South Florida ClimateReady Tech Hub Overarching Narrative

EXECUTIVE SUMMARY. Rising sea levels, extreme weather events, and exponentially growing energy demand pose generational threats to the global economy, human welfare, and national security. In response to these threats, innovative, affordable, and sustainable "climate technologies" are emerging, providing hope for increasing communities' resilience and advancing environmental justice.

South Florida is uniquely positioned to become the global leader – rapidly – in delivering these community-level climate technologies. Our exposure to weather and climate variations presents an existential threat, with more than \$3.5T in assets exposed to sea-level rise inundation alone. Fortunately, multiple transformational technologies are ready to scale in South Florida, underpinned by a vibrant entrepreneurial class and ready workforce.

To fully realize this potential, the ClimateReady Tech Hub will catalyze the commercialization of community-level climate technologies into domestic and global markets. Led by Miami-Dade County, the Hub is joined by regional governmental partners Broward, Monroe, and Palm Beach Counties. It partners with experienced institutions across academia, workforce development, entrepreneurship, manufacturing, and commercialization. This initiative will catapult the US into the global leader of home-grown climate technologies and ensure that opportunities to build this hub – and the benefits of these investments – are shared equitably, including among communities historically excluded from economic prosperity.

A VISION FOR SCALABLE, COMMUNITY-LEVEL CLIMATE TECHNOLOGIES. The vision of the South Florida ClimateReady Tech Hub is to accelerate the development and deployment of scalable climate technologies that meet community-level needs. The Hub has identified three verticals of climate-ready technologies to support over the next five years (see visualization of technology areas below): (1) energy efficiencies; (2) infrastructure; and (3) coasts. EDA provides a unique funding source, addresses gaps to validate new technologies, provides equitable access to emerging innovations, and convenes stakeholders, from regulators to industry titans, to scale products globally.

Collectively, these technologies represent a global addressable market of nearly \$3T by 2030. Within South Florida alone, the addressable market for these technologies could reach \$50B by 2030. To succeed, our investments must be intrinsically linked to wealth creation in historically marginalized communities



disproportionately affected by climate change, providing access to high-quality jobs and direct benefit from the economic prosperity attributable to commercialization. As a result, this Hub will create over 23,000 new jobs (at least 15,100 serving individuals from historically marginalized communities), provide technical assistance to 500 startups, and newly train over 3,000 people. <u>The climate challenge</u>. In 1992, following the most destructive hurricane in its history, South Florida began developing market expertise in climate adaptation. Our resulting building codes have become the global standard for protecting structures from destructive winds. Three decades later, we face mounting storm damage from the increased frequency and intensity of tropical storms and other extreme weather events. Coastal defense technologies are integral to protecting critical infrastructure such as airports, seaports, and military installations. These technologies enable quicker reopening of such vital facilities, minimizing economic disruption and maintaining supply chains crucial to the national economy. In 2023, the United States experienced the highest number of "billion-dollar" disasters in history, topping over \$92.9B in costs.¹

The United States' volatile international position on climate adaptation also creates a geopolitical imbalance. The US and China are currently in a race to export climate technologies. We've seen this story before; the US pioneered the most advanced solar technology in the early 2000s. Then, China invested to commercialize, eventually capturing 80% of the global market. We cannot let history repeat itself.

<u>The opportunity</u>. To leverage existing climate technologies primed for global distribution and seize a global leadership position in consumer climate technologies within a decade, we have selected three technology verticals for an initial focus:

1.**ClimateReady Energy Efficiencies** aims at the \$72B industry of next-generation building energy management systems and HVAC systems designed for humid environments, in addition to the micro-grids and marine energy industries. In particular, our building efficiency cooling systems include advanced liquid desiccant dehumidification and internal building systems to improve thermal and water resistance. More than 20 industry partners are ready to support demonstrations, customer discovery, and distribution economics to overcome the lack of market incentives and data. The technology benefits will be showcased at Florida Memorial University (an HBCU) and on the Miccosukee Tribe of Indians of Florida, among other local sites. This vertical will scale over 40 new startups and enable many pilots. By 2034, we will support over 14,000 new jobs in this vertical, including skilled labor opportunities for refrigeration mechanics and installers, electricians, pipefitters, university-trained electric grid engineers, and scientists. We have arrived at these job numbers by modeling the workforce requirements of growing startups in the region and provided the new investment in validation and support by the EDA.

