

**NORTHWESTERN PUERTO RICO BIO MANUFACTURING CLUSTER**  
**Overarching Narrative**

**REGIONAL GROWTH CLUSTER, COALITION MEMBERS, & COMPONENT PROJECTS**

For over sixty years, Puerto Rico has stood as a global leader in the highly regulated bio manufacturing sector, with production of pharmaceuticals and medical devices. The bio industries have been the steady anchor of the Puerto Rico economy, representing 35% of the Island's GDP, 45% of all manufacturing jobs, and employs over 88,000 people. In 2020, the combined sector's exports totaled more than \$5 billion. All of this has been driven in good measure by tax policy, starting with Section 936 in 1976.

As other jurisdictions have adopted similar strategies, resulting in the current global minimum tax negotiations, Puerto Rico must evolve to support its bio industry with a new vision. Puerto Rico needs the facilities necessary for new product development as well as post-approval production. Puerto Rico's workforce must acquire the skills necessary to identify and produce these innovations. Production must be complemented with enhanced and specialized logistics capabilities to provide efficient cargo operations, and future economic development decisions must align with the region's long-term strategy.

Companies in the Northwestern Region (Region) have capitalized on access to the Rafael Hernandez Airport (BQN) in Aguadilla, but they characterize it as just "good enough". To transform the region into a biomedical hub for research and development (R&D), production, and innovation, the Region must transform into a Northwestern Puerto Rico Bio Manufacturing Cluster (Cluster) where ideas can flourish, and bio products can efficiently reach consumers.

To achieve this vision, the Region assembled a Coalition of industry experts who are collaborating synergistically to ensure that the Cluster has a strategy for long-term success. The six (6) Coalition Members are:

- **Departamento de Desarrollo Económico y Comercio (DDEC)** who will act as the Coalition lead and will coordinate activities and drive the Coalition towards the success
- **Invest PR (IPR)** who will co-lead the formation of a cargo organization and lead marketing messaging
- **Puerto Rico Ports Authority** who, as the owner of BQN, will lead the facility buildouts
- **University of Puerto Rico (UPR) Molecular Sciences Research Center (MSRC)** who will support early phase pharmaceutical research
- **American Lightweight Materials Manufacturing Innovation Institute (ALMMII/LIFT)** who will provide manufacturing innovation and workforce development
- **Industry University Research Center (Induniv)** who will lead the CEIV certification to revamp the way the air cargo industry complies with the strict transportation requirements of the pharmaceutical and life sciences industry
- **Puerto Rico Science, Technology and Research Trust** will lead the EnTRUST Innovation Gap Fund to help move innovative discoveries from the lab to market.

Puerto Rico serves as a global air transshipment manufacturing hub for a range of pharmaceutical and medical goods, and it is already a critical component of the global drug supply chain. According to the US Census Bureau's Foreign Trade Statistics, Puerto Rico is the US's top pharma

exporting region with Puerto Rican-produced pharmaceuticals accounting for 22% of total US pharma exports in 2018. Furthermore, 12 of the top 20 global pharmaceutical companies manufacture in Puerto Rico, and 19 of the top 30 pharma, biotech, and medical device companies have operations in Puerto Rico<sup>1</sup>.

The following component projects leverage industry experts, community leadership, and regional assets to support our overall vision of Puerto Rico becoming a global leader in bio manufacturing:

- **Warehousing Construction (\$44M):** the construction of temperature-controlled warehousing facilities at BQN will support the requirements of bio companies in the Region and drive towards CEIV certification standards.
- **Cargo Access Road (\$3.12M):** the construction of a dedicated cargo access road at BQN will increase the overall operational efficiency and reduce the impact on passenger operations. While required for warehouse access, this increased connectivity promotes additional air travel which in turn allows for incremental cargo-hold capacity.
- **Cold Chain Pharma Certification (\$0.8M):** the building of a network of CEIV certified pharmaceutical trade lanes that meet consistent standards, assures product integrity, and enhances workforce development will attract additional companies and improve company retention. Every year, billions of dollars of pharmaceutical goods are stored and shipped at incorrect temperatures. In a 2019 survey, 44.6% of respondents reported multiple failures in the supply chain, with 90% attributed to human error during the transportation of the products<sup>2</sup>.
- **EnTRUST Innovation Gap Fund (\$8.3M):** The private, non-profit organization (Engaging Technologists and Researchers from Underrepresented Schools for Translation) will promote innovation-driven enterprises, science and technology with the goal of moving academic discoveries from the lab to the market where they will benefit human health.
- **Advanced Manufacturing Technology and Talent Development (\$5.2M):** a partnership with ALMMII/LIFT will drive continuous manufacturing innovation and enhanced workforce development. It would also accelerate the ideation, development, and commercialization of new manufacturing processes and technologies, that would ultimately lead to increased manufacturing and distribution activities.
- **Clean Room Installation at MSRC Facilities (\$6M):** the expansion of UPR's MSRC facilities will provide researchers, pharma startups, and interested companies an environment to pursue research and innovation. Additionally, it provides an opportunity for partnerships with schools in the area to increase interest and exposure to the industry.
- **Coalition Governance (\$1.9M):** to achieve the vision's full potential and ensure a successful implementation and impact of the investments, DDEC will contract with a Regional Competitiveness Officer, Pharma Air Cargo and Logistic Specialist, and a Diversity, Inclusion, and Equity Consultant.

