedness, and decrease disease burden
- Obtain, collect, and use data to drive our work and create initiatives
- Promote, inform the creation of public health policy, informed by evidence, focused on enhancing health equity and social justice.
- Increase research and opportunities for research of chronic and infectious disease in public health.
- Effectively create, implement, and distribute telemedicine and telehealth technology.

Organizational Outputs Programmatic

- Health promotion/education curriculums on chronic disease; CHW training/certification program; All Hazards Center established at PRPHT
- Centralized data hub for all PRPHT programs data;
- Two position papers; Two (per year) public health policy issues promoted; Attend three discussions/formal legislative hearings on public health policy
- One report on five most prevalent chronic diseases in Puerto Rico; One community based participatory research project conducted.
- One strategic plan to increase telemedicine utilization; One promotion plan for telemedicine and telehealth adoption; One plan for technology use in chronic disease health education;





Puerto Rico Public Health Trust (PRPHT)

Goals and Strategies Operational

- Improve and create effective processes for operations and management
- Create and maintain PRPHT as a place to work where one is valued and successful

Organizational Outputs Operational

- One needs assessment report; One operational improvement plan; One sustainability plan.
- One cultural assessment; One culture management plan; One performance management process; Individual goals for all staff and contractors; Goals based performance reviews for all staff.



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OUR FOUNDATION

Vision

Achieve sustainable health equity in Puerto Rican communities and improve their quality of life through innovation, collaboration, and community engagement.

Mission

Serve as a trusted ally working with private and public partners to identify and execute communityled, evidence-based solutions



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Outcomes Driven

IMPROVE PUBLIC HEALTH	INCREASE QUALITY OF LIFE	DECREASE MORTALITY
SHORT TERM OUTCOMES	INTERMEDIATE OUTCOMES	LONG TERM OUTCOMES
Improved program administration and employee satisfaction	Population-Based Changes	Enhanced quality of life for residents
Utilization and creation of data	Program-level Change	Promotion of chronic disease
Support, collaborate and work with partners, community leaders and other		related risk factors
stakeholders	 Environmental-level Change 	Increase public health
Developed systems change for increased access to specialized medical services		awareness promotion and prevention
via telemedicine	Policy-level Change	
Developed health promotion and education		 Increase support for PRPHT activities
CHW certification		





Program Strategic Plan Puerto Rico Public Health Trust

What do we want to achieve?

Achieve sustainable health equity in Puerto Rican communities and improve their quality of life through innovation, collaboration, and community engagement

How do we want to achieve it?

Serve as a trusted ally working with private and public partners to identify and execute community-led, evidence-based solutions.

How are we going to measure it?

We have a series of 28 measurable objectives to measure organizational, programmatic, and operational strategies.





Puerto Rico Vector Control Unit (PRVCU)

The PRVCU has done a titanic work all over the island controlling the biggest mosquito outrage in the United States. The key to their success is the generation of close and trustful relationship with local municipalities, the Department of Health, and the CDC.

The latter has laid down the road to continue to find financing, formalize a collaboration with PRDoH, strengthen their relationship with municipalities, PRVCU authority for IVM plan development

Develop an entrepreneurial applied R&D arm, industry funded, capitalizing on our unique situation.

Shift operational emphasis on vector control to the municipalities.

External approach: Research institutions and Center of Excellence; Building program with USVI; Collaborations with Latin America.

Path to PRVCU financial sustainability





Program Strategic Plan Puerto Rico Vector Control Unit

What do we want to achieve?

Striving together for a Puerto Rico free from mosquitoborne disease.

How do we want to achieve it?

Protect the people of Puerto Rico from the Aedes aegypti mosquito, while educating and empowering everyone to dramatically and sustainably reduce mosquito-borne disease across Puerto Rico.

How are we going to measure it?

Continuing our surveillance system to provide accurate data to stakeholders; strengthing the collaboration with the municipalities and provide plans for vector management; and completing evaluations and implementation of vector control techniques.

PRVCU laboratory is currently conducting dengue serotype assays (# of assays); # of traps deployed (on-demand); # of mosquitoes and # of human dengue cases; % of participants completing community assessments (pre and post tests, questionnaires); # of people, schools, communities, municipalities, collaborators reached/trained/impacted; # of people/municipalities enrolled in the Puerto Rico Vector Management Association.

Foundations





STEM Education and Workforce Development

These efforts began with STEM programs impacting younger generations and were aligned with the Research and Development pillar of the organization. Today the Education pillar of the PRSTRT is evolving to focus on Public Policy, Strategic Partnership, and equitable access to STEM and Workforce Development.

Today, the STEM and Workforce Development program is not only serving an external audience, but the PRSTRT

as a whole.

STEM

- STEM training Teachers
- Resuelvelo Boricua
- STEM KIT BOX, funding through MEDTRONIC. (Online component)
- Partnership Departamento de Educación

Workforce Development

- ISACA Certifications
- Academia del CACO
- Puerto Rico Ready (PR-READY): CDBG-DR
 Workforce Development
 Grant
 - Good Jobs Challenge





Program Strategic Plan STEM Education & Workforce Development

What do we want to achieve?

STEM Education

- We want the STEM Ed Program to become a source for public policy leadership and relevant STEM data to inform such public policy.
- That the program can provide high-quality informal STEM learning for grades K-12.
- That the program includes relevant professional development opportunities to STEM educators on the island.

Workforce Development

- To lead the public policy on workforce development on the island.
- To become the leading program in emergent technology certifications for the island.
- To be the leader organization in upskilling the IT/Innovation workforce

How do we want to achieve it?

STEM Education & Workforce Development

- By developing appropriate frameworks and practices for public policy.
- By developing programs with best practices and innovative component.
- By establishing effective partnerships.
- By accessing funding that enables it.

How are we going to measure it?

STEM Education & Workforce Development

- By establishing clear KPIs
- By developing SMART objectives
- By conducting formal program evaluations:
 - Formative assessments (customer surveys)
 - Evaluative assessments (aligning KPIs and execution)







KPIs Logic

Trust level KPIs: fed by the Strategic Pillars

Research & Development
of strategic opportunities
of new technologies
created and protected
of funded and supported
research

Entrepreneurship
of new companies
of capital and revenue
of jobs

Public Health
of communities /people
reached
of Funding Opportunities
of new public health
programs

Foundation
of people trained
of people placed
Quality of Labor

this is a fill and it again





Trust level KPIs: fed by the Strategic Pillars

Research:

#funded/supported
research labs that consequently
are capable of supporting
their research through other
sources, including corporate, nonprofit, and governmental entities.

#research assets that result in (a) technologies disclosed, protected, and transferred from research labs (differentiate academic v private) to the market for the public benefit; and (b) knowledge transfer outputs (e.g., publications, research collaborations, consulting).

#strategic opportunities that informs funding decisions to leverage research assets and support technology and knowledge transfer.

Entrepreneurship:

new companies created through any of the Trust programs including the companies registered and referred by Colmena66

#Private and public Capital raised and revenue generated in Puerto Rico by the companies graduated from the Trust programs

#Employees hired by the companies supported by the Science Trust infrastructure

Public Health:

resources and funding to support public health activities in Puerto Rico

public health programs and efforts in Puerto Rico through formalized partnerships with the Department of Health and other governmental entities

#Puerto Rican communities through capacity building and training to increase positive health status for citizens

Foundation:

individuals trained by the Puerto Rico Ready program, STEM and eventually Good Jobs Challenge

individuals placed in different labor opportunities presented by the Trust workforce initiatives

#quality of labor: Increasing income of participants, improving in perceived working conditions