2. **ClimateReady Infrastructure** prioritizes a global \$63B industry of advanced concrete building materials such as ternary cement that reduces emissions by 40%, new forms of carbon-negative sustainable resources products, and ultra-high-performance concrete with high compressive strength and resistance. Although clean cement and concrete have immense value for all buildings, they hold tremendous benefits for coastal communities that use concrete to protect from adverse weather. Led by FIU, with a student body comprised of 85% underrepresented minorities, our Hub will scale at least 60 startups (~80% with a minority background) with the ability to sell into the industry by lowering the cost of production, assisting with validation efforts, and connecting companies with global industry leaders. This project will create ~500 new jobs and reskill another 200, primarily in construction labor and equipment operator jobs.

3. **ClimateReady Coasts** focuses on the global \$21B industry of green-gray artificial reef structures, sea walls, breakwaters, and hybrid reefs featuring heat-resilient corals. These coastal defenses mitigate storm surges while promoting marine biodiversity. Although these technologies

¹ https://www.noaa.gov/news/us-struck-with-historic-number-of-billion-dollar-disasters-in-2023

have been deployed for large corporations and wealthy landowners, a broader scale is essential for communities on the coast and flooding-prone areas, where many underserved communities currently reside. With the ability to mitigate storm damage in the United States by billions of dollars annually, our Hub will work with 50 startups to conduct in situ demonstrations, improve unit economics, and link firms to large corporations bidding for federal and commercial procurement work. With support from the IUOE Local 487, this project will help create nearly 7,000 new jobs by 2034, including manufacturing, installer, 3D printing fabricators, and diver jobs. These jobs will arise by new permitting and the construction of new coastal installations throughout the region.

Collectively, these three groups of technologies are the product of decades of federal R&D investment and are all ready to scale broadly. Without the Hub, it could take decades more for the market to address these barriers. While significant activity exists in the climate startup community, the industry needs a hub to validate the technology and convene the critical mass of industry partners to grow. These technologies can scale to the global market in five years and set the stage for new climate technologies to emerge within the decade, **supporting over 150 startups and producing over 23,000 green jobs**.

South Florida is ready to meet the moment. South Florida is home to 6.2M people and among the world's most diverse city, with a minority population of 70%.² We have one of the nation's fastest-growing venture communities, raising over \$5.8B in 2022. We have 150 Foreign Consulates and strong ties to international markets. We are also home to a significant amount of early-stage climate-tech innovation, with over 2% of all US patents in climate tech over the past five years coming from South Florida. South Florida already has more than 34K workers in climate-technology verticals related to our Hub, with the ability to double these numbers with an investment from EDA.

Because of our strategic importance as a global logistics hub and the presence of several critical military installations, the Department of Defense (DoD) has a longstanding investment interest in our region and has significantly funded local university-based marine energy and coastal resilience research.. Publicly traded HEICO Corporation, an innovative defense contractor and hub supporter, is based in the region and hosts numerous DoD resilience-related investments, notably DARPA's Reefense program and multiple US Army Corps of Engineers projects. To strengthen these investments, the South Florida Defense Alliance has committed to supporting the creation of ResWERX, an initiative to build resilience programming and support for dual-use companies linked with our nation's warfighters. Letters of support from the DoD's National Security Innovation Network, its Defense Innovation Unit, the Florida Defense Alliance, and the American Security Project highlight the national security opportunities linked with hub investment.

<u>Outcomes.</u> An investment in the Hub will generate ~23K direct jobs, with a multiplier effect to bring an overall employment impact to 60K. These jobs—"good jobs" for construction laborers, electricians, HVAC mechanics and installers, and divers— will have a mean salary of \$83k, adding \$41B to the region's GDP. More than 75% of these new jobs do not require a four-year degree.³ Our workforce component project expects to train 2,800 individuals, 80% from historically marginalized communities, and provide wrap-around services to 700 people. 150 startups will receive demonstration and validation services, while 500 will receive technical assistance.

<u>Promoting climate resiliency through community-driven action</u>. Recognizing that historically marginalized communities are already disproportionately affected by extreme weather conditions,

² https://worldpopulationreview.com/world-city-rankings/most-diverse-city-in-the-world

³ Job Posting Analytics analysis by Lightcast in Q1 2024 for South Florida

those communities must have an active role and structural voice in helping the region avoid the worst impacts of climate change and enjoy the benefits of a more resilient economy.