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<sup>1</sup> Invest Puerto Rico, BioScience Industry Fact Sheet. <https://www.investpr.org/wp-content/uploads/2021/11/BioScience.pdf>

<sup>2</sup> Klinge Corporation, Ocean Shipping vs. Air Shipping Pharmaceuticals. <https://klingecorp.com/blog/ocean-shipping-vs-air-shipping-pharmaceuticals/>

## **COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY SUPPORT**

The proposed selection of complementary projects will support several of the economic development strategies the drive the strategic plans and initiatives for Puerto Rico describes in the *Transformation and Innovation in the Wake of Devastation*<sup>3</sup> (CEDS equivalent).

Of the seven strategic initiatives outlined, these projects are in direct support of two: 21<sup>st</sup> Century Workforce and Advanced Manufacturing. The 21<sup>st</sup> Century Workforce aims to establish a world-class workforce, increase labor force flexibility, and create high-quality employment opportunities aligned with economic growth strategies. Three component projects have a sustainable workforce development component in pharma, advanced manufacturing, and medical device industries, with opportunities to partner with schools to introduce students in the Region to the industries at an early age and provide additional job opportunities for those that are unemployed in the area.

Due to the environmental disasters, like Hurricanes Maria and Irma, and the pandemic, unemployment rates have risen, leading to an intense focus on job creation. As of December 2021, the unemployment rate in Puerto Rico stood at 7.5%, more than 3% higher than the national 3.9% rate.<sup>4</sup> During FY2021, Invest Puerto Rico (IPR) began executing strategies for attracting new investment of life sciences and air cargo companies. These efforts generated a pipeline of approximately 1,700 potential jobs and \$308 million in capital investment for the second half of the fiscal year. They attracted two life sciences companies that have agreed to set up operations in Puerto Rico, with \$228 million of capital investment and the creation of 400 high paying jobs. Puerto Rico seeks more successful investments to generate the economic growth it needs.

Puerto Rico has been focused on making it easier to do business and boosting air cargo activity. The warehouse development at BQN, increase in manufacturing expertise, and the v will support the expansion of cargo activity and make it easier for businesses to leverage Puerto Rico's assets for their distribution and storage needs. The modernization of road and transportation systems, establishment of a culture of preventative maintenance, and a multi-port capability is envisioned that includes promoting the development of regional airports and seaports availing Puerto Rico of three Part 139 Federal Aviation Administration airports and four main seaports. Other supported initiatives are the creation of research centers and partnerships, upgrading the airports to boost resilience, redevelopment of BQN, and commitment to governance, transparency, and accountability.

### **SUCCESS METRICS**

The Coalition will integrate a RECO and a Diversity, Equity, and Inclusion (DEI) consultant on the Executive Committee to ensure projects are moving towards completion and key performance indicators and success metrics are being tracked and monitored for progress towards the goals.

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<sup>3</sup> <https://recovery.pr/documents/pr-transformation-innovation-plan-congressional-submission-080818.pdf>

<sup>4</sup> US Bureau of Labor Statistics

### ***Job Retention and Creation***

- The construction components will create short- and medium-term job opportunities. Once complete, the facilities will require additional staff, and will lead to investment of new and existing logistics companies.
- The development and implementation of the Manufacturing USA center through ALMMII/LIFT expects to assist over 180 companies, support job retention and creation.
- With pharmaceutical and medical devices companies providing new and improved job positions, and manufacturing in these sectors having some of the highest economic multipliers<sup>5</sup>, these efforts are expected to reduce unemployment and increase wage rates on the island. The poverty rate is also expected to be reduced, with specific efforts to bring projects to the northwestern municipalities, most of which are currently over 50%.