Today, one third of our Hub's population is considered low-income. In our targeted workforce development census tracts, the average wage is \$24k, and the unemployment rate is approaching 45%. A rampant 70% pay gap exists between Black & Hispanic women and their white male counterparts. Meanwhile, 50-90% of job postings in positions where the Hub is investing are unfilled. Our Hub will fail if we cannot fill the positions created. It is imperative that we address systemic gaps. This is why our Hub has been proactively weaving equity into every aspect of our activities. We are intentionally centering communities historically marginalized in choosing the partners with whom we work and identifying the initiatives we pursue.

We have over 50 diverse community organizations communicating educational resources and career opportunities to underserved neighbors. We target at least **15,100 of our newly created positions to be occupied by underrepresented individuals** in the green economy, including women and people of color. Working with IUOE 487, an estimated 10% of workers are expected to be represented by building and trades unions.

The Consortium's members represent South Florida's diverse communities, and local leaders of color have been the primary direction-setters for the Tech Hub initiative from the beginning. Of the Consortium, 56% of the members and partners are led by a leader of color. Women of underserved backgrounds lead 50% of our component projects. Consortium members and partners represent organizations with a diverse view of climate justice, including Catalyst Miami, which focuses on neighborhood activism, and Maroon League, a group of 27 black community-based organizers specializing in economic equity. Our Consortium table will be as diverse as the community we serve.

Equity goes beyond a diverse workforce. In our entrepreneurial support vertical, "super conveners" such as the Allapattah Collaborative CDC have engaged with the Hub to help launch 50 new climate tech startups from diverse founders who are primarily LMI Afro-Latino and committed \$3M in growth capital. Refresh Miami has 13k members and a longstanding history of convening women founders. They have engaged with the Hub to promote gender equity and track climate startups. As one of the most diverse regions in the country, we will ensure that our founders reflect the composition of our community.

Many of our technology demonstrations are located in prominent convening places for underserved communities, including on the Miccosukee Native Nation, at Florida Memorial University. This will help ensure that underserved communities are among the first communities to gain access to new technologies and create awareness for opportunities in climate-related fields.

While this is all a fine start, our Hub must continue efforts to address generational systemic gaps. We will continue to bring new voices to the table, connect to underserved communities, and evaluate where we can improve to ensure shared prosperity among all stakeholders. If not, our talent gap will widen, and the Hub will not reach its full potential.

WORKING WITH LABOR. A significant contributor to the Hub's vision is the International Union of Operating Engineers (IUOE) 487, which has 1500 members. The IUOE conducts workforce development programs and training around Everglades restoration and building pump stations with the Army Corp of Engineers. Through the Hub, their apprenticeship programs will be expanded, and their policy expertise will be leveraged in developing new safety standards.

SCALING CLIMATE TECHNOLOGIES. We have identified three cross-cutting component projects to foster ecosystem development and interconnectivity and three vertical technology projects to catalyze the deployment of scale-ready climate technologies:

<u>1. Catalyze ClimateReady Collaboration (Governance).</u> Enhance the capacity of regional governance that has recently broken down silos within the climate and capital ecosystem to foster collaboration between government, climate justice advocates, startups, corporations, capital partners, and academia.

<u>2. Policy Innovation & Entrepreneurship</u>. Establish greater connectivity with regulators and quad-county policies to accelerate climate technologies, focusing on overcoming governmental barriers to adoption by convening capital partners and providing technical assistance.

<u>3. Equitable Workforce Development</u>. Provide high-paying job opportunities to underserved populations, offering pathways to diverse groups towards upward mobility through certifications, training, and apprenticeships, supplemented with wrap-around services.

<u>4. ClimateReady Infrastructure</u>. Scale technologies to protect built and natural environments in low-lying areas, specifically focusing on marginalized populations most affected by extreme weather events.

<u>5. ClimateReady Coasts</u>. Expand coastal product demonstration facilities along South Florida's coastline for green-gray artificial reef structures, seawalls, and breakwaters. Provide consolidated validation services and assist companies in capturing additional market share.

<u>6. ClimateReady Energy Efficiencies</u>. Demonstrate and validate affordable energy solutions tailored for subtropical climates, enhancing performance, sustainability, and reliability and ensuring access for marginalized populations.

This collective effort will form a dynamic innovation ecosystem, attracting top talent and resources to South Florida. While some of these functions are currently occurring in our ecosystem, individually, these organizations act in a vacuum. As interconnected and complementary projects with unified governance, they will collectively elevate the region's culture of innovation, establishing it as a hub for groundbreaking developments, building a sustainable framework for commercialization, and accelerating immediate opportunities.

CONSORTIUM MEMBERS AND PARTNERS. The Hub comprises 31 full consortium members and 28 hub partners from diverse backgrounds committed to a single vision of the equitable commercialization and scaling of climate-ready technologies.

	Consortium Members	Hub Partners		
Government	Miami-Dade County (lead), City of Miami, Broward County, Miccosukee Tribe of Indians of Florida	Monroe County, Palm Beach County, City of Miami Beach, City of Lake Worth Beach		
Higher Education	Florida Atlantic, Florida International, Miami Dade College, Nova Southeastern, Univ of Miami, Florida Memorial	Northeastern (Miami), College of the Florida Keys, Barry University, University of Florida		
Industry	1Print, Blue Frontier, Carbon Limit, MasTec, Titan Florida, Watsco, Mangrove Contracting, Facade & Envelope	Florida Power & Light, I Squared, Merrimac Ventures, Mission One Capital, JLL, Black & Veatch, AME Power		
Economic Development	Ken Griffin/Citadel, Knight Foundation, South Florida Regional Planning Council, Miami-Dade Innovation Authority, South Florida Defense Alliance, Alapattah CDC, Seaworthy Collective	Beacon Council, eMerge Americas, Greater Fort Lauderdale Alliance, Marine Research Hub, Techstars, Ocean Exchange, LARTA		
Workforce	IUOE 487, Miami Tech Works, OIC of South Florida (OIC-SFL)	CareerSource, CodePath		
Other Orgs.	Southeast FI Regional Climate Compact, Miami Waterkeeper	Maroon League, Refresh Miami, Frost Science Museum, Catalyst Miami		

<u>State Support.</u> The Hub fostered strong relationships with the State of Florida. Housed within the Governor's Executive Office, the Florida Statewide Office of Resilience (FSOR) sets the strategic direction for interagency initiatives to minimize the flood vulnerability of critical assets. The Office is an advocate for the Hub and an ally in providing technical guidance to local governments.

<u>Formal Federal Support.</u> Bipartisan federal excitement and support are high. National Oceanic and Atmospheric Administration (NOAA), the DoD's National Security Innovation Network (NSIN), and the DoD's Defense Innovation Unit (DIU) have provided letters of support.

GOVERNANCE BUILT FOR SUCCESS. The Hub has developed the foundation for robust governance across its consortium members. Although there are many stakeholders around climate in South Florida, no individual organization has the mandate or reach to convene the entire innovation lifecycle needed to commercialize community-level climate technologies.

The Miami-Dade County Innovation & Economic Development Office is responsible for the Hub's governance. The County has committed at least 60 hours of weekly staff time since designation and will continue to do so by employing the Regional Innovation Officer (RIO) and climate manager. Partners' networks will act as super-conveners, engaging a vast network of diverse groups required for an equitable and scalable hub. Working with an eight-member Steering Committee, the Hub will drive top-level decisions and oversee thematic working groups of key stakeholders, conveners, and other subject experts in our Consortia to ensure accountability and continuous improvement.

We will apply lessons and the POWER framework (a research-based governance model aligned with best practices through partnership structures, oversight and decision-making, workflow management, evaluation, and resourcing) to our governance model, which we describe in greater detail in the governance component project. The Hub is focusing on providing agency to traditionally underrepresented community voices. Driving equitable outcomes will be a primary focus of the Hub and its governance model, emphasizing ensuring the integration of underserved communities into our strategy and operations.