### ***Economic Development and Cargo Activity***

- There is an expected increase in air cargo activity, that will be supported by the Warehousing Development, Cargo Access Road, Cold Chain Pharma Certification, and pharma air cargo and logistic specialist. The LIFT programs will also increase manufacturing services provided, which will lead to an increase in shipping and distribution.

### ***Workforce Development***

- The Coalition understands that a successful, sustainable project relies on a qualified, trained workforce. The MSRC expansion, Cold Chain Pharma Certification, Advanced Manufacturing Technology and Talent Development, and EnTRUST Innovation Gap Fund components incorporate workforce development in pharma and advanced manufacturing in the Region. The RECO and DEI roles will ensure that the training programs are communicated and marketed to the target populations as job opportunities for those currently without jobs, or opportunities to obtain jobs with higher paying salaries.

### ***Intellectual Property***

- The installation of clean rooms in the MSRC will facilitate the research and development of new products leading to new patent registrations and pharma startup growth, expand the IP portfolio, patent submissions, and intellectual property commercialization.
- The programs provided through the ALMMII, LIFT, and PRST partnerships will encourage innovation and accelerate ideation, development, and commercialization of new products and processes.

### **TIMELINE (SUBJECT TO MATERIAL CHANGE)**

<b>Project Name</b>	<b>Length (months)</b>	<b>Projected Start Date</b>	<b>Projected End Date</b>
<b>Warehousing Construction</b>	29	Nov 2024	Apr 2027
<b>Cargo Access Road</b>	36	Nov 2022	Oct 2025
<b>Cold Chain Pharma Certification</b>	60	Jan 2023	Dec 2023

<sup>5</sup> <https://rimanufacturers.com/manufacturing-has-the-highest-multiplier-effect-of-any-sector-of-the-u-s-economy/#:~:text=Manufacturing%20has%20the%20highest%20multiplier,of%20the%20U.S.%20economy%20%2D%20RIMA>

Project Name	Length (months)	Projected Start Date	Projected End Date
Clean Room Installation at MSRC Facilities	18	Jan 2023	June 2024
Advanced Manufacturing & Talent Development	48	Oct 2022	Sept 2026
EnTRUST Innovation Gap Fund	48	Oct 2022	Sept 2026
Coalition Governance	60	Nov 2022	Oct 2026

**MUNICIPAL REGIONS SERVED**

72003	Aguada	72065	Hatillo	72099	Moca
72005	Aguadilla	72071	Isabela	72115	Quebradillas
72011	Añasco	72079	Lajas	72117	Rincón
72013	Arecibo	72083	Las Marías	72131	San Sebastián
72017	Barceloneta	72093	Maricao		
72027	Camuy	72097	Mayagüez		

The Region has been greatly impacted by changing tax policy and has a poverty rate over 50%.<sup>6</sup> Additionally, as of August 2021, the U.S. Bureau of Labor Statistics reported an unemployment rate of 10.7% in the Aguadilla-Isabella-San Sebastian region of Puerto Rico.<sup>7</sup> This is 2.5% higher than Puerto Rico’s unemployment rate of 8.2%.<sup>8</sup> These two statistics demonstrate the need for an investment in the Region to decrease unemployment and reduce overall poverty.

A strong Cluster will identify, make use of, enhance, and/or create regional assets that will support the Cluster’s competitiveness. The Region has a geographic advantage in the Caribbean which allows it to supply to the mainland United States, Latin American, and European markets. The air transshipment hub waiver awarded by the federal Department of Transportation will ease the cargo service. In addition, Puerto Rico's Foreign Trade Zones (FTZ) allow manufacturers to ship and import materials directly around the world without added tariffs, taxes, or processing through mainland United States first, creating more revenue opportunities for businesses. Lastly, the availability of technical skills, support firms, and training organizations nearby is crucial for cluster growth and development. The Region has a high concentration of resources, and it is considered a high-growth region with plenty of production space, market proximity, and transports. The quality of life and the community's attitude make this zone an extraordinary place with potential suitable for the bio industry.