OUR PARTNERS' COMMITMENTS. Since being designated a Tech Hub, we have engaged stakeholders throughout the community to gather around our vision. We now have monetary and in-kind commitments of over \$16M from partners, growing by the week. Our partners have committed to deepening connections in five areas throughout the innovation cycle, from local talent development to global commercialization:

<u>1. Preparing the workforce of the future</u>. A unique strength of the Hub is our investment in the people who will drive the future of climate technologies. Focusing on education and training within existing communities allows the Hub to meet participants "where they are," and these new education pathways can enable individuals who are just starting, those who are upskilling, and those who are reskilling to advance their careers in highly paid green jobs. We are working with consortium partners to create new certifications, educational pathways, and training opportunities to **train 2,800 individuals, including at least 80% from historically marginalized communities**.

In further commitments, Miami-Dade College, which serves the highest number of minority students in the nation, and Northeastern University have committed to the establishment of a new non-profit organization—the Urban Coastal Resilience and Sustainability Academy—which will include targeted coastal resiliency workforce development programming for Miami Dade County high school students and Miami Dade College students. Additionally, the Museum of Discovery and Science and the Frost Museum of Science have each committed to providing new sustainability-themed content to build K-12 students' interest in STEM career paths, offering fiscal

commitments of a combined \$2.1M. Each year ~1.1M people visit these museums, many of whom receive discounted or free admission to enable engagement with underserved communities.

2. Promoting high-quality jobs for our existing workforce. The Hub is also committed to expanding opportunities for the existing workforce across multiple efforts. First, we will expand EDA's Good Jobs recipient Miami Tech Works, which implements the research-based approach Talent Pipeline Management ® framework, into climate tech and provide on-the-job training for workers on large-scale demonstration projects.

The Hub's partners have also committed to building capacity for organizations that support underrepresented communities. As part of that commitment, these partners will provide wraparound services to participate in job-training efforts through providers such as the OIC of South Florida, Miami Dade College, and YWCA South Florida. We expect 700 participants to receive wraparound services. Additionally, the Miccosukee native nation has committed to expanding youth programming services, pre-apprenticeship, basic adult education, wrap-around services, and training stipends at their location, planning to reach 150 participants over five years. Individuals will also have access to local resource centers that leverage collaboration with community providers and governmental agencies to remove barriers associated with wealth creation, such as financial literacy, emergency financial assistance, and housing support.

The Hub intends to work with large employers to create new jobs and hire locally. Watsco, for example, is the nation's largest distributor of HVAC equipment and has committed to collaborating on developing new specialized training, upskilling, and certificate programs, access to our training facilities, and job placement support. Today, we have identified over 11,000 active postings from organizations such as MasTec, Titan, Cemex, Black & Veatch, HEICO, and others. While we are still collecting commitment letters, all consortium and partner companies have agreed to engage in workforce roundtables and work with the universities to develop pipeline programs to provide quality job opportunities and education to populations traditionally left behind.

<u>3. Capital access and mentorship</u>. Although South Florida is among the fastest-growing venture capital markets, silos exist among our emerging climate startup communities and large capital partners. Patient capital is required to grow startups in capital-intensive climate technology, and the overall understanding of the market is still in its infancy.

Leading capital partners have made commitments to work with small businesses within our supply chain and high-growth startups for mentorship, capital access, and procurement opportunities. This network of funders will assist firms throughout their journey, from ideation to global distribution. On the early end, we have commitments from an early-stage seed accelerator, Seaworthy Collective, with 2,250 global members, creating a specific track to assist with the commercialization of startups in our Hub verticals following grants from the SBA and NOAA. At the later stage, I Squared Capital (a hedge fund with \$38B AUM) dedicated \$900M for climate infrastructure projects earlier this year and has committed to reviewing companies in the Hub's programs for investment.

Two organizations representing the largest companies in the State, Florida Council of 100 and Partnership for Miami, have committed to mentorship and the amplification of Hub technologies. Represented by C-level executives across the region, these groups represent over 140 firms. Finally, the Venture Mentoring Team, which partners with university startup programs and community partners, including the National Science Foundation's Mid-south I-Corps Hub, has committed to providing mentoring services valued at \$960,000 at no charge over the five years of this project. <u>4. Demonstration + testing</u>. To de-risk climate technologies and improve time to market, the Hub's partners have made numerous commitments to provide space, facilities, and regulatory support. For example, the coastal project requires an array of specialized production infrastructure and facilities, including coastal testing facilities, production launchpads, a fabrication site collective, and professional services for fabrication designed to scale production capabilities.

Through new commitments with UM (which has agreed to open up its "Sustain Tank" for demonstrations), UF (which has agreed to support technologies in pre-permitted sites extending demonstration environments to the Gulf Coast), and FIU (which will establish a legal framework for startups to use its "Wall of Wind"), the Hub will enable pilots of products by startups that show promise but have faced challenges during attempts to scale. Similarly, multiple large real-estate owners in the region have agreed to provide over 1,000 vacant apartments for testing energy-efficiency building technologies within the next five years.

The Hub has also identified demonstration sites likely to raise awareness of climate technologies. For example, the Underline, the largest linear park in the United States, has agreed to deploy clean concrete produced by the Hub. Additionally, the Miccosukee Tribe has agreed to demonstrate the efficacy of a revolutionary AC system, which combines dew-point-style sensible cooling with liquid desiccant dehumidification to reduce electricity use by up to 90%. This revolutionary AC system is an example of where existing regulatory frameworks have needed to catch up with emerging technologies because current regulations require minimum compression standards and, unlike traditional AC systems, this technology requires no compression.

<u>5. Commercialization + distribution</u>. Once technologies have been proven successful, the critical task of scaling the technology globally remains. To meet this need, the Hub has identified partners with global reach and will pair them with companies with proven technologies ready to scale. For example, consortium member AME Power provides electrical conversions on mass transit and has committed to a \$1 million investment toward creating new jobs and demonstrating its technology. In 2023, Ame's owner received an SBA Small Business Persons of the Year award, and today Ame's technology is prepared to scale.

To support companies like AME, the Hub will leverage partnerships with other consortium members that have already achieved global scale. For example, the TITAN Group, a publicly traded producer of cement and building materials, produces 27 million metric tons of cement annually and employs over 5,500 people. In support of the Hub, TITAN has agreed to allow consortium members to use excess plant space for production, manufacturing, and validation. MasTec, the largest minority-owned engineering firm in the United States, has agreed to partner and mentor members.

OVERCOMING EXISTING BARRIERS AND CONSTRAINTS. Through interviews with entrepreneurs, industry leaders, and subject matter experts to test concepts in our Phase I application, the Hub has been designed to overcome the following barriers and constraints:

<u>1. Complex Regulatory Markets</u>. The regulatory landscape for climate technology is stunted by non-standardized codification and protracted permitting processes across various levels of government. The Hub proposes a regulatory sandbox that simplifies these processes, allowing businesses to operate across multiple jurisdictions and accelerating project implementation.

<u>2. Fragmented Innovation Ecosystem</u>. Startups are commonly isolated, and intellectual property is often confined within university settings. To counter this, we will leverage existing industry space and bring expert conveners to support in-person meetups and real-time

collaboration. This will empower existing startup organizations to bridge community gaps, provide better education about resources, add community navigators, and strengthen founder connections.

<u>3. Insufficient Alignment and Collaboration</u>. Given the diverse needs of our communities, maintaining alignment across technology verticals and sectors is a persistent challenge. To overcome this, we must align local municipalities with technical assistance and create a more cohesive environment where governments, academia, and industry can collaborate effectively.

<u>4. Challenges in Capital Markets</u>. Despite significant regional venture capital, only \$137M was invested in the climate vertical in 2022. MDIA will convene regional angel and venture capitalists actively investing in our technology thesis and create syndication opportunities for startup companies. This will result in greater access to education in private markets, infrastructure funds, debt, and government financing.

ENSURING AFFORDABLE HOUSING. Readily affordable housing is a concern in South Florida. Miami MSA has the highest percentage of households moderately or severely cost-burdened among peers, which disproportionately impacts our Hispanic, Black, and recent immigrant population. Already, Miami-Dade County has a shortage of ~160K affordable housing units across rental and home ownership. According to the South Florida Regional Planning Council's models, another ~2,800 housing units/yr will be needed to address the Hub's impact.

It is essential to note that the technologies being commercialized here reduce the cost of housing. Our energy vertical will commercialize technologies that reduce the energy burden in residential apartments. Our infrastructure vertical is pioneering new forms of cement designed for residential structures to improve the resiliency and affordability of housing stock. Finally, enhanced coastal defenses benefit from reducing insurance premiums, a significant burden to make more housing affordable. Leaders in our four-county region are keenly aware of the issue and have various efforts to implement regional housing plans. Climate adaptation technologies must be commercialized and scaled for those plans to succeed.