**Rafael Hernández Airport (BQN)<sup>9</sup>:** The BQN has a 20,000 sq. ft. advanced aircraft maintenance, repair, & overhaul (MRO) facility in operation and is home to the longest runway in the Caribbean. Built on a former U.S. Air Force Strategic Command Base, BQN has advanced aerial facilities and around 1,500 acres available for greenfield development. The Puerto Rico Ports Authority is currently constructing a new \$100 million runway, and other infrastructure and

<sup>6</sup> <https://www.census.gov/quickfacts/aguadillamunicipiopuertorico>

<sup>7</sup> [https://www.bls.gov/eag/eag.pr\\_aguadilla\\_msa.htm](https://www.bls.gov/eag/eag.pr_aguadilla_msa.htm)

<sup>8</sup> [https://www.bls.gov/regions/new-york-new-jersey/puerto\\_rico.htm](https://www.bls.gov/regions/new-york-new-jersey/puerto_rico.htm)

<sup>9</sup> Invest Puerto Rico: BioScience Industry in Puerto Rico. Michael P. Gay, CECD, Chief Business Development Officer.

development projects are in the planning phase. The airport is also in the heart of Puerto Rico's aerospace cluster.

***Molecular Science Research Center (MSRC)<sup>10</sup>***: The MSRC is a 152,000 sq. ft. advanced research facility with laboratories conducting basic and translational biomedical research in protein structure and dynamics, molecular biology, genomics, proteomics, bio-imaging, pharmacogenetics, and neurosciences. The MSRC is designed to meet the needs of cutting-edge research in Puerto Rico for the foreseeable future with the primary goal of being at forefront scientific research and innovation. The MSRC features standardization, flexibility and adaptability, systems integration, and ease of sharing equipment and human resources.

***Puerto Rico Highway 22 (PR-22)***: The construction of and extension of the PR-22 will enhance the connectedness of San Juan and western Puerto Rico, and this extension will service BQN. A connection between San Juan and Aguadilla opens the door for products that are produced outside of Aguadilla to be shipped through BQN.

***Institutions of Higher Education***: Access to higher education helps fuel innovation, growth, and resiliency, and with more than 50 institutes of higher education<sup>11</sup>, Puerto Rico is an ideal center for advanced research and collaboration. The coalition will leverage those located in the northwestern region, like UPR Mayagüez, to more directly connect with students, researchers, and partners in the area.

## **ENGAGEMENT**

The Advanced Manufacturing Technology and Talent Development, EnTRUST Innovation Gap Fund, and Cold Chain Pharma Certification component projects rely on the leadership, support, and involvement of nonprofit organizations ALMMII, EnTRUST, and Induniv. FedEx provided a letter confirming their interest in potentially leasing the new building, subject to funding, due diligence, and operational specifications. CADIA (Center for Automotive Diversity, Inclusion, and Advancement) has agreed to collaborate, partner, participate in governing bodies, and accelerate diversity strategies and initiatives.

The Coalition will hire a RECO who will be responsible for building and maintaining relationships with community organizations and key stakeholder groups (business, academic, labor, civic leaders in the fields of innovation, research, logistics, and workforce development) to ensure the benefits of the investments maximized. The RECO, DEI consultant, and Coalition Members will partner with organizations like the Technology Transfer Office, WCC, ALMMII, the Medical Devices cluster, local universities and schools and other organizations that support the growth and development of the northwestern region to ensure the individual component project outputs and outcomes are being communicated and leveraged to support the unique needs of the area. The DEI consultant will ensure the target populations are being promoted and prioritized and will collaborate with other organizations to maximize benefits. The RECO and coalition leaders will ensure these resources, partnerships, and current coalition member networks are explored, leveraged, and optimized.

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<sup>10</sup> Invest Puerto Rico: BioScience Industry in Puerto Rico. Michael P. Gay, CECD, Chief Business Development Officer.

<sup>11</sup> U.S. Department of Education, Higher Education Emergency Relief Fund

## **CLUSTER SUSTAINABILITY**

Build Back Better is a means to kickstart regional growth, and Coalition Members must commit to a long-term strategy and adopt sustainability measures that ensure enduring economic growth and success. The Coalition Members commit to the following three actions to develop self-sustaining capabilities and foster long-term growth.

### ***Formalize a Long-term Strategy for Success***

The Cluster recognizes the need to be forward looking to ensure sustained success. To accomplish that, the proposed projects create a cycle that fosters bioscience product development, trains the manufacturing industry to develop the skillset to continue manufacturing locally developed products, and creates a strong logistics strategy that helps this cycle be efficient and longstanding. MSRC clean rooms and ALMMII/LIFT's product development equipment will supply industry with long term product development capabilities. They will generate revenue through facility rentals and a membership-based revenue plan through the LIFT program that will be reinvested into programming. DDEC is also developing the organizational structure to help ensure sustainability through establishment a long-term strategy for success.

### ***Create a Recurring Revenue Stream from Infrastructure Investments***

With the completion of the BQN infrastructure improvements, local businesses will have the opportunity to leverage the warehousing and logistical improvements to grow. FedEx has also expressed interest in moving operations to the warehouse which would create a sustainable revenue stream. The regional growth, specifically the biomedical industry, will result in continued revenue generation from the improvements to warehousing and logistics. This flow of goods through BQN provides a long-term revenue stream that can be reinvested in areas which include continued operations, further improvements, and increased Regional development.

With this recurring revenue stream, BQN will leverage the pharma air cargo and logistic specialist's long-term strategy to ensure it is reinvesting the revenue in the most impactful manner. This will allow for timely repairs and enhancements which will drive additional growth.

### ***Nurture Sustained Partnerships with Educational Institutions and Coalition Members***

The Clusters seeks to establish lasting partnerships with key educational institutions and other Coalition Members. Through these partnerships, the educational institutions will understand the needs of the community and continue to provide long-term workforce development. Additionally, with the local investment, the students at the local institutions of higher education will have access to greater prospects, including internships, hands on experience, and future employment opportunities.

Not only will the educational institutions benefit from the sustained partnerships, but other Coalition Members will recognize benefits from their continued partnerships. For example, with continued investment in the region, the Western Chamber of Commerce (WCC) will have a greater opportunity to impact regional businesses, and because of the partnership with other organizations, they will be able to provide better planning resources as it will understand the long-term strategy for success. As a result, businesses will receive more impactful advice and be set up for long-term success.

## **ENGAGING EQUITABLY**

The key to developing a strong Cluster is ensuring that community investments impact the diverse range of individuals that live in the communities. This includes all members, not just the economically advantaged. To ensure equity, DDEC and Coalition Members identified key projects that will integrate diversity and equity into leadership and goals, invest in foundational capabilities accessible to the community, develop core skills to support foundational capabilities, and drive regional growth through local engagement.

This can only be accomplished by first investing in foundational capabilities that are accessible to regional businesses while developing core skills to support the foundational capabilities and driving growth through local engagement. To lift individuals out of poverty, DDEC and Coalition Members recognize the need to make investments that will impact both the large pharmaceutical businesses as well as the regional and general business community outside of the metropolitan area where these investments have traditionally looked to set up.

### ***Integrate Diversity and Equity into Leadership and Goals***

The proposal includes the integration of a DEI consultant on the Executive Committee to ensure that the outcomes of the benefits of the investment is impacting the northwestern region as expected. This role will ensure that there are diversity and equity goals included in the component project success metrics and will partner with organizations with missions that support and directly communicate with target populations regularly. They will ensure that training and quality job opportunities are offered to a diverse population.

### ***Invest in Foundational Capabilities Accessible to the Community***

The proposal revolves around the anchor project of improving BQN which is a critical step towards decreasing unemployment and poverty. These investments in foundational capabilities of the airport will provide increased distribution opportunities for all businesses in the Cluster and promote strategic growth. This is not limited to the pharmaceutical industry but includes suppliers and the general business community surrounding the airport that can leverage these capabilities. Additionally, the construction of a dedicated cargo access road will improve commercial access to the airport and allow greater exportation to a number of markets served by the airport. By increasing these capabilities, Puerto Rico can create opportunities for other businesses and private investments that all benefit from logistic and transportation improvements. The DEI consultant can work to ensure diversity of partnerships with minority-owned businesses.

### ***Develop Core Skills to Support Foundational Capabilities***

With the attraction of new businesses and growth, there will be a need for increased workforce development. Through partnerships with Interamerican University and ALMMII/LIFT, there is a proposed investment of over \$5 million in innovation and workforce development. These funds invest in the people of the local community and provide them with the skills currently needed while preparing the workforce for new and emerging technologies. As a part of the proposal, there will also be funds used to formalize Puerto Rico's cargo strategy and execution. This investment seeks to enhance sustained employment in the region and allows it to adapt to changing needs.

### ***Drive Regional Growth Through Local Engagement***

The Cluster will work with the WCC to identify local community needs as well as facilitate connection to ensure all members have access to the capabilities built by this proposal. The WCC understands local businesses, and will provide a voice and partnership for community needs assessments and projects that promote impact employers and workers. The WCC will ensure the Region's small businesses the necessary resources to take advantage of new opportunities. Invest PR will market the Cluster and the businesses within it to attract private investment that will create local jobs for both low- and moderate-income residents as well as high paying STEM-related employment. By attracting outside businesses, Invest Puerto Rico will help bring jobs to the community while increasing demand for other goods and services in the surrounding area.