PROGRESS SINCE PHASE ONE. Since the Phase One award in October 2023, the consortium has worked diligently to ensure we can hit the ground running. Miami-Dade County has provided +60 hours of weekly employee commitment dedicated resources to help stand up the Hub. Over 70 stakeholders have participated in weekly meetings related to the Hub's development, and over \$16M of new commitments have been made. In late 2023, the Hub launched the "South Florida's Climate Tech Ecosystem" database by collaborating with Miami-Dade County and Opportunity Miami. This database grows daily and includes 300+ individuals and organizations working on climate solutions. We have also forged new relationships thanks to our designation. The Hub has welcomed the Miccosukee Tribe, a resilience leader that continues to drive the effort for water and Everglades protection, into the consortium. This has resulted in a new partnership for demonstrations with our most promising startups. Similarly, the Underline has made new commitments to buy local, clean concrete. New folks are sitting around the table, meeting and cultivating new relationships.

ACHIEVING MEASURABLE OUTCOMES WITHIN 5 YEARS. Investing in the Hub will be transformational for South Florida, the subtropical regions of the United States, and the world. Our North Star goals will be quantified, measured, and publicly reported to demonstrate our commitment to transparency and process improvement and include an estimated 23,000 jobs with salaries above the prevailing wage and a new workforce comprised of over 50% underrepresented individuals, 500 firms receiving technical assistance, resulting in over \$250M in new growth investment, and a \$6.4B increase in the gross domestic product by consortium partners, commercializing subtropical innovation throughout the world. We expect to train 2,800 individuals, 80% from historically marginalized communities, and provide wrap-around services to 700 people.

To achieve these goals, we have developed interim goals over a 5-year timeline. Collecting timely quantitative and qualitative measurements will be critical for our Hub's continuous performance to meet and exceed our goal:

Project	Yr 1 & Yr 2	Yr 3 - 5	North-Star Metrics	KPI
Governance	-Codify operating procedures -Establish metrics and reporting	-Ensure financial stability -Recommend continuous improvements	# Northstar metrics obtained	Financial stability
Coastal	-Pre-permit more than 20 sites -Convene 8 of 10 industry players	-+50 startup demonstrations -Capture 10% market share w/ Hub technology	# demonstration # firms assisted	# miles of new coastal defenses % underserved founders
Energy	-Ready sites for commercial and residential demonstration	-+40 startup demonstration -\$500M in sales of Hub technology	# demonstrations \$ energy cost savings	% market share
Cement	-Establish legal documentation for university validation -Ready startup cooperative agreement	->60 startups -Reduce xxxxxx lbs of CO2	# firms assisted # lbs produced	% market share \$ new revenue for tech
Workforce	-Finalize agreements with industry -Complete university agreements	-Provide training to +2,800 job seeks -1,800 Placements	# Placements Placement wage & mobility	% underserved individuals
Entre. & Policy	-MOUs with partners -Convene government stakeholders	-Support >150 startups -Adoption of new regulations	# startups assisted \$ new growth capital	# introductions # adoption of sandbox policy

SUSTAINING SUCCESS AFTER 5 YEARS. A diversified funding strategy will enhance financial sustainability post-EDA investment. Emphasis will be placed on building long-term partnerships with philanthropic organizations, government agencies, and industry leaders to secure stable funding streams. Since announcing the Tech Hub opportunity, our Hub has raised \$2.25M from major philanthropic institutions for organization and startup efforts. We have engaged over 70 partners and received over \$16M in new commitments in the last three months. We are confident in our roadmap to achieve global competitiveness while being fiscally stable.

As one of the country's most significant growth capital ecosystems, the Hub has only explored a few opportunities. Additionally, we are exploring opportunities for fee-based services, leveraging our expertise in technology demonstration and piloting to attract public and private clients. These activities will be guided by a Chief Development Officer, who will be onboard in Year three and will support the Hub's efforts to ensure sustainability as market needs evolve.

CONCLUSION. South Florida is uniquely positioned to become the global leader in technologies that allow our community to adapt to the country's most prominent threat – extreme weather. We have a vision of shared prosperity. An EDA investment can dramatically reduce the time it will take to deploy community-level climate technologies and reduce the impact of climate change. As the United States and the world look for solutions, the investment in South Florida will ensure that the ClimateReady Tech Hub is in place to deliver.