### **EXPECTED OUTCOMES**

While the RECO role will ensure that each component project is working towards their individual goals, they will also be gauging and monitoring the overall impact of the investments. The Coalition expects to decrease the region's unemployment, contribute to GDP growth, develop a talented workforce, and shift the perception of the Island's capabilities and opportunities. The investments will not only create new short-term and long-term job opportunities, but also support the development of training programs that will prepare underserved communities to apply for and secure quality jobs in their area.

The intentional focus on the manufacturing and pharma industries is expected to increase exposure to the communities in these areas and an increase in the number of students pursuing quality jobs in those industries. This will build a sustainable pipeline of talent in the Region to continue to improve the status of the region in these industries.

An enhanced infrastructure and access to the BQN airport will bring additional revenue and revitalize an area of the Island that has been severely impacted by natural disasters and a change in regulations. As investments in the airport are completed, more logistics companies will set up operations, which will also have a beneficial impact on logistics capacity for other manufacturers of all sizes. This will have a trickledown effect to suppliers in the region and general business community outside of the metropolitan area where these investments have traditionally looked to operate.

By prioritizing research and innovation through the development of facilities and programs that provide the appropriate environment, equipment, funding, and training, the Island will be able to partner with researchers, universities, entrepreneurs and startups to increase patent submissions, commercialize intellectual property, and accelerate the transition from discoveries in the lab to market.

With a trained workforce, increased manufacturing and pharma activity, and a focus on innovation, will enhance global branding so Puerto Rico will be seen as a critical piece of the supply chain that companies prefer to leverage, and a place where innovative processes and products are created.

The RECO, in partnership with the Coalition leaders, LIFT, ALMMII, PRST, WCC, Impact Puerto Rico, and others, will develop a comprehensive communication plan to ensure communities,

businesses, researchers, universities, and startups are aware of the opportunities that are created from this investment and market Puerto Rico's renewed operational excellence in the industry.

### **PROGRESS AND CHANGES SINCE PHASE 1 SUBMISSION**

**Warehousing Construction:** The investment about has increased to \$44MM based on additional planning details discovered in Phase 1, and PRPA has secured additional funding from the FAA AIP program (letter has been submitted). Since Phase 1, the Coalition has redefined location from revisions to BQN Approved Master Plan, increased the size of the warehouse, and included a renewable energy alternative. PRPA has also secured a letter from FedEx confirming their interest in potentially leasing the new building, subject to funding, due diligence, and operational specifications.

**Cargo Access Road:** Details of the proposed access road within the PRPA property boundaries were defined. Burns St. Connector is a Southern Connector between State Roads PR110 and PR107, which primarily focuses on improving the intersection of the Southern Connector with PR110. The Puerto Rico Highway Authority has programed this project in the State Transportation Integrated Plan (STIP) and the Project proposed a future connection with this new road, and a temporary connection with existing. Match to complete the project will come from PRPA.

**Cold Chain Pharma Certification:** Induniv was added to the Coalition to lead and collaborate on the component project as they had already initiated work towards the execution of the project goals. Induniv has secured letters of intent and 20% matching commitment for certification and 3-year re-certification costs and a \$200k match from Hacienda.

**Advanced Manufacturing Technology and Talent Development:** The programmatic investment increased to \$5,224,065 due to the application of critical personnel.

**Clean Room Installation at MSRC Facilities:** A \$1.2M match from Hacienda has been approved and a letter of support from CytolImmune Therapeutics, the first therapy development and manufacturing operation in PR.

**Coalition Governance:** This component project was added after Phase 1 to ensure synergy and compliance and develop a long-term strategy for successful implementation of the projects, sustainability, and diverse and equitable outcomes. CADIA (Center for Automotive Diversity, Inclusion, and Advancement) has agreed to collaborate, partner, participate in governing bodies, and accelerate diversity strategies and initiatives. A \$500k match from Hacienda was approved.

**EnTRUST Innovation Gap Fund:** This component project was added to support to provide competitive gap funding to transition innovation and outputs of research and development efforts in the medical device and bio pharma industries to the marketplace.

**Dedicated Cargo Organization:** Component was consolidated into the Coalition Governance Component.

**Industrywide Systems Connectivity:** Component was removed due to resourcing, increasing complexity, and difficulty defining project